

WORKING P A P E R

Assessing Health and Health Care in the District of Columbia

Phase 2 Report

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EXECUTIVE SUMMARY

As a result of the recent settlement of tobacco litigation, the District of Columbia has more than \$200 million available to invest in the health of the city's residents. A Health Care Task Force, convened in 2006 by then-Mayor Anthony Williams, considered alternative ways to invest the available funds. The Task Force crafted several options that included investment in additional or improved hospital capacity, ambulatory care, and health care system improvement, but agreed that research was needed before final investment decisions could be made. The District contracted with the RAND Corporation to study health and the health care delivery system in the District. The goals of RAND's evaluation are to:

- 1) Conduct a comprehensive health needs assessment for Washington D.C.;
- 2) Assess the quality and accessibility of the District's health care delivery system for individuals with urgent or emergent medical needs; and,
- 3) Use information from those assessments to identify and assess various policy options for improving the health care delivery system.

An interim report (http://www.rand.org/pubs/working_papers/WR534/) summarizes findings related to the first two goals. Since the release of the interim report, we conducted additional quantitative and qualitative analyses. Specifically, we:

- Conducted focus groups with community residents.
- Interviewed and convened focus groups with District health care providers.
- Synthesized information describing the health care safety net in the District.
- Conducted additional analyses of Medicaid and Alliance managed care claims data, hospital discharge data, and data on Medicaid provider capacity from the Medicaid Assistance Administration (MAA).
- Surveyed each of the eight acute care hospitals in the District of Columbia to get additional information about hospital and emergency department patient flow and staffing.
- Analyzed data from D.C. Fire and Emergency Medical Services (FEMS), including six years of computer-aided dispatch (CAD) data and data from electronic run sheets for a two-month period in 2006.
- Obtained and analyzed information about the times at which patients first present to emergency departments.

In addition, we visited six clinics and discussed our findings and with a wide array of stakeholders, including representatives from DCHA, staff at individual hospitals and clinics, representatives from DCPCA, and the RAND Advisory Committee appointed by the Mayor and City Council. Findings are presented in the body of the full report.

The majority of the report addresses the third goal. Legislation passed in December 2006 allocated some of the tobacco settlement funds, including \$20 million for cancer prevention, \$10

million for anti-smoking efforts, \$10 million for chronic disease treatment, \$6 million for establishing a regional health information exchange, and \$2 million to buy new ambulances. Legislation passed in 2007 further authorized the use of \$79 million for a public/private partnership between the District and Specialty Hospitals of America for the revitalization of Greater Southeast Community Hospital (though some of those funds are in the form of a loan). We provide recommendations for the allocation of the remaining funds, totaling approximately \$135 million, which by legislation are limited to capital expenditures.

ES.1 Recommendation

Based on our analyses, we articulate (1) specific recommendations for the expenditure of tobacco settlement funds; (2) additional policies critical to the success of the capital investments; (3) complementary policies needed to improve ambulatory care; (4) recommendations relating to emergency medical services; and (5) recommendations regarding the allocation levels of capital investments.

Recommendations for Investing Tobacco Settlement Funds

- (1) Use tobacco settlement funds to expand the capacity and improve the physical space of community health centers.¹
 - (1.1) Target expanding primary care capacity in community health centers (CHCs) by roughly 200,000 visits.
 - (1.2) Invest in CHCs that expand capacity in high-need locations.
 - (1.3) Invest in CHCs that establish and commit to maintaining urgent care capacity (including after-hours and weekend capacity) in at least two high-need locations.
 - (1.4) Prioritize expansions to CHCs that would increase the availability of specialty care through plans for additional exam room space, investments in equipment to allow for specialty care services, and planned personnel arrangements with local hospitals.
 - (1.5) To the extent possible, invest in expansions that leverage funding from other sources.
- (2) Use tobacco settlement funds to support greater adoption of health information technology.
 - (2.1) Subsidize the adoption of electronic health records by hospitals and by providers who serve a substantial number of individuals who are enrolled in Medicaid or the Alliance or who are uninsured.
 - (2.2) Invest in sustaining the regional health information organization (RHIO).
 - (2.3) Consider investments in other promising health technologies.
- (3) Use tobacco settlement funds to invest in establishing an information clearinghouse for provider availability.

¹ By community health center (CHC) we mean any ambulatory care facility that provides first contact, coordinated, comprehensive, continuous outpatient care for all regardless of their ability to pay. We do not restrict our definition of a CHC to federally qualified health centers or look-alikes.

(4) Use tobacco settlement funds for implementing and evaluating interventions and programs to improve the accessibility and quality of care; for planning and initial implementation of new data collection; and for additional evaluations of health and health care in the District.

(5) Use tobacco settlement funds to pay for projects that move ambulatory health care facilities closer to evidence-based design.

(6) Invest tobacco settlement funds in diversion reduction strategies including a collaborative and a “dashboard” with real-time information about diversion status and bed availability across hospitals.

(7) Delay allocation of a portion of tobacco settlement until an assessment of needs for mental health and dental care is complete, and to pay for ongoing investments in health care service delivery improvement.

Additional Policies to Ensure the Success of Capital Investments to Expand Capacity

- Modify Medicaid and Alliance reimbursement for primary care and outpatient specialty care providers.
- Enhance financial incentives for primary and specialty care providers who serve the underserved.
- Ensure the availability and affordability of medical malpractice coverage for specialists serving Medicaid/Alliance enrollees and the uninsured.

Complementary Policies for Improving Ambulatory Care

- Focus private and public purchasers on purchasing quality health care.
- Re-enfranchise District patients in the health care delivery system.
- Promote health education and facilitate health care navigation.
- Improve coordination of care between hospitals and physicians and between primary care and specialty care physicians.
- Improve ongoing data collection and monitoring of health and health care in the District, including data on the health and health care of children.

Recommendations for Improving Emergency Services

- Develop a robust system to continuously assess the quality of emergency services.

- Incentivize D.C. hospitals and D.C. FEMS to work together in a concerted effort to reduce hospital diversion and drop times.²
- Develop a system to track diversion and factors related to it.
- Create a city-wide diversion policy.
- Regionalize services to insure that patients are transported to hospitals that can meet their emergent needs.

Recommendations for Funding Allocation Levels

Table ES.1 below summarizes the recommended strategy for allocation of tobacco settlement funds.

Table ES.1: Summary of Recommended Allocation Strategy

| Recommendation | Expenditure | Level of Funding (approximate, in millions)* |
|-----------------------|--|---|
| 1 | Expansion of primary and urgent care CHC capacity | \$90 |
| 2 | Electronic health record adoption, RHIO, other health information technologies | \$24 |
| 3 | Information clearinghouse | \$0.5 |
| 4 | Pilots, data collection, and evaluation | \$8 |
| 5 | Evidence-based design for ambulatory care | \$2.5 |
| 6 | ED collaborative and dashboard | \$2 |
| 7 | Reserve for additional investments, including mental health, oral health | \$7.5 |
| Total | | \$135 |

**Figures are upper bounds where a range in the text is specified.*

ES.2 Gaps in Knowledge

Substantial gaps exist in what we know about the health of District residents and their health care. Filling these gaps will better enable the District to determine whether and how to invest in additional components of care for District residents. Our recommendations include the allocation of funds to ongoing evaluation activities. In what follows, we summarize a number of gaps in knowledge that largely reflect gaps in the data available.

- Little is known about children’s health status and access to care.

² Diversion is when a hospital can only accept the sickest “priority 1” patients. Drop time is the amount of time it takes for EMS providers and hospital staff to transfer a patient from pre-hospital to hospital care.

- Available information about insurance status among adults in the District is inadequate.
- Little is known about the quality of emergency medical services in D.C.
- Available data on mental health status and mental health and substance abuse service needs and use are extremely limited.
- Provider supply could be measured with more precision if reliable data on practice time in the District and population served, by type of insurance, were available.
- Differences in data formats and availability of Medicaid and Alliance data from managed care organizations make it less useful than it could be.
- The lack of timely analysis of data with which to monitor the health of the District should be addressed.
- We need clearer understanding about the role of private office-based providers in the delivery of care to Medicaid and Alliance enrollees and for the uninsured.

ES.3 Conclusion

The targeted infusion of tobacco settlement funds has the potential to improve considerably the robustness of the District’s health care system; and especially so if these investments are made in conjunction with auxiliary and complementary policies to increase the capacity, quality, and accessibility of health care services in the District, and activities to provide ongoing data and analysis to monitor progress.

However, “fixing” the health care delivery system in the District cannot be accomplished with one-time policies or investments. Rather, the District needs to maintain a long-term vision for the future of the health of District residents, and commensurate with that, to devote resources to systematically tracking health and health care outcomes among residents on a consistent basis. That effort must begin with the new investments that will be made with tobacco settlement funds.

It also bears repeating that the health of a population is the product of many factors. Our focus in this report on the health care delivery system is not meant to understate the importance of other factors on health outcomes. Systemic factors other than access to health care that give root to poor health outcomes in the city require additional, ongoing, and concentrated attention. These include the social environment (family structure, education, employment, crime), physical environment (air quality, water quality, access to healthy food, safe environments for physical activity), and the prosperity of District residents.

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1. Introduction

As a result of the recent settlement of tobacco litigation, the District of Columbia has more than \$200 million available to invest in the health of the city's residents. A Health Care Task Force, convened in 2006 by then-Mayor Anthony Williams, considered alternative ways to invest the available funds. The Task Force crafted several options that included investment in additional or improved hospital capacity, ambulatory care, and health care system improvement, but agreed that research was needed before final investment decisions could be made. The District contracted with the RAND Corporation to study health and the health care delivery system in the District. The goals of RAND's evaluation are to:

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In addition, we visited six clinics and discussed our findings and with a wide array of stakeholders, including representatives from DCHA, staff at individual hospitals and clinics, representatives from DCPCA, and the RAND Advisory Committee appointed by the Mayor and

City Council.³ In the following chapter, we provide a summary of findings from the new analyses.

The majority of the report addresses the third goal. Legislation passed in December 2006 allocated some of the tobacco settlement funds, including \$20 million for cancer prevention, \$10 million for anti-smoking efforts, \$10 million for chronic disease treatment, \$6 million for establishing a regional health information exchange, and \$2 million to buy new ambulances. Legislation passed in 2007 further authorized the use of \$79 million for a public/private partnership between the District and Specialty Hospitals of America for the revitalization of Greater Southeast Community Hospital (though some of those funds are in the form of a loan). We provide recommendations for the allocation of the remaining funds, totaling approximately \$135 million, which by legislation are limited to capital expenditures.

In what follows, we briefly summarize key findings from the interim report and new analyses conducted after the release of the interim report (Section 2), present guiding principles for our policy recommendations (Section 3), and provide recommendations (Section 4). Section 5 concludes. Detailed information about the methods and findings from new analyses appear in the appendices to this report.

³ Technical Appendix 7 provides a list of community contacts.

2. Summary of Findings

An interim report, available at http://www.rand.org/pubs/working_papers/WR534/, summarizes our findings on health, health care, and the emergency care system in the District of Columbia. In Section 2.1, we highlight key findings from the report. We group findings by topical area: health outcomes, access to health care, emergency care, and health care capacity and infrastructure.

We summarize findings from new analyses (conducted since the release of the interim report) in Sections 2.2-2.5. We describe findings from focus groups and interviews with community residents (Section 2.2) and providers (Section 2.3); characterize the health care safety net in the District (Section 2.4); summarize our estimates of the shortfall in primary care capacity (Section 2.5) and our strategy for identifying areas within the city that are in particularly high-need of additional primary or urgent care capacity (Section 2.6); and describe the results of our survey of District hospitals and analyses of FEMS data (Section 2.7).

2.1 Summary of Interim Findings

Health Outcomes

- Among adult District residents, more than one in four adults reported having hypertension, making it the most common among the chronic diseases reported.
 - Following hypertension, in order of prevalence, are asthma (10 percent), diabetes (8 percent), heart disease (5 percent), and cerebrovascular disease (3 percent). Over half of adult District residents qualify as overweight or obese, and nearly one-quarter qualify as obese.
- District-wide, mortality rates from heart disease and cancer were higher than those from other causes, although cancer and HIV/AIDS contribute the most to rates of premature mortality.
- Among District children, 36 percent between ages 6 and 12 were overweight, based on reported height and weight, while 17 percent between ages 13 and 17 were overweight.
 - 9 percent of D.C. children were reported to have a dental health problem.
 - Twelve percent were reported to have asthma.
 - 11 percent of parents reported that their children require services for a behavioral health issue.
 - 8 percent of children in D.C. were estimated to have a serious emotional disturbance (in 2000).
- Among adults, residents of Wards 7 and 8 had generally higher rates of chronic disease, poor health status, and premature mortality.
 - However, other areas of the city also have poor health outcomes. Among adults, Ward 5 had rates of hypertension and overweight/obesity that exceeded the city-wide average.

- Breast and prostate cancer incidence rates among adults were highest in Wards 4 and 8. The cervical cancer incidence rate was highest in Ward 7 and for colon cancer, Ward 6.
- Among children, health outcomes were better among those in Ward 3 than in other wards.
 - Asthma prevalence among children was highest in Ward 7, with 18 percent of children reported to have asthma of any severity.

Access to Health Care

- Rates of health insurance coverage among adults were higher in the District than in comparable cities, probably largely as a result of the Alliance.
- Despite a relatively high rate of insurance coverage, about 20 percent of District residents—children and adults—reported no usual source of care.
 - Lack of a usual source of care was greater among uninsured compared to insured adults.
 - Among adults, those living in PUMA C (which includes Wards 5 and 6) were least likely to report having a usual source of care among adults.
 - Among children, those with public insurance were less likely to report having a usual source of care compared to those with private insurance.
 - Among children, those living in PUMAs D (which includes Wards 7 and 8) and B (which includes most of Ward 4 and some of Wards 1 and 5) had relatively low rates of having a usual source of care, compared to other PUMAs.
- Rising rates of admissions for ambulatory care sensitive conditions⁴ over time among youth and adults aged 40-64 suggest worsening access to non-hospital-based care in recent years. Similarly, rates of emergency department visits for conditions that are primary care sensitive have risen for adults 18-64.
- Admissions for ambulatory care sensitive conditions were highest in 2006 among adults in PUMA D (which includes Wards 7 and 8) and among children in PUMA B (which includes most of Ward 4 and some of Wards 1 and 5).
 - Children in PUMA D (which includes Wards 7 and 8) had low rates of receiving any well child visits and any dental care. Children in PUMA C (which includes Wards 5 and 6) had low rates of receiving any well child visit, any acute care visit, or any dental care.
 - Adults in PUMA B (which includes most of Ward 4 and some of Wards 1 and 5) had low rates of having a check-up in the last two years compared to those in other locations.

⁴ These are conditions, such as asthma or heart failure, which can usually be treated by timely access to high quality outpatient care, thereby preventing the need for hospitalization.

- Rates of primary care use among individuals enrolled in public insurance programs are low, as are rates of specialty use among those with chronic conditions. Rates of inpatient hospital stays and ED visits are relatively high.
 - Among children enrolled in Medicaid managed care, rates of primary care use ranged from about one third among older children to just over half among children 0-5 years old. Between 2 and 4 percent had an inpatient stay during the course of a year. Among children 0-5 years who are covered by Medicaid, 42 percent had an ED visit during the year. Approximately one-quarter of children 6-17 years old who are enrolled in Medicaid had an ED visit during the year .
 - Among adults covered by Medicaid, 40 percent had an ED visit during a year period. Approximately 14 percent of adult Medicaid enrollees had an inpatient stay during a one-year period.
 - While the majority of individuals with chronic conditions who are enrolled by Medicaid or the Alliance have at least one visit to a primary care provider, few see a specialist with expertise in treating their condition. Between about half and three-fourths of these individuals use the ED at least once. Rates of inpatient hospital use among with those with selected chronic conditions (such as heart disease, HIV/AIDS, asthma or diabetes) ranged from 23 to 34 percent.
- From 2000-2006, rates of inpatient hospital use by D.C. residents remained fairly steady, while rates of ED use by District residents increased 7 percent between 2004 and 2006, with most of the increase driven by greater use among District residents ages 40-64.

Emergency Care

- Patients with serious, acute conditions, such as heart conditions, strokes, and major trauma, are sometimes transported to hospitals that are not best suited to meet their needs.
 - This is a particular problem for residents in Wards 7 and 8 transported to Greater Southeast and for some patients transported to Sibley.
- The overall demand for District emergency services has increased only modestly in recent years.
 - The volume of EMS runs was approximately eight percent greater in 2006 than 2000.
 - The number of ED visits appears to have increased between 2000 and 2001, although data from D.C. General, which are included in ED visit estimates, may be incomplete for these years. Since 2004, ED utilization at District hospitals increased 6.5 percent.
 - We were unable to fully explain the increase in diversion, which nearly doubled between 2000 and 2006.⁵
- There is little evidence of a single, unified vision of high quality pre-hospital and hospital emergency services and there are few available measures of the quality of emergency care in the District.

⁵ Diversion is when a hospital can only accept the sickest “priority 1” patients.

- Hospital and D.C. Fire and Emergency Medical Services leaders appear to know little of each other’s challenges.

Health Care Capacity and Infrastructure

- Overall primary and specialty care supply measures are not appreciably different from benchmark rates, but the distribution of providers does not appear commensurate with population need, and the availability of providers for vulnerable populations was difficult to measure.
- The average occupancy rate was at or below 70 percent at four hospitals in 2006, and was between 73 and 85 percent for three other hospitals. Only one hospital, Children’s National Medical Center, had occupancy rates at or near 100 percent.
 - In all areas of the city, residents appear to have a choice in which hospital they go to, as residents from every zip code (or ward) used a variety of hospitals.
 - The supply of hospitals and hospital beds in the District was in the range of other benchmark cities.
- About one-fourth of inpatient admissions among children and among adults 40-64 are ambulatory care sensitive. More than half of ED visits (that did not result in an inpatient admission) are classified as primary care sensitive across all age groups, and the percentage of ED visits that are PCS is highest among children.

2.2 Community Perspectives on Health Care in the District

We conducted focus groups to get the perspectives of community residents about their experiences obtaining health care in the District and their ideas for improving health services in the city. We summarize key findings in what follows. Appendix 1 provides additional detail on the focus group methods and results.

- Community residents believe that there are not enough providers, particularly for primary care needs.
- The limited availability of appointments and subsequent long wait times, even for a scheduled appointment, create significant frustration among community residents.
- Residents face multiple challenges getting pharmaceuticals/medications, often because of confusion regarding insurance coverage, difficulties with co-payments, and, for some, limited pharmacy locations.
- Many residents, and particularly those who reside in Wards 7 and 8, reported having to travel a significant amount of time to access outpatient care.
- Residents pointed to considerable gaps in the availability of outpatient specialty care.
- District parents reported that getting behavioral health care for their children was one of the most daunting problems.

- Residents reported that a lack of clear and up-to-date information on how to navigate the health care system limited their ability to obtain timely care and understand what is covered by insurance.
- Residents reported that enrollment issues with Medicaid and the Alliance were critical obstacles to continuing access to care.
- Residents felt they had limited options for places to go where they could receive high-quality care.
- Residents feel they have ‘no voice’ in the health care system, particularly in evaluating the quality of health service provision.
- Residents feel disengaged from the health care system reform discussions and would like to be “at the table” for decision-making.
- Residents offered their views on policies for improving health care services in the District, including ideas for increasing the supply of providers and services, improving the accessibility of care, and improving the quality of care.

2.3 Provider Perspectives on Health Care in the District

We held focus groups and conducted interviews with District health care providers with the goal of better understanding the experiences of District physicians—particularly, the factors affect their decisions about which patients to serve and where to practice—and to elicit providers’ ideas about policy options to improve the health care delivery system in the District. In what follows, we summarize key findings from the focus groups and interviews. Appendix 2 provides additional detail.

- Physicians indicated that the District is a high-cost practice environment, in part because the cost of medical malpractice insurance is high.
- Physicians agreed that poor Medicaid reimbursement rates and delays in getting reimbursement from Medicaid are key drivers limiting provider availability for underserved populations.
- Providers also indicated that high “no-show” rates among Medicaid patients limited their willingness to serve this population.
- Primary care physicians reported significant challenges in getting authorization and referral requests completed for Medicaid MCO patients and difficulties finding specialty care for their patients.
- Physicians also related that case management for Medicaid (managed care and fee for service) and Alliance enrollees is a significant problem.
- Physicians did not view Wards 7 and 8 as attractive practice environments.
- Providers suggested that an increase in Medicaid reimbursement rates (so that they are comparable to Medicare and commercial rates) and improved timeliness of reimbursement, are critical to improving provider participation in Medicaid.

- Providers proposed that case management for Medicaid and Alliance patients be improved, either through improved case management services offered through Medicaid MCOs or through enhanced reimbursement for case management services that providers offer.
- Providers recommended improving the referral process for Medicaid MCO and Alliance enrollees.
- Providers advocated for improving the physical space of safety net clinics.
- Providers identified several incentives that would encourage them to open their practice to accept Medicaid patients.
- Providers felt that a better system for information sharing between specialists and primary care providers was essential to their ability to provide better, more coordinated care.
- Providers considered malpractice reform paramount to improving the practice environment in order to attract physicians to the District.
- Providers advised that electronic medical record (EMR) investments would be worthwhile in a multitude of practice settings.
- Providers advocated for better integrating psychiatry services with primary care and for adjusting reimbursement policies to allow for greater options for Medicaid patients with mental health problems.

2.4 Overview of the District's Health Care Safety Net

Appendix 3 describes the funding, services, and providers that contribute to the health care safety net in the District. In what follows, we highlight key findings from our characterization of the District's safety net:

- In total, nearly \$2 billion was spent on District health care safety net services in fiscal year 2007 (FY07), with Medicaid accounting for \$1.4 billion, Alliance for \$130 million, federal Health Resources and Services Administration (HRSA) grants for \$69 million, and Medicare disproportionate share hospital payments (DSH) for \$59 million. Hospital shortfalls from caring for Medicaid/Alliance patients and uncompensated care net costs totaled \$270 million.
- Children and adults enrolled in D.C. Healthy Families constituted 72 percent of Medicaid enrollees but accounted for only 30 percent of Medicaid spending. Conversely, persons with disabilities accounted for 20 percent of Medicaid enrollees but 48 percent of Medicaid spending.
- In FY06, \$309 million, or about 25 percent of Medicaid expenditures for health care services, was paid in premium to three managed care organizations (MCOs) who purchased health care services on behalf of their Medicaid enrollees. We were unable to obtain information on MCO payment rates to providers and how aggregate payments are distributed across health care providers.
- Medicaid paid \$936 million, or about 75 percent of its health care spending, to providers on behalf of fee-for-service (FFS) enrollees. Among the non-hospital ambulatory care providers, 85 percent of payments flow to clinics, indicating their important role in providing safety net services in D.C.

- FFS payment rates for hospital services have not been adjusted for a number of years and may no longer be appropriate to assure access at a reasonable rate for efficiently delivered services. FFS payment rates for physician services are not regularly updated and are low relative to Medicaid physician payment rates in Maryland and Virginia.
- In total, there are 56 full-time-equivalent (FTE) filled National Health Service Corps NHSC positions slots in DC community-based providers. Of these, 38 are held by physicians (including one psychiatrist) and eight are held by nurse practitioners. Forty-eight of the 56 positions are at clinics operated by Unity Health Care. Forty-seven positions are held by individuals in their initial two-year commitment period; nine have extended their commitment beyond two years.
- Few community health centers (CHCs) are federally qualified health centers (FQHCs). In FY07, 5 District grantees received HRSA Section 330 grants totaling \$9.2 million. FQHCs in the District are: Columbia Road Health Service, Community of Hope, La Clinica Del Pueblo, Mary's Center for Maternal and Child Care, and Unity Health Care, Inc (which operates multiple sites).
- The DC Primary Care Association (DCPCA) received a grant from the District in 2005 for its Medical Homes initiative totaling \$21 million, which was intended to help leverage additional funds for capital investments in community health centers. However, financing even 50 percent of project costs, much less than the originally anticipated 80 percent, has been difficult to achieve even for the CHCs that in relatively good financial positions. Two key factors are (1) problems securing funds in the capital market and (2) the risk-averse culture of many of the governing boards of these organizations, leading to unwillingness to take on additional debt, and to caution in committing to land purchases without guaranteed financing for building as well.
- Private providers contribute substantially to the care of Medicaid and Alliance patients. Approximately 30 non-CHC based primary care providers each care for more than 500 Medicaid managed care patients. The percentage of Medicaid managed care enrollees with a non-CHC based primary care provider varies by MCO, with one plan reporting that the majority of Medicaid enrollees were enrolled with a non-CHC based primary care provider. By comparison, at another plan, at least two-thirds of enrollees were with a CHC-based primary care provider. Among fee-for-service Medicaid patients, 52 percent of office-based visits occurred in (non-CHC based) physicians' offices, with another 38 percent in hospital outpatient department or clinics.

2.5 Estimating the Primary Care Capacity Shortfall

Using data regarding utilization of primary care in Medicaid, and data on ambulatory care sensitive (ACS) inpatient admissions and primary care sensitive (PCS) emergency department visits, we estimated the shortfall in primary care visits among District residents. There is no national standard or established body of research on which to more definitively base these estimates. Hence, we estimated the shortfall using three different methods, each of which are approximate and by nature "back of the envelope." Appendix 4 provides details about the estimation methodologies and results. Each is briefly described below.

- The first method estimates the shortfall by translating the shortage in primary care provider FTEs calculated by Ross and Wright (2006) into an estimate of the shortage in the number of primary care visits.
- The second method estimates the shortfall by deriving the number of primary care visits needed to mitigate ACS hospitalizations and PCS ED visits among Medicaid and Alliance enrollees and the uninsured. We also conducted sensitivity analyses around those estimates.
- The third method estimates the shortfall in primary care visits by determining the additional visits that would need to occur among District Medicaid and Alliance enrollees in order to bring utilization up to national norms for publicly insured individuals. We also conducted sensitivity analyses around those estimates.

The median deficit is 225,000 to 253,000; sensitivity analyses yield lower and upper bound estimates of 145,000 to 471,000.

- Using the first method, we estimate a primary care visit shortfall of between 225,000 and 253,000 visits among the medically vulnerable population—including individuals enrolled in Medicaid or the Alliance, the uninsured and low income elderly individuals.
- The second method suggests a deficit of between 129,000 to 188,000 primary care visits among the uninsured and those enrolled in Medicaid or Alliance. However, this estimate does not include the population of people who receive no or insufficient care but who do not use ED or hospital services.
- The third method suggests Medicaid and Alliance enrollees need an additional 273,000 to 471,000 visits, although this method does not take into account the deficit in use of care among the uninsured.

2.6 Identifying High Priority Areas for Expanded Primary Care and Urgent Care Capacity within the District

In our previous analyses, we identified areas of the city with high and/or rising rates of PCS ED visits (for children and adults separately), and areas of the city with high/and or rising rates of ACS hospitalizations. Because population data for recent years for areas within the city were only available at the public use microdata area (PUMA) level, we analyzed ACS and PCS rates across PUMAs. However, we recognize that PUMAs are relatively large catchment areas and that there can be considerable variability in health care access within those areas. Consequently, we performed additional analyses to help us in identify high priority zip codes for expanded primary care and urgent care capacity for children and adults. Specifically, we identified zip codes with low rates of primary care and high rates of PCS ED admissions. Appendix 4 provides a detailed description of analyses and results.

To summarize, the zip code level analyses suggest that the following zip codes are high priority areas for expanding primary care capacity among children and adults:

- Children: **20002, 20005, 20010, 20011, 20019, 20020.**
- Adults: **20001, 20002, 20003, 20005, 20010, 20011, 20019, 20020, and 20032.**

Further, the analyses suggest the following zips are high priority areas for expanding urgent care capacity among children and adults:

- Children: **20002, 20010, 20011, 20019, 20020, 20032**
- Adults: **20001, 20002, 20010, 20011, 20019, 20020, and 20032.**

2.7 New Findings Related to Emergency Care Services

In what follows, we briefly describe the results of our survey of District hospitals and analyses of FEMS data. Appendix 5 provides detailed analyses and results.

- In general, the survey reveals that patients in DC EDs wait longer than patients in EDs in many other parts of the country.
 - In DC hospitals, the median amount of time a patient waits in the ED before seeing a physician is 90 minutes – nearly twice as long as the national average of 47.4 minutes.
 - The length of time for patients to be discharged from the ED and for admitted patients to be transferred to an inpatient unit in the hospital are longer than the national average at all DC hospitals. The median length of time from ED triage to ED discharge in DC hospitals is 3.7 hours, more than 25 percent longer than the national average of 2.9 hours (Nawar, Niska and Xu, 2007).
 - The average ED boarding time in DC hospitals ranges from 2 hours to 8 hours, with a median of 4 hours.⁶ The DC median is slightly less than the average boarding time of 4.6 hours at U.S. hospitals reporting over-capacity ED volume.
- The percent of “leave without being seen” (LWBS) patients at seven DC hospitals ranges from 2.3 to 10.0 percent and the median LWBS rate for these hospitals is 3.2 percent, compared to the national average of 1.3 percent.
- DC hospitals reported that hospital-wide patient flow issues were the main contributing factors to the increase in recent years in hospital diversion hours; in particular, they identified a lack of critical care and general acute care beds, ED crowding, and nursing shortages as the principal reasons for diversion and closure.
- Overall, the hospitals indicate that they are operating, on an annual basis, at about 36 percent over capacity. Three of the eight hospitals plan to double ED capacity over the next five years and another three plan to grow by nearly that amount. Greater Southeast Community Hospital also plans to expand its ED.
- Of the six hospitals that answered survey questions on hospital occupancy, four reported that occupancy remained below 90 percent throughout 2006. Two hospitals experienced hospital-wide occupancy rates above 90 percent for almost half of all days in the year.

⁶ Patients are considered “boarders” once they have been admitted to the hospital, but have not been moved from the ED to an inpatient bed

- Nurse vacancy rates vary widely across DC hospitals. The median nurse vacancy rate within DC emergency departments is 10 percent. The median hospital-wide nurse vacancy rate was 13.6 percent. The median hospital-wide nurse vacancy rate in DC is well above the national average of 8.5 percent, as reported in the 2006 American Hospital Association survey.
- Five hospitals report that they routinely collect data on patient flow times in the ED, including wait time to see a physician, length of stay in the ED for discharged and admitted patients, and patient boarding time. A sixth hospital reports routinely collecting data on all but boarding times. Currently, most hospitals make little use of the collected data. Two hospitals did not answer questions on data collection.
- More than half of the EDs in the District report that they have significant difficulties obtaining psychiatric care for their patients.
- Five hospitals report that they routinely collect data on patient flow times in the ED, including wait time to see a physician, length of stay in the ED for discharged and admitted patients, and patient boarding time. A sixth hospital reports routinely collecting data on all but boarding times. Currently, most hospitals make little use of the collected data.
- Performance on acute life support (ALS) response times for critical medical dispatches has improved steadily over the period 2002-2007. Performance on response times for first responders has risen more slowly.
- In the past two years, there has been some progress towards shorter drop times in the District, with the majority of improvement occurring in basic life support (BLS) units. This may indicate that ambulances are able to transfer low acuity patients into hospital care faster than potentially higher acuity patients.
- Drop times show significant fluctuations by the time of day. The longest drop times occur during the late afternoon, from 2pm to 5pm. Two large dips in drop times occur at 7am and 7pm, which coincides with shift changes at DC FEMS and some hospitals. This pattern of drop times by time of day has been consistent over several years.
- EMS transports from nursing homes to hospitals comprised 5.5 percent (4,670) of all EMS transports in DC in 2007. This is up from 2002, when the share of nursing home transports was 4.5 percent.
- DC FEMS data shows that three-quarters (76.2 percent) of the runs made by EMS on behalf of District residents are for individuals using the system only once during a two-month period. Calls from individuals with the most frequent use of the system, 11-28 calls per person over the two-month period, made up only 2 percent of all EMS calls.

3. Guiding Principles for Recommendations Regarding Investment of Tobacco Settlement Funds

In the process of translating our findings into recommendations for the investment of tobacco settlement funds, we developed several general recommendations, or “guiding principles” that served as the foundation for our more detailed recommendations (as summarized in Section 4).

Guiding Principle 1: Focus tobacco fund investments on improving ambulatory care.

The findings make clear that access to all forms of ambulatory care—primary, specialty, and urgent care—is a problem, particularly for individuals covered by Medicaid, enrolled in the Alliance, or who are uninsured. Ambulatory care sensitive hospitalizations and primary care sensitive ED visits have been rising since 2004 and rates of use of primary and specialty care among Medicaid and Alliance enrollees are surprisingly low. At the same time, the District has virtually no urgent care capacity. Further, inpatient hospital capacity does not appear to be at saturation, investments in ambulatory care are likely to mitigate avoidable and preventable hospital use, and a substantial portion of the tobacco settlement fund has already been invested in hospital improvement (specifically, at Greater Southeast Community Hospital). Thus, our first recommendation in Section 4.1 focuses on expanding ambulatory care capacity. Nonetheless, emergency department overcrowding and ED diversion in the District are substantial issues, and reducing ED use by improving the accessibility and effectiveness of primary care, specialty care and urgent care is not a panacea. As described in Appendix 5, a range of solutions have been tried and tested to improve emergency care. Recommendation 6 in Section 4.1 and Section 4.4 focus specifically on emergency services.

Guiding Principle 2: Capital investments should build ambulatory capacity—but facility investments alone, without complementary changes to build human resources and improve efficiency, will be insufficient to increase capacity.

Ambulatory care capacity constraints reflect not only a shortage of physical space in which care can be provided, but a shortage of physicians and other providers who are willing and able to provide care to Medicaid and Alliance enrollees and the uninsured. Plans for new or expanded physical space must be accompanied by plans not only to increase the availability of providers, but to sustain that increase. New policies and investments aside from capital expenditures are crucial for ensuring an adequate supply of providers to serve Medicaid and Alliance enrollees and the uninsured. We highlight these in Section 4.2.

Guiding Principle 3: Capital investments should not only expand ambulatory care capacity, but also improve the quality and accessibility of ambulatory care.

Current ambulatory care capacity is a key factor underlying the problems District residents have accessing care; however, problems with ambulatory care are diverse and extend well beyond just the capacity of the system. Capital investments must also address issues other than capacity, and must build the quality and accessibility of ambulatory care. Thus, our recommendations in Section 4.1 describe not only investments to increase capacity, but also investments designed to improve the quality and accessibility of care. Further, we

describe complementary (non-capital) policies that are important for building the quality and accessibility of ambulatory care in Section 4.3.

Guiding Principle 4: The targeted infusion of tobacco settlement funds can improve the robustness of the District’s ambulatory care system; but other systemic factors that give root to poor health outcomes and suboptimal health care among District residents require additional, ongoing, and concentrated attention.

There are two important points here: First, there are a broad range of issues that need to be addressed to improve health care for District residents, some of which capital funds can address, but some must be addressed through other means and through the actions of multiple stakeholders, governmental and non-governmental alike. Second, health care is a determinant of health, but the contributions of poverty, education, crime, pollution and a range of other factors cannot be overlooked as the District seeks to improve the health of its residents.

4. Recommendations

This section summarizes specific policy recommendations for the allocation of remaining tobacco settlement funds (Section 4.1); articulates policies needed to ensure the success of tobacco settlement fund investments (Section 4.2); describes complementary policies needed to improve ambulatory care (Section 4.3); and summarizes additional policies related to improving emergency care services (Section 4.4). Section 4.5 provides recommendations regarding levels of funding for investments.

4.1 Recommendations for Investment of Tobacco Settlement Funds

As described, some of the tobacco settlement funds have already been allocated, including \$20 million for cancer prevention, \$10 million for anti-smoking efforts, \$10 million for chronic disease treatment, \$6 million for establishing a regional health information exchange (RHIO), \$2 million to buy new ambulances, and \$79 million for the revitalization of Greater Southeast Community Hospital (some of which is in the form of a loan).

The remaining settlement funds, totaling approximately \$135 million, are largely restricted to capital expenditures (up to approximately \$12 million can be distributed as a grant). We provide seven primary recommendations about the types of investments that should be made with tobacco settlement funds. Where necessary, sub-recommendations clarify the primary recommendations.

Policy Recommendation 1: Use tobacco settlement funds to expand the capacity of community health centers.⁷

Access to ambulatory care—including primary care, specialty care, and urgent care—is a problem, particularly for individuals covered by Medicaid, enrolled in the Alliance, or who are uninsured. As summarized in Section 2.4 (and more fully described in Appendix 3), community health centers (CHCs) play a vital role in the District’s health care safety net. We recommend investing tobacco settlement funds to expand the capacity of community health centers and improve the physical space of existing facilities. These funds efficiently build capacity by capitalizing on existing infrastructure—in some cases the actual physical plant and in other cases the know-how of organizations currently operating CHCs. Several specific features of these expenditures are important and are delineated in the following sub-recommendations.

⁷ By community health center (CHC) we mean any ambulatory care facility that provides first contact, coordinated, comprehensive, continuous outpatient care for all regardless of their ability to pay. We do not restrict our definition of a CHC to federally qualified health centers or look-alikes.

Recommendation 1.1: Target expanding primary care capacity in CHCs by roughly 200,000 visits.

As summarized in Section 2.5 (and in more detail in Appendix 4), our best estimates suggest that the District has a deficit of between 253,000 and 273,000 primary care visits annually. While CHCs are an integral component of primary care capacity for Medicaid, the Alliance, and the uninsured, not all of the increase in primary care capacity needs to come through CHC expansion; indeed private office-based providers also play a key role in safety net capacity (see Appendix 3). If we assume that 80 percent of capacity expansion is achieved via CHC expansion, then CHCs need to accommodate an additional 202,000 to 218,000 visits.

Medical Homes projects may be a natural way to achieve the planned expansion, and the District should consider additional investment specifically in these projects. In addition, Reservation 13 is slated for an extensive renovation, and the site currently houses an ambulatory care center that is one of the few places that Medicaid and Alliance patients can access specialty care. Maintaining and potentially expanding the existing ambulatory capacity on Reservation 13 needs to be part of any renovation plan for the land.

There are various means through which the capacity of private office-based providers can be expanded and our recommendations speak to these, including by incentivizing participation in the Medicaid and Alliance networks with better reimbursement rates (see Section 4.2), subsidies for electronic health record adoption for providers who commit to serving the underserved (see Recommendation 2), and loan repayments or subsidies for medical malpractice insurance premiums (see Section 4.3).

Recommendation 1.2: Invest in community health centers that expand capacity in high-need locations.

The findings from the interim report along with the zip code level analyses described in Section 2.6 (and more fully in Appendix 4) suggest a particular need for primary care capacity expansion for children in zip codes 20010 and 20011 and for adults in 20019, 20020 and 20032. Other high priority zip codes for children include 20002, 20005, 20019, 20020. For adults, other high priority zip codes for primary care expansion include 20001, 20002, 20003, 20005, 20010, 20011.

Figure A4.2 in Appendix 4 maps high priority areas for primary care against existing ambulatory care services. Figure A5.1 in Map Appendix 5 maps high priority areas for primary care against planned expansions through the DCPCA's Medical Homes projects. We note that—given its planned renovation, proximity to public transportation, proximity to high need areas, and familiarity to residents as a place to receive health care services—Reservation 13 is one logical place for expanding ambulatory care.

Recommendation 1.3: Invest in CHCs that establish, and commit to maintaining, urgent care capacity (including after-hours and weekend capacity) in at least two locations.

Our interim report shows that more than half of ED visits in 2006 were primary care sensitive (PCS) and approximately one-fourth of those were non-emergent. Reducing the use of the ED for non-emergent care is one means through which ED overcrowding can be mitigated.

Urgent care services are less costly than ED services (Warren and Isikoff, 1993), and their availability has been shown to reduce non-emergent use of the ED (Merritt, Naamon, and Morris, 2000). Urgent care availability is extremely limited in the District.

We recommend incorporating urgent care capacity into existing or new primary health care sites. By urgent care, we mean care that is available during the day, after hours and on weekends for acute, non-emergent problems. In addition, urgent care needs to be able to provide basic tests and procedures necessary to resolve the patients' problem.

We believe that co-locating urgent care with or within primary care sites is important for several reasons. First, co-location increases the potential for continuity of care between the urgent and primary care settings. Second, co-location with primary care is important for re-shaping individuals' care-seeking patterns, and, specifically, to cultivate the instinct to seek out care in a non-hospital setting. Additional urgent care capacity in a hospital setting could have negative "spillover" effects on ED use and is unlikely to help change care-seeking behaviors in the long run. Co-locating urgent care capacity with primary care also capitalizes on the familiarity of the location and health services to the local population.

Tobacco settlement funds should be used to expand urgent care capacity through expansions of operating hours at community health centers, physical space, and available equipment. A viable urgent care center needs on-site laboratory and x-ray services, and the facility to perform simple procedures (such as simple suturing and suture removal, splinting and casting, and incision and drainage of abscesses) at a minimum. Urgent care capacity could be added to existing primary care sites, or be included as an addition to a planned new site.

Based on our analyses of the timing of ED visits from selected hospitals (see Appendix 5), the highest priority times for expanding capacity, both weekend and weekday, are 9 am through 8 pm. Weekday capacity during normal clinic operating hours requires the availability of urgent care on a walk-in basis; weekday evening (5 to 8 or 9 pm) and weekend urgent care capacity (9 am to 8 pm) require that clinics be open after normal business hours. Urgent care capacity should be located where rates of primary care sensitive hospitalizations are high. Our analyses (see Section 2.6 and Appendix 4) suggest that zip codes 20010 and 20011 are high priority areas for urgent care capacity for children and for adults, 20019, 20020, and 20032. In addition, these zip codes are also areas that appear apt to benefit from additional urgent care capacity: for children, 20002, 20019, 20020, 20032; for adults, 20001, 20002, 20010, and 20011. Reservation 13 is one of several logical place for expanding urgent care capacity, given its pending renovation and proximity to high need areas.

Recommendation 1.4: Prioritize expansions to CHCs that propose to increase the availability of specialty care through plans for additional exam room space, investments in equipment to allow for specialty care services, and planned personnel arrangements with local hospitals.

Access to specialty care was identified as a key issue both in our analyses of MCO claims data (which indicated that few Medicaid and Alliance enrollees with chronic conditions were receiving specialty care) and in our focus groups with community residents (who reported significant problems with getting in to see a specialist) and with providers (primary care providers reported problems trying to get specialty care for their Medicaid and Alliance patients). In addition, hospitals reported having difficulties obtaining specialty care for patients in the ED,

with the fields of neurosurgery, ophthalmic surgery and urology leading in terms of difficulty. Many specialists are unwilling to take call in the ED since treating patients in the ED may not be well-reimbursed.

One previously proposed way to increase access to specialty care (at the same time as primary and urgent care) is to create a comprehensive health center that co-locates a variety of health care services, as well as possibly social services and other health-related amenities such as an exercise facility. We spoke with national experts, as well as providers and community residents about the notion of a comprehensive health center (or “healthplex” or “medical mall”), and specifically about one that could potentially be located on the grounds of the former D.C. General hospital (Reservation 13), which is in the planning stages for redevelopment.

We identified both positive and negative aspects of this model for ensuring access to ambulatory care, based on our interviews with residents and providers and investigation into similar models elsewhere. For example, INOVA has a “healthplex” in Virginia, though it serves primarily privately insured patients, and a “medical mall,” owned and operated by a foundation, was established in Jacksonville, Mississippi at an abandoned shopping center.

Some potential benefits of this kind of comprehensive health service center are that it could:

- provide “one-stop shopping” for health care services which would reduce the time and travel costs of obtaining care;
- be a signal of the District’s commitment to underserved areas;
- offer incentives for specialty care physicians to serve the uninsured/Medicaid patients/Alliance patients—if financial incentives such as free or discounted rent were provided;
- be an engine of community/economic revitalization; and,
- be a potential for model for other urban areas.

On the other hand, concerns articulated included:

- The potential for an expensive failure, if patients and/or providers were not attracted to use health care/serve in the location;
 - Many residents in Wards 1 and 4, for example, perceived the trip to Reservation 13 as “too long” to be a place they would frequent for care.
 - Other residents preferred a greater availability of health care services in places closer to them—not co-located services at a location farther from them.
 - Residents said that the location would have to serve a mix of privately insured and publicly insured patients for it to be attractive to them to travel farther.
 - Providers indicated they would be unlikely to come unless reimbursement for their services through Medicaid/Alliance were improved and other financial incentives such as loan repayment and subsidized or free rent were available.
- The need to have the right organization, ownership, oversight, management, and long term plan for sustainability in order to ensure success;

- The possibility that the place would become stigmatized as a place for the poor and the uninsured as opposed to becoming a place that would serve a mix of payers; and,
- The need to fix other, ongoing and systemic problems before attempting something on such a large scale (e.g., reimbursement policies, medical malpractice policies).

Alternatives to building a new facility to house a range of primary and specialty medical services include:

- Increasing the supply of specialty care providers who provide part-time services at CHCs by expanding the physical space available for the provision of specialty care, ensuring the availability of exam rooms that are adequate for the provision of specialty care (such as an ophthalmologic exam room), addressing the medical malpractice issues for such providers, and supporting the formation of arrangements between hospitals and CHCs;
- Increasing the supply of specialty care providers who see at least some Medicaid patients with higher reimbursement rates, more timely reimbursement, and other financial incentives such as loan repayments, funds to support evidence-based design and subsidies for electronic health records or medical malpractice insurance premiums;
- Decreasing the no-show rate (and thus increasing the propensity of specialists to provide care) by instituting automated voice reminders about appointments for patients with Medicaid/Alliance;
- Decreasing the demand for specialty care services by providing the infrastructure and reimbursement mechanism to promote “e-referrals”;
- Piloting other programs or interventions to improve the availability of specialty care.

In light of the substantial concerns voiced about the “healthplex” model, including the overarching concerns about its financial sustainability if rents were to be free or subsidized and the District’s ability to effectively oversee whichever organization might run the medical center, we considered a combination of other alternatives for increasing the availability of specialty care preferable to the establishment of a single comprehensive health center. Recommendation 1.4 refers to the first of these alternatives—ensuring that specialty care is planned for in expansions to CHCs. However, additional and complementary policies, such as changes to reimbursement rates and other financial incentives are required to successfully increase the availability of specialty care, as described in the other recommendations and in Sections 4.2 and 4.3.

Recommendation 1.5: To the extent possible, the expansions should leverage other funding.

District funds can, and should to the extent possible, be used to leverage other sources of funding for CHCs. Capital investments made by the District to increase primary and urgent care capacity should be used in concert with funding from other sources such as loans from traditional sources (such as the New Market Tax Credit) as well as other grants and philanthropic donations.

As described in Section 2.4 (and Appendix 3) the Medical Homes initiative originally envisioned health centers receiving loans or grants to finance on the order of 80 percent of project costs. However, raising this percentage of funding has proven more difficult than expected. Any additional investment in Medical Homes projects should still require co-funding from the health

centers, but a more realistic goal for the current Medical Homes projects appears to be in the range of 25 percent co-funding.

Co-funding is preferable, as well, for expansions that are not Medical Homes projects.

Further, District funds can be used to leverage federal funds. CHCs that are FQHCs have access to federal dollars through “Section 330” grants, as described in Section 2.4, and these funds can shoulder a substantial portion of the costs of operating a health center. A level of priority should be placed on assisting non-FQHC CHCs along the way to FQHC certification and to expansions of the existing FQHCs.

Policy Recommendation 2: Use tobacco settlement funds to support greater adoption of health information technology.

Recommendation 2.1: Subsidize the adoption of electronic health records by hospitals and by providers who serve a substantial number of individuals who are enrolled in Medicaid or the Alliance or who are uninsured.

At the most basic level, electronic health records convert a paper chart to an electronic one, but systems for tracking patient medical information electronically come in a variety of forms.⁸ Some are stand-alone systems for a particular physician’s office or provider organization with no inter-operability, while others are part of a larger network that allows multiple providers treating the same patient access to a common set of information. Some include “computerized physician order entry” (CPOE), which allows for electronic prescribing of drugs and lab tests. Others include clinical assists to remind physicians about guideline appropriate preventive care or help with disease management for chronic conditions.

Research has shown that widespread adoption of EHRs has the potential to improve efficiency (e.g., reduced waste, less duplication of medical tests and procedures) and safety (e.g. fewer prescription drug errors, more clinically appropriate care) (Hillestad et al., 2005). Further, EHRs offers providers the ability to track patient population level statistics to better target individuals for broad interventions or better plan for appropriate service provision. Mongan, Ferris, and Lee (2008) list EHRs as one of four policies with the greatest potential for reducing medical expenditures, with the lion’s share of savings stemming from improved coordination among health care providers and improvements in clinicians’ use of tests and treatments.

However, EHR adoption has been relatively slow; a key factor is that the potential savings from EHRs accrue largely to payers and patients, and not to the physicians or organizations who shoulder the substantial costs of health information technology investments. The rationale for government investment is “substantial” and early intervention will provide the most leverage (Hillestad et al., 2005).

Given the potential for cost savings and improvement to quality and patient safety and because of the divergence between the parties who pay for the costs of EHR versus who accrue the

⁸ An EHR differs from a personal health record, which is owned and maintained by a patient, as opposed to payers or providers.

benefits of the system, we recommend that the District invest tobacco settlement funds in supporting the adoption of EHRs by hospitals and other health care providers. In addition to the potential cost savings and improvements to patient quality and safety, research has shown that physician recruitment and retention may be improved by establishing and sustaining an environment with attractive features such as access to computer information networks (Lipson and Lamphere, 1995).

The District has already begun to invest in EHRs among the CHCs, including \$5m for implementing an EHR (eClinicalWorks) in six clinics: Whitman-Walker, SOME, La Clinica, Mary's Center, Family and Medical Counseling Services, and Bread for the City. Unity clinics have also independently begun the process of adopting eClinicalWorks. However, a number of CHCs (including Community of Hope, Family Health and Birthing Center, Columbia Road, and Carl Vogel Center) have not yet begun the transition to EHR, and many private providers serving Medicaid and Alliance enrollees have also not begun or completed a transition to electronic systems.

Non-CHC providers are an essential element of current capacity for the Medicaid enrollees in particular, and to a more limited extent for Alliance and the uninsured population. New York has established a precedent for investing in EHR for local providers serving in underserved communities, with the Primary Care Information Project (see Technical Appendix 5).

We believe that the District should support EHR adoption for physicians in non-CHC settings who currently provide care to some threshold level of patients, in the range of 100 or more per year. In addition, the District may want to consider encouraging additional providers to increase their Medicaid/Alliance patient population by offering EHR support for providers that achieve this level going forward. Finally, the District may want to consider a separate threshold for specialists that provide care to Medicaid and Alliance patients. Additional understanding of the distribution of specialty services provided by specialists is required to set an appropriate threshold.

Given the adoption of eClinicalWorks by the majority of local health centers, the District should consider prioritizing adoption of this specific EHR by other clinics and office-based providers.

A note of caution is that it is essential that EHR adopters recognize the substantial cultural change and change in work flow that must accompany the transition to EHR. Recent studies have highlighted the importance of workflow adaptation, staff communication, and strategic implementation to the success of EMR adoption (Han et al., 2005; Gestenland, Nebeker, and Reed, 2006; Garg et al., 2005; Koppel et al., 2005; O'Connor et al., 2005).

We also recommend providing capital funds to hospitals to support their adoption of EHRs. Some of these funds should be one-time, non-repayable disbursements. The level of EHR support to a particular hospital should reflect its commitment to caring for the underserved, as measured by the amount of charity care provided and/or the level of care provided to Medicaid and Alliance patients. In addition, disbursements should be made contingent on each hospital's commitment to one or more of several initiatives, such as (1) ER diversion program(s), including for example, community health workers; and (2) improving continuity of care by ensuring notification of patients' primary care doctor or health center upon admission and providing a discharge summary within 48 hours of discharge.

Recommendation 2.2: Invest in sustaining the regional health information organization (RHIO).

EHR investments need to take place in the context of a regional health information system, which the District has already begun to invest in, that establishes the technical, logistical, and legal foundation for connections across independent EHRs. More specifically, the RHIO's tasks include identifying a technology and network infrastructure; defining standards for data sharing, defining educational and business strategies that ensure appropriate use of greater health information technology and the sustainability of the effort, and identifying strategies to create and enhance information exchange. While the District has allocated \$6m in tobacco settlement money to support the RHIO through 2010, the RHIO requires: (1) additional resources to fully fund the RHIO through 2010, and (2) continuing support after 2010 to ensure the RHIO's sustainability, until such time as it becomes self-sustaining (e.g. through reimbursement rates or a 'tax' on paid claims).

Recommendation 2.3: Consider investments in other promising health technologies.

A number of promising health technologies are gaining evidence-based success. One example is automated voice reminder (AVR) technology, which can be used for automated reminders of scheduled doctors' visits (which may assist with the substantial no-show rate among Medicaid and Alliance patients that discourages providers from serving these populations), reminders to provide Medicaid or the Alliance with appropriate paperwork to maintain enrollment, and information or reminders related to disease management, such as for diabetes or asthma. Another example is health technology to support "e-referrals," where primary care physicians can electronically transmit patient information (such as lab and radiology results) to a specialist for their review and recommendation about treatment plan or the need for an in-person consultation. We return to this in Section 4.3.

Policy Recommendation 3: Use tobacco settlement funds to invest in establishing a health care provider information clearinghouse

One of the barriers to care cited by District residents who were part of our focus groups is the lack of available information about which primary care providers are currently accepting new patients (as new enrollees choose a PCP or current enrollees seek to switch a PCP) and what the immediacy is of their available appointments, as well as which specialists are currently accepting new patients and the immediacy of their available appointments. Provider directories, whether from Medicaid or private MCOs are of limited value because provider availability, particularly to accept new patients, changes frequently. As described in Section 2.2, residents explained how they have asked for referrals to other clinics if there are significant appointment lags—but with limited success. Further, residents shared that they often had outdated information about providers who accepted their insurance and the services available at particular health centers. In addition, they did not have comprehensive information on the processes to follow when seeking follow-up care, including specialist services.

One model to improve information availability is a centralized information clearinghouse, accessible on-line or through a toll free telephone call. Capital funds should be used to pay for planning and start-up costs associated with the clearinghouse; contracting MCOs could then assume responsibility for funding its operation.

The clearinghouse would include a variety of functions such as:

- Provision of up-to-date information regarding the availability of primary and specialty care providers for new/current Medicaid patients.
- Provision of information about the language capabilities of providers, as well as office hours, location, parking, and the like.
- The capacity for individuals to make appointments through the system. Offices and CHCs are likely to be reluctant to give up control over their appointment scheduling, but a system operator would place the call, make the appointment, and call the patient back to confirm. This is a service that some CHCs provide (for example, Mary's Center, for specialty appointments) but the information clearinghouse would universalize the availability of this service. The service is critical for patients who have limited English proficiency and may have difficulty calling for an appointment, or who have no or limited access to a phone during normal business hours.
- An automated reminder function for appointments made through the clearinghouse and which could enable patients to cancel or reschedule visits if needed, potentially alleviating some of the patient 'no-show' challenges.

The clearinghouse would not only facilitate access to primary and specialty care for enrollees, but also would allow the MCOs (and thereby the District) to monitor and track provider availability, at least for the subset of enrollees who utilize the service. The clearinghouse would also offer the future potential for enrollees to obtain data about various providers related to current/former patients' satisfaction with care.

The toll free line, 1-800-Dentist is a successful example of this type of service. Callers can obtain information, office hours, contact information, treatments offered, office conveniences, dentist credentials, office mission and philosophy, a detailed map and patient testimonials.

Policy Recommendation 4: Use tobacco settlement funds for implementing and evaluating interventions and programs to improve the accessibility and quality of care; for planning and initial implementation of new data collection efforts; and for additional evaluations of health and health care in the District.

We recommend that the District invest a portion of the tobacco settlement money in pilot testing and evaluating access and quality improvements by hospitals, CHCs, or other providers in the District. We know from previous research that there is no single "one-size-fits-all" design to changing undesirable care-seeking behavior or improving patients' ability to manage their chronic disease, or, on the provider side, to improving the workflow and efficiency in an office setting. The best approaches to improving health care are sometimes specific to local

populations depending on their age, gender, ethnicity, location and other characteristics. We recommend funding the planning, piloting, and evaluation of interventions aimed improving the accessibility and quality of care.

The District should also considering additional investment in strategies that divert clients from ERs and link them to medical homes. One promising possibility is a “nurse advice line” that patients can call with medical questions and that has proven successful in other locations. These strategies can be employed with all District residents, including those who are privately insured.

One way to operationalize this recommendation is to co-fund or match grants that organizations receive from the Institute for Healthcare Improvement or other similar philanthropic organizations. Co-funding increases the chances that a local health care organization will be able to win a grant from an outside funder, while at the same time freeing the District from the burden of peer-reviewing applications to determine the promise of proposed quality improvement interventions and from sole oversight of funded projects.

In addition, funding should be used to support planning for and the initial implementation of new data collection. A pressing need is more and more timely information on children, and an opportunity exists to obtain this information through the Behavioral Risk Factor Surveillance System (BRFSS) Child Health Assessment and Monitoring Program (CHAMP). Eligible children for the CHAMP survey are drawn each month from the BRFSS telephone survey of adults. One child is randomly selected from the household and the adult most knowledgeable about the health of the selected child is interviewed in a follow-up survey. The random child selection process and population-based weighting allows for valid and reliable health and risk estimates for this population.

Finally, the District has invested in enriching its understanding of the health and health care of District residents. But additional assessment and evaluation is needed in some areas. Two such areas are (1) the behavioral health status of District residents and their access to behavioral health care and (2) oral (dental) health status and access to dental services. An additional area for continued information gathering and study is the health of the incarcerated population (and its public health implications). In addition, more needs to be understood about what role private providers (not affiliated with CHCs) play in meeting the health care needs of Medicaid or Alliance patients or the uninsured to determine whether additional investments in the supply of these providers (such as tax credits for providers who serve a substantial number of Medicaid enrollees) may be warranted.

Policy Recommendation 5: Invest tobacco settlement funds in projects that move ambulatory health care facilities closer to evidence-based design.

We recommend that the tobacco settlement funds be used to fund projects that are evidence-based design improvements to the physical appearance and patient flow in ambulatory health care facilities, including CHCs, hospital-based outpatient clinics, and private offices of providers who serve a substantial number of Medicaid/Alliance enrollees or the uninsured. (As with the subsidy for EHR adoption, the threshold may need to be set differently for specialists compared to primary care physicians).

In our focus groups and interviews, providers and community residents alike pointed to the quality of the physical space as a deterrent to providing care or seeking care. A substantial body of research demonstrates that the physical environment of a health care facility is tightly linked to patient health and satisfaction and to staff outcomes such as effectiveness, productivity and morale. Ulrich et al. (2004) systematically reviewed hundreds of studies and document the impact of a range of design characteristics, such as reduced noise, improved lighting, better ventilation, supportive workplaces, and improved facility layout. While much of the research focuses on hospital design, the principles of “evidence-based design” (EBD) are important for other health care facilities as well.

“EBD refers to a process for creating health care buildings, informed by the best available evidence, with the goal of improving outcomes and of continuing to monitor the success of designs for subsequent decision-making. EBD is not about hospitals that are simply nicer or fancier than traditional hospitals. Rather, the focus of evidence-based design is to create hospitals that actually help patients recover and be safer, and help staff do their jobs better. EBD is a process for creating health care buildings informed by the best available evidence concerning how the physical environment can interfere with or support activities by patients, families, and staff, and how the setting provides experiences that provide a caring, effective, safe, patient-centered environment. Many of the improvements suggested by EBD are only slightly more expensive than traditional solutions, if they are more expensive at all.” (Ulrich et al., 2004).

Key principles of EBD particularly relevant for community health centers and other ambulatory health settings include:⁹

- Reduce noise: Higher noise levels are associated with stress and staff burnout, and reducing noise levels in health care settings is associated with a reduction in perceived work demands, an increase in workplace social support, and improved quality of care for patients. Likewise, higher noise levels are associated with higher levels of stress, blood pressure and heart rates in patients.
- Ensure the physical setting follows the work flow: A physical environment that is closely aligned with work patterns can improve work flow, reduce waiting times, and increase patient satisfaction.
- Modify the physical environment to ensure patient confidentiality: Reception areas, for example, should be configured to ensure that other patients cannot overhear telephone conversations or interactions between the health care staff.
- Incorporate positive distractions: Positive distractions are features that have been found to reduce stress such as music, art and nature.
- Design waiting rooms to encourage social interaction: In our focus groups, District residents cited a lack of information about the quality of providers and patients’ experience with providers and limited sharing of information with neighbors and community members about how to best access care and from whom. The focus groups became impromptu networking sessions for participants, who shared information about

⁹ See Ulrich et al (2004) for a comprehensive review and complete reference list.

how and where to obtain services for children with ADHD, for example. The arrangement of seating can enhance social interaction (e.g., small groups of movable, comfortable chairs). Arranging seating side-by-side along room walls or in rows inhibits social interaction.

- Improve the aesthetics of waiting areas, exam rooms, and other patient-occupied spaces: A comfortable, aesthetically pleasing, and informative environment (through color scheme, furniture, floor covering, curtains, and reading or informational material, for example) can relieve stress and increase patient satisfaction.

Policy Recommendation 6: Invest tobacco settlement funds in diversion reduction strategies including a collaborative and a “dashboard” with real-time information about diversion status and bed availability across hospitals.

Our findings show that there is no coordinated system of emergency care in the District or recognition of the need for one. We saw little evidence of a single, unified vision of high quality pre-hospital and hospital emergency services. Additionally, we were struck by the lack of innovation in District hospitals to manage emergency department (ED) crowding.

We recommend that the District allocate funds to help support a hospital-based crowding reduction collaborative that focuses on implementation and evaluation of strategies used to improve patient flow and manage ED crowding. The collaborative should include the collection and analysis of standardized performance measures linked to quality of care in the ED. Additional discussion about such collaboratives can be found in Appendix 5.

All District hospitals with active emergency departments should be required to participate in this collaborative in addition to D.C. Fire and Emergency Medical Services (FEMS). The goal for hospital participants should be to alleviate ED crowding by using proven strategies that can achieve breakthroughs in quality and safety while creating a better workplace that encourages retention of employees. The goal for FEMS should also be to work with hospitals on drop time reduction.

As part of the collaborative, the District should purchase, implement and maintain a city-wide dashboard that includes information on diversion status and bed availability. The dashboard should be implemented in concert with the hospital collaborative and managed by FEMS and the Department of Health. Ultimately, this system should work in conjunction with the system currently in place in Maryland (CHATS) and connect with other surrounding areas such as northern Virginia.

Policy Recommendation 7: Delay allocation of a portion of tobacco settlement until an assessment of needs for mental health and dental care is complete and to pay for ongoing investments in health care service delivery improvement.

Despite the comprehensiveness of this effort to profile health and health care in the District, there are particular topical areas that require further study (as described in Recommendation 4). Of particular importance are behavioral and oral (dental) health. Mental health and substance abuse problems and access to services for these issues were resounding issues in our community and provider focus groups. But before appropriate and considered investments can be made, more needs to be learned about the current infrastructure of care, or lack thereof, and the levels of behavioral health care need. It is essential that the District retain some capital funds for later (but near-term) investment in the behavioral health care delivery system. In addition, some funds should be reserved to supplement initial investments that show success (including, for example, programs and interventions as described in Recommendation 4). The reserved funds should be spent within a specified period of time—ideally within two years.

4.2. Policies Needed to Ensure the Success of Capital Investments to Expand Capacity

The capacity of the health care system is a function of both human resources (providers, receptionists, nurses, pharmacists) and capital resources (exam rooms, exam tables, medical equipment). Capacity expansion cannot occur through facility and other capital expansion alone; complementary expansions to human resources are also essential. Thus, some of the capital investments recommended—including the investment in EHRs for CHCs and other providers committed to serving vulnerable populations and the investment to improve the physical settings in which care takes place—are designed help attract and retain physicians who are committed to serving underserved populations.

However, the provider focus groups and interviews highlighted multiple barriers to providers serving the medically underserved, including low reimbursement rates, concern about medical malpractice, limited administrative and clinical support for patient care, and high no-show rates among patients.

Additional policy changes are critical both to the success of the recommended capital investments and to the success of the District’s health care system in providing for its population’s primary *and* specialty care needs. In what follows, we highlight three critical areas where policy changes that support the capital investments are crucial.

4.2.1 Medicaid and Alliance Reimbursement

More than any other issue, providers pointed to reimbursement as limiting their participation in Medicaid or the Alliance. Reimbursement issues were not solely related to the level of compensation for services; they also included the types of services that are reimbursable, the speed (and certainty) with which payment occurred, and the process for receiving reimbursement. The bulleted list that follows provides more specificity about policy changes for the District to consider to attract and retain sufficient providers.

- Increase payment levels for primary and outpatient specialty care visits. As described in Section 2.4, District Medicaid and Alliance reimbursement rates are relatively low for office-based services. Further, current rates are insufficient for ensuring the accessibility of specialists.

- Increase the relative payment for primary care (compared to other types of services) to account for the significant time that care coordination requires.
- Allow for reimbursement of services from case workers/case managers that are affiliated with a provider (as opposed to an MCO).
- Revisit the reimbursement of mental health services provided to Alliance enrollees.
- Have preferentially higher reimbursement rates, or implement other financial incentives, for providers that adopt or have EHR.
- Improve and continually monitor the time from service provision to reimbursement for providers.
- Modify reimbursement policies to allow for specialists to charge for triaging “e-referrals” from primary care providers (identifying which patients should be seen and providing advice to primary care physicians about patients that do not need to be seen).
- Correct the disparity in Medicaid hospital and non-hospital expenditures with better balanced reimbursement rates for hospital and non-hospital services.
- Ensure the incorporation of reimbursement rates specifically for after-hours urgent care.

4.2.2 Financial Incentives for Providers Serving the Underserved

Financial incentives are one means for increasing the supply of providers in underserved areas or for underserved populations (Rivo, Henderson, and Jackson, 1995). Financial incentives can include loan repayment programs, scholarship programs, other loan assistance, direct financial incentives (e.g., signing bonus), medical malpractice insurance premium subsidies, and resident support (Pathman et al., 2000). Given the large debt burden carried by many physicians and health care professionals, loan repayment and scholarships are often effective recruitment programs (Mattke and Martorell, 2005; Wennberg et al., 1993).

Naturally, while the aggregate supply of physicians serving the medically underserved is important, so too are the quality and racial and ethnic diversity of the physician workforce. Indeed, some have posited that increasing the racial and ethnic diversity of the physician workforce and promoting an environment designed to care for vulnerable populations may be more important than the absolute overall number of physicians in an underserved area (Grumbach, Vranizan, and Bindman, 1997). Thus, as physician supply is increased, attention to the quality and diversity of the supply is essential.

A GAO report found that loan repayment programs are generally more effective than scholarship programs for recruiting and retaining health care professionals to underserved areas for three reasons: they are less expensive, the recipients are more likely to complete their service obligations, and the recipients are more likely to continue practicing in the underserved area after completing their obligation (U.S. Government Accountability Office, 2000). Additionally, military recruitment literature suggests that signing bonuses are a cost-effective way to increase enlistment. However, to encourage retention for a specified amount of time, the bonuses could

be conditional on committing to work in the area for a specific amount of time or be paid out in a staggered fashion (Mattke and Martorell, 2005).

The DC Health Professional Loan Repayment Program offered through the Primary Care and Prevention Administration, Primary Care Health Program, started in 2007 and is currently funding 10 health care providers. The program is available to physicians (with training in family practice medicine, general internal medicine, general pediatrics, obstetrics/gynecology, psychiatry or osteopathic general practice), dentists, registered nurses, nurse midwives, certified nurse practitioners, or physician assistants. Physicians and dentists are eligible for up to \$120,000 over four years of service and other health professionals are eligible for up to \$66,000 over four years of service. As a condition of participation in the Program selected applicants shall enter into a contract with the Department of Health and the service obligation site (nonprofit health facility or a District of Columbia Department of Health or Department of Mental Health program that provides primary care, mental health, or dental services located in a HPSA or MUA within the District of Columbia that provides care regardless of ability to pay).

Going forward, the District may want to consider expansions to the DC Health Professional Loan Repayment Program, which could include additional funding for more positions; new eligibility for behavioral health professionals; and an option for partial loan repayment for part-time work. Additional publicity about the program was also something that providers in our focus groups and interviews recommended.

Further, it may be worthwhile for the District to consider other financial incentives particularly for private-office-based providers who serve a substantial portion of Medicaid/Alliance or uninsured patients. One example is a subsidy for medical malpractice insurance premiums.

4.2.3 Medical Malpractice

Employees of FQHCs and volunteer physicians at free clinics are covered for medical malpractice through the Federal Tort Claim Act (as described in Appendix 3). The DC Free Clinic Assistance Program Act of 1986, which provides coverage for free clinics and volunteer physicians at those clinics, predates coverage under the FTCA for free clinics and provides malpractice coverage under comparable rules for free clinics. The “District of Columbia Medical Liability Captive Insurance Company Establishment Act of 2008” (A17-0390) repeals the Free Clinic Assistance Act when a new captive insurance company becomes operational. The new law 1) extends “gap coverage” to FQHCs for services that are not covered under the FTCA and 2) expands coverage to the staff and volunteer providers at any non-profit community health center that provides services regardless of ability to pay, including those that accept payments from third-party payers.

This legislation expands access of the community health centers to affordable malpractice insurance (Kellenburg, 2008), but leaves the issue of the affordability of malpractice insurance for physicians in private practice who serve Medicaid and Alliance enrollees and the uninsured, some of whom may provide and bill directly for their services at community health centers as well as from their private practice locations. Medical malpractice insurance is a key issue in ensuring the availability of specialists to CHC patients. To ensure the accessibility of specialty care to District residents who are enrolled in Medicaid or the Alliance or who are uninsured, the

affordability and availability of medical malpractice insurance coverage requires attention from policymakers.

4.3 Complementary Policies Needed to Improve Ambulatory Care

Adequate physical resources and an adequate supply of providers are necessary—but not sufficient—for ensuring the accessibility and quality of health care. As described in Section 2.2, District residents in our focus groups enumerated a range of different factors *not* centrally related to the capacity of the health care system that kept them from accessing ambulatory care, such as the level of respect with which they felt they were treated, the ability to see the same provider on an ongoing basis, and a feeling of disenfranchisement. Further, District residents identified health literacy—the ability to understand the medical issue and the information from their provider—and health education—information about nutrition, wellness, preventive care—as key challenges in obtaining and appropriately using health care services. In addition, community residents described significant confusion regarding how to navigate a complex health care system.

In what follows, we describe a number of potential ways to begin to address quality and accessibility issues. These—and the many others not articulated here—bear further attention and consideration from policymakers as well as other stakeholders in District health care service delivery.

4.3.1 Purchasing Quality Health Care

In recent years, purchasers of health insurance, including large and small employers and governments at all levels, have begun to take a more active role in ensuring the quality of the health care services that they help to pay for. Employer coalitions such as the Pacific Business Group on Health and the Washington Business Group on Health have aligned employers, providing them with a forum through which to come to agreement about how and what to measure about quality, the purchasing power to be able to set quality requirements for health care providers, and the organizational vehicle through which to monitor, track and report health care quality. Other organizations, such as the Center for Health Care Strategies, have developed curricula for improving the ability of governments to likewise purchase for quality.

In the District, as elsewhere, the role played by private and public health care purchasers in strengthening and reinforcing access to quality health care will be central to achieving and supporting the health care quality and capacity recommendations outlined in this analysis. In the District, both private and public purchasers need to increase and align their emphasis on purchasing quality care, thereby creating a culture of quality and an environment in which District residents, both publicly and privately insured, could make health care decisions based, in part, on quality of care. On the private side, the District currently lacks a large employer coalition. However, both the District and the federal government employ and insure large numbers of District residents; there is likely untapped potential for increasing purchasing power, either separately or as part of a coalition.

We note that Medicaid and the Alliance have made gains in repositioning their activities to play a far more pivotal role in purchasing for quality. For example, Medicaid and the Alliance have moved toward a contracting approach that emphasizes quality performance through practice

improvements and financial incentives and the development of robust and accessible provider networks that are appropriately supported, structured, and financially rewarded. In addition, MAA has bolstered its quality of care oversight capacity through the addition of senior staff with credentials in quality improvement. These efforts should be continued and strengthened. Of particular importance will be the extension of these reforms to populations with serious and chronic conditions, who can be well served in the community.

We believe that continued and enhanced tracking and public reporting of health care outcomes among enrollees—including patients' ability to access care, the quality of clinical services provided, and perceptions of communication and respect between patients and their physicians—will help stimulate needed improvements in quality. Also, as summarized in Section 2.4 (and described in Appendix 3), a relatively large share of Medicaid funding is directed toward disabled Medicaid enrollees. This suggests that quality purchasing for this particular population is particularly important.

4.3.2 Re-Enfranchising Patients in the Health Care Delivery System

As described in Section 2.2, residents in our focus groups articulated problems with how they were treated by health care providers and their staff. In addition, focus group participants expressed concerns that they have little say in their health care, and have not often been asked to evaluate the quality of health services, including their providers and the clinic environment. A key means through which to give patients more voice is to ask about their experiences with the particular providers, their perceptions of the health care environment, the communication they have with their providers and the respect they feel, and their overall satisfaction with the provider and care they have received, and to make that information public. The District's Medicaid Assistance Administration (MAA) has made important strides in this area by conducting surveys of fee-for-service and managed care beneficiaries and analyzing results. However, the District may want to consider data collection that allows for additional focus on, for example, individuals with chronic conditions and their experiences with obtaining specialty care, as well as more regular opportunities for input from a broader set of enrollees about their experience and satisfaction with health care.

Further, as described, Medicaid and the Alliance need to do more to ensure continual tracking of utilization and other health care outcomes among their enrollees, such as reports based on claims data regarding use of office-based care, specialty care, and hospital-based care. Again, this information needs to be reported publicly on at least an annual basis.

Another component to giving voice is ensuring patients know how and where to raise concerns or grievances or to appeal a denial of insurance coverage for a requested service. A third lever for ensuring voice is to ensure that there are a sufficient number of providers so that patients *do* have the ability to disenroll with a provider (physician or MCO) with whom/which they are not satisfied. Related to that is assuring that information on provider availability—and consumers' satisfaction with providers—is easily accessible. The recommended clearinghouse is designed to help address this latter issue.

4.3.3 Promoting Health Education and Facilitating Health Care Navigation

As described in Section 2.3, District residents are troubled by the lack of information on prevention and wellness, and, in focus groups identified key areas where health education opportunities were needed. They felt disconnected from accurate and useable information on how to maintain good health, and requested more information about nutrition, alternative or complementary medicine, and mental health issues. Further, residents described significant problems understanding how to find and obtain care in a complicated system.

Case managers and “community health workers” can play pivotal roles in helping patients learn how to keep themselves healthy, manage a chronic condition, or navigate the health care system. Some CHCs employ on-site case managers, though the lack of reimbursement for these services precludes their more widespread availability.

Community health workers (CHWs) are part of a growing field of social and human service assistants (Ro, Treadwell, and Northridge, 2003). CHWs have been used in the U.S. for several decades to promote prenatal care, diabetes care, hypertension screening, and smoking cessation. Their duties can include outreach, health education, translation, patient transportation, case management and relationship development (Fedder et al., 2003; Zuvekas et al., 1999). Typically, CHWs live in the communities they serve, and thus are familiar with the environment and understand community problems. Training for CHWs varies. Many workers receive only on-the-job training, though some standardized training and certification programs have been developed (Dower et. al, 2006).

Technical Appendix 6 summarizes literature that has evaluated CHWs. Overall, studies examining community health workers have found positive effects. For example, in a research review examining cultural competency of community health workers, studies showed significant improvement in the number of patients receiving health screenings (e.g., cancer screenings) and immunizations. Additionally, studies of specific patient populations, such as groups of diabetic patients, have shown improved health status as measured by triglycerides and diastolic blood pressure although the size of the effects varies by study. Studies evaluating community health workers educating patients about health care services have shown an improvement in use of primary health care and a decrease in the use of non-urgent emergency care. Also, the vast majority of studies evaluating the cost-effectiveness of community health workers suggest that the programs are cost effective.

DCPCA has launched a Community Health Worker Initiative, with the first cohort of twenty community health workers graduating in July 2007 (Ross and Patrick, 2007). The capacity of the program and its sustainability depend on financial support. To date, the District has provided support for the CHW initiative. Going forward, additional support from the District will be essential, but that funding could potentially be coupled with reimbursement for CHWs through insurance or outreach and education dollars available through Medicaid and SCHIP.

For example, in December 2007, Minnesota received federal approval for a Medicaid waiver providing for broad-based reimbursement of Community Health Worker services through approved Medicaid providers (Family Health Foundation, 2008). Coverage of community health worker services for enrollees of managed care organizations (MCOs) begins in 2008. Similarly, the California Department of Health Services obtained a Medicaid Section 1115 Demonstration

Program waiver to involve community health workers and promotoras in the expansion of family planning services for low income women (Dower et al., 2006). Finally, in Alaska, tribal authorities, and the federal government are now recognizing community health aides/practitioners, who received comprehensive training and certification as billable providers for Medicaid reimbursement (Dower et al., 2006).

4.3.4 Improving Care Coordination

Essential to the safety and efficiency of the health care delivered to patients is the coordination of care among multiple providers treating the same patient—including between primary care physicians and specialists; between primary care physicians and emergency departments; between physicians and sources of diagnostic data; between hospital-based physicians and primary care physicians; between physicians and patients and their families; and between hospitals and patients and their families (Bodenheimer, 2008).

Coordination is even more important for underserved populations, who tend to have care that is more fractionated. Care coordination has been defined as “the deliberate integration of patient care activities between two or more participants involved in a patient’s care to facilitate the appropriate delivery of health care services” (Bodenheimer, 2008). The lack of care coordination and communication among health care providers contributes to duplicative and inadequate health care, increased cost, decreased safety, and patient dissatisfaction (Gordon et al., 2007). The continuity of care objective is to provide a 'seamless service' through integration, coordination of care and information sharing between different health care providers (Gulliford, Naithani, and Morgan, 2006).

Problems with care coordination are not unique to the District, or even the U.S. In a synthesis of previous research, Kripalani et al. (2007) find that direct communication between hospital physicians and primary care physicians in the U.S. is infrequent, with only 3% of primary care physicians reported being involved in discussions about discharge and 17% to 20% reported always being notified about discharges. Discharge summaries commonly lacked key information, including tests pending at discharge, responsible hospital physician, main diagnosis, diagnostic test results, discharge medications, and specific follow-up plans. Further, in a 2004 survey of adults in Australia, Canada, New Zealand, the United Kingdom, and the United States, coordination concerns were identified among patients in all five countries, though U.S. adults reported significantly higher coordination of care issues than at least three of the other four countries (Schoen et al., 2004).

Barriers to continuity and coordination of care include limitations of the current primary care foundation, lack of information between providers (e.g., no interoperable computerized record), a financing system that does not pay for coordination of care and lack of integrated systems of care due to the high number of small practices (Bodenheimer, 2008).

While the adoption of EHRs by many providers, and their linkage through RHIO, will facilitate long terms care coordination, other, shorter-term initiatives to improve care coordination are important.

Improving Coordination between Hospitals and Primary Care Physicians

Kripalani et al. (2007) also reviewed evaluations of several interventions aimed at improving communication between the hospital-based physician and the primary care physician. Computer-generated discharge summaries and using patients as couriers shortened the delivery time of discharge communications. Additionally, Kripalani et al. suggest the following:

“On the day of discharge, a summary document should be sent to the primary care physician by e-mail, fax, or mail. If a complete discharge summary cannot be sent on the day of discharge, then an interim discharge note should be sent. At minimum, it should include the diagnoses, discharge medications, results of procedures, follow-up needs, and pending test results. Discharge summaries should include the following:

- *Primary and secondary diagnoses*
- *Pertinent medical history and physical findings*
- *Dates of hospitalization, treatment provided, brief hospital course*
- *Results of procedures and abnormal laboratory test results*
- *Recommendations of any subspecialty consultants*
- *Information given to the patient and family*
- *The patient’s condition or functional status at discharge*
- *Reconciled discharge medication regimen, with reasons for any changes and indications for newly prescribed medications*
- *Details of follow-up arrangements made*
- *Specific follow-up needs, including appointments or procedures to be scheduled, and tests pending at discharge*
- *Name and contact information of the responsible hospital physician*

Discharge summaries should be structured with subheadings to organize and highlight the information most pertinent to follow-up care and to ensure that all essential topics are addressed.”

The Society of Hospital Medicine has also developed recommendations for improving continuity of care by specific stages of hospital care: pre-hospitalization (at the time of admission), hospitalization (during the hospital stay), and post-hospitalization (at discharge). Their recommendations include the following (Society of Hospital Medicine, 2008):

- For pre-hospitalization, hospital-based physicians should notify their patient’s primary care physician of the patient’s hospitalization and that they are taking over responsibility for their care. Notification can occur by a voicemail message or a faxed copy of the admission notification from the hospital chart.
- The primary care physician should also communicate with the hospital-based physician at the time of admission to provide outpatient medical records including any pertinent information to provide a better understanding of the patient and their medical problems.
- During the hospitalization, the hospital-based physician should notify the patient’s primary care physician of any significant events that occur during the hospital stay. Examples include transfer to ICU, deterioration of status, surgery, etc.

- At discharge, the hospital-based physician should provide the primary care physician with a dictated summary of the hospitalization as soon as possible. The primary care physician should have this information prior to the patient's first follow-up visits.

An additional note is that it is essential that hospital providers ensure that patients have an appointment for follow-up within an appropriate time after discharge.

Improving Primary-Specialty Care Provider Coordination

Electronic referrals (e-referrals) are one initiative that may improve coordination of care between primary and specialty providers, and reduce the number of patient visits. The electronic referral is a communication between the primary care physician and the specialist which may include specific medical questions, patient health information and even digital photographs. The advantages of electronic referrals include cost reduction, increased care coordination and faster access to specialists. Electronic referral is used by some practices including the GreenField Health primary practice in Portland, Oregon, San Francisco General Hospital and Group Health Cooperative of Puget Sound. These practices report a prompt response from specialists, decrease in time to see a specialist, and an increase in coordination of care. Electronic referral systems are successful in integrated systems such as academic medical practices and community health centers, but are less successful in the private fee-for-service environment based on current health plan compensation (Bodenheimer, 2008).

In addition, referral agreements between primary care physicians and specialty practices, which specify each individual's responsibility including which clinical conditions are best managed by each provider, may also improve coordination of care (Bodenheimer, 2008). To date, these have not been widely used.

As described in Section 4.2, establishing reimbursement rates for e-referrals is a prerequisite to their potential use. In addition, the adoption of EHRs by primary and specialty care providers, as recommended in Section 4.1, facilitates the e-referral arrangement. However, in the interim before full connectivity is established, such arrangements are still possible, though require more onerous manual sharing of patient information. More exploration of e-referral arrangements and their potential applicability in the District is warranted.

4.3.5 Ongoing Data Collection and Monitoring

The District needs to maintain a long-term vision for the future of the health of District residents, and commensurate with that, to devote resources to systematically tracking health and health care outcomes among residents on a consistent basis. One area of particular need is information about the health and health care of District children. Recommendation 4 suggests allocating funds for the District's initial participation in the BRFS CHAMP, but sustaining the District's participation over time will require ongoing investments.

4.4 Improving Emergency Services

These recommendations are designed to provide immediate opportunities for meaningful change on behalf of the residents of the District, as well as longer-term strategies for the District to position itself as a leader in the field of emergency care.

- **D.C. FEMS needs to better measure the quality of its care.** D.C. FEMS has made significant strides in improving quality monitoring. The department is transitioning to an electronic patient care reporting system for its providers that will enable better monitoring of quality measures. It has restructured its retraining program for providers to focus on targeted areas of deficiencies identified through prior review. The department has also hired a nurse in charge of reviewing selected cases for quality, including the electronic medical record cases as well as those flagged through the complaint process. There is, however, no systematic tracking of quality measures by provider type, length of training or patient diagnosis. D.C. FEMS needs to adopt formal evaluation of whether providers adhered to evidence based standards of care. More importantly, it also needs to start tracking outcomes measures by provider characteristics (e.g., years and type of training.) Such a system to track quality will be enhanced by linkage of pre-hospital records to hospital outcomes.
- **D.C. hospitals and D.C. FEMS must work together in a concerted effort to reduce hospital diversion and drop times.** Hospital leadership, emergency department directors and representatives from EMS should meet on a regular basis to construct dynamic approaches to address issues related to crowding and diversion. Such task forces have been successful in generating creative approaches to diversion in other jurisdictions.
- **The District should create a city-wide diversion policy for hospitals.** A coordinated effort should be made both within and between hospitals and D.C. FEMS to address issues of diversion. Currently, there is no uniform diversion policy in hospitals throughout the District. The majority of hospitals do not have any diversion policy, and only one hospital, Children's National Medical Center, has adopted a 'no divert' policy. Many cities and states in the country have adopted diversion policies that attempt to manage the emergency care system and ensure that diversion is a limited or prohibited event. Such policies can also ensure that patient demand is equitably distributed between hospitals.
- **Hospitals and D.C. FEMS need to invest in a system for tracking factors related to diversion.** The District should create a capacity dashboard that shows both real-time diversion status for hospitals and bed capacity. The District of Columbia has some of the highest wait times and diversion hours in the country. Most of the hospitals reported collecting data about patient flow, however some hospitals collect more than others do. Greater detail is needed about elements of patient flow to help understand factors that may be contributing to crowding, so that hospitals and D.C. FEMS can implement strategies to alleviate crowding. This not only includes details about patient flow times within the emergency department and hospital but also more details about drop times, to determine what factors are related to ED triage delays versus other factors. Such an online system in Washington D.C., that provides information on diversion as well as overall hospital bed status and emergency department patient load, would greatly enhance care.
- **Efforts need to be made to regionalize services to insure that patients are transported to hospitals that can meet their emergent needs.** Currently, patients may be transported or

going to the hospitals that are not best suited to meet their needs. Analysis of computer aided dispatch data showed that a significant number of high acuity cardiac, stroke and trauma cases may be going to hospitals that do not provide care in these areas. Such cases may face further life threatening delays if initially transported to a hospital that does not provide immediate in house coverage for these complaints. Montgomery County’s EMS has instituted a system where less acute cases go to an urgent care center, with more acute cases going to the necessary centers that can provide appropriate care. Because the computer aided discharge data does not provide information about actual clinical diagnosis, D.C. FEMS and hospitals need to track whether cases are being transported to the appropriate centers for care and whether such transport impacts outcomes.

4.5 Allocation of Funds

Table 4.1 below summarizes the list of recommended capital investments and describes the approximate funding level required for each.

Table 4.1: Recommended Allocation Strategy

| Recommendation | Expenditure | Level of Funding (approximate, in millions)* |
|-----------------------|--|---|
| 1 | Expansion of primary and urgent care CHC capacity | \$90 |
| 2 | Electronic health record adoption, RHIO, other health information technologies | \$24 |
| 3 | Information clearinghouse | \$0.5 |
| 4 | Pilots, data collection, and evaluation | \$8 |
| 5 | Evidence-based design for ambulatory care | \$2.5 |
| 6 | ED collaborative and dashboard | \$2 |
| 7 | Reserve for additional investments, including mental health, oral health | \$7.5 |
| Total | | \$135 |

**Figures are upper bounds where a range in the text is specified.*

In what follows, we describe the rationale underlying the proposed allocation levels.

Expansion of CHC Primary and Urgent Care Capacity

We estimate that achieving a primary care capacity of expansion of between 202,000 and 218,000 visits will require between \$92 and \$99 million.¹⁰

¹⁰ We base this estimate on the costs and level of increased primary care capacity associated with Medical Homes projects.

However, the capital investments made by the District should be used in concert with loans from traditional sources (such as the New Market Tax Credit) and other funding (federal grants, philanthropic donations) to fully fund the expansion. We have assumed that the District would fund 75 percent of the costs of any new primary care capacity expansion, with 25 percent leveraged from other sources, yielding a total cost of between \$69 and \$75 million.

As described in Section 4.1, the District should consider capitalizing on the Medical Homes initiative as a way to expand primary care capacity; however, additional investments outside of Medical Homes (or in lieu of particular Medical Homes projects) should be considered, and in particular, maintaining and possibly expanding ambulatory care capacity on Reservation 13 should be a District priority.

The expansion of urgent care capacity can occur in conjunction with the primary care expansion (that is, a new facility that is built can include plans for urgent care capacity or a planned expansion of an existing facility can be modified to include urgent care capacity expansion). We have included \$12-\$15 million for urgent care capacity expansion, potentially at three sites. We estimate equipment costs of \$1.5 million per site (total of \$4.5 million at 3 sites) with the remainder for costs for modifying or expanding CHC office-space. Realized costs will depend on the nature of facility adjustments/expansions that will need to be made to accommodate additional urgent care capacity and the number of expansion sites.

Evidence-based Design Projects

Evidence-based design initiatives can take a wide variety of forms and be associated, correspondingly, with a wide range of resource requirements. Less expensive investments include paint, waiting room furniture, art work and the like. More expensive are work space redesign, the construction of new walls or reception areas to ensure patient privacy, and the addition of natural light. We recommend setting aside \$2.5 million for evidence-based design initiatives, in order to support a combination of large and small initiatives; for example, 25 small (\$20,000) projects and 10 large (\$200,000) projects.

Health IT

We estimate the average cost for EMR adoption per physician to be between \$13,000 and \$14,000 (for year 1). Costs include fees for software application and license, maintenance and support, training, interfaces, and project management. We estimate ongoing costs for maintenance and support to be about \$3700 per physician per year. More detailed cost estimates are provided in the table below.

Table 4.2: Rough Breakdown of EMR Adoption Costs

| Upfront Pricing for EMR/Practice Management | Cost | Year 1 Cost for 5 providers | Cumulative 3 year Cost for 5 Providers |
|---|----------|-----------------------------------|---|
| First Provider Cost | \$10,000 | \$10,000 | \$10,000 |
| Additional Provider Cost | \$5,000 | \$20,000 | \$20,000 |
| Maintenance and Support Fee | 18% | \$5,400 | \$16,200 |
| Telephone Support (cost is per provider) | \$600 | \$3,000 | \$9,000 |
| Training and Implementation Services (cost per day) | \$750 | \$3,750 | \$3,750 |
| Travel Cost Per Trainer (per day) | \$200 | \$1,000 | \$1,000 |
| Server Cost | | \$5,000 | \$5,000 |
| TabletPC (Assume 1 per physician) | \$2,000 | \$10,000 | \$10,000 |
| Desktops (Assume 1 per physician) | \$950 | \$4,750 | \$4,750 |
| High Speed Scanners (Assume 1 per 5 physicians) | \$950 | \$950 | \$950 |
| Printers (Assume 1 per 5 physicians) | \$500 | \$500 | \$500 |
| Wireless Access Points (Assume 1 per 5 physicians) | \$600 | \$600 | \$600 |
| TOTAL | | \$64,950 | \$81,750 |

Source: eClinicalWorks website, Section on Implementation and Cost. <http://www.eclinicalworks.com/cost.php>., Last Accessed May 15, 2008.

We assume that 200 office-based (non-CHC) providers would be eligible for the subsidy. (The actual number will depend on the specific eligibility thresholds that the District determines and whether the availability of EHR incentivizes new physicians to serve Medicaid/Alliance enrollees.) To subsidize 200 providers at \$14,000 each (for the first year adoption) requires \$2.8 million. Adding two years of subsidy for each provider requires an additional \$1.5 million. (The District may want to differentiate the level of support for providers depending on their level of commitment to Medicaid/Alliance enrollees.) DCPCA estimates that funding an additional four CHCs to adopt EHR will require approximately \$3 million.

Subsidizing EHR adoption at each of the eight acute care hospitals in the District at between \$250,000 and \$1 million each requires an additional \$2 million- \$8 million. The level of subsidy must be negotiated between the District and hospitals, and as indicated earlier, should reflect the hospital's commitment to vulnerable populations and to improvement in health care delivery through improved continuity of care and ER diversion.

Thus, in total, the range for EHR allocation is approximately \$9 to \$15 million.

To fully fund the RHIO through 2010, DCPCA estimates a cost of \$2 million, and further that each year thereafter will need approximately \$3 million to ensure the sustainability of the RHIO. Some share of the RHIO should be paid for through Medicaid or from other sources such as foundations; we have included \$8 million for the District to contribute in total for sustaining the RHIO through 2010 (\$2 million) and for sustaining the RHIO in the subsequent four years at \$1.5 million.

We have also included \$1 million for potential investments in other promising health information technologies.

Information Clearinghouse

We recommend allocating in the range of \$500,000 for the planning and design and upfront costs of the information clearinghouse.

Pilots, Data Collection, and Evaluation

We have allocated \$8 million to support quality improvement interventions (ideally with co-funding for some projects), as well as for planning and implementation of new data collection, and additional evaluations of health and health care in the District. This will support, for example, 8 moderately sized (\$500,000) projects and 4 large (\$1 million) projects.

ED Collaborative and Dashboard Adoption

We recommend that the District contract with an external entity to organize a D.C. hospital collaborative focused on implementing the dashboard, adopting best practices surrounding ED crowding and collecting state-of-the-art patient flow performance measures. We estimate that this will cost in the range of \$1 million.

Further, we recommend allocating \$750k for DOH/FEMS to acquire and implement the dashboard. In addition, supporting each hospital's implementation of the dashboard requires \$200k (\$25k for each of 8 hospitals).

5. Conclusion

The District contracted with RAND to perform a study of health and the health care delivery system in the District. An interim report (http://www.rand.org/pubs/working_papers/WR534/) summarizes the findings related to the first two goals of the evaluation—to conduct a comprehensive health needs assessment and to assess the quality and accessibility of the District’s health care delivery system for individuals with urgent or emergent medical needs.

This report provides additional information relevant to those two goals and identifies policy options for improving the health care delivery system. We offer specific recommendations for investments with remaining tobacco settlement funds and provide additional recommendations related to improving the quality and accessibility of health care services for District residents.

In this Section, we summarize the recommendations made, review key gaps in knowledge, and conclude.

5.1 Review of Recommendations

Based on our analyses, we articulate (1) specific recommendations for the expenditures of tobacco settlement funds; (2) additional policies critical to the success of the capital investments; (3) complementary policies needed to improve ambulatory care; (4) recommendations relating to emergency medical services; and (5) recommendations regarding the allocation levels of capital investments.

Recommendations for Investing Tobacco Settlement Funds

- (1) Use tobacco settlement funds to expand the capacity and improve the physical space of community health centers.
 - (1.1) Target expanding primary care capacity in community health centers (CHCs) by roughly 200,000 visits.
 - (1.2) Invest in CHCs that expand capacity in high-need locations.
 - (1.3) Invest in CHCs that establish and commit to maintaining urgent care capacity (including after-hours and weekend capacity) in at least two high-need locations.
 - (1.4) Prioritize expansions to CHCs that would increase the availability of specialty care through plans for additional exam room space, investments in equipment to allow for specialty care services, and planned personnel arrangements with local hospitals.
 - (1.5) To the extent possible, invest in expansions that leverage funding from other sources.
- (2) Use tobacco settlement funds to support greater adoption of health information technology.
 - (2.1) Subsidize the adoption of electronic health records by hospitals and by providers who serve a substantial number of individuals who are enrolled in Medicaid or the Alliance or who are uninsured.

- (2.2) Invest in sustaining the regional health information organization (RHIO).
- (2.3) Consider investments in other promising health technologies.
- (3) Use tobacco settlement funds to invest in establishing an information clearinghouse for provider availability.
- (4) Use tobacco settlement funds for implementing and evaluating interventions and programs to improve the accessibility and quality of care; for planning and initial implementation of new data collection; and for additional evaluations of health and health care in the District.
- (5) Use tobacco settlement funds to pay for projects that move ambulatory health care facilities closer to evidence-based design.
- (6) Invest tobacco settlement funds in diversion reduction strategies including a collaborative and a “dashboard” with real-time information about diversion status and bed availability across hospitals.
- (7) Delay allocation of a portion of tobacco settlement until an assessment of needs for mental health and dental care is complete, and to pay for ongoing investments in health care service delivery improvement.

Additional Policies to Ensure the Success of Capital Investments to Expand Capacity

- Modify Medicaid and Alliance reimbursement for primary care and outpatient specialty care providers.
- Enhance financial incentives for primary and specialty care providers who serve the underserved.
- Ensure the availability and affordability of medical malpractice coverage for specialists serving Medicaid/Alliance enrollees and the uninsured.

Complementary Policies for Improving Ambulatory Care

- Focus private and public purchasers on purchasing quality health care.
- Re-enfranchise District patients in the health care delivery system.
- Promote health education and facilitate health care navigation.
- Improve coordination of care between hospitals and physicians and between primary care and specialty care physicians.
- Improve ongoing data collection and monitoring of health and health care in the District, including data on the health and health care of children.

Recommendations for Improving Emergency Services

- Develop a robust system to continuously assess the quality of emergency services.

- Incentivize D.C. hospitals and D.C. FEMS to work together in a concerted effort to reduce hospital diversion and drop times.
- Develop a system to track diversion and factors related to it.
- Create a city-wide diversion policy.
- Regionalize services to insure that patients are transported to hospitals that can meet their emergent needs.

Recommendations for Funding Allocation Levels

Table 5.1 below summarizes the recommended strategy for allocation of tobacco settlement funds.

Table 5.1: Summary of Recommended Allocation Strategy

| Recommendation | Expenditure | Level of Funding (approximate, in millions)* |
|-----------------------|--|---|
| 1 | Expansion of primary and urgent care CHC capacity | \$90 |
| 2 | Electronic Health Record adoption, RHIO, other health information technologies | \$24 |
| 3 | Information clearinghouse | \$0.5 |
| 4 | Pilots, data collection, and evaluation | \$8 |
| 5 | Evidence-based design for ambulatory care | \$2.5 |
| 6 | ED collaborative and dashboard | \$2 |
| 7 | Reserve for additional investments, including mental health, oral health | \$7.5 |
| Total | | \$135 |

**Figures are upper bounds where a range in the text is specified.*

5.2 Gaps in Knowledge

Substantial gaps exist in what we know about the health of District residents and their health care. Filling these gaps will better enable the District to determine whether and how to invest in additional components of care for District residents. Our recommendations include the allocation of funds to ongoing evaluation activities. In what follows, we summarize a number of gaps in knowledge that largely reflect gaps in the data available.

- Little is known about children’s health status and access to care.
- Available information about insurance status among adults in the District is inadequate.
- Little is known about the quality of emergency medical services in D.C.

- Available data on mental health status and mental health and substance abuse service needs and use are extremely limited.
- Provider supply could be measured with more precision if reliable data on practice time in the District and population served, by type of insurance, were available.
- Differences in data formats and availability of Medicaid and Alliance data from managed care organizations make it less useful than it could be.
- The lack of timely analysis of data with which to monitor the health of the District should be addressed.
- We need clearer understanding about the role of private office-based providers in the delivery of care to Medicaid and Alliance enrollees and for the uninsured.

5.3 Conclusion

The targeted infusion of tobacco settlement funds has the potential to improve considerably the robustness of the District’s health care system; and especially so if these investments are made in conjunction with auxiliary and complementary policies to increase the capacity, quality, and accessibility of health care services in the District, and activities to provide ongoing data and analysis to monitor progress.

However, “fixing” the health care delivery system in the District cannot be accomplished with one-time policies or investments. Rather, the District needs to maintain a long-term vision for the future of the health of District residents, and commensurate with that, to devote resources to systematically tracking health and health care outcomes among residents on a consistent basis. That effort must begin with the new investments that will be made with tobacco settlement funds.

It also bears repeating that the health of a population is the product of many factors. Our focus in this report on the health care delivery system is not meant to understate the importance of other factors on health outcomes. Systemic factors other than access to health care that give root to poor health outcomes in the city require additional, ongoing, and concentrated attention. These include the social environment (family structure, education, employment, crime), physical environment (air quality, water quality, access to healthy food, safe environments for physical activity), and the prosperity of District residents.

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MAIN APPENDICES

Appendix 1:

Community Perspectives on Health Care in the District

We gathered the perspectives of community residents about their experiences obtaining health care in the District and their ideas for improving health services in the city. In what follows, we describe our methodology and summarize key findings.

A1.1 Methods

During March and April 2008, we conducted five community resident focus groups. The focus groups, which included 57 residents in total, were intended to provide a snapshot of the health and health care experiences of a sample of community residents and to offer opportunities for residents to share their ideas and recommendations for how to strengthen the District's health system. The focus groups were conducted with residents of Wards 1, 4, 7 and 8. We included these Wards because of the significant health and health care needs in these areas, identified through our first phase of work, as well as to capture the experiences of District minority populations (Wards 1 and 4 house the greatest proportion of Hispanic residents and Wards 7 and 8 are predominantly African-American). Time and resource constraints precluded additional groups in other areas of the District.

We worked with community leaders in each of the Wards to assist us with focus group recruitment. We provided leaders with the objectives for the groups as well as a sampling plan to ensure that we had adequate representation by age, gender, and health needs. We conducted two focus groups with residents from Wards 1 and 4 (combined) and two in Ward 8. In each, we conducted one with parents focused on pediatric health issues and the other with adults regardless of parental status, focused on adult health issues. We conducted one focus group with parents who were residents of Ward 7, and asked about pediatric as well as adult health issues. Participants represented a range of insurance statuses (e.g., insured/uninsured, private insurance/Medicaid/Alliance). Table A1.1 below provides the breakdown of the community focus group participants by location and age. As shown in the Table, we had some challenges recruiting males, particularly fathers who could provide input about children's health issues. We included participants with chronic disease experience (e.g., asthma, diabetes, cardiovascular disease, depression, sickle cell anemia), either for themselves or their children.

Table A1.1 Demographic Characteristics of Focus Group Participants

| Focus Groups on Children’s Health Care Issues | | | | | | |
|--|----------|-------------|---------------|-------------------------------------|------------------|-------------------|
| <i>Ward</i> | <i>N</i> | <i>Male</i> | <i>Female</i> | <i>Ages of Children Represented</i> | | |
| | | | | <i>Ages 0-5</i> | <i>Ages 6-12</i> | <i>Ages 13-18</i> |
| 1 & 4 | 9 | 2 | 7 | 8 | 5 | 4 |
| 7 | 6 | 1 | 5 | 3 | 5 | 2 |
| 8 | 8 | 1 | 7 | 1 | 7 | 3 |

| Focus Groups on Adult Health Care Issues | | | | | | | |
|---|----------|-------------|---------------|------------------|---------------------------|------------------|----------------|
| <i>Ward</i> | <i>N</i> | <i>Male</i> | <i>Female</i> | <i>Age 18-34</i> | <i>Age of Participant</i> | | |
| | | | | | <i>Age 34-44</i> | <i>Age 45-64</i> | <i>Age 65+</i> |
| 1 & 4 | 13 | 3 | 10 | 2 | 4 | 3 | 4 |
| 8 | 21 | 5 | 16 | 3 | 3 | 12 | 3 |

Focus groups lasted approximately 1.5 hours, and participants received a \$50 gift card for their time. We used a focus group protocol to guide the discussion with residents. We specifically queried participants about their experiences with the following services, with attention to facilitators of and barriers to care:

- Primary care services
- Specialty care services
- Pharmaceuticals
- Hospitals, including avoidable hospitalizations
- Emergency department visits

In addition, we asked participants to provide recommendations for improving health care facilities and services and for addressing other health needs.

The focus groups were moderated by a RAND researcher, and a RAND research assistant compiled notes. Focus groups were also recorded to ensure that we accurately captured participant perspectives. The groups in Wards 1 and 4 were conducted in Spanish by a bilingual RAND researcher. We analyzed focus groups notes by summarizing and enumerating themes in order to establish areas of theme convergence.

A1.2 Key Findings

In what follows, we describe the perspectives of community residents on their experiences obtaining health care in the District and their ideas for improving health services in the city. Our findings do not reflect an exhaustive accounting of every resident’s experience, but rather highlight key concerns and recommendations for improvements in health care service delivery that emerged.

Community residents believe that there are not enough providers, particularly for primary care needs

One of the main challenges confronting the health care system in D.C. is provider shortage, particularly for primary care.

The limited availability of appointments and subsequent long wait times even for a scheduled appointment create significant frustration among community residents

A related theme was concern over scheduling a health center appointment. Residents reported that a key challenge to obtaining primary care is the time lag in scheduling an appointment: often two to six months in the future. Further, even when residents are able to schedule an appointment, the subsequent wait time once they arrive at the health center can be extensive. One Ward 8 resident noted:

Some of the clinics that are run by the government, they tend to have you wait a long time. If they say I should be there for 10:30 at an appointment, the most you should have to wait is 20 minutes. Sometimes they're not doing anything so why should we wait any more than 20 minutes, even when there are not that many people there?

This issue of wait times is particularly troubling for parents seeking care for children as these prolonged times in non child friendly waiting rooms are difficult to manage. Parents shared that some waiting rooms prohibit food, which is not sensible for attending to the needs of children.

The wait time issue is further complicated by poor linkages between health centers. In other words, health centers often do not have a complete or easy to use referral list which can provide alternative options for health care when the center has a backlog of clients. Several residents explained how they have asked for referrals to other clinics if there are significant appointment lags with limited success. A parent from Ward 7 reported:

You have to wait a long time sometimes while your child is needs help right now. The clinic is so booked up or sometimes I don't even think they know where to refer you to. There are some situations in which you can't wait.

Long wait times not only frustrate residents; this barrier often results in emergency department (ED) care-seeking as a substitute for primary care. Community members, particularly those in Wards 7 and 8, indicated that they visited the ED because the wait times once at the ED are comparable or shorter than those in health centers. Further, residents perceived better linkages with care via an ED, which ultimately reduced their overall time spent getting care. For example, residents shared that they were able to obtain medication and diagnostic services (e.g., X ray) on-site, whereas at a health center, they incurred long follow-ups.

Community members offered their recommendations on how to reduce wait times, including advance scheduling options that some clinics were beginning to establish. One Ward 8 resident commented:

I find myself at the ER because I miss the 8 am call time and then they only see 4 people a day [via the advance scheduling mechanism]. If you do call by 8 o'clock, but are not 1 of the 4, you have to wait the next day. They have something called 'next day turn around', which is

something fabulous. If you call by 8 o'clock you can see the doctor the very next day. I find myself setting my alarm clock, trying to wake up to call by 8 o'clock when I need my yearly physical.

Residents also suggested that health centers should not schedule more people than they can see. They should also allow walk-ins, who are established patients of a given clinic in their schedule. They argued that this model, if feasible, would ensure that clients are able to maintain a relationship with the same provider.

Residents face multiple challenges getting pharmaceuticals/medications, often because of confusion regarding insurance coverage, difficulties with co-payments, and, for some, limited pharmacy locations.

Residents also confront challenges when trying to obtain prescription drugs. These difficulties are related to inadequate insurance coverage, confusion over required co-payments, and a limited supply of pharmacies.

A common theme from the focus groups was the removal of certain medications from formulary lists, often with little notice to the consumer. Several residents recounted stories of visiting a pharmacy only to discover that the medication that they required was no longer covered by their insurance (Medicaid, Alliance, or private insurance). In addition, some insurance companies dropped the pharmacy altogether; thus residents were unable to use a pharmacy in their community. A Ward 4 resident observed:

What about when the medicine you're on is just taken off of the Medicaid supply list, then you go to the pharmacist and they won't pay for it anymore. I never received any letter. What do I do?

The payment for prescriptions also was a point of confusion and distress. Many residents shared that they were unclear about what medications were covered, what medications required additional payment, and which pharmaceuticals needed to be brand versus generic. In addition, they described that this medication payment issue can require return visits, which aggravates a difficult situation. One Ward 1 man explained:

When a medicine is a little expensive, they always say they can't fill it or that you have to go back to your doctor so that they'll prescribe another one for you. The insurance doesn't cover what we need.

Another issue for residents was the limited supply of pharmacies. They reported that there are few drugstores or grocery stores with pharmacies in their neighborhoods. Thus they must travel substantial distances for prescription services. In addition, local pharmacies often do not stock the required medication; therefore residents must return to obtain their prescription. This was particularly true for parents of children with mental or behavioral health issues. One Ward 8 parent observed:

My son sees a psychiatrist and has to do the therapy. Sometimes the pharmacy doesn't have his medicine then they tell me to come back. Then I come back and it's still not there and this is hard

because my son needs this to focus and I have to come back multiple times. They simply don't have the medicine.

Many community residents, and particularly those who reside in Wards 7 and 8, reported having to travel a significant amount of time to access outpatient care.

During the Ward 7 and 8 focus groups, residents reported that they were traveling to other wards in order to receive quality or even decent services. They expressed frustration that there were no “safe” or “comprehensive” health services in their wards, thus necessitating travel. They also perceived that health services, including the treatment by health care providers, were better in other wards. One resident offered:

We know what health care is like over there. We know how we get treated here, and you have to travel. There is a difference in the way people are treated, socioeconomic situations. When you are economically underprivileged and black, you have to do it for yourself.

For example, several parents reported traveling to Children’s National Medical Center in order to access pediatric health services rather than visiting closer locations in their neighborhoods. In addition, residents seeking adult health services had found “medical homes” in other wards, but they realized that these options were severely limited.

Community residents pointed to considerable gaps in the availability of outpatient specialty care.

One of the recurrent themes from these focus groups was the challenge of accessing specialty care. Residents described difficulties in obtaining referrals from providers, receiving the appropriate authorization for specialty services, and finding a specialist. Whether it was due to the high volume of patients seen by providers and clinics or the lack of information about the available specialists, residents complained that they did not always obtain an appropriate and timely referral. Second, residents reported that even when they did have a referral name and had scheduled an appointment, the specialist may turn them away due to lack of authorization from their insurance provider. Third, residents reported frustration over the limited number of specialists in their neighborhoods, further limiting access to these services. Co-location of a specialist with a primary health care provider, which was rare, greatly improved access to specialty care.

The lack of specialty care was particularly pronounced for pediatric services. Parents in each of the wards included in this analysis reported that there were not enough providers for their children’s health needs, including allergists, nutritionists, speech and language pathologists, and dentists.

District parents reported that getting behavioral health care for their children was one of the most daunting problems.

Parents shared extensive stories of trying to obtain quality specialty care for their children, particularly in the area of mental or behavioral health. For example, several mothers described

the difficulties of accessing consistent mental health services for their children with ADHD and bipolar disorder. The lack of coordination among these specialists, primary care providers, and school mental health providers also was cited as a related issue.

Further, some parents observed that they did not appreciate the focus on medication for ADHD or other behavioral health issues. A mother from Ward 8 noted:

They [providers] need to actually talk to the child. They should do evaluations and really understand the issue. They should really look at the condition before they write the prescription. Then they don't bother to ask how the medication is doing for the child.

Residents reported that a lack of clear and up-to-date information on how to navigate the health care system limited their ability to obtain timely care and understand what is covered by insurance.

The conversations with community residents highlighted significant confusion regarding how to navigate a complex health care system. Residents reported that they often had outdated information about providers who accepted their insurance and the services available at particular health centers. In addition, they did not have comprehensive information on the processes to follow when seeking follow-up care, including specialist services. In some cases, residents had incorrect information about primary care and mental health services.

Residents reported that enrollment issues with Medicaid and the Alliance were critical obstacles to continuing access to care.

Another major health care access issue was insurance coverage. This was articulated in all groups, and was raised most emphatically by Latino residents. While D.C. boasts a relatively high insurance coverage rate for both children and adults, partly due to the presence of Alliance, residents reported that lapses in insurance coverage were a significant problem. For instance, residents explained that insurance companies used to send a new card every year, yet some participants had not received a new one in some time. Thus, if they were not automatically reenrolled, or notified of the need to do so, they faced problems accessing services. It should be noted that for Alliance, residents must re-enroll every six months, while for Medicaid, enrollment occurs annually. Residents also reported that they often completed extensive paperwork without the follow-through on the part of the insurer. A Ward 1 resident observed:

I had done all the paperwork for his insurance two months before, but when we arrived at the hospital for a referral that they gave us here at [health care center], they told me that he didn't show up in the system. And so I lost the whole day waiting for an appointment for my son and he didn't even end up getting services.

Latino community members discussed the lack of respectful treatment they received in applying for insurance, which compounded the challenge of obtaining insurance. One Ward 4 resident reported:

My insurance (Medicaid) was going to expire in December, so I went down to the office in November to file all the paperwork. I spent all day down there. The people that work there don't help you. They don't respect you. They treat you badly. After I finally turned in all my paperwork, they told me to go home and that I would get my papers in the mail in a couple of weeks. And I waited for a couple of months and no papers.

Finally, some residents provided accounts of the discrepancy between what they thought was covered by insurance and what they were ultimately billed for following care. They expressed frustration that there was no recourse for these situations, which represent a significant problem. One Ward 1 community member described an instance when emergency services were not fully covered by the insurer (a private, employer-sponsored insurer):

When I first got my visa and was just starting to work, I had an accident on-the-job and they called the ambulance and took me to the hospital. They took good care of me at the hospital and I thought that my insurance had covered everything, but then like a month later I get this bill in the mail for the ambulance. I didn't know what to do.

Residents felt they had limited options for places to go where they could receive high-quality care.

Although there are major challenges to accessing health services, there are equally if not more significant problems with the quality of those services. Residents consistently shared deep frustrations with the health services in the city, which stem primarily from perceived disrespect from health center staff (providers and front line staff) and an inability to develop a consistent relationship with a provider due to turnover and related issues.

Residents across wards, though more frequently cited in Wards 7 and 8, articulated problems with clinic staff who were not HIPAA-compliant in that they did not ensure patient confidentiality. For example, focus group participants shared that front line staff member (e.g., receptionists) often discuss patient health conditions loudly so that individuals in the waiting area can clearly hear. One Ward 7 resident noted:

Whatever they say to each other you hear. They sit there and gossip all day and we can hear everything. I walked in with facial dermatitis. It looked like I had been punched by a gang of men. Instead of them talking to me they start talking to one another about my condition. Each one of them are not professional. Then they say we have this bad mentality and that's why they treat us that way...If you think you can't handle us because we're from the 'hood' sometimes they don't realize it is because we are sick and we are just trying to get someone to help us.

The challenges of client mistreatment were not simply focused on front line staff. Residents explained that providers (e.g., doctors, nurses) did not always treat them with respect either, and sometimes assumed that they were unintelligent. One Ward 8 resident recounted:

The doctor referred to me as 'mama'. I would have felt much better to be addressed by my name. His office was not neat. You expect basic cleanliness. I think the doctor was shocked at my knowledge of my medical history.

In addition, client treatment was not isolated to community health centers or clinics. Treatment at hospitals also was not felt to be appropriate. One Ward 1 resident described challenges with translation services:

They treat you badly at [hospital] too....Sometimes I had to fast in the morning before the test, so I'd go to the hospital at 9 in the morning, but no one would see me until 12 in the afternoon. First I had to wait for a doctor to be available and then I had to wait again for an interpreter to show up to translate for me. And then they finally did the sonogram, the doctor was talking and explaining things and the interpreter didn't translate hardly anything to me. She didn't explain anything to me. I felt like I didn't know what was going on.

Residents argued that while more clinics are important, they will not get better care unless they are staffed with well-trained personnel who treat people respectfully. The issue about health center staff respect was inextricably linked with the pervasive concern that there were few providers with whom one could develop a trusting, long-term relationship. While residents acknowledged that some of this lack of a “medical home” was a result of provider supply and strain on clinics, they also felt that there were few providers with whom they are comfortable to share your complete health history. This had potentially significant implications for the quality of care received if clients did not report a comprehensive assessment of their health needs.

Residents feel they have ‘no voice’ in the health care system, particularly in evaluating the quality of health service provision.

In addition to the problems of client treatment, residents expressed a feeling of disconnection from the decisions that are made for improving the health care system. They felt that they have little to no say in their health care, and have rarely been asked to evaluate the quality of health services, including their providers and the clinic environment. One Ward 8 resident described:

We are treated like subhuman beings. Here the doctors become comfortable because we only hold them to a certain standard. We need to speak up for better health care. We need to hold people accountable for their community. We have generations and generations in this community.

Residents provided a few examples of hospitals and clinics that have patient advocates, and this offered a significant benefit to the quality of health care. For example, one Ward 4 resident argued:

[Health Center] has an office for patient advocacy. I have never seen that at [other health center]. That was nice. You have a visible presence of a place to voice your concerns. This shows they are not hiding anything.

Residents feel disengaged from the health care system reform discussions and would like to be “at the table” for decision-making.

It was clear from the focus groups that community residents wanted more say in reforming the health care system in the city. They were willing to engage in community meetings to discuss the issues and potential solutions. One Ward 8 expressed her frustration with this health needs assessment process and a general lack of voice in research and policy decisions:

The mayor has set up the research but there is a big gap between you and us as the community. What I would think right now is that since we have to be going around looking for information, don't you think that it is time by now that you should have less research and more community workshops? We really need community workshops because that's where you will involve us. And especially in Ward 8. Whenever we have something that has ruptured, they put it in Ward 8.

Community residents offered their views on policies for improving health care services in the District. They offered a number of different possibilities, as summarized below. (The order does not denote priority).

Increase the Supply of Providers and Services

- Attract more specialists to the city, in particular allergists, other asthma specialists, nutritionists, ophthalmologists, and mental health providers. Include a full-time psychologist in the health centers.
- Make sure that dentists, particularly pediatric dentists, are available at health clinics.
- Develop more free clinics for homeless and other populations.
- Provide economic incentives so that providers locate their private practices in Wards 7 and 8. Develop planned communities in order to have doctor's offices "on the corner."
- Include more interpreters and translation services at hospitals and clinics.
- Develop more urgent care facilities.

Improve the Accessibility of Care

- Create a brochure with all of the specialists and other providers that you can see at the area hospitals and make accurate and up-to-date health service information readily available by mail and on the internet
- Link social services with health care, particularly for pediatric issues.

Improve the Quality of Care

- Place more money in prevention including holistic health and wellness centers.
- Provide opportunities for health education, including community forums, places in the health clinics for information posting and exchange, and health classes.
- Include a performance based system of accountability that regularly includes client perspectives.

A1.3 Summary

Community residents expressed great interest in informing changes to the health care system in D.C., with particular attention to reducing wait times for appointments and increasing the availability of primary and specialty care providers. While several residents appreciated the quality of care that they obtained at a few health care centers, the majority of focus group participants articulated deep concerns regarding the sometimes disrespectful treatment they

received from providers as well as the rather limited inclusion of resident voices in health care decision-making. The participants offered recommendations for addressing these issues, including more community resident involvement in regular evaluations of providers. Further, the participants were invested in exploring complementary policies for improving health, and not simply health *care* in the city, including increasing opportunities for health education and implementing more wellness strategies.

Appendix 2:

Provider Perspectives on Health Care in the District

We held focus groups and conducted interviews with District health care providers with the goal of better understanding the experiences of District physicians—particularly, what factors affect their decisions about which patients to serve and where to practice—and to elicit providers’ ideas about policy options to improve the health care delivery system in the District. In what follows, we summarize our methods and the key findings from the focus groups and interviews.

A2.1 Methods

Nine focus groups and 13 one-on-one or group interviews, including a total of 95 District providers, were completed between March 12 and April 10, 2008. We recruited participants through medical directors at area hospitals, the D.C. Hospital Association, the D.C. Primary Care Association, the D.C. Medical Society, and by word of mouth. Participants included providers from a number of practice settings including the Unity clinic system, private practice and hospital based practices (Washington Hospital Center, Children’s Hospital and George Washington Hospital.) To incentivize participation, some providers received a \$50 Starbucks gift card.

Five of the 9 focus groups were specifically with residents/fellows. Individual interviews were all with practicing providers. In addition to the focus groups and interviews, we also had meetings with hospital leaders from Howard, Providence and Washington Hospital Center as well as meetings with hospital leaders at the D.C. Hospital Association.

There were a number of specialties represented in the provider interviews and focus groups. Table A2.1 describes focus group participants by specialty and ward of practice. The majority of providers were from primary care pediatrics (24%) and primary care internal medicine (23%). Several wards were represented. The majority of participants practiced in Ward 5 (33%), followed by Ward 1 (27%). Some participants practiced in more than one ward.

Table A2.1 Characteristics of provider focus group participants

| Characteristic | Percentage <i>(unless otherwise noted)</i> |
|--------------------------------------|---|
| Age (in years)* | 36 (mean) |
| Gender | |
| Male | 34 |
| Female | 63 |
| Unknown (no response) | 13 |
| Race | |
| White | 33 |
| Black | 34 |
| Asian | 17 |
| Hispanic | 3 |
| Unknown | 13 |
| Stage of Training | |
| Residents | 54 |
| Attendings | 46 |
| Years in Practice (attendings only)* | 14 (mean) |
| Specialty | |
| Pediatrics | 24 |
| Internal Medicine-Primary Care | 23 |
| Internal Medicine-Subspecialties | 14 |
| Family Practice | 6 |
| Psychiatry | 6 |
| Obstetrics/Gynecology | 5 |
| Other | 7 |
| Unknown | 14 |
| Ward of Practice** | |
| Ward 1 | 27 |
| Ward 2 | 20 |
| Ward 4 | 1 |
| Ward 5 | 33 |
| Ward 6 | 6 |
| Ward 7 or 8 | 10 |
| Other | 1 |

**Among those responding; **Among those responding; some providers practiced in more than one ward.*

We used a semi-structured interview protocol. We collected basic information about participants, including specialty, location of practice, duration of practice and other general practice characteristics. We asked providers about a number of issues, including about their experiences with Medicaid and the Alliance and their thoughts about practicing in areas east of the Anacostia River. We also asked about various policy options that would improve their practice environment and that would encourage providers to practice in underserved areas and/or to provide care to District residents enrolled in Medicaid or the Alliance.

All focus groups and interviews were moderated by a RAND researcher. Focus groups were recorded by a research assistant and notes were taken at both focus groups and interviews. Focus groups lasted approximately 1.5 hours. Interviews lasted approximately 45 minutes. We

analyzed focus group and interview notes by summarizing and enumerating themes in order to establish areas of theme convergence.

A2.2 Findings

Physicians' Perceptions and Practice Decisions

We first summarize the perceptions of physicians practicing in the District, with a particular focus on factors that affect their decisions about whom and where to serve.

Physicians indicated that the District is a high-cost practice environment, in part because the cost of medical malpractice insurance is high.

Most providers felt that Washington D.C. has a very expensive practice environment. Providers report that malpractice insurance is particularly high because there has been no tort reform in the city. Because of high malpractice costs and lack of tort reform, many providers would rather practice in Maryland or Virginia. This is particularly true for high-risk specialties, such as obstetrics and gynecology. In addition, office rental space is very expensive with few amenities for providers or patients, such as parking. As one focus group participant remarked:

D.C. is a foreboding place to practice medicine and not to mention the litigious environment. For someone just coming out of residency, I can't imagine how they could even think about opening up their own practice. They would have to join an already existing practice to help defray the costs, or negotiate with realtors.

Physicians agreed that poor Medicaid reimbursement rates and delays in getting reimbursement from Medicaid are key drivers limiting provider availability for underserved populations.

Given the high costs of practicing in the city, providers thought reimbursement rates for some indemnity insurance plans were too low and that reimbursement rates for Medicaid and Alliance patients were extremely low. Providers reported that they were unable to take a large percentage of Medicaid patients and still meet their practice costs. One participant said:

Reality is that you can't have a whole office full of D.C. Medicaid patients even though that's my passion. They are the sickest patients and they are underserved. Reality sets in and you have to look at who you can serve.

The administrative burden added by billing multiple carriers is a major disincentive for taking insurance, and this is particularly true for Medicaid.

Beyond low reimbursement rates, many providers also reported that reimbursement for Medicaid is not timely, and that, together, the combination of low reimbursement rates and delays in reimbursement have led to many providers making the decision to no longer accept new patients with Medicaid and the Alliance. Further, providers reported a history of not getting paid by Medicaid at all in some cases.

Providers indicated that there has been a steady decrease in oncologists who participate in Medicaid, in particular, due to the low reimbursement rates as well as due to delays in reimbursement for costly chemotherapy agents.

Providers also indicated that high “no-show” rates among Medicaid patients limited their willingness to serve this population.

In addition, providers described high “no-show” rates among Medicaid enrollees. Booking Medicaid patients who do not follow through with their appointment results in a loss of revenue for providers because they cannot bill for no-shows. As one focus group participant summarized:

The no show rate is really high for Medicaid patients. For specialty care it is really high, even when there’s calling for reminders [especially for] those who have a long wait [for appointments]. Trying to call is difficult because their phones are disconnected or they’ve moved.

Primary care physicians reported significant challenges in getting authorization and referral requests completed for Medicaid MCO patients and difficulties finding specialty care for their patients.

Providers reported additional disincentives for caring for Medicaid patients, including problems with getting referrals, authorization and necessary treatments for their patients. Providers report that the processing specialty referrals can be very difficult for a number of reasons. The pre-authorization process can be prolonged and require burdensome paperwork. As a result, providers were frustrated with the prolonged waiting times their Medicaid patients experienced for specialty appointments. Further, primary care providers also reported that they often do not receive the results of the specialty consultation in a timely manner for their Medicaid patients.

District physicians identified mental health and oral health care services as particular challenges. Pediatricians reported additional difficulty getting referrals for children with special developmental needs. Physicians reported that psychiatry referrals to the Department of Mental Health are offsite and not integrated within the primary care environment. Another major barrier for psychiatric services is the longstanding Medicaid provision called the Institute for Mental Disease Exclusion, which prohibits freestanding mental health hospitals from receiving Medicaid reimbursement for inpatient services for adults. As a result, there are restricted options for hospitals which need to transfer a Medicaid patients requiring admission. This may lead to prolonged emergency department boarding due to fewer available hospital beds available for Medicaid patients.

I cannot easily refer someone to a psychologist and it is very frustrating as a provider to shop around for different [services]. We are forbidden to send some people with [some insurance] to psychiatry because they have their [own carve out] insurance. So the way things are organized are stumbling blocks to providing services. Ten percent of my professional time is spent talking to therapists. The most fundamental services are social and psychological services. The vast majority of problems in teens are behavior based.

Physicians also related that case management for Medicaid (managed care and fee for service) enrollees and Alliance enrollees is a significant problem.

Providers reported spending a large amount of time performing case management functions for their patients, including time spent arranging referrals for specialty care, social services and radiology studies. Such time spent on case management by providers is not billable under the current insurance structure. Many providers who decide to hire someone to deal with case management issues must do so out of their own budget without coverage or reimbursement from MCOs.

Medicaid and Alliance patients are perceived to be more complicated than those with private insurance and to have particular needs for good case management. Despite higher needs, providers feel that the MCOs do not do an adequate job with case management, with the exception of Health Services for Children with Special Needs MCO. Providers said that case management is a priority for improving the health care practice environment in the city. As two participants put it:

There needs to be case managers in place. Doctors spend a good percentage of their time dealing with social work issues in addition to health issues. Because of the lack of social workers, doctors have to pick and choose who needs social work assistance the most.

You have to see loads and loads of patients in primary care. This does not work because you're supposed to do loads of stuff in primary care, depression screening, diabetes screening, blood pressure screening. How much do they expect us to do? Many patients are not educated on how they are supposed to use their insurance. Medicaid is especially bad, you have to get authorization to even get a chest x-ray and it is very burdensome to do all of the paperwork.

Physicians did not view Wards 7 and 8 as attractive practice environments.

A number of factors contributed to this view. First, providers perceived that the patients are sicker (and thus more time-consuming to treat) and that patient non-compliance would be an issue. In addition, some providers thought that the health care infrastructure in Wards 7 and 8 was insufficient in terms of the supply of pharmacies, specialists, and hospital services, making practicing there even more difficult. Some providers also were concerned about their safety, though many felt these perceptions could change if providers were given more exposure to the practice environment during the training process.

Physicians' Views on Policies for Improving the Health Care Delivery System

Providers were asked about different policies for improving the health care delivery system, and offered the following suggestions:

Providers suggested that an increase in Medicaid reimbursement rates (so that they are comparable to Medicare and commercial rates) and improved timeliness of reimbursement, are critical to improving provider participation in Medicaid.

Providers proposed that case management for Medicaid and Alliance patients be improved, either through improved case management services offered through Medicaid MCOs or through enhanced reimbursement for case management services that providers offer.

An additional option discussed was for Medicaid and the Alliance to provide a block grant to clinics for hiring an on-site, point-of-service case manager. Providers asserted that if they were able to spend less time on case management, they would be able to care more efficiently for patients.

Providers recommended improving the referral process for Medicaid managed care and Alliance enrollees.

A web-based or phone-based referral system that does not require prolonged wait times or extensive preauthorization paperwork would ease the referral process for providers. In addition, expanding the specialty provider network through other incentives, such as improved reimbursement, is seen as critical.

Providers advocated for improving the physical space of safety net clinics.

Many providers feel that some elements of safety net clinics were not physically attractive and therefore did not always offer a good working environment for providers or staff. Often there are insufficient exam rooms.

Every one of my patients should get the care that I get when I go to the doctor. Nice waiting rooms and reports from physicians. This can go a long way to getting people more appropriate care.

Providers identified several incentives that would encourage them to open their practice to accept Medicaid patients.

Salary guarantees, stipends, loan repayments, and tax incentives for providers who agreed to provide care to a certain percentage of Medicaid or Alliance patients or who practice in medically underserved areas were considered attractive options for encouraging providers to expand their practice to underserved populations. An option allowing loan repayment for part time work in underserved clinics was attractive to residents and fellows pursuing specialty fields. Providers felt loan repayment options should be better publicized and the number of opportunities increased. As one provider articulated:

When I was looking for a job the big thing was salary. For me I had to go for the money because I'm so poor. I had lots of lofty goals. I wanted to stay in D.C. but money was important.

Providers felt that a better system for information sharing between specialists and primary care providers was essential to their ability to provide better, more coordinated care.

Information flows from primary care providers to specialists (with background clinical data) and flows back to primary care providers from specialists (with information on diagnosis and treatment plan) were noted to be lacking and an impediment to better quality, more efficient care.

Providers considered malpractice reform paramount to improving the practice environment in order to attract physicians to the District.

As described, most providers reported that malpractice insurance costs were particularly high in the District relative to other locations, and that Maryland and Virginia were more attractive because of their lower malpractice costs.

Providers advised that electronic medical record (EMR) investments would be worthwhile in a multitude of practice settings.

Many community-based providers do not have access to an EMR. They feel that this is an impediment to practice. In addition, they have no link to inpatient medical records for their patients who have been hospitalized. Lack of an integrated electronic medical record that connects primary care providers with inpatient facilities and specialists hinders continuity of care, as providers are unable to have immediate access to treatment plans that were implemented outside of their immediate practice setting.

I think we should all be on one and the same electronic medical record. If it was something that was widely available that'd be a lot better. Sometimes people will get tests and no one knows what tests they get so they come back to their primary care provider and they don't know what was done.

An EMR for providers linked with clinics and hospitals as well as private providers in the community would improve the flow of information and also make providers more efficient. An electronic medical record would also allow ongoing data collection so that health care outcomes can be more efficiently tracked.

Providers advocated for better integrating psychiatry services with primary care and for adjusting reimbursement policies to allow for greater options for Medicaid patients with mental health problems.

Providers thought integrated psychiatry services that incorporate a team approach with primary care were important to improving care for the mentally ill. Further, providers pointed to relaxing the Institute for Mental Diseases exclusion, (the Medicaid provision that restricts Medicaid reimbursement for freestanding mental health hospitals for inpatient services for adults) as a way to mitigate delays for patients boarded in the ED who require inpatient psychiatric services.

Appendix 3:

Overview of the District's Health Care Safety Net

In this Appendix, we describe the funding, services, and providers that contribute to the health care safety net in the District. Contributors include:

- *The federal government*, which provides matching funds to increase the availability of health care insurance through Medicaid and the State Children's Health Insurance Program (SCHIP), funds for the provision of care to uninsured or underserved populations (Health Resources and Services Administration grants, and the National Health Service Corps), and funds through Medicare disproportionate share (DSH) payments;¹
- *The D.C. government*, which funds health insurance and health care programs (Medicaid, SCHIP, and the Healthcare Alliance), and directly supports the provision of care to uninsured or underserved populations (such as through direct subsidies to community health centers);
- *Hospitals*, which provide charity care and cover shortfalls in revenues from Medicaid and the Alliance program;
- *Private providers*, who volunteer their time at local health clinics, provide free or discounted care in their offices, or participate in the Medicaid or Alliance network;
- *Community health centers*, which use a combination of federal funds, local government funds, grant funds, and donations to provide care for the uninsured, Medicaid and Alliance populations; and,
- *Philanthropic organizations*, which fund the provision of care to uninsured or underserved populations (such as grants to community health centers)

In total, nearly \$2 billion was spent on District health care safety net services in FY2007. Table A3.1 below summarizes safety net financing in aggregate across payers and programs. (The table does not include unrecovered costs to community physicians, clinics and other providers of ambulatory care for furnishing safety net services, which we were unable to estimate.) Medicaid accounted for \$1.4 billion, Alliance for \$130 million, and HRSA grants \$69 million. In addition, D.C. hospitals received an estimated \$59.1 million in Medicare DSH funds in FY 2007. Hospital uncompensated care net costs and revenue shortfalls from Medicaid/Alliance and medical charity programs accounted for \$270 million.

¹ Medicare makes a supplemental payment to hospitals that serve a disproportionate share of low-income patients (or a low-income patient percentage of at least 15 percent). These payments are tied to Medicare patient care payments through a percentage add-on factor to the standard per discharge payment.

Table A3.1 Safety Net Funding by Payer and Program

| | Federal Government | Local Government | Local Hospitals | Total |
|---|-------------------------------|-----------------------------|----------------------------|----------------|
| Medicaid | \$980 | \$420 | -- | \$1,400 |
| Alliance | \$0 | \$130 | -- | \$130 |
| SCHIP | \$7 | \$2 | -- | \$9 |
| Medicare DSH | \$59 | \$0 | -- | \$59 |
| HRSA grants | \$69 | \$0 | -- | \$69 |
| Hospital uncompensated care net costs and Medicaid/Alliance shortfalls* | | | | \$270 |
| Total | \$1,115 | \$552 | \$270 | \$1,937 |

**We are unable to quantify the contribution of charity care provided in non-hospital settings.*

In what follows, we provide additional detail on the programs, services, and providers which make up the safety net.

A3.1 Medicaid, SCHIP, and the Alliance

Medicaid provides health insurance coverage to eligible individuals and families with low incomes and resources. In the District, Medicaid covers approximately 142,500 people, or about 25 percent of the D.C. population. The State Children’s Health Insurance Program (SCHIP) is integrated with D.C.’s Medicaid program and covered an additional 5,150 persons in FY2007.

Subject to minimum program requirements established by the Medicaid law, the District has considerable flexibility to determine eligibility, coverage, and payment rules. Eligibility is based on covered categories of the population and income levels. There are three major groups of Medicaid/SCHIP enrollees:

- *Low-income families with children* (about 70,000 children and 30,000 adult enrollees). SCHIP raised the eligibility thresholds to 300% of federal poverty line (FPL) for pregnant women and children. Other adults with children are eligible up to 200 percent of the FPL. Most are enrolled in managed care. These are “D.C. Healthy Families” enrollees.
- *Individuals with disabilities who are not eligible for Medicare* (about 28, 400). Most are fee-for-service enrollees; however, about 3,200 children are enrolled in the Health Care for Children with Special Needs plan (a partially capitated managed care plan with on-going case management).
- *Low income individuals with dual Medicaid/Medicare coverage* (about 12,400 enrollees). Individuals with incomes below the FPL are entitled to full Medicaid benefits (which are secondary to Medicare), including long-term care that is not covered by Medicaid.

Created after the closure of D.C. General Hospital in 2001, the D.C. Alliance is a public-partnership that provides free care to 46,000 District residents with family incomes below 200

percent of the FPL who have no other source of insurance.² Enrollees are assigned randomly to one of two health plans (Chartered Health Plan or Health Right).³

Despite the availability of Medicaid, SCHIP and the Alliance, some District residents remain uninsured. Determining the number and proportion of the population that is uninsured is not straightforward (Lurie and Stoto, 2002) and estimates vary.⁴ For example, estimates from the National Survey of Children's Health and Behavioral Risk Factor Surveillance Survey indicate that 4.5% of District children were uninsured in 2003 and 8.7 percent of adults lacked insurance in 2006 (Lurie et al., 2008).⁵

By contrast, the Kaiser Family Foundation and the Urban Institute estimate, using Current Population Survey data, that in 2005/2006 8 percent of children age 0-18 and 15 percent of the adult population age 19-64 in the District of Columbia had no insurance at some point during the year (Kaiser State Facts, 2008). The percentage reported as having "other public coverage" is low relative to the percent of the population enrolled in the Alliance program, suggesting that some of those reporting no insurance were eligible for (or enrolled in) the Alliance program.

Funding

Both Medicaid and SCHIP are funded through a combination of federal and state funds. For Medicaid, the D.C. government pays 30 percent of the cost and the federal government pays 70 percent of the cost.⁶ Total fiscal year 2007 expenditures (D.C. and federal) were \$1.4 billion, including \$34 million in administrative costs and \$82.4 million in subsidies to hospitals that serve a disproportionate share of low-income patients. By comparison, for SCHIP, the D.C. government pays 21 percent and the federal government pays 79 percent of the cost. Total expenditures were \$9.1 million in FY2007.

In FY2007, the Health Care Safety Net Administration in the Department of Health spent \$118 million on patient care services and \$11 million in oversight and monitoring the D.C. HealthCare Alliance.

Spending

Figure A3.1 shows the distribution of Medicaid enrollment and spending across basic population groups in FY2006.

² Benefits include acute care and emergency services, preventive care, health education and wellness programs, prescription drugs, rehabilitation therapy, home health care, family planning and dental services. The program does not cover long-term care services.

³ New contracts were awarded in March 2008. Under the terms of the new contracts, Alliance enrollees will be able to choose their health plan.

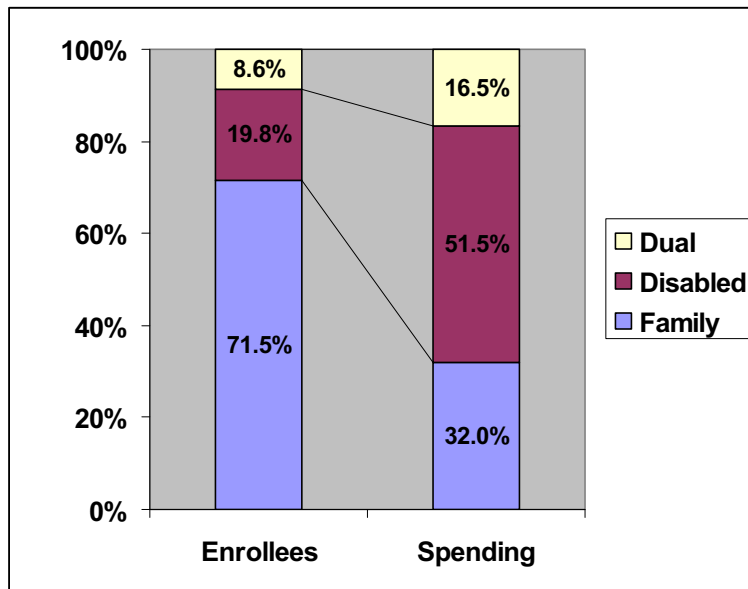
⁴ Challenges include the lack of an on-going data collection mechanism focused on this question, inadequate survey sample sizes to estimate insurance status by demographic and economic characteristics, and changes in insurance status throughout the year. A survey that asks about insurance status at a particular point in time may underestimate the proportion of the population who lacked insurance at some time during the year.

⁵ These surveys measure insurance at a particular point in time and may understate the proportion of the population that lacked insurance at any point during the year.

⁶ Most of the District's share of funding is from general revenues; however, a six percent provider tax is levied on nursing homes for the Nursing Quality of Care Fund.

- Together, children and adults enrolled in D.C. Healthy Families constituted approximately 72 percent of Medicaid enrollees but accounted for only 32 percent of spending.
- Persons with disabilities accounted for 20 percent of the eligible population but approximately 52 percent of the spending.
- Aged individuals (those with dual eligibility for Medicaid and Medicare, which includes mainly those who cannot afford to pay for needed long-term care) represented nine percent of Medicaid enrollees and accounted for approximately 17 percent of spending.

Figure A3.1 Medicaid Enrollment and Spending by Population Group, FY2006



Source: MMA Medicaid Annual Report FY2007. Does not include expenditures that are not specific to a population group.

Medicaid Provider Payments--Overview

Most Medicaid funds flow to health care providers through four mechanisms:

- Per capita premium payments are made to three Medicaid managed care organizations for about 90,000 enrollees in D.C. Healthy Families. These organizations are at-risk for providing the Medicaid-covered services and pay health care providers for the care provided to their enrollees.
- Fee-for-service payments are made directly to health care providers for services provided to aged and disabled persons (other than the children who are enrolled in a partial capitation program), including cost-sharing amounts (deductible and coinsurance amounts) paid to health care providers for dual Medicare/Medicaid enrollees. Fee-for-service payments are

also made for some individuals within the family eligibility category who are not eligible for managed care or need services that are not covered by the health plans.

- Subsidy payments are made to hospitals that serve a disproportionate share of low-income patients.
- Subsidy payments are made to FQHCs for the difference between the payments they receive from the Medicaid managed care organizations and the amounts they would have received from Medicaid under the fee-for-service program.

Table A3.2 summarizes FY06 Medicaid spending by eligibility category. We were unable to separately identify subsidy payments to DSH hospitals and FQHCs. They are included in the fee-for-service payments for acute care services.

Table A3.2 Total Medicaid spending for Health Care Services, FY 2006 (Millions of \$)

| Spending Category | DC Healthy | | | Total (n=142,500) |
|---------------------------------|-------------------------|--------------------------------|-----------------------------|----------------------|
| | Families (n=102,600) | Disabled Persons (n=28,400) | Dual Eligible (n=12,400) | |
| Managed care insurance premiums | \$ 246 | \$ 63 | -- | \$ 309 |
| FFS: Acute care | \$ 117 | \$ 369 | \$ 26 | \$ 512 |
| FFS: Long-term care | \$ 35 | \$ 210 | \$ 160 | \$ 405 |
| FFS: Medicare cost-sharing | -- | -- | \$ 20 | \$ 20 |
| Total | \$ 399 | \$ 642 | \$ 206 | \$ 1,246 |

**Does not include \$55 million for spending not specific to individuals.*

Source: MMA Annual Report 2006.

Findings include:

- Fee-for-service payments accounted for 76 percent and managed care payments for 24 percent of total Medicaid spending for health care services.
- Though ninety percent of DC Healthy Families enrollees were in managed care, fee-for-service spending was 38 percent of total spending for these enrollees.
- Fee-for-service spending for disabled persons was \$369m for acute care services and \$210m for long-term care services.
- Most spending for the dual eligible population was for long-term care services that are not covered by the Medicare program.

Table A3.3 compares Medicaid enrollment, distribution of payments, and per capita payments by population group in D.C. to the U.S., Maryland and Virginia in FY2005 (the most recent year for which comparative data are available). Key findings are:

- A higher proportion of Medicaid enrollees are disabled in D.C. (18.4 percent) than in the comparison jurisdictions (for example, the national average is 14.1 percent).
- Comparing how payments are distributed across population groups is difficult because D.C. has a higher proportion of payments that are designated as “unknown”. Nonetheless,

it appears that D.C. spends less on the aged and more on the disabled than its neighboring states and the U.S. average which is consistent with the fact that the District has a greater proportion of enrollees who are disabled.

- Across all population groups, D.C. per capita expenditures were higher than those for the comparison jurisdictions. However, per capita expenditures tend to be higher in urban areas than rural areas and D.C. is a single metropolitan area whereas the other jurisdictions are states with urban and rural populations. Thus, the per capita spending comparisons have limitations for benchmarking purposes.

Table A3.3 Medicaid Enrollment, Payments, and Per Enrollee Spending by Type of Enrollee: DC Compared to Maryland, Virginia and the US (FY2005)

| | Children | Adults | Elderly | Disabled | Unknown | Total |
|---|----------|---------|----------|----------|---------|---------|
| Distribution of Medicaid Enrollees by Enrollment Group | | | | | | |
| US | 49.9% | 25.8% | 10.3% | 14.1% | -- | 100 % |
| DC | 48.5 | 24.6 | 8.6 | 18.4 | -- | 100 |
| Maryland | 54.8 | 21.1 | 9.5 | 14.6 | -- | 100 |
| Virginia | 56.1 | 14.9 | 11.8 | 17.2 | -- | 100 |
| Distribution of Medicaid Payments | | | | | | |
| US | 17.3% | 11.6% | 26.1% | 40.8% | 4.2% | 100% |
| DC | 17.4 | 11.8 | 18.7 | 46.3 | 5.9 | 100 |
| Maryland | 19.5 | 10.1 | 24.0 | 45.6 | 0.7 | 100 |
| Virginia | 19.3 | 9.2 | 26.4 | 44.3 | 0.8 | 100 |
| Medicaid Payments per Enrollee (Average) | | | | | | |
| US | \$1,617 | \$2,102 | \$11,839 | \$13,524 | -- | \$4,662 |
| DC | \$2,844 | \$3,801 | \$17,360 | \$20,040 | -- | \$7,941 |
| Maryland | \$2,052 | \$2,753 | \$14,594 | \$17,984 | -- | \$5,760 |
| Virginia | \$1,596 | \$2,865 | \$10,410 | \$11,945 | -- | \$4,644 |

Source: Kaiser Family Foundation State Health Facts

Medicaid Payments to Managed Care Organizations

Three MCOs received \$246 million in Medicaid payments in FY2006. One served only Medicaid enrollees (Amerigroup) and two served both Alliance and Medicaid enrollees (Chartered Health Plan and Health Right, Inc.)⁷

- Established in 1987, D.C. Chartered Health Plan, Inc. (37,341 enrollees) is privately-owned for-profit plan that operates only in D.C. The health plan has transportation services and a staff-model comprehensive health care center and also provides services to the Alliance population.

⁷ New contracts were awarded to these three organizations in March 2008. In addition, a contract was awarded to Unison Health Plan of the Capital Area, Inc. Unison Health Plan operates public-sector health care plans in Delaware, Ohio, Pennsylvania, South Carolina and Tennessee that serve about 380,000 members and established a subsidiary to offer managed care in D.C. in July 2007. In early 2008, AmeriChoice, the public sector health care unit of UnitedHealth Group, announced plans to purchase Unison Health Plan.

- Amerigroup (38,606 enrollees), the largest publicly-traded company focused on Medicaid and uninsured populations, has operated in D.C. for nine years. Amerigroup Maryland Inc. is a licensed health maintenance organization that operates in both D.C. and Maryland. Other subsidiaries are active in nine other states, including Virginia.
- Established in 1998, Health Right, Inc. (13,586 enrollees) is a private health plan owned by two FQHCs: Unity Health Care and Columbia Road Health Services. It is a mixed staff-IPA HMO model that also serves the Alliance population.

Medicaid is required to reimburse managed care plans in an actuarially sound manner. Actuarial soundness is important for assuring that health plans will participate in the Medicaid program and will have the ability to purchase health care services through adequate provider networks. CMS' implementing rules (42CFR438.6(c)) define *actuarially sound capitation rates* as rates that:

- “have been developed in accordance with generally-accepted actuarial principles and practices;
- are appropriate for the populations to be covered and the services to be furnished under the contract; and
- have been certified as meeting the requirements of the regulation by actuaries who meet the qualification standards established by the American Academy of Actuaries and follow the practice standards established by the Actuarial Standards Board.”

A practice note issued by the American Academy of Actuaries contains broad guidelines touching on factors that should be considered in the rate-setting process , but leaves a number of issues inadequately addressed (Spitz, 2007; Lewin, 2006). The guidelines indicate that rates should 1) be based on the costs that Medicaid would have paid on a fee-for-service basis for services provided by the health plan and 2) should be adjusted at a minimum for eligibility category, age, gender, and locality. Risk adjustment for health status is not required (Spitz, 2007).

The practice note also indicates that actuarially sound rates are typically independent of budget issues. However, a survey of health plans found that 39 percent said that their state is generally not responsive to concerns about the adequacy of rates; plans in half the states indicated that the payment rates were either explicitly budget driven or indirectly affected by budget constraints through trend assumptions (Lewin, 2006).

The rate-setting process for the D.C. Medicaid program begins with the average per capita costs for the three health plans. Prior to the contracts awarded in March 2008, the per capita rates are adjusted for age and sex but not for differences in use rates or health status across the plans. The new contracts incorporate adjustments for differences in use rates, establish a minimum medical loss ratio of .75 (at least 75 percent of the payments should be spent on medical providers), and provide incentive-based payments on health outcome indicators.

Until recently, the MCOs had minimal reporting requirements and we were unable to obtain information on payment levels and how they are distributed across health care providers.

Table A3.4 below compares average monthly per capita managed care payments in the District to that in Virginia and Maryland. These comparisons are limited because each state cover different populations in varying degrees under different types of Medicaid managed care plans and have different demographic and geographic compositions.⁸ Keeping these limitations in mind, D.C.’s average payment is in line with the neighboring states. The District’s rate is higher than Virginia’s but lower than Maryland’s.

Table A3.4 Comparison of Managed Care Enrollment and Capitation Rates

| | US | DC | MD | VA |
|------------------------------------|------------|--------|---------|----------|
| MCO Enrollment | 28,575,585 | 91,217 | 482,749 | 335,414* |
| Enrollment as % of Medicaid | 63% | 65% | 67% | 50% |
| Average Monthly Per Capita Payment | \$121 | \$268 | \$287 | \$244 |

*Does not include 86,017 persons enrolled in a primary care case management program.

Medicaid Fee for Service Payments—Comparison to Maryland and Virginia

In Table A3.5 we compare the distribution of Medicaid fee-for-service spending in FY2005 to the spending distributions nationally and for Maryland and Virginia.⁹ Again, while these comparisons are useful, they must be interpreted with caution because of the different types of enrollees included in FFS Medicaid programs in different states.

⁸ For example, Maryland has a mandatory Medicaid managed care plan. Dual Medicare/Medicaid eligible and individuals with long-term institutional status are exempt. Under Virginia’s mandatory managed care plan, 50 percent of the population was enrolled with a managed care plan and another 15 percent in a primary care case management program that combines fee-for-service payment with a \$3.00 per member per month case management payment. Dual eligibles and others receiving long-term care (institutional or under a home and community-based waiver) are exempt. For purposes of comparing per capita payments to managed care organizations, only the enrollees in the managed care organizations are included in the calculation of Virginia’s monthly per capita payment.

⁹ For comparability purposes, the distribution is based only on spending for enrollees under the regular Medicaid program and does not include spending for SCHIP eligibles.

Table A3.5 Comparison of Medicaid Fee-for-Service Spending in FY2005

| | DC | DC | National | Maryland | Virginia |
|---|---------------------------------|-----|----------|----------|----------|
| | Total Spending (in millions) | % | % | % | % |
| Fee-for-Service Payments | 874.0 | 100 | 100 | 100 | 100 |
| Inpatient Hospital - Reg. Payments | 280.7 | 32 | 22 | 20 | 19 |
| Mental Health Facility Services - Reg. Payments | 15.1 | 2 | 3 | 6 | 12 |
| Outpatient Hospital Services | 20.2 | 2 | 7 | 6 | 5 |
| Physicians' Services | 19.1 | 2 | 5 | 2 | 6 |
| Clinic Services | 148.9 | 17 | 4 | 7 | 2 |
| Federally-Qualified Health Center | 7.4 | 1 | 1 | 1 | 0 |
| Other Practitioners | 1.3 | 0 | 1 | 0 | 1 |
| Laboratory/Radiological | 3.8 | 0 | 1 | 1 | 1 |
| Prescribed Drugs Net of Rebates | 81.2 | 9 | 16 | 16 | 18 |
| Dental Services | 0.8 | 0 | 2 | 0 | 1 |
| EPSDT Screening | 0.2 | 0 | 1 | 0 | 0 |
| Nursing Facility Services | 176.3 | 20 | 25 | 33 | 26 |
| Intermediate Care Facility Services | 78.7 | 9 | 7 | 3 | 9 |
| Home Health Services | 31.8 | 4 | 2 | 4 | 0 |
| Personal Care Services | 6.7 | 1 | 5 | 1 | 0 |
| Hospice Benefits | 1.6 | 0 | 1 | 1 | 1 |

Table A3.5 shows several striking differences. Relative to Maryland, Virginia and the U.S. as a whole, Medicaid fee for service payments under D.C.'s program were disproportionately higher for inpatient hospital services (excluding DSH payments) and for the combined categories of physician services, hospital outpatient services, and clinic services. Within that combined category, payments were proportionately much higher for clinic services and lower for the other two categories of outpatient services. By contrast, Medicaid FFS payments in the District were disproportionately lower for prescription drugs, nursing facility services, and mental health facility services.

These differences could be attributable to differences in utilization rates, payment rates, or a combination of factors including the composition of the FFS population. We do not have access to data that would allow us to analyze the differences in depth.

Medicaid Fee for Service Payments--Hospital Inpatient Services

The D.C. Medicaid program pays for Medicaid inpatient stays in acute care hospitals on a per discharge basis using the All-Patient (AP)- DRG classification system that is used by several states for Medicaid hospital payment (e.g., New York, North and Washington) to account for differences in case mix. Each DRG has a relative weight that reflects the average cost of patients assigned to that DRG relative to the average cost of all patients. The base payment rate is the District-wide average cost per discharge plus additional hospital-specific payments for capital and graduate medical education costs. Additional payments are also made for atypically high cost cases. The current payment parameters are based on FY1996 cost reports without adjustment for inflation after 2002 or for changes in practice patterns and new technology,

charging practices or teaching activities. The MAA plans to rebase the payment rates for FY2009.

Because the payment rates have not been adjusted for a number of years, the payment levels may not longer be appropriate to assure access at a reasonable rate for efficiently delivered services. Overall, findings from a benchmarking analysis of payment rates by the Lewin Group in 2005 found that the D.C. Medicaid rates were on average four percent higher than Medicare.

Table A3.6 reports the study’s findings with respect to the ratio of the average payment under the Medicaid fee-for-service programs in D.C., Virginia, and Maryland for a standard mix of patients to the amount that would be payable under Medicare in each of those states.¹⁰ By using Medicare as the benchmark, the analyses automatically adjusted for geographic cost differences.

Table A3.6 Ratio of Medicaid Payment Rates to Medicare Rates in 2005

| Type of Service | D.C. | Maryland | Virginia |
|-----------------|------|----------|----------|
| Medical | 1.06 | 1.14 | .89 |
| Surgical | .99 | 1.14 | .98 |
| Trauma | 1.08 | 1.20 | 1.10 |
| Total | 1.04 | 1.15 | .94 |

Source: Lewin, 2006

Compared to the other Medicaid programs, D.C.’s payments were lower than Maryland’s but higher than Virginia’s.¹¹

Medicaid Fee-for-Service Payments—Hospital Outpatient and Emergency Room Services

The D.C. Medicaid plan provides the following with respect to facility services furnished to Medicaid patients in hospital outpatient clinics:

- An all-inclusive payment for clinic services based on 131.1% of each hospital’s per visit cost in FY1980. According to MAA nearly 135,000 hospital clinic visits were made in FY2007 under the Medicaid FFS program.
- An all-inclusive payment for emergency services (determined by the patient’s diagnosis) provided in an emergency room based on 140% of each hospital’s per visit cost in FY1980.
- An all-inclusive \$50 rate for non-emergency (or “urgent care”) services provided in an emergency room.

¹⁰ Because the primary purpose of the study was to benchmark Alliance fee-for-service payments before the program converted to a managed care plan, the Lewin analysis is based on the mix of patients covered by the Alliance programs. While an analysis based on the Medicaid patient mix would be preferable for our purposes and could have different results, we have no reason to expect that the general pattern would be different by service category. Maryland is an all-payer state that has a waiver from the regular Medicare prospective payment system. To be consistent with other states, the analysis used what would have been payable under the regular Medicare payment formula instead of the all-payer rates. Although Lewin also benchmarked payments for obstetrics, we have not included the findings in Table A4.1. Because the Medicare population has few labor and delivery cases, the Medicare DRGs and relative weights are generally not appropriate for these services (CMS, 2007) and should not be used for assessing the appropriateness of the Medicaid payment rates.

¹¹ Maryland’s rates are based on 94 percent of commercial insurer rates under the state’s all-payer system. The design of Virginia’s payment system is similar to D.C.’s.

Medicaid Fee-for-Service Payments—Physician Services

An estimated 184,000 outpatient physician visits were made under the fee-for-service program in 2005. Physician services are described and paid using Common Procedure Terminology (CPT-4) codes maintained by the American Medical Association. Under the D.C. Medicaid plan, payment rates for physician services are based on 80 percent of the Medicare physician fee schedule amounts in effect when a new code is established without subsequent adjustments for inflation.

The Lewin Group benchmarking study also provides comparative information on payments for physician visits and procedures under Medicaid in D.C., Virginia and Maryland to Medicare in those jurisdictions.¹² The analysis indicated that in 2005 D.C. Medicaid payments were 53 and 54 percent of Medicare fee schedule amounts for primary care specialties and other specialties, respectively.

At that time, the payment levels were comparable to Maryland Medicaid payment amounts but considerably lower than the payment amounts under Virginia's Medicaid program (which were 76 percent and 73 percent for primary care and other specialties, respectively). However, the Lewin benchmarking study was completed before the impact of Maryland Medicaid fee increases for targeted services during state FY2005-FY2007.¹³ The increases raised the overall average of Medicaid fees in 2006 to 73 percent of Medicare fees, but there was wide variation in the fees for individual procedures. Maryland has continued to raise physician fee levels to assure participation in Medicaid and, as of 2008, fees were estimated at 80 percent of Medicare fees (MDDHMH FY09 Budget).

As part of its fee schedule analysis, Maryland completed a benchmarking study comparing Medicaid payment rates in other states to Medicare rates. Table A3.7 summarizes the findings from this study for the procedure groupings that were targeted for increases.¹⁴ The fee levels are reported relative to Maryland Medicare fees rather than the Medicare fees in the particular jurisdiction.

¹² Benchmarking to Medicare automatically adjusts for geographic differences in practice costs and malpractice expenses. The suburbs of Northern Virginia (Alexandria City, Arlington, Fairfax, Fairfax City, and Falls Church City) and Maryland (Montgomery and Prince Georges Counties) are combined into a single locality for purposes of the Medicare fee schedule.

¹³ The FY2005 increases were targeted toward evaluation and management codes. The FY2006 increases were targeted toward specialties with substantial increases in medical malpractice insurance. The FY2007 increases were targeted toward procedures where there is a need to recruit and train new surgeons.

¹⁴ The Maryland Department of Health and Mental Hygiene reported the fee levels in other jurisdictions relative to Maryland Medicare fees.

Table A3.7 Comparison of Physician Fees for Selected Services

| Type of Service | DC | MD (after increases) | VA |
|-------------------------------------|-----|----------------------------|-----|
| Evaluation and Management | .49 | .78 | .67 |
| Integumentary/General Surgery | .48 | .80 | .64 |
| Digestive Surgery | .54 | .81 | .64 |
| Ear Surgery and Otorhinolaryngology | .48 | 1.00 | .63 |
| Radiation Oncology | .49 | .80 | .63 |
| Allergy, Immunology and Dermatology | .56 | .80 | .62 |

Source: DHMH, 2006

Medicaid Disproportionate Share Hospital (DSH) Payments

Safety net hospitals are also supported through additional Medicaid payments that are made for serving a disproportionate share of low-income patients. At a minimum, the federal Medicaid law requires that a state make DSH payments to a hospital if 1) its Medicaid inpatient utilization rate is one standard deviation or more above the mean for hospitals in the District that are Medicaid providers or 2) its low-income utilization rate exceeds 25 percent including at least one percent Medicaid utilization.

The low-income utilization rate takes into account the proportion of a hospital's services that is attributable to inpatient and outpatient care covered by Medicaid and any cash subsidies received directly from the D.C. government for patient care services as well as inpatient care provided to low-income patients with no source of payment. The D.C. Medicaid plan incorporates these provisions and also includes the hospital has the greatest number of Medicaid inpatient days of all D.C. hospitals. This last criterion is directed at Washington Hospital Center, which has too low a low-income patient percentage to qualify under the mandated criteria but, because of its size, has the most low-income patients. With the exception of the Children's National Medical Center, the D.C. Medicaid plan also requires that an eligible hospital have at least two obstetricians on staff who provide obstetric services to Medicaid patients.

Federally-mandated aggregate limits apply to DSH funding that qualifies for federal matching funds. The limit applicable to D.C.'s DSH funding in federal fiscal year (FFY) 2006- 2008 is \$57.6 million. There is a separate limit on aggregate DSH payments that states may make to institutions for mental disease. The FY2008 limit for D.C. is \$4.6 million. In addition, there are hospital-specific limits on DSH payments. For example, DSH payments to private hospitals cannot exceed their losses on Medicaid and uninsured patients.

The D.C. government retains a portion of the DSH funds to cover the costs Medicaid coverage expansions and the Alliance program and distributes the remainder to DSH eligible hospitals as a percentage add-on to the payment for Medicaid inpatient services. In FY07, the DSH allotment was distributed as shown (Table A3.8).

Table A3.8: FY07 DSH Allotment

| | FY07 DSH Allocation |
|------------------------------|----------------------------|
| Healthcare Alliance | \$5,636,571 |
| Age 50-64 waiver | \$12,857,143 |
| St. Elizabeth's | \$1,193,217 |
| Private Specialty Hospitals | \$4,926,700 |
| Private Acute Care Hospitals | \$57,804,370 |

The formula in the D.C. Medicaid plan for distributing DSH funds to eligible private hospitals is based on the formula Medicare uses to make DSH payments under its prospective payment system for inpatient hospital services. The allocation formula is based on the sum of 1) the proportion of inpatients who are Medicaid eligible and 2) the proportion of Medicare patients who are also entitled to Medicaid. It has been criticized because it does not account directly for uncompensated care and provides an advantage to hospitals that have a higher proportion of Medicaid patients relative to uninsured patients. A hospital that qualifies for DSH funding based on its Medicare /Medicaid utilization and provides little care to the uninsured may receive the same add-on as a hospital that provides substantial amounts of care to the uninsured. Moreover, by tying payments to Medicaid inpatient discharges, the DSH formula also creates an incentive for hospitals to provide inpatient services and penalizes those who shift services to outpatient and community-based settings.

A3.2 Hospital Safety Net Contributions

Using a combination of information from the D.C. Hospital Association's 2006 Financial Indicators report and Medicare data, we have summarized in Tables A3.9 and A3.10 information on each acute care hospital regarding its capacity, commitment to safety net services, and financial support for safety net services.

Table A3.9 below provides the average daily census, adjusted average daily census, and distribution of gross revenues by payer category for each acute care hospital in the District. The average daily census (or average number of occupied beds throughout the year) is a measure of the capacity of the hospitals to provide inpatient services. The adjusted average daily census takes into account the volume of outpatient services provided by the hospital. Gross revenues are the charges before reductions for contractual allowances, discounts or bad debt and include revenues from out-of-state patients. Medicaid, Alliance and all medical charity program patients are combined into a single category. The uninsured, some of whom are able to pay for some or all of their hospital bill, are included in the self-pay category.

Washington Hospital Center is much larger than the other facilities and, as a result, has as many safety net patients as Howard University Hospital and the Children's National Medical Center, both of which provide a majority of their services to the safety net population. Greater Southeast Community Hospital is the other core safety net hospital.

Table A3.9 D.C. Acute Care Hospital Capacity and Payer Mix

| Name | Average Daily Census | Adjusted Average Daily Census | Self-Pay (%) | Medicaid/Alliance ² (%) | Medicare (%) | Other Insurance (%) |
|------------------------------------|----------------------|-------------------------------|------------------|------------------------------------|--------------|---------------------|
| George Washington Univ Hospital | 185 | 287 | N/A ¹ | 14 | 30 | 56 ¹ |
| Georgetown University Hospital | 287 | 456 | 5 | 10 | 27 | 59 |
| Greater Southeast | 114 | 164 | 6 | 44 | 34 | 17 |
| Howard University Hospital | 197 | 274 | 9 | 45 | 28 | 19 |
| Children's National Medical Center | 199 | 267 | 1 | 49 | 0 | 50 |
| Providence Hospital | 204 | 308 | 3 | 28 | 48 | 21 |
| Sibley Memorial Hospital | 152 | 303 | 5 | 1 | 43 | 51 |
| Washington Hospital Center | 633 | 860 | 3 | 14 | 40 | 44 |

¹ GWU combines self-pay and other insurance; ² Includes all medical charities programs

Table A3.10 compares the distribution of uncompensated care provided by each hospital with the distribution of Medicaid and Medicare DSH funds. Uncompensated care is defined as the cost of bad debt and charity care. We have chosen to use the FY2007 DSH funding levels because the formula has been revised since 2005. We have also included Medicare's indirect medical education (IME) payments to teaching hospitals for the higher patient care costs associated with graduate medical education. These payments are an add-on to the standard Medicare per discharge payment. The payment formula results in subsidies that exceed the impact of teaching on patient care costs that some argue are intended to support uncompensated care and other teaching hospital missions. In FY2007, Medicare paid D.C. teaching hospitals an estimated \$60.9 million, at least 50 % of which exceeded the higher costs attributable to teaching activities.¹⁵ Finally, we have included each hospital's operating margin is provided because it is an indicator of the hospital's ability to cover the cost of safety net services.

Key findings include:

- Uncompensated care costs account for more than 10 percent of costs in two hospitals: Greater Southeast Community Hospital (30.9%) and Howard University Hospital (18.9%). Together, these hospitals account for 45 percent of the uncompensated care costs in D.C.
- The Children's National Medical Center and Washington Hospital Center account for 19.6 percent and 15.6 percent, respectively. Both of these hospitals receive special treatment in the DSH allocation process.
 - Unlike the other hospitals with high safety net patient loads, the CNMC has negligible Medicare patient utilization and, as a result, receives no Medicare DSH funding and is more dependent than the other hospitals on Medicaid DSH funds.

¹⁵ The payment formula measures teaching intensity as the ratio of residents-to-beds. The current adjustment factor results in a 5.5 percent increase in the adjustment factor for each 10 percent increase in the ratio of residents-to-beds. Using the CMS-DRGs (which have since been replaced by Medicare-Severity DRGs), the Medicare Payment Advisory Commission estimated that the actual teaching effect is a 2.1 percent increase in cost for each 10 percent increase in the ratio (MedPAC, 2007).

- Without special consideration, Washington Hospital Center would not qualify for Medicaid DSH funding because its safety net patient load is a relatively small percentage of its patient population.
- Both of these facilities are scheduled to receive double the FY2007 Medicaid DSH funding in FY 2008 with proportionate reductions to the other hospitals.
- Because they receive substantial Medicare DSH funds in addition to Medicaid funds, Providence Hospital and the Washington Hospital Center’s uncompensated care costs are essentially covered before consideration of any additional funding through the Medicare IME adjustment.
- In contrast, only 27.6 percent of the uncompensated care costs for Greater Southeast Community Hospital are covered by DSH funds. We do not have the data needed to analyze why this is occurring but it warrants additional attention.
- Two core safety net providers, Howard University and Greater Southwest Community Hospital, had negative operating margins in 2005.
- National Children’s Medical Center had a 4.6 percent operating margin while Providence Hospital was able to nearly break even.

Table A3.10 Uncompensated Care Costs (2005), DSH Funding (FY2007) and Hospital Margins (2005) for D.C. Hospitals

| Hospital | Uncompensated Care Costs (in millions) | % of Total Care Costs | % of Uncompensated Care Costs | Medicaid FY07 DSH (in millions) | Medicare FY07 DSH (in millions) | Medicare IME (in millions) |
|-----------------|---|------------------------------|--------------------------------------|--|--|-----------------------------------|
| GWU | \$7.7 | 3.0 | 4.0 | \$0.0 | \$5.4 | \$11.9 |
| Georgetown | 13.4 | 3.4 | 6.9 | 0.0 | 2.7 | 13.9 |
| GSE | 35.9 | 30.9 | 18.5 | 5.6 | 4.3 | 0.0 |
| Howard | 52.2 | 18.9 | 26.9 | 22.9 | 8.6 | 5.4 |
| CNMC | 36.9 | 8.8 | 19.0 | 23.1 | 0.0 | 0.0 |
| Providence | 11.6 | 6.5 | 6.0 | 4.7 | 10.1 | 3.3 |
| Sibley | 6.0 | 3.3 | 3.1 | 0.0 | 0.0 | 0.3 |
| WHC | 30.4 | 3.5 | 15.6 | 1.5 | 27.9 | 26.2 |
| Total | 194.1 | 7.2 | 100.0 | 57.8 | 59.1 | 60.9 |

| Hospital | Total DSH As % of Uncompensated Care | Remaining Uncompensated Care Costs (in millions) | Operating Margin (%) |
|-----------------|---|---|-----------------------------|
| GWU | 69.9 | \$2.3 | 2.06 |
| Georgetown | 20.4 | 10.7 | 1.23 |
| GSE | 27.6 | 26.0 | -11.98 |
| Howard | 60.3 | 20.7 | -7.01 |
| CNMC | 62.6 | 13.8 | 4.70 |
| Providence | 127.9 | -3.2 | -0.87 |
| Sibley | 0.4 | 6.0 | 3.16 |
| WHC | 96.9 | 0.9 | 1.60 |
| Total | 60.2 | 77.2 | 0.74 |

Figure A3.2 compares the ratio of inpatient days to net inpatient revenues across hospitals. Key findings are:

- Medicare days (a proxy for resource use) and revenues are roughly comparable.
- In contrast, Medicaid (broadly defined to include Alliance and medical charity patients) accounts for 28.2 percent of the days but only 21.8% of revenues.
- Other payers, including commercial managed care plans, commercial insurance, and self-pay/other, generate revenues that exceed their inpatient days that can be used to subsidize charity care and the shortfalls from the Medicaid/Alliance programs.

The same patterns prevail with respect to outpatient visits, except that self-pay outpatient visits exceed self-pay revenues (Figure A3.3). Medicaid/Alliance outpatients accounted for 25.1 percent of the visits but 15.4 percent of the revenues.

Figure A3.2 Inpatient Days Compared to Inpatient Revenues by Payer, 2005

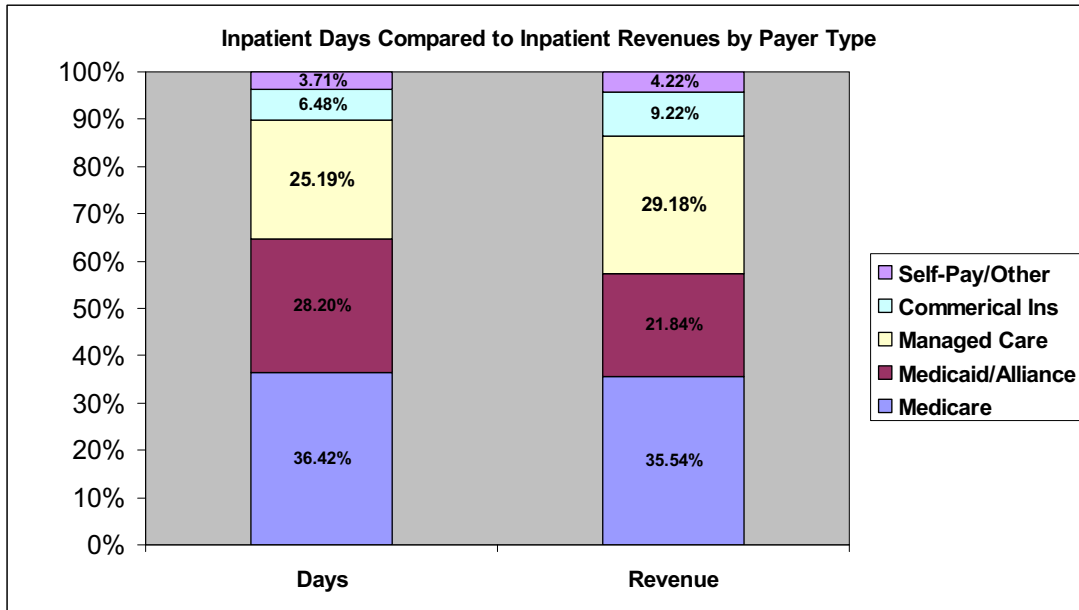
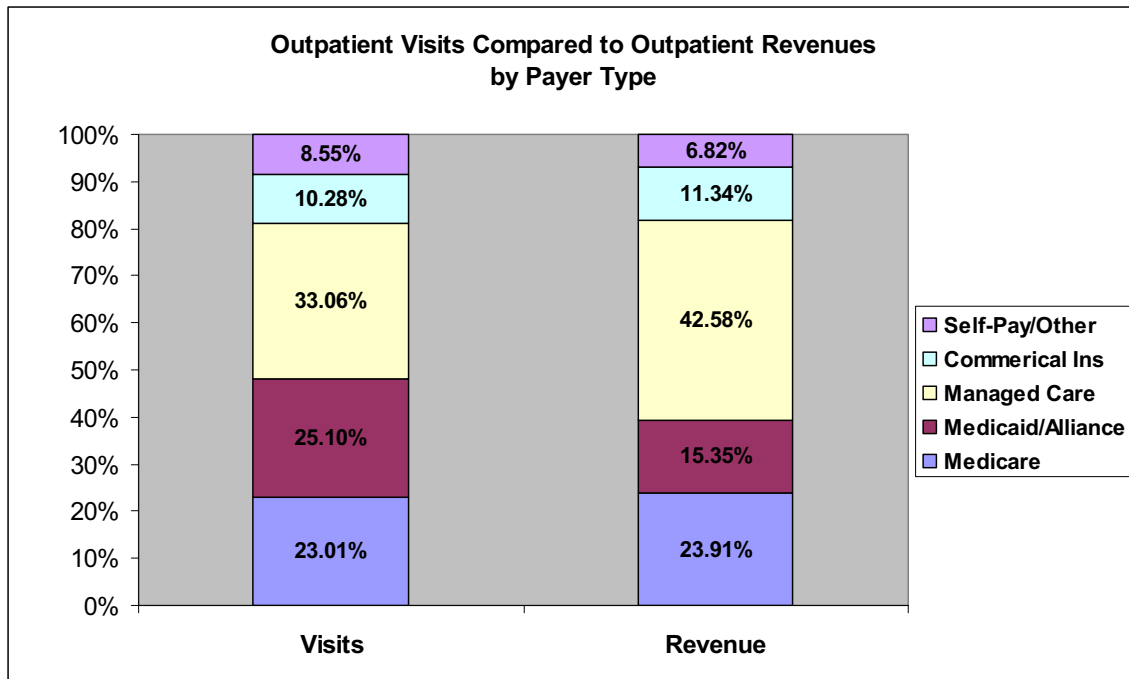


Figure A3.3 Outpatient Visits Compared to Outpatient Revenues by Payer



In the aggregate, considering both inpatient and outpatient services, we estimate that the shortfall from Medicaid/Alliance/medical charity payments (before consideration of DSH payments) was approximately \$193 million. Adding to this the uncompensated care costs that were not covered by DSH payments generates an estimate of approximately \$270 million that needed to be generated through private payer subsidies and other sources.

A3.3 HRSA Programs

The Health Resources Services Administration (HRSA) of the federal government provides several vehicles of support for the health care safety net, as described below.

Section 330 Grants

Section 330 of the Public Health Service Act authorizes grant funding to four categories of health centers: community health centers, migrant health programs, organizations providing health care for the homeless, and centers providing primary care to residents of public housing. Only a particular type of community health center—a federally qualified health center or FQHC—is eligible to receive this type of funding.

To become an FQHC, a community health center must meet several requirements. These include:

- Having an independent Board of Directors that is comprised of a majority of individuals who are patients being served by the health center
- Providing services on a sliding fee scale according to ability to pay.

- Providing or arranging for a core set of services, including primary health care services for all life-cycles, basic laboratory tests, emergency care first response capabilities, radiological services, pharmacy, preventive health services, preventive dental services, and hospital services.
- Providing enabling services that help patients gain access to health care, such as outreach, translation, and transportation.
- Providing 24/7 emergency care on-site or through arrangements for access to health care during medical emergencies.¹⁶

The financial advantages to being an FQHC include:

- Section 330 grants from HRSA to support health care services for the uninsured;
- Enhanced reimbursement rates from Medicaid and Medicare.¹⁷
- Medical malpractice coverage under the Federal Tort Act. Employees (both full and part-time) and certain contractors are deemed to be federal employees and are immune from medical malpractice suits for actions within the scope of their employment. Volunteer physicians are not covered by this provision. There is no cost to the participating FQHCs.
- Eligibility to purchase outpatient medications at a reduced rate through the 340B drug pricing program. The 340B price is a maximum price the FQHC has to pay for select outpatient and over-the-counter drugs. It provides the FQHC drugs at prices comparable to those the Medicaid agencies pay after the manufacturer's rebates.
- Eligibility to apply for National Health Service Corps (NHSC) placement.
- Eligibility as a site where a J-1 visa physician can serve. Foreign physicians who participate in graduate medical education under J-1 educational visas must return to their country of nationality for at least two years following the completion of their training. This requirement may be waived under certain circumstances, including a commitment to serve for at least 3 years in a HPSA or Medically Underserved Area (MUA). In order to target communities in greatest need for primary care, the U.S. Department of Health and Human Services rules limit the waivers to primary care physicians who will practice in a facility located in a HPSA with a score of 07 or higher.

¹⁶ See www.hrsa.gov.

¹⁷ Medicaid pays FQHCs and FQHC look-alikes a prospective payment per encounter based on an FQHC's average cost per visit for 1999 and 2000, adjusted for inflation and when necessary, for changes in the scope of services. The rate for newly participating FQHCs is based on the average rate paid to other FQHCs with a comparable caseload. To encourage participation in managed care plans, Medicaid also pays for the difference between the prospective rate and the health plan's established rate in the community. In D.C., additional payments are also made on a fee-for-service basis for services provided by an FQHC for services that are not considered core FQHC services.

In FY2007, 5 District grantees received Section 330 grants totaling \$9.2 million (HRSA, 2007). District FQHCs are: Columbia Road Health Service, Community of Hope, La Clinica Del Pueblo, Mary’s Center for Maternal and Child Care, and Unity Health Care, Inc (which operates multiple sites).

We examined information from HRSA’s Uniform Data System regarding the patient population and funding sources of four FQHCs in the District (data are not available for the fifth FQHC, La Clinica, which was recently certified and for non-FQHC clinics). (Table A3.11)

In aggregate, the four FQHCs served 85,543 patients. Of these, 25 percent were uninsured, 40 percent were covered by the Alliance, and 29 percent were covered by Medicaid. Services included 294,829 medical encounters, 27,219 dental encounters, 17,762 mental health encounters, and 52,612 enabling services such as case management and education. In total, 774 FTEs providers provided 399,826 encounters.

Table A3.11 Distribution of Patients and Patient Care Revenues across 4 District FQHCs

| | Uninsured/ Self-Pay | Medicaid | Medicare | Other Public | Privately Insured | Total |
|---------------|--------------------------------|-----------------|-----------------|-------------------------|------------------------------|--------------|
| # of patients | 21,090 | 24,775 | 2,921 | 34,270 | 2,487 | 85,543 |
| % of patients | 24.7% | 29.0% | 3.4% | 40.1% | 2.9% | 100% |
| \$ revenue | 448, 032 | 13,551,113 | 1,548,374 | 14,859,197 | 392,451 | 30,351,135 |
| % revenue | 0.7% | 21.5% | 2.5% | 23.6% | 0.6% | 48.9% |

Patient care revenues accounted for about half of the total revenues supporting the FQHCs. Grant revenues accounted for the rest (Table A3.12).

Table A3.12 Sources of Revenue, 4 District FQHCs

| Source | Amount (\$) | Percent of Total Revenue |
|-----------------------------------|------------------------|---|
| Patient Care Revenue | 30,351,135 | 49 |
| Grant Revenue | 30,507,447 | 48 |
| Breakdown of Grant Revenue | | |
| Federal | 10,177,405 | 16 |
| <i>BPHC Grants</i> | <i>8,751,092</i> | <i>14</i> |
| <i>Other Federal</i> | <i>1,426,313</i> | <i>2</i> |
| Non-Federal | 20,330,042 | 32 |
| <i>State & Local</i> | <i>13,823,516</i> | <i>22</i> |
| <i>Foundation/Private</i> | <i>6,506,526</i> | <i>10</i> |
| Other | 1,738,200 | 3 |

Other HRSA Grants

In addition to the Section 330 grants, HRSA administers other grant programs that use federal funds to support access to essential health care for underserved populations and to eliminate health disparities. Grants are made both directly to health care providers and to the DC

government to support specific initiatives. The DC government may then allocate some of the funds that it receives to providers and other organizations. FY07 grants awarded for DC health care related activities in AIDS/HIV and maternal and child health program areas totaled \$45.7 and \$14.0 million, respectively.¹⁸

National Health Service Corps

The NHSC helps providers in Health Professional Shortage Areas (HPSAs) recruit and retain primary care physicians, nurse practitioners, and physician assistants, certified nurse midwives, dentists and dental hygienists and mental and behavioral health professionals through a scholarship program and a loan repayment program for qualified educational loans. Participants in the scholarship program agree to one year of service for each year of scholarship support (maximum four years) at a NHSC-designated site after completing their education. During the 2007-8 academic year, scholarships were available for students pursuing primary health care training leading to a degree in allopathic medicine, osteopathic medicine, or dentistry, and education leading to a degree as a family nurse practitioner, nurse-midwife or physician assistant.

Loan repayment slots are awarded to eligible applicants who choose to practice in the neediest communities as determined by the HPSA designation score. To distribute the available slots across many community sites, the number of new NHSC placements through the Loan Repayment Program allowed at any one site (parent sites as well as satellite sites) is generally limited to no more than two individuals in each broad professional category (e.g., physicians, dentists, primary care allied health professionals). The initial commitment is for two years and may be extended for up to seven years. Participants negotiate and receive salary and benefits from the employing community site and up to \$50,000 in NHSC repayment funds for two years of service.

In total, there are 56 full-time-equivalent (FTE) filled NHSC positions slots in DC community-based providers. Of these, 38 are held by physicians (including one psychiatrist) and eight are held by nurse practitioners. Forty-eight of the 56 positions are at clinics operated by Unity Health Care. Forty-seven positions are held by individuals in their initial two-year commitment period; nine have extended their commitment beyond two years.

¹⁸ These estimates do not include grants for research and training because most are not specifically directed toward health care services in D.C. or grants to national organizations located in D.C. that are not focused on the D.C. health care delivery system.

Table A3.13 Distribution of District NHSC Positions (April 2008)

| Type of Care | Provider Type | FTE |
|---------------------|--|------------|
| Dental Care | Dentist | 3 |
| Mental Health | Physician, Allopathic (Specialty Psychiatry) | 1 |
| | Social Worker | 1 |
| Primary Care | Nurse Midwife | 2 |
| | Nurse Practitioner | 8 |
| | Physician Assistant | 4 |
| | Physician, Allopathic | 32 |
| | Physician, Osteopathic | 5 |
| Total | | 56 |

A3.4 Private Office-Based Providers and Community Health Centers: Contribution to Supply of Safety Net Care

Community health centers (CHCs) offer health care to individuals, regardless of their ability to pay, and thus are a primary source of health care for District residents who have no health insurance. In addition, most CHCs provide services to Medicaid and Alliance enrollees. Private office-based health care providers also contribute to funding safety net services by covering the cost of care provided to medically indigent patients that is not covered by other sources of revenue. CHCs and other providers cover these costs through other patient care revenues, contributions from foundations and other philanthropic contributions, and endowment funds.

In what follows, we describe the availability of CHCs in the District and then describe the relative contributions of CHCs and office-based providers to ambulatory safety net care.

Community Health Centers (CHCs)

CHCs are located throughout the city (see map in Section 6). District CHCs are owned and operated by various organizations. Community health centers fall into four broad categories: (1) FQHCs, (2) FQHC look-alikes, (3) free clinics, and (4) other community health centers that provide safety net services to low-income uninsured and underinsured patients.

As described earlier, FQHCs are community-based clinics that receive federal funding from HRSA to furnish primary and preventive services to medically underserved populations. FQHC look-alikes meet the requirements for designation as an FQHC but do not receive HRSA funding and are not eligible for FTCA malpractice insurance coverage. However, FQHC look-alikes *are* eligible for enhanced Medicare and Medicaid reimbursement and can serve as NHSC sites. Free clinics and other community health centers do not receive federal funds. Free clinics serve the uninsured only and do not take patients who have third-party insurance coverage. Other community health centers serve Medicaid and the Alliance, as well as the uninsured.

Some evidence suggests that CHCs surpass other providers in terms of the quality and efficacy of the care provided, possibly by virtue of their specialization in the treatment of a population with complex needs. For example, Shi and Stevens (2007) find that health center uninsured patients reported better access to and more comprehensive care, and were more likely to have a regular source of care compared to the uninsured nationally. They further find that health center Medicaid and uninsured patients were more likely to receive preventive screening than Medicaid and uninsured patients nationally. Shi, Stevens, and Politzer (2007) find that health center patients tend to have poorer health than non-health center patients, yet access to care for health center uninsured and Medicaid-enrolled patients is as good as or better compared to their national counterparts. Similarly, Hicks et al (2006) find that the quality of care delivered through health centers was as good as or better than care delivered through other venues. In addition, Falik et al (2006), in an analysis of claims data for Medicaid enrollees in four states, find that Medicaid beneficiaries who received most of their care from a CHC were less likely to use the emergency department for an ACS condition and less likely to be hospitalized for an ACS condition compared to Medicaid beneficiaries using outpatient and office-based physicians for usual care.

CHCs differ in the target population served, in number of patients seen, in scope of services provided, in their reliance on volunteer versus paid staff, in their revenue streams, in the ways they promote access to specialty care services, in the attributes of their physical space, and in the way appointments are made. The variability across CHCs is illustrated in the brief descriptions of selected centers below.

Mary's Center: Mary's Center is an FQHC. Its primary location is on Ontario Street in Ward 1. The main building houses social services including an after-school program for teens and English language program (Even Start) for adult speakers of other languages. A co-located clinic has 8 pediatric and 8 adult exam rooms. Mary's Center has an additional site on Kennedy Street in Ward 4 that provides medical services. In addition, the center operates a mobile medical van that is equipped to provide various services including pregnancy tests and immunizations. Mary's Center uses open access for appointments—no specific appointment times and dates are scheduled; rather individuals call and are given a window of time in which to come. For patients who need specialty care, Mary's Center staff make specialist appointments and provide a translator to go as well, if necessary. Enrollment services for Medicaid and the Alliance are also provided at the clinic. Mary's Center was originally established in response to the demand for bilingual health services and is located in a predominantly Hispanic area, but provides care to a diverse population of patients.

SOME: SOME (So Others Might Eat) is an interfaith, community-based organization that focuses on homeless individuals in the District. Services include food, clothing, job training and health care. SOME operates a medical clinic for the homeless, as well as an Eye Clinic and Dental Clinic, located on O Street in northwest DC. Other social services are co-located with the medical/eye/dental clinics. SOME operates an HIV/AIDS clinic once each month as well as a behavioral health clinic. SOME accepts the uninsured as well as Medicaid and Alliance enrollees. SOME uses open access scheduling. Specialists visit on a rotating basis. The medical clinic relies heavily on RNs. There are no pediatric services. SOME is not an FQHC. The medical clinic averages 30 patients per day; the eye clinic treats about 50 patients per month.

Spanish Catholic Center: The Spanish Catholic Center (SCC) focuses on the immigrant Hispanic population. Medical services are co-located with dental, legal, employment and social services. It is owned and operated by Catholic Charities of the Archdiocese of Washington. The Washington DC center is located on Monroe Street in Northwest and includes six exam rooms plus a dental clinic. SCC serves the uninsured and does not accept Medicaid or the Alliance. SCC is not an FQHC. SCC relies on some paid staff (e.g., a full time dental hygienist part time dentist, and full time nurse practitioner) and volunteer doctors. Appointments are scheduled (not open access).

DCPCA and Medical Homes

Many CHCs in the District are part of the DC Primary Care Association (DCPCA), a non-profit organization focused on “facilitating the development and sustainability of an integrated health care system that guarantees access to primary health care and eliminates disparities in health outcomes” (www.dcpca.org). DCPCA has begun planning for additional capacity through the renovation, replacement, or establishment of community health centers through its “Medical Homes” initiative. The goals of the program are to increase capacity through facility improvement and expansion, but also to improve clinical performance, measure performance, improve financial and administrative operations, enhance the effectiveness of governing boards, take advantage of health information technology, and ensure long-term financial stability, including through improving clinics’ ability to collect reimbursements for care and by helping centers become FQHCs.

Capital projects are a central component of Medical Homes. Proposed projects are reviewed for financial feasibility, benefit to the community, and sustainability by national experts in the development of community health centers. Funds are allocated for the planning, design and development and construction of projects and as a project moves into each phase, grant recipients return to Medical Homes DC for additional funding. Subsequent grant requests will be evaluated based on the level of success achieved to date.

Medical Homes is funded by a combination of local dollars and private funders. The initiative received a grant from the District in 2005 totaling 21 million for capital investments in community health centers. The grants was conceived of as funding only a percentage of project costs (about 20 percent), with the idea that health centers would develop other sources of funding (grants or loans) for the remaining 80 percent of project costs.

Medical Homes has raised 6 million in private support for the technical support that DCPCA provides and has received donated time from experts in real estate, board, governance, nonprofit law, and finance mechanisms such as new market tax credits and direct debt-financing. However, financing even 50 percent of project costs, much less than the originally anticipated 80 percent, has been difficult to achieve even for the CHCs that are in relatively good financial positions. Two key factors are (1) problems securing funds in the capital market and (2) the risk-averse culture of many of the governing boards of these organizations.

Technical Appendix 1 profiles current Medical Homes projects.

Private Office-Based Providers

In an effort to better understand the roles of CHCs and private office-based providers in the delivery of safety net ambulatory care, we undertook several tasks. First, we gathered data from the managed care organizations that enroll Medicaid and Alliance patients about the number of patients enrolled with a PCP at a clinic versus at a private office. Second, we obtained data from MAA about the number of Medicaid enrollees per provider at a point in time in early 2008. However, the data available were limited for a number of reasons and more analysis on more complete data is needed to provide a more comprehensive picture of the role of private providers.

Key findings include:

- While the majority of Alliance enrollees were enrolled with CHC-based primary care physicians (in the range of about three-fourths), there was more variability for Medicaid enrollees, depending on the MCO with which they were enrolled. At one MCO, the majority of Medicaid enrollees were reported to have a non-CHC based primary care provider; at another, the at least two-thirds of enrollees were with a CHC-based primary care provider.
- Among fee-for-service Medicaid patients, about 11 percent of office-based visits (about 39,000 visits) occurred in CHCs, with 52 percent in physicians' offices and another 38 percent in hospital outpatient department or clinics.
- Our analysis of MAA data suggests that approximately 30 providers serve more than 500 Medicaid managed care patients.

Appendix 4:

Estimating the Primary Care Capacity Shortfall and Identifying High-Priority Areas within the District

We conducted additional analyses of Medicaid and Alliance managed care claims data, hospital discharge data, and data on Medicaid provider capacity from the Medicaid Assistance Administration (MAA). We used the claims data and hospital discharge data to develop estimates of the number of primary care visits that are needed among medically vulnerable populations (see Section A4.1). We also used the claims data and discharge data to examine patterns of health care use by zip code to better identify areas of the city that are “high-priority” areas for expanded primary or urgent care capacity (see Sections A4.2 and A4.3). Further, we obtained and analyzed data from MAA on the volume of Medicaid patients seen by providers to better understand the role of private office-based providers in the health care safety net.

A4.1 Estimating the Primary Care Capacity Shortfall

We estimated the shortfall in primary care visits among District residents using three methods. The first method estimates the shortfall by translating the shortage in primary care provider FTEs calculated by Ross and Wright (2006) into an estimate of the shortage in the number of primary care visits. The second method estimates the shortfall by deriving the number of primary care visits needed to mitigate ambulatory care sensitive (ACS) hospitalizations and primary care sensitive (PCS) ED visits among Medicaid and Alliance enrollees and the uninsured. The third method estimates the shortfall in primary care visits by determining the additional visits that would need to occur among District Medicaid and Alliance enrollees in order to bring utilization up to national norms for publicly insured individuals. We describe each in more detail in what follows.

Method 1: Analysis Based on Estimated Shortfall in Primary Care Providers Per Population: Ross and Wright (2006) estimate the number of additional primary care FTEs necessary to serve the medically needy population in the District, which includes Medicaid enrollees, enrollees in the Alliance, senior citizens below 300 percent of the poverty line, and the uninsured. Using an estimate of 1 primary care FTE per 1,500 medically vulnerable, the authors suggest that the District needs 146 primary care FTEs. They further estimate that the District currently has between 92 and 98 primary care FTEs, leaving a gap of between 48 and 54 primary care FTEs.

Primary care physicians typically spend 41.3 hours per week in patient care for each of 47.2 weeks per year, resulting in approximately 1949 hours of patient care per year (AAFP, 2004; Ostbye, 2005). An additional 48 to 54 primary care providers would thus provide between 72,000 and 105,000 hours of patient care.

Visit times vary depending on the number and complexity of the medical problems. Yawn et al (2003) estimates that primary care physicians address an average of three medical problems per visit. Osbye estimates about 10 minutes of physician practice time per chronic condition and references other literature showing a mean of 18 to 21 minutes for many office based visits.

Given these estimates and the relatively high need/high complexity for medically vulnerable populations, we assume 25 minutes for each office visit.

Thus, using Ross and Wright's estimates of the primary care FTE shortfall, we estimate a primary care visit shortfall of between 225,000 and 253,000 visits among the medically vulnerable population—including individuals enrolled in Medicaid or the Alliance, the uninsured and low income elderly individuals.

Method 2: Analysis Using ACS and PCS Rates: We used DCHA discharge data from 2006 to estimate the number of ACS visits per year by age (0-17, 18-39, 40-64, over 65) among individuals insured by Medicaid, enrolled in Alliance, or who are uninsured. Among all age groups we estimated approximately 23,000 ACS visits per year (among Medicaid and Alliance enrollees and individuals who are uninsured). From our analyses of MCO claims data, we know that approximately 35 percent of Medicaid and Alliance enrollees have an office-based visit in the previous 30 days. If we assume that those who had an office-based visit in the previous 30 days need at least one more office-based visit to avoid the ACS hospitalization and we assume that those who had no such visit need three office-based visits annually to avoid the hospitalization, we estimate a deficit approximately 56,000 visits. Alternatively, if we assume that those who had an office based visit require two more visits, and those who do not have an office based visit require four more visits, we estimate a deficit of 79,000 visits.

We also estimated the number of non-emergent ED visits per year, number of non-emergent primary care treatable ED visits per year, and the number of non-emergent primary care avoidable/preventable visits per year by age and insurance status. If we assume each type of ED visit represents a deficit of one, two or three primary care visits, respectively, we estimate a deficit of approximately 109,000 primary care visits per year among Medicaid/Alliance and the uninsured. Alternatively, if we assume each type of ED visit represents a deficit of one or two primary care visits, we calculate a deficit of approximately 73,000 visits. Thus, we estimate a deficit of between 73,000 and 109,000 primary care visits from our analysis of PCS ED visits.

Together, the ACS and PCS rates among the publicly insured and uninsured suggest a deficit of between 129,000 to 188,000 primary care visits. However, this estimate does not include the population of people who receive no or insufficient care but who do not use ED or hospital services.

Method 3: Analysis Using Utilization Data from District Medicaid and Alliance Enrollees: Approximately 142,000 District residents are enrolled in Medicaid and another 46,000 are enrolled in the Alliance. Approximately 94,000 of Medicaid enrollees are in managed care with the remainder—primarily the elderly and disabled--in fee for service Medicaid (approximately 48,000). We estimate that there are approximately 21,600 0-5 year olds in managed Medicaid, 23,700 6-12 year olds, and 15,600 13-17 year olds, along with 33,000 adults.

Using Medical Expenditure Panel Survey (MEPS) data from 2005, we calculated rates of use of office-based care among children and adults with public insurance nationwide. We compared these to rates of use among District Medicaid MCO enrollees. The results are shown in Table A4.1 below.

Table A4.1 Use of Office-Based Care and ED Visits Among Medicaid Enrollees in the District and Nationwide

| | Percent with No Office Based Visit | | Mean Visits Among those With Any Visit | | Median Visits Among those with Any Visit | |
|----------------|------------------------------------|--|--|--|--|--|
| | Publicly Insured Nationwide (2005) | District Medicaid MCO Enrollees (2006) | Publicly Insured Nationwide (2005) | District Medicaid MCO Enrollees (2006) | Publicly Insured Nationwide (2005) | District Medicaid MCO Enrollees (2006) |
| Children 0-5 | 18 | 39 | 3.4 | 3.1 | 2 | 2 |
| Children 6-12 | 33 | 58 | 4.1 | 2.1 | 2 | 1 |
| Children 13-17 | 33 | 60 | 4.1 | 2.4 | 2 | 1 |
| Adults 18-64 | 31 | 39 | 10.8 | 4.2 | 5 | 2 |

**Source: Authors' analyses of 2005 MEPS data and 2006 MCO claims data. For Alliance enrollees in the District, 33 percent had no office-based care, the mean number of visits was 3.7, and the median was 3 visits.*

To match national norms of use among the publicly insured, Medicaid and Alliance enrollees would need an additional 273,000 to 471,000 visits. The low value assumes each non-user would receive at least two visits and that mean use among those who use care would match the national mean.¹⁹ The high value assumes use among the current non-users should match that among the current users; that is, that non-users should have the same mean number of visits. The low range is appropriate if non-users do not use because they are relatively healthy, and would benefit from a single wellness visit each year. The high range is appropriate if non-users are similar in health to users. Breaking down the deficit in visits by age, children need an additional 113,000 to 182,000 visits and adults have a deficit of between 160,000 and 289,000 visits.

This analysis does not take into account the deficit in use of care among the uninsured.

A4.2 Identifying High Priority Areas for Expanded Primary Care and Urgent Care Capacity within the District

In our previous analyses, we identified areas of the city with high and/or rising rates of PCS ED visits (for children and adults separately), and areas of the city with high and/or rising rates of ACS hospitalizations. Because population data for recent years for areas within the city were only available at the public use microdata area (PUMA) level, we analyzed ACS and PCS rates across PUMAs.

Among our findings were the following:

- For children ACS rates were highest in PUMA B and were substantially rising in PUMAs D and C.
- For adults 40-64, ACS rates were highest and rising substantially in PUMA D and rising in PUMAs E and C.
- For adults 18-39, ACS rates were generally steady and were highest in PUMA D.
- PCS rates were highest in PUMA B among children.

¹⁹ To estimate the deficit in visits among adults, we used the national median instead of the mean.

- PCS rates among adults were highest in PUMA D for adults 18-39 and 40-64.

However, we recognize that PUMAs are relatively large catchment areas and that there can be considerable variability in health care access within those areas. Consequently, we performed additional analyses to help us identify high priority zip codes for expanded primary care and urgent care capacity for children and adults.

We used several measures to identify high priority zip codes:

- percentage of Medicaid/Alliance enrollees in the zip code who use any office-based care during a year;
- number of Medicaid/Alliance enrollees in the zip code who have one of several chronic conditions;
- number of ACS hospitalizations among children/adults in the zip code; and,
- number of PCS ED visits among children/adults in the zip code.

We calculated office-based use and prevalence of chronic conditions in each zip code separately for children enrolled in Medicaid managed care, adults enrolled in Medicaid managed care and adults enrolled in Alliance. We calculated ACS hospitalizations and PCS ED visits in each zip code separately for children and adults.

We identified (separately for children and adults) zip codes with the lowest rates of office-based use among Medicaid/Alliance enrollees, highest number of Medicaid/Alliance enrollees who have one of several chronic conditions, and highest ACS counts. We defined areas as high-priority for expanded primary care capacity as the union of these zip codes. We identified zip codes with the highest rates of PCS ED visits and defined these as high priority areas for expanded urgent care capacity.

In our analyses of the claims data, we did not consider zip codes that had very few Medicaid or Alliance enrollees and thus for whom rates of ED visits and office-based care are not likely to be very informative. Similarly, we did not include zip codes with very small populations in our analysis of ACS or PCS counts. The calculation of the numbers of Medicaid/Alliance enrollees with particular chronic conditions is based on claims data and includes only individuals who both had a diagnosed condition and who used care during the course of a year. Thus, the numbers are lower bounds on the true numbers of such individuals. We did not construct zip code level ACS and PCS rates because the most recent data on population size by zip code is for 2000 (from the US Census) and our analyses of the 2006 American Community Survey data reveal significant demographic changes since 2000.

The analyses reveal:

- Among children enrolled in Medicaid, rates of use of office based care are lowest in zips **20002**, **20005**, and **20010**. ACS counts are highest in zips **20002**, **20011**, **20019**, and **20020**.
- Among adult Medicaid enrollees, rates of use of office based care are lowest in zips **20005**, **20010**, and **20011**.
- Among adult Alliance enrollees, rates of use of office-based care are lowest in zips **20002** and **20003**.

- Among adults 18 and over, ACS counts are highest in zips **20001, 20002, 20011, 20019, and 20020, and 20032.**
- Five zip codes are home to the greatest number of Medicaid and Alliance enrollees with heart disease, hypertension, diabetes, asthma, and cancer: **20002, 20011, 20019, 20020 and 20032.**
- Among children, PCS counts are highest in zips **20002, 20010, 20011, 20029, 20020, 20032.**
- Among adults 18 and over, PCS counts are highest in zips **20001, 20002, 20011, 20019, 20020, 20032.**

Map Appendices 1-4 provide maps of office-based use by zip, chronic conditions by zip, ACS counts by zip, and PCS counts by zip.

The zip code level analyses suggest that the following zips are high priority areas for expanding primary care capacity among children and adults:

- Children: **20002, 20005, 20010, 20011, 20019, 20020.**
- Adults: **20001, 20002, 20003, 20005, 20010, 20011, 20019, 20020, and 20032.**

These zip code-level findings are consistent with the PUMA level analyses of ACS rates. For children, the PUMA level analyses of ACS rates suggest that PUMA B is the highest priority area for primary care for children, given the relatively high rate of ACS admissions. This PUMA includes zip codes 20010 and 20011. For adults, ACS rates are highest and rising most dramatically in PUMA D, which includes zip codes 20019, 20020, and 20032.

Further, the analyses suggest the following zips are high priority areas for expanding urgent care capacity among children and adults:

- Children: **20002, 20010, 20011, 20019, 20020, 20032**
- Adults: **20001, 20002, 20010, 20011, 20019, 20020, and 20032.**

These results are consistent with the PUMA level analyses of PCS rates. PCS rates for children are highest in PUMA B, which includes zips 20010 and 20011. PCS rates among adults are highest in PUMA D, which includes zips 20019, 20020, and 20032.

Figure A4.1 below displays the high priority areas for primary care capacity expansion for adults and children. (High priority areas for urgent care capacity expansion can be seen in Map Appendix 4). In addition, Figure A4.2 displays high priority areas mapped against existing health care resources including community health centers, homeless care, and high volume private office-based Medicaid providers.

Figure A4.1 High-Priority Areas for Primary Care Capacity Expansion
Based on Health Care Service Utilization, Chronic Disease Prevalence, and ACS Counts

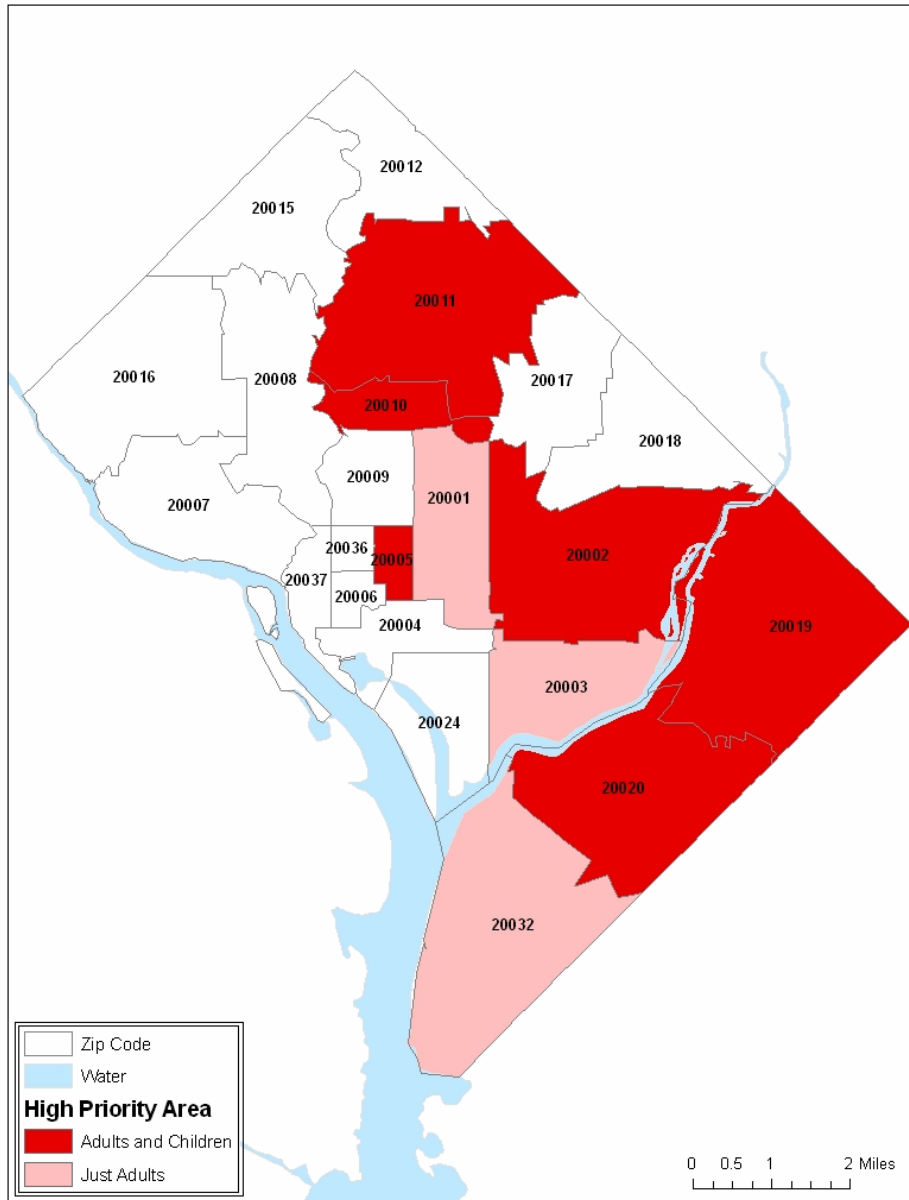
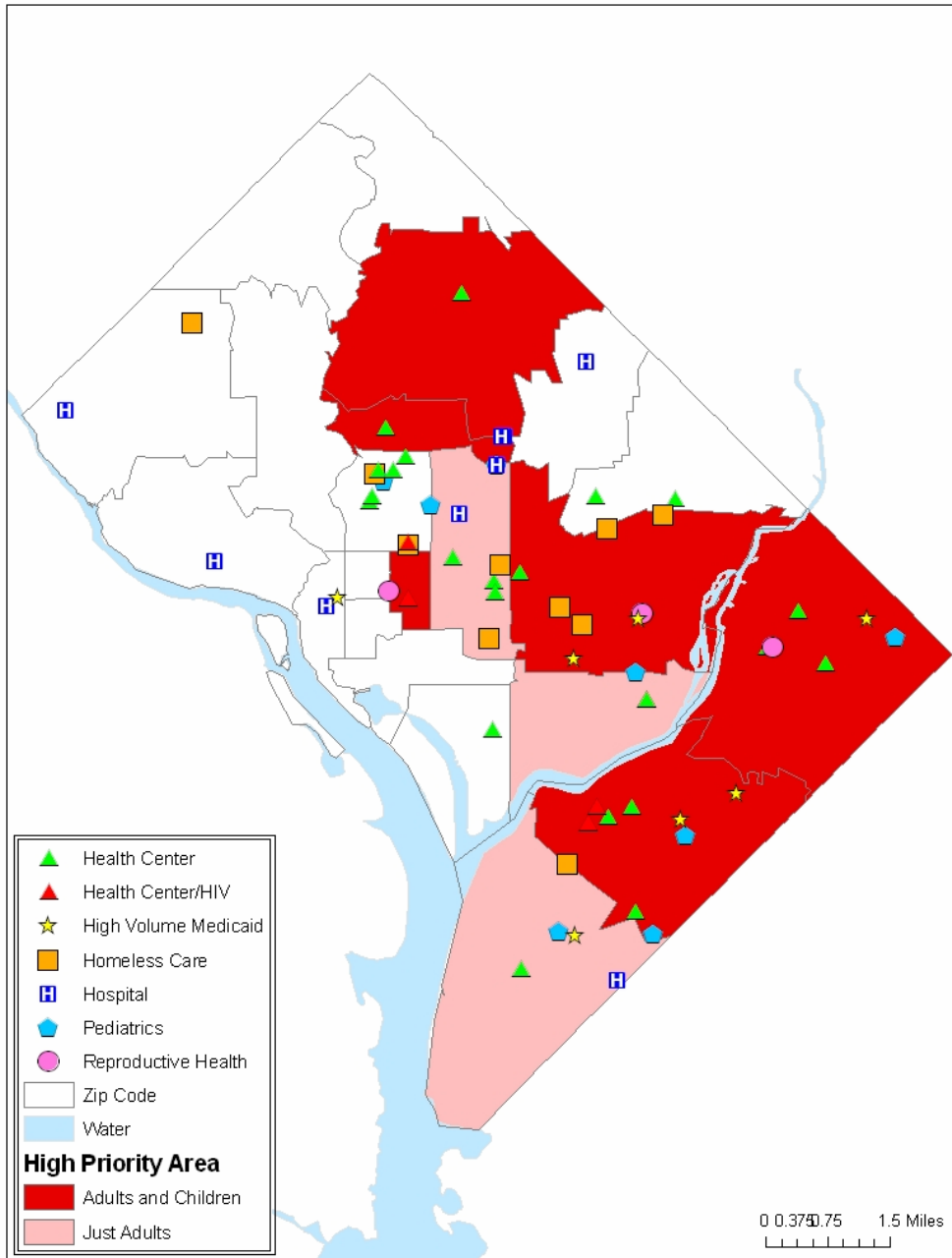


Figure A4.2 High-Priority Areas for Primary Care Capacity Expansion and Existing Health Care Services



Appendix 5:

Additional Findings Related to Emergency Care Services

In 2006, the Institute of Medicine (IOM) published a landmark series of three reports, providing recommendations for strengthening hospital-based services, emergency services, and pediatric-based emergency care (IOM, 2006). The IOM acknowledged the current state of emergency care in America is generally lacking when it comes to measures of timeliness and quality. Several of the report's recommendations in its hospital-based report are relevant to hospitals in the District:

- Hospital chief executive officers should adopt enterprise-wide operations management and related strategies to improve the quality and efficiency of emergency care;
- Hospitals should end the practices of boarding patients in the ED and ambulance diversion, except in the most extreme cases, such as a community mass casualty event;
- Hospitals should adopt robust information and communications systems to improve the safety and quality of emergency care and enhance hospital efficiency;
- Hospitals, physician organizations, and public health agencies collaborate to regionalize critical specialty care on-call services.

Likewise, several of the recommendations from the emergency medical services report are also relevant to the District:

- State governments should adopt a common scope of practice for EMS personnel, with state licensing reciprocity;
- States should accept national certification as a prerequisite for state licensure and local credentialing of EMS providers;
- States should require national accreditation of paramedic education programs;
- Dispatch, EMS, ED and trauma care providers, public safety, and public health should be fully interconnected and united in an effort to ensure that each patient receives the most appropriate care, at the optimal location, with the minimum delay;
- Hospitals, trauma centers, EMS agencies, public safety departments, emergency management offices, and public health agencies should develop integrated and interoperable communications and data systems.

The IOM recommendations represent the standard by which emergency care is now judged in America.

In this section, we attempt to compare the current state of emergency care in DC to this standard. In addition to the analyses reflected in the interim report, we conducted additional data collection and analyses related to emergency department and DC FEMS services and performance.

Specifically, we:

- Surveyed all eight acute care hospitals in the District of Columbia to gather information about quality of care and quality improvement activities (Section A5.1);

- Analyzed information about the times at which patients first present to emergency departments (Section A5.1)²⁰;
- Analyzed data from DC FEMS electronic run sheets for a two-month period in 2006 to learn more about patterns of EMS utilization in the District. The analysis provides information about the extent to which certain categories of users of EMS, such as frequent users and nursing home patients, contribute to overall demand (Section A5.2);
- Analyzed six years of computer-assisted dispatch (CAD) data to assess the timeliness of EMS services (Section A5.2);

In addition to these empirical analyses, we describe several “best practices” in the provision of emergency services in different parts of the country (Section A5.3). These practices appear to hold particular promise for improving services in the District of Columbia and have been vetted by a group of national experts in the provision of high-quality emergency services. We also include case studies of pre-hospital emergency services in several communities adjacent to the District that may prove particularly useful for planning local quality improvement efforts (Section A5.4).

A5.1 Survey of Local Hospital and Emergency Medical Services

Our interim report identified a large increase in hospital diversion hours from 2000-2006, despite only a modest increase in ED utilization and hospital occupancy. We developed a survey to identify factors related to ED crowding and quality of care at the eight hospitals in the District of Columbia with active emergency departments. The survey, which collected information on system capacity, ED utilization, services and quality improvement activities, was completed by all hospitals in July and August of 2007. To our knowledge, this is the first survey of its kind to solicit information from all of the hospitals in a state. As such, its findings provide an interesting window into the state of emergency department capacity, challenges and current or planned initiatives to improve patient flow and relieve ED crowding.²¹ We summarize key findings below.

A5.1.1 Emergency Department Crowding and Patient Flow

To help determine the extent and causes of ED crowding, hospitals were asked to report patient flow times (the amount of time the patient spends at each point in the ED and the hospital). Examining each stage of a patient’s hospital stay reveals patient flow issues not only in the ED but also highlights bottlenecks that occur throughout the hospital and contribute to ED crowding. When patients spend long periods of time in the ED, waiting for triage, treatment, or transfer to an inpatient unit, patient flow is interrupted and the ED can become crowded. In general, the survey reveals that patients in D.C. EDs wait longer for treatment than patients in EDs in many other parts of the country.

²⁰ We separately obtained this data from a selected sample of hospitals. This was not part of the survey.

²¹ All eight hospitals in D.C. responded to the survey, although not all hospitals were able to answer every question. In some cases, hospitals were unable to provide data because it is not routinely recorded and tracked at the hospital. Technical notes regarding data analysis can be found in Technical Appendix 3.

Patient Flow Times

One measure commonly used in understanding patient flow is the amount of time a patient waits in the ED before seeing a physician. For D.C. hospitals, the median wait time before seeing a physician is 90 minutes – nearly twice as long as the national average of 47.4 minutes. Time to discharge from the ED and for admission to the hospital is also longer than the national average at all D.C. hospitals. The median length of time from ED triage to ED discharge is 3.7 hours, which is 27.6 percent longer than the national average of 2.9 hours (Nawar et al, 2007). Further, some D.C. emergency departments have much longer LOS for patients discharged from the ED; at least one hospital reported an average LOS for discharged patients of nine hours. The LOS in the ED for patients admitted to the hospital is much longer than for discharged patients, since admitted patients often wait long periods to be moved out of the ED and into an inpatient bed. In D.C. hospitals, the median LOS for these patients is 7 hours – a full hour longer than the national average (Nawar et al, 2007). Table 7.1 presents the DC patient flow times in comparison to the national averages.

ED Patient Boarding

Patients are considered “boarders” once a decision has been made to admit them to the hospital, but have not been moved from the ED to an inpatient bed. Boarders use ED beds, treatment stations, nursing time and other resources while waiting to be transferred to an inpatient bed, essentially ‘crowding out’ new ED patients by taking those resources out of service. Time spent by patients boarding in the ED accounts for much of the long ED LOS for admitted patients. In addition, research shows that long boarding times can delay necessary treatment and increase mortality in critically ill patients (Rivers et al 2001; Chalfin et al 2007)

The average ED boarding time in DC hospitals ranges from 2 hours to 8 hours, with a median of 4 hours. The D.C. median is slightly less than the average boarding time of 4.6 hours at U.S. hospitals reporting over-capacity ED volume (see Table 7.1) (Lewin Group, 2002). The maximum number of patients boarding at any one time in D.C. hospitals ranges from 9 to 49, with a median of 20.5. Since occupancy rates have been at about 75% in recent years (with some variability by hospital), it is likely that D.C. hospitals have the inpatient capacity to manage emergency department patient admissions.

Table A5.1 ED Patient Flow Times in Hours

| | D.C. Minimum | D.C. Maximum | D.C. Median | National Average |
|---------------------------------|-------------------------|-------------------------|------------------------|-----------------------------|
| ED wait time to see a physician | 0.7 | 2.5 | 1.5 | 0.8 |
| ED LOS for discharged patients | 3.2 | 9.0 | 3.7 | 2.9 |
| ED LOS for admitted patients | 6.4 | 11.0 | 7.0 | 6.0 |
| ED boarding time | 2.0 | 8.0 | 4.0 | 4.6* |

** Includes only those hospitals reporting over-capacity ED volume.*

Source: GWU Hospital Survey and 2006 National Hospital Ambulatory Medical Care Survey

Patients Who Leave Without Being Seen

Another indicator of ED crowding and overall quality of care in the emergency department is the percent of patients who leave the emergency department without being seen (LWBS).²² There can be many reasons why patients leave an emergency department without being seen by a health care provider, despite going through an initial intake and registration process. The most common reason patients give for LWBS is long wait times to see a physician. Other factors include an improvement in the patient's condition, deciding that treatment could wait, transportation, safety concerns, and difficulties with ED staff. The percent of LWBS patients at seven D.C. hospitals ranges from 2.3 to 10.0 percent and the median LWBS rate for these hospitals is 3.2 percent. The LWBS rate at D.C. hospitals is more than twice the national average of 1.3 percent.

ED Closure and Ambulance Diversion

Over the past several years, ambulance diversion in D.C. hospitals has risen at a rate faster than hospital occupancy and ED visits. The survey asked about factors contributing to diversion and closure. D.C. hospitals reported that hospital-wide patient flow issues were the main contributing factor; in particular, they identified a lack of critical care and general acute care beds, ED crowding, and nursing shortages as the principal reasons for diversion and closure.

Several D.C. hospitals have systems in place that assist with patient flow in the ED and throughout the hospital. Most D.C. hospitals use a fast track in the ED, which creates a separate space and process where patients with less serious conditions can be treated and released more quickly. To quickly process ambulance patients, some hospitals have a triage nurse dedicated to EMS transports. Also, a few hospitals have electronic bed tracking systems that allow the emergency department and other hospital departments to monitor the status of beds across the hospital.

A5.1.2 Hospital Capacity and Workforce

ED Capacity

D.C. hospitals report that visits to their EDs exceed current ED capacity (see Table 7.2). In the hospital survey, we defined 'capacity' as beds that were licensed and staffed during the reporting period. Overall, the hospitals indicate that they are operating, on an annual basis, at about 36 percent over capacity. While ED capacity is one contributing factor to ED crowding, many hospital-wide issues, including inpatient capacity and staffing, greatly influence ED patient volumes. Three of the eight hospitals plan to double ED capacity over the next five years and another three plan to grow by nearly that amount. Greater Southeast Community Hospital also plans to expand its ED; however, they did not indicate expected capacity after expansion.

²² While LWBS patients are generally low acuity, approximately one-half will eventually seek care, often in the same ED they left. In follow-up, LWBS patients generally feel worse and report greater pain than non-LWBS patients. However, adverse events are very rare with LWBS patients and hospitalization is relatively low compared to non-LWBS patients.

Table A5.2 Emergency Department Capacity in D.C.

| | ED Visits (2006) | ED Capacity (per year) | Percent Over ED Capacity | Expected ED Capacity (5 yrs)* | Expected Change in Capacity (%) |
|--------------|---------------------|---------------------------|-----------------------------|-------------------------------------|--|
| CNMC | 71,000 | 40,000 | 43.7 | 80,000 | 100.0 |
| GWU | 60,378 | 60,000 | 0.6 | 60,000 | NA |
| Georgetown | 32,577 | 27,000 | 17.1 | 48,000 | 77.8 |
| GSE | 35,627 | 9,420 | 73.6 | 9,420 | NA |
| Howard | 44,979 | 30,000 | 33.3 | 55,000 | 83.3 |
| Providence | 49,288 | 30,000 | 39.1 | 60,000 | 100.0 |
| Sibley | 29,170 | 24,000 | 17.7 | 50,000 | 108.3 |
| WHC | 76,168 | 35,000 | 54.0 | 60,000 | 71.4 |
| Total | 399,187 | 255,420 | 36.0 | 422,420 | 65.4 |

*For GWU and GSE, current ED capacity is also listed as the five-year expected ED capacity, since these hospitals did not indicate if they expected capacity to change. Source: D.C. Hospital Survey, 2007

Hospital Capacity

Having high hospital occupancy rates can increase ED crowding since limited inpatient beds make it difficult to move admitted patients out of the ED and into inpatient units. Thus, high occupancy *could* serve as an explanation for some of the crowding seen in so many of the D.C. EDs. However, of the six hospitals that answered survey questions on hospital occupancy, four remained below 90 percent occupancy throughout 2006. Two hospitals experienced hospital-wide occupancy rates above 90 percent for almost half of all days in the year. The daily occupancy rate at these two hospitals at times also exceeds 105 percent.

Nurse Vacancies

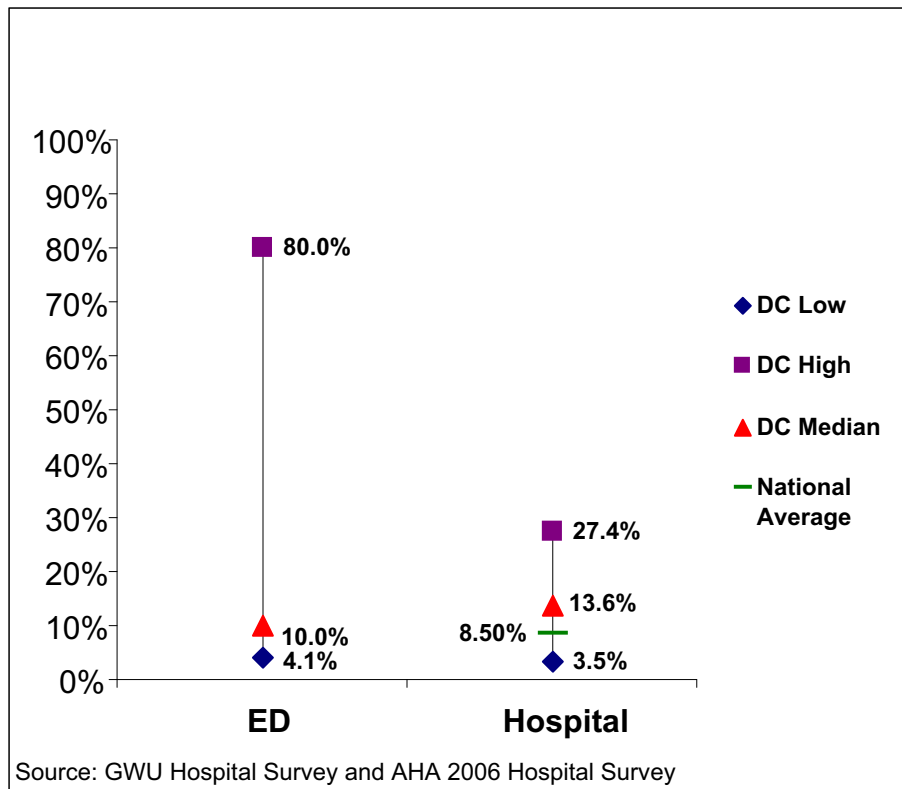
Shortages of nurses both in the ED and hospital-wide contribute to ED crowding by making it difficult to transfer patients from the ED to inpatient units. As in many hospitals across the country, D.C. hospitals struggle with high nurse vacancy rates and D.C. hospitals cite nurse shortages as one important factor contributing to ED crowding.

When hospitals have nurse vacancies, they generally fill the need for nursing care through contractual arrangements with nurses from staffing agencies. These arrangements can be short-term engagements – for example, to fill certain shifts – or longer-term arrangements while vacancies remain unfilled. While using staffing agencies helps to prevent dangerous nurse shortages in the hospital, operating with a large number of temporary or contractual nurses can present financial and quality challenges for hospitals. A number of studies comparing hospital staff workers and contract nurses show lower quality of care and worse patient outcomes associated with the presence of the contract nurses. (Wu and Lee, 2006; Estabrooks et al., 2005). In addition, contract nurses tend to be more costly, relative to staff nurses.

Nurse vacancy rates vary widely across D.C. hospitals, as is shown in Figure 7.1. The median nurse vacancy rate within D.C. *emergency departments* is 10 percent—a rate that is high, yet lower than the median *hospital-wide* nurse vacancy rate of 13.6 percent. The ED nurse vacancy rate in one D.C. hospital is 80 percent, which means that the hospital relies most heavily on contract nurses to fill important nursing slots. This stands in stark contrast to the ED with the lowest ED nurse vacancy rate, about 4 percent. The highest hospital-wide vacancy rate is approximately 27 percent. The median hospital-wide nurse vacancy rate in D.C. is well above

the national average of 8.5 percent, as reported in the 2006 American Hospital Association survey.

Figure A5.1 12 Month Nurse Vacancy Rates



Specialty Care

A lack of specialists willing to care for ED patients contributes to ED crowding and can decrease quality and access to care. Five of the hospitals surveyed reported that they had difficulties obtaining specialty care in the ED. Hospitals cited neurosurgery, ophthalmic surgery and urology as the most difficult areas for obtaining ED coverage, while cardio-thoracic surgery, neurology, otolaryngology, orthopedics, and plastic surgery also posed difficulties at various hospitals.

Many specialists are unwilling to take call in the ED since treating patients in the ED may not be well-reimbursed. To address this problem, four hospitals in D.C. pay specialists to provide coverage in the ED.²³ Most D.C. hospitals report that they have 24 hour in-house or on-call coverage for most or all specialties. However, a few hospitals report no coverage for at least one specialty or less than 24 hour coverage for multiple specialties, which can cause long delays or prevent access to specialty care for patients. Even with hospitals reporting 24-hour coverage, there can be long delays waiting for on-call specialists, according to hospitals.

²³ Many EDs across the country provide additional payments to specialists to create incentives for them to provide services in the ED. This can be very helpful to encourage specialists to provide care for uninsured patients in the ED.

A5.1.3 Special Populations and Services

At the request of the Office of the City Administrator, the survey included questions related to special patient populations. Hospitals were asked to provide information on the services available to ED patients with a psychiatric diagnosis, alcohol or substance abuse issues, and jailed or prison inmates.

More than half of the hospitals in the District report that they have significant difficulties obtaining psychiatric care for their patients. Patients with psychiatric needs can require complex treatment, often resulting in lengthy ED stays and, as a result, may disrupt patient flow and contribute to ED crowding. None of the eight D.C. hospitals has a separate psychiatric ED or a dedicated psychiatric unit in the ED. A separate psychiatric ED on the D.C. General campus, the Comprehensive Psychiatric Emergency Program (CPEP), provides onsite emergency psychiatric evaluations for people 18 years of age and older who are in crisis.

Services for alcohol and substance abuse are also very limited in the District, both in the ED and across inpatient services. Providence Hospital has an inpatient detoxification unit and two other hospitals indicate that they will admit patients for alcohol or other substance abuse detoxification. Other D.C. hospitals that see patients with substance abuse problems in their EDs but do not provide these services on an inpatient basis indicate that these patients often have long lengths of stay within their EDs.

Patients in police custody or jailed and prison inmates do not make up a large portion of patients at most D.C. hospitals. Three hospitals treat a significant number of patients in police custody or jailed, ranging from 80 to 755 in May 2007. The other hospitals treated very few or none of these patients in May 2007.

A5.1.4 Innovation to Reduce ED Crowding

Many of the hospitals in the District have implemented measures to reduce crowding in the ED and improve patient flow and overall quality. In some cases, these initiatives have been comprehensive in scope – addressing crowding in the ED along with improvements in inpatient services as well. Other efforts have been designed to target one of many factors that contribute to ED crowding and patient flow.

Hospital strategies have included:

- *Changes to the admissions process within the ED.* For example, one hospital redesigned the admissions process to improve speed and classification of patient health status in order to shorten wait times for treatment.
- *Assigning inpatient nurses responsibility for moving patients from the ED to an inpatient bed.* At one hospital, each day from 9:00 am to 9:30 pm, a nurse from an inpatient unit processes and assumes care for patients from the ED, reducing the amount of time that an admitted patient stays in the ED.
- *Expanding the use of the ED fast track.* Several hospitals have found that this provides quicker care and discharge to low acuity patients.

- *Implementing early discharge programs.* Three District hospitals have implemented protocols to empty inpatient beds earlier in the day, which creates space for patients admitted from the ED. One of the hospitals conducts early discharge rounds and another opened a discharge lounge to provide a space within the hospital for discharged patients to wait for transportation home. These changes have paid off at the hospitals, with one reporting a reduction in hospital length of stay by 0.5 days due to earlier discharge times.
- *Constructing a new area adjacent to the ED for psychiatric patients.* Since psychiatric patients often spend long periods in the ED waiting for treatment or transfer, moving psychiatric patients to a dedicated area will free up space and resources in the regular ED for other patients.
- *Using a patient flow team to identify and resolve issues in the hospital that contribute to crowding.* At one hospital, the patient flow team's input has led to some semi-private rooms being converted to private rooms in order to better handle isolation patients. These rooms can also be used as semi-private for additional surge capacity. Also, a new process has been put in place to streamline medical-surgical admissions from the ED.
- *Creating additional space for patients on inpatient units.* In order to improve patient flow, one hospital has opened previously closed inpatient beds and improving housekeeping to reduce bed turnover times.
- *Using case management and referral programs to reduce non-emergent ED use.* One hospital currently uses social workers/case managers in the ED for 12 hours each day. These individuals help obtain and coordinate care and services for ED patients so that physicians and nurses in the ED can treat other patients. Another hospital uses case managers for asthma patients, an initiative that has reduced readmission rates by 40 percent. Three hospitals also provide primary care referrals to prevent non-emergent ED use.

A5.1.5 Data Collection and Use

The survey asked hospitals if they regularly collect the type of information on timeliness and patient flow that we requested from them on the survey. Five hospitals report that they routinely collect data on patient flow times, including wait time to see a physician, length of stay in the ED for discharged and admitted patients, and patient boarding time. A sixth hospital reports routinely collecting data on all but boarding times. Currently, most hospitals make little use of the collected data. However, a few hospitals have indicated a move towards increased data analysis with the intention of using this data to drive initiatives on ED crowding and quality of care. Also, two hospitals currently use their data to create formal forecasts of ED demand. Two hospitals did not answer data collection questions on our survey.

A5.1.6 Analysis of Data on Time of Day/Day of Week of ED Admissions

We received data from selected hospitals (not as part of the survey) about the timing of their ED admissions by day of week and time of day for a recent interval of time. For weekends and weekdays, the highest intensity of ED use occurred in the interval from 9 am to 8 pm. Between

30 and 35 percent of weekly ED visits occur on the weekend; of those, approximately two-thirds occur between 9 am and 8 pm.

A5.2. Emergency Medical Services

This section provides new data and analysis on the quality and utilization of EMS services in D.C. Computer Aided Dispatch (CAD) and electronic run sheet data provided by D.C. FEMS was used to analyze EMS response and drop times, nursing home transports and frequent users of the EMS system. Our previous report included information on EMS response and drop times calculated by D.C. FEMS. Analysis of the raw CAD data provides additional and updated information on D.C. FEMS performance in these areas.

A5.2.1 EMS Response Times

D.C. FEMS tracks response times using Computer Aided Dispatch (CAD) data and uses this information to measure system performance. Our analysis of CAD data from fiscal years 2002 to 2007 matches reports from D.C. FEMS showing that response times have decreased substantially in recent years. Table 7.3 shows D.C. FEMS response time performance compared to internal and national benchmarks. In 2007, D.C. FEMS met or exceeded the 90 percent goal on two internal benchmarks. Performance on Acute Life Support (ALS) response times for critical medical dispatches has improved steadily over the period 2002-2007. In 2002, 66 percent of critical medical dispatches were 8 minutes or less; by 2007, performance was at 90 percent. In addition, transport unit response times were under 12 minutes for 95 percent of all medical dispatches. Performance on response times for first responders has risen more slowly, and D.C. FEMS was slightly under the 90 percent goal for its internal benchmark in this area in 2007. First responders arrived in less than 6.5 minutes on 86 percent of all medical dispatches.

D.C. FEMS also performs well on ALS response times using the National Fire Protection Association (NFPA 1710) benchmark, which is slightly different from the internal D.C. FEMS ALS benchmark. In 2007, response times for ALS units were less than 9 minutes on 93 percent of all medical dispatches, compared to the NFPA goal of 90 percent. However, D.C. FEMS misses the NFPA benchmark for first responders by a substantial margin. Response times for first responders were under 5 minutes (the NFPA standard) on only 70 percent of all medical dispatches. Nevertheless, it has shown improvement on this measure over the past two years.

Table A5.3. D.C. FEMS Benchmark Goals vs. Actual Performance, FY 2002-2007

| System Goal Description | Benchmark (%) | 2002 (%) | 2003 (%) | 2004 (%) | 2005 (%) | 2006 (%) | 2007 (%) |
|--|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| D.C. FEMS | | | | | | | |
| Critical Medical Dispatches with ALS Arrival < 8 minutes | 90 | 66 | 67 | 72 | 76 | 83 | 90 |
| All Medical Dispatches with First Transport Unit Arrival <12 minutes | 90 | 86 | 85 | 85 | 85 | 90 | 95 |
| All Medical Dispatches with First Responder Arrival <6.5 minutes | 90 | 81 | 81 | 80 | 79 | 84 | 86 |
| National Fire Protection Association | | | | | | | |
| All Medical Dispatches with ALS Arrival < 9 minutes | 90 | 75 | 76 | 80 | 84 | 89 | 93 |
| All Medical Dispatches with First Responder Arrival < 5 minutes | 90 | 63 | 63 | 63 | 62 | 69 | 70 |

Note: Technical notes regarding data analysis can be found in Technical Appendix 3.

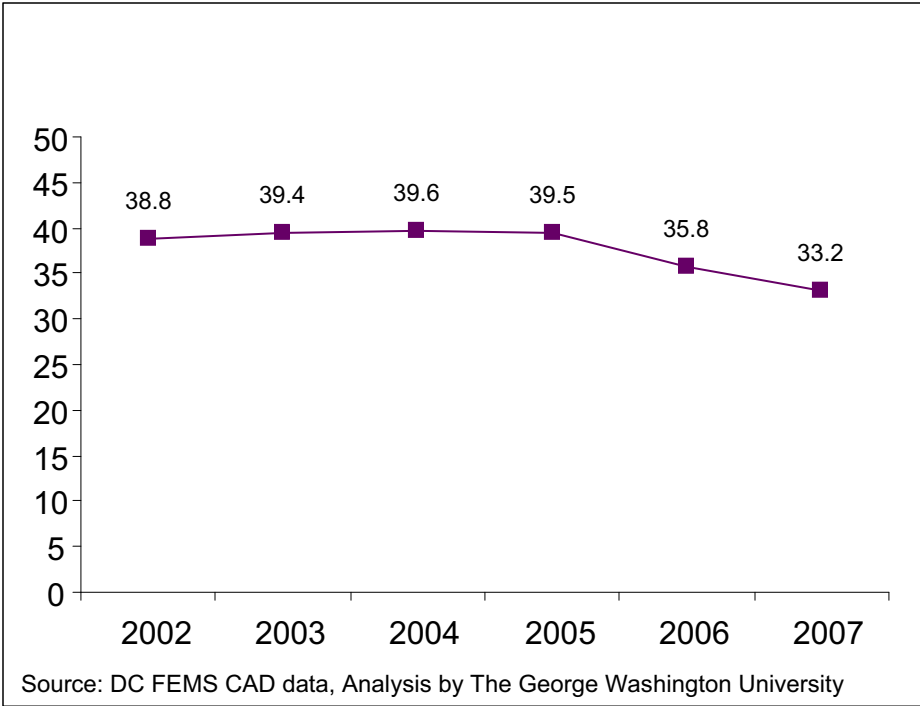
Source: D.C. FEMS CAD data

As reported in our earlier report, the District’s EMS response times compare favorably to those of other cities recently identified in a report by The Abaris Group for the special Mayor’s Task Force on EMS. In addition, the District’s goals seem in line with those of other benchmark cities for Basic Life Support (BLS) and ALS response times.

A5.2.2 EMS Drop Times

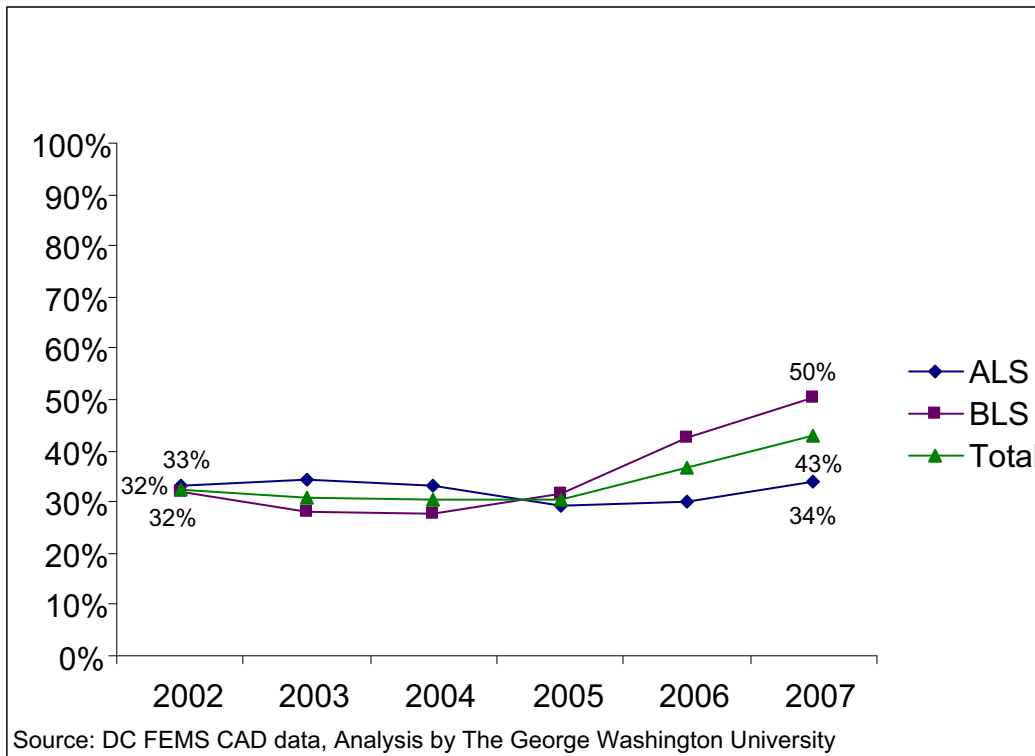
Another measure of efficiency of emergency services concerns drop times – the length of time an ambulance is at a hospital transferring patient care. Lengthy drop times have been a concern for D.C. FEMS because lengthy waits consume resources that could be deployed elsewhere in the city. Ambulances parked outside of a hospital are unable to respond to other calls for transports or emergency services. However, in the past two years, there has been some progress towards reducing drop times in the District. Figure 2 shows median drop times from 2002 through 2007. Median drop times decreased 14.4 percent during this period, from 38.8 minutes to 33.2 minutes. The majority of this improvement occurred after 2005. In addition, the percent of transports with drop times over one hour decreased from 13.4 percent in 2002 to 9.1 percent in 2007.

Figure A5.2 Annual Median Hospital Drop Times in Minutes



Further analysis of drop times by the type of transport unit shows that the majority of improvement has occurred in BLS units. Figure 3 shows that both ALS and BLS units had drop times less than 30 minutes about a third of the time. However, BLS units have experienced significant growth in the proportion of drop times under 30 minutes, up to 50 percent in 2007, while drop times for ALS units have remained relatively unchanged. This may indicate that ambulances are able to transfer low acuity patients into hospital care faster than potentially higher acuity patients.

Figure A5.3 Percent of Drop Times Under 30 Minutes



Both EMS and hospital factors contribute to drop time durations. The percent of drop times under 30 minutes increased substantially at all hospitals from 2002 to 2007, as shown in Table 7.4. Children’s National Medical Center, Howard University Hospital, and Sibley Hospital saw the largest decreases in drop times (as measured by the percent of drop times under 30 minutes). The George Washington University had the smallest decrease in drop times. In 2007, Sibley Hospital also had the highest percentage of drop times under 30 minutes (61 percent), followed closely by Children’s Hospital (60 percent). The George Washington University had the lowest percentage of drop times under 30 minutes (34%).

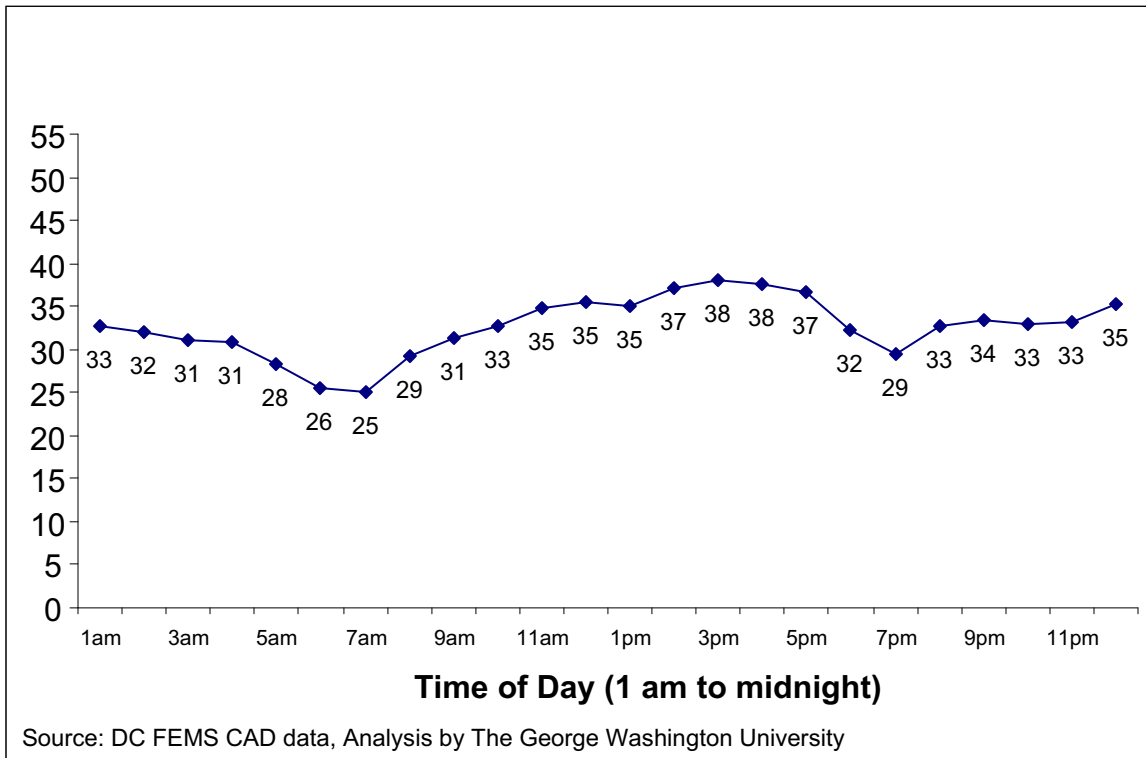
Table A5.4 Percent of Hospital Drop Times 30 Minutes or Less

| Hospital | 2002 (%) | 2007 (%) | Percent Change |
|---------------------------------------|----------|----------|----------------|
| Children’s National Medical Center | 37 | 60 | 62.2 |
| George Washington University Hospital | 29 | 34 | 17.2 |
| Georgetown University Hospital | 35 | 43 | 22.9 |
| Greater Southeast Community Hospital | 31 | 45 | 45.2 |
| Howard University Hospital | 28 | 43 | 53.6 |
| Providence Hospital | 34 | 44 | 29.4 |
| Sibley Memorial Hospital | 40 | 61 | 52.5 |
| Washington Hospital Center /MedStar | 32 | 46 | 43.8 |
| All Hospitals | 32 | 43 | 34.4 |

Source: D.C. FEMS CAD data

Drop times show significant fluctuations by the time of day. In 2007, median drop times ranged from a low of 25 minutes to a high of 38 minutes throughout the day, as shown in Figure 7.4. The longest drop times occur during the late afternoon, from 2pm to 5pm. Also, two large dips in drop times occur at 7am and 7pm, which coincides with shift changes at D.C. FEMS and some hospitals. This pattern of drop times by time of day has been consistent over several years.

**Figure A5.4 Median Drop Time in Minutes by Time of Day
FY2007**



A5.2.3 Nursing Home Transports

EMS transports from nursing homes to hospitals comprised 5.5 percent (4,670) of all EMS transports in D.C. in 2007. This is an increase from 2002, when the share of nursing home transports was 4.5 percent. While nursing homes often contract with private ambulance services to provide non-emergency transportation for residents, D.C. FEMS provides this type of transportation in response to calls from nursing homes. Nursing home patients tend to be labor and resource intensive and may put a disproportionate burden on the system. In most communities, the public ambulance service does not provide non-emergent nursing transportation between nursing homes and hospitals.

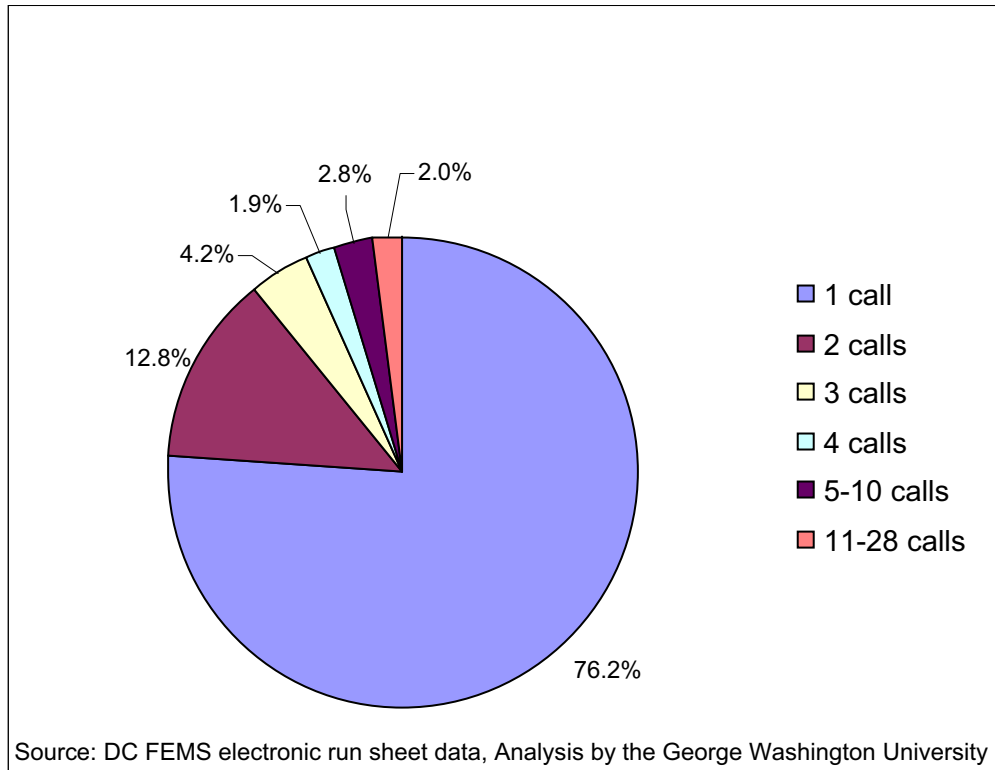
However, D.C. FEMS does not have the right of refusal when responding to calls, and therefore is obligated to provide transportation to any entity requesting the service. These non-emergent nursing home transports use limited resources that could be deployed elsewhere in the system.

A5.2.4 EMS Frequent Users

D.C. FEMS data shows that three-quarters (76.2 percent) of the runs made by EMS on behalf of District residents are for individuals using the system only once during a two-month period.²⁴ An additional 12.8 percent of EMS calls were for individuals who used the system two times. About one out of ten (11.0 percent) calls was for individuals who used the system three or more times over the two-month period. Data on EMS calls in the District show a similar pattern; most (89%) were for individuals who used the system only one or two times in the span of two months. Calls from individuals with the most frequent use of the system, 11-28 calls per person over the two-month period, made up only 2 percent of all EMS calls. Total EMS calls by the number of calls per person is shown in Figure 7.5.

²⁴ For a two-month period in 2006, information from EMS run sheets were entered into an electronic database, enabling analysis of the types of users of EMS services and the extent to which individuals were using EMS on multiple occasions.

Figure A5.5 Total Calls by Number of Calls per Person
November and December 2006



A5.3. National Emergency Department Crowding Strategies

Urgent Matters, a program funded by the Robert Wood Johnson Foundation and operated by faculty and staff at The George Washington University, is focused on seeking and spreading national strategies to improve patient flow and reduce emergency department crowding. The work of this project indicates that crowding can in large part be addressed through better hospital capacity and patient flow management with a highly structured approach using mainly existing resources.

As part of the Phase II report, we scanned our database of hospital strategies that would benefit the DC hospital community and identified five potentially useful case studies, summarized below (full case studies and documents related to these strategies can be found in Technical Appendix 4.)

(1) *Helping Frequent Users of Emergency Departments Find Their Medical Home*

BryanLGH Medical Center in Lincoln, Nebraska, worked with a neighboring hospital to coordinate care for people who are most in need of primary care and who previously turned to local EDs repeatedly for their medical care. The program, ED Connections, identifies patients who regularly come to any of the city's hospital emergency departments for non-emergent care

and matches them with appropriate resources. Patients with chronic medical or mental health issues are educated and matched with appropriate medical providers, information on insurance coverage options, needed medications and referrals to other community services. Hospitals have seen a 60 percent decrease in ED visits from program participants after implementation of the program.

(2) Comprehensive Diversion Reduction Plan Improves Efficiency in Hospital Discharges

The Massachusetts Department of Public Health has decreased ambulance diversion throughout the state. Upon initial examination into the issue, the Department found that no hospital was immune from ambulance diversion and that diversion was correlated with hospital occupancy. To enhance coordination among hospitals, the Department of Public Health designed a tool that reported which hospitals were on diversion in real-time. Hospitals were required to participate in the system through the Department's hospital licensing regulations. This program has been so successful that the Public Health Commissioner is looking to add real-time information on available beds at hospitals throughout the state.

(3) Regionalization of Cardiac Care

Hospitals are essentially required to measure the time a heart attack patient waits before receiving balloon angioplasty or percutaneous coronary intervention (PCI) under federal public reporting rules. Duke University Medical Center piloted the Reperfusion of Acute Myocardial Infarction (RACE) program to coordinate timely and appropriate care for heart attack patients. A major component of this program was creating a regional system to coordinate transfers of patients needing percutaneous coronary intervention (PCI) to hospitals that with the necessary staff and equipment. In a one year period, Duke was able to reduce its median time to PCI from 180 minutes to less than 120 minutes, a 33 percent reduction.²⁵

(4) Avoiding ED Gridlock and Effectively Managing Diversion

In 2005, the Centers for Medicare and Medicaid services (CMS) published a memo warning hospitals that failure to release ambulances back into the field in a timely manner poses safety concerns and could result in an Emergency Medical Treatment and Labor Act (EMTALA) violation. Presbyterian Intercommunity Hospital, in Los Angeles, California, created a team to identify strategies that could help the hospital avoid diverting ambulances. Point-of-care testing was implemented in the emergency department as well as bedside registration to avoid administrative delays. Additionally, case managers were brought to the ED to coordinate care for patients and make recommendations for home care, skilled nursing or other needs. Since these changes have been implemented, the diversion rate has decreased 23 percent.

(5) Using ED Dashboards and Real-Time Data to Improve Operational Efficiency

LDS Hospital in Salt Lake City, Utah, created a tracking system to collect and analyze data on patient flow. By tracking ED patients throughout their visit, the hospital could gather data that showed where patient flow problem areas were, thus allowing the hospital to improve patient flow and department efficiency. The system was developed to provide real-time ED patient data, capture time and volume data, and provide detailed ED operational data. Additionally, the ED

²⁵ The current CMS standard for time to PCI is 90 minutes. At the time of implementation of the RACE Program, the standard was 120 minutes.

built a dashboard that shows key ED operations, while continuously being updated by real-time data from the tracking system. Using this dashboard, staff is able to make real-time process improvements, which has resulted in an average door-to-physician time that has decreased 50 percent despite an ED volume that grew 20 percent in the same period.

A5.4 EMS in Communities Adjacent to DC

The inclusion of best practices can be a helpful addition to a report on emergency services, but they run the risk of describing initiatives that seem far removed from the geographic, political or resource-related contexts of emergency care in a particular location. For this reason, we also include case studies of pre-hospital emergency services in several communities adjacent to the District that may prove particularly useful for planning local quality improvement efforts. Arlington, Fairfax and Montgomery Counties have each implemented various initiatives to improve the quality of emergency medical services in their communities.

We interviewed representatives from EMS systems in neighboring communities to describe pre-hospital emergency services in the region. The goal was to provide insight into innovative ways to provide high-quality pre-hospital care, which could serve as a guide for the District during reform of the current EMS system. Arlington, Fairfax and Montgomery Counties have each implemented various initiatives to improve the quality of emergency medical services.

A5.4.1 Fairfax County Fire and Rescue Department – Measuring Clinical Quality

Fairfax County Fire and Rescue Department houses emergency medical services in an integrated system, where fire fighters and emergency medical services providers work in the same agency. Similar to such systems, the majority of calls are of for EMS origin (65,000 out of a total of 90,000 calls or 72 percent). And, like the District, Fairfax County Fire and Rescue includes the use of paramedics on fire engines and all firefighters are trained as emergency medical technicians (EMTs).

Like DC, Fairfax County Fire and Rescue Department is moving towards an electronic patient care reporting (ePCR) system. This will be fully functional in 2008. The ePCR will streamline a current quality improvement process that focuses on six clinical areas:

- Multi-system trauma
- Individual, isolated trauma
- Chest pain/acute coronary system
- Diabetes
- Pediatrics
- Respiratory illness

Fairfax County does 100 percent chart review weekly of the patients that fit into any of these six areas. Each of these areas has defined measures of ideal care. For example, for patients with acute coronary syndrome, there are seven review criteria:

- Assessment,
- Oxygen administration,
- Serial 12 lead EKGs,
- Administration of baby aspirin,
- Administration of nitroglycerin,
- Administration of morphine, and
- Patient transported to the appropriate hospital.

While the Fairfax County does not expect to meet these criteria 100 percent of the time, largely because of contraindications, such as a patient having already taken aspirin prior to their arrival, Fairfax reviews each case that does not meet the criteria to better understand and address any potential deficiencies on a weekly basis. Similar to the District, Fairfax uses the Utstein Cardiac Survival rate to monitor cardiac arrest survival rates. The Utstein Cardiac Survival rate looks at both survival of the patient to the hospital and survival of the patient upon discharge from the hospital. Like the District, Fairfax has difficulty coordinating data with area hospitals. Additionally, Fairfax also reviews all refusals for transport, timeliness of response and drop times, all code 1 transports (emergent) and the therapeutic skills of providers and makes adjustments based on the analyses, such as increased and targeted training for providers.

Providers are assessed on their success rates for the following procedures: proper Combitube insertion, endotracheal intubations, proper interosseous placement and proper use of continuous positive airway pressure (CPAP). These skills are required of advanced life support providers to assist with proper airway management and intravenous therapy for critical patients. Poor performers are provided additional education and training specific to their deficiency.

A5.4.2 Montgomery County EMS – Maintaining Hospital Relationships

The Montgomery County Fire and Response Service (MCFRS) communicates regularly with physician and nurse managers in hospital emergency departments (EDs) regarding patient flow in the pre-hospital (EMS) and hospital setting. Montgomery County also uses an electronic system hosted by the Maryland Institute of Emergency Medical Services Systems (MIEMSS) to track and report hospital diversion online. However, the county does not have an electronic dashboard to collect information on hospital capacity. In order to manage system-wide demand for emergency services and decrease ambulance drop times, three EMS supervisors may go to county hospitals on an as needed basis to monitor ED capacity and bed availability and direct ambulances accordingly.

In addition to five acute care hospitals, Montgomery County also has a freestanding ED. The Germantown Emergency Center (GEC), which opened in August 2006, is operated by Shady Grove Adventist Hospital (SGAH). This new 21-bed ED has decreased transport times for non-acute ill and injured patients in the Germantown area. The freestanding ED is located in the northern part of the county serving the communities of Germantown, Gaithersburg, Poolesville and Damascus. The decision to build the free standing emergency facility was based on the growing delays in emergency care, traffic congestion, and the projected population growth for the northern part of the county. The GEC has resulted in a reduction of up to 30 percent in the cycle times of the MCFRS EMS units.

One concern related to opening a freestanding ED instead of a full hospital is the need for inter-facility transports. The *Maryland Medical Protocol*, the MCFRS Quality Assurance Office and the SGAH ED staff have provided detailed instructions for EMS personnel describing appropriate patients for transport to the freestanding ED. As a result of this partnership, the percent of patients that require transportation from the freestanding ED to SGAH is averaging only 3-5 percent per month. MCFRS is not responsible for other inter-facility transports, including transport between nursing homes and hospitals, as is common in the District of Columbia.

A5.4.3 Arlington County Fire Department—Adjusting to System Integration

The Arlington County Fire Department (ACFD) recently changed to a fully-integrated system where all employees are both trained firefighters and emergency medical services (EMS) providers. Previously, all firefighters were certified to at least the EMT-basic level, but all EMS personnel were not trained as firefighters. Impetus for the transition came from leadership at ACFD as a way to improve quality and morale by creating equity in pay, promotion, and duties for all employees. Overall, the process of creating an integrated system has gone smoothly; however, there continue to be adjustments to address new challenges.

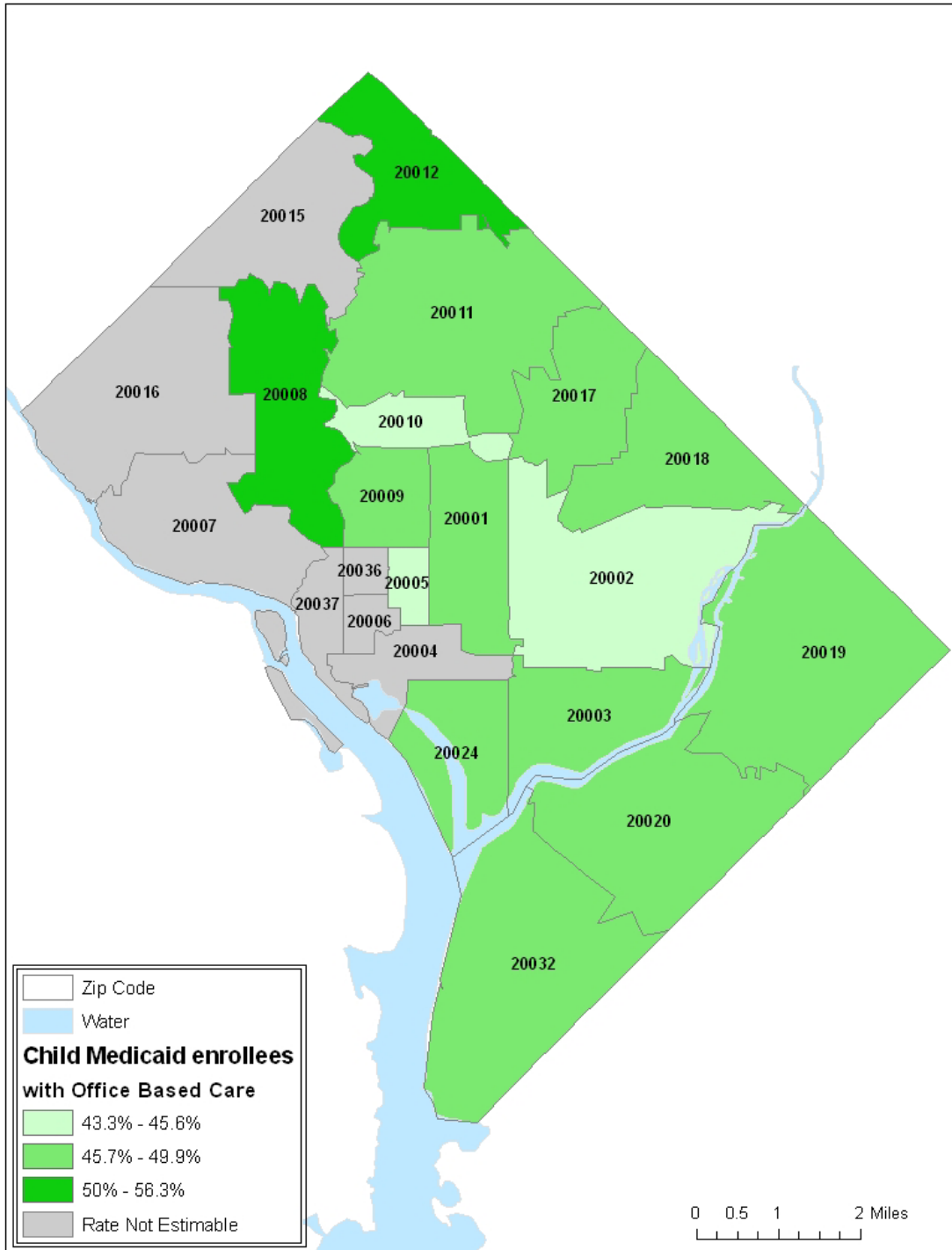
Reorganizing the system has been a multi-step process for Arlington. First, ACFD identified problems with EMS, including training, leadership, and equipment. Then, hiring and training were changed in order to cross-train all existing and new employees in fire and EMS. With this model, ACFD pays for the paramedic education of current employees, since it is difficult to hire outside paramedics willing to undergo fire training. Since most ACFD employees are initially trained as both firefighters and EMT-basics, the department is currently facing challenges balancing staffing between EMS and fire assignments. Currently, ACFD firefighters with ALS certification have limited time to rotate to a fire suppression unit to maintain proficiency in both disciplines. To address this issue and prevent burnout of ALS personnel, ACFD is forming a working group to explore the possibility of assigning all employees to fire suppression for at least 50 percent of their time.

Promotion and leadership changes have also been made throughout the system. Employees who work primarily in EMS now have equitable promotion and career opportunities within ACFD. For example, the EMS Supervisor position has been upgraded to match the newly created Station Commander position. At higher levels in ACFD, the EMS chief also has an expanded role in leadership of the department. In practice, these new policies have been successful at promoting EMS providers; however, it has also led to some inconsistency in leadership. ACFD plans to correct this problem by introducing more standardization to leadership positions.

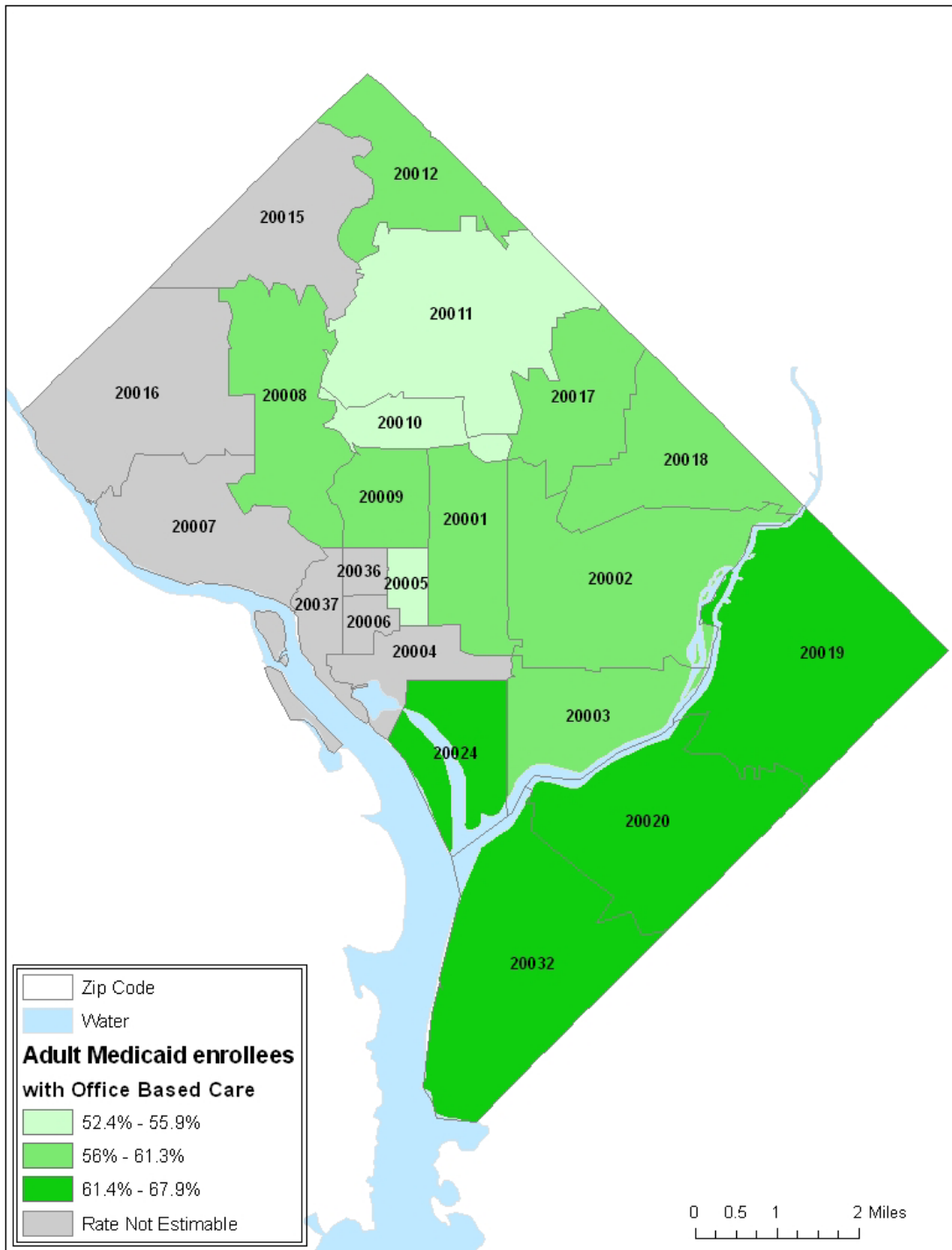
MAP APPENDICES

Map Appendix 1: Use Of Office Based Care Among Medicaid And Alliance Enrollees, By Zip Code Of Residence

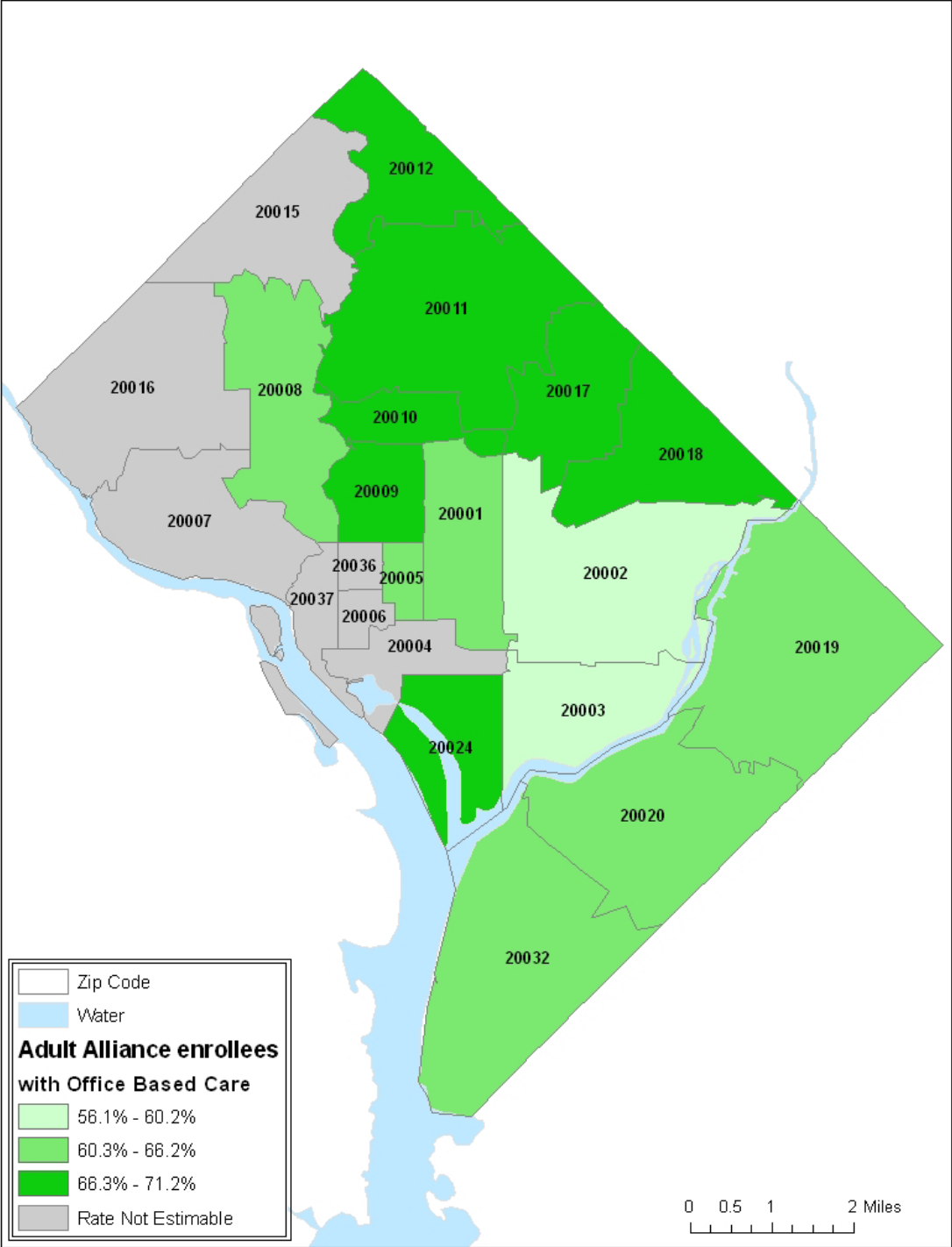
Map 1.1: Percentage of Medicaid Enrollees Ages 0-17 Who Have At Least One Office-Based Visit



Map 1.2: Percentage of Medicaid Enrollees Ages 18 and over Who Have At Least One Office-Based Visit

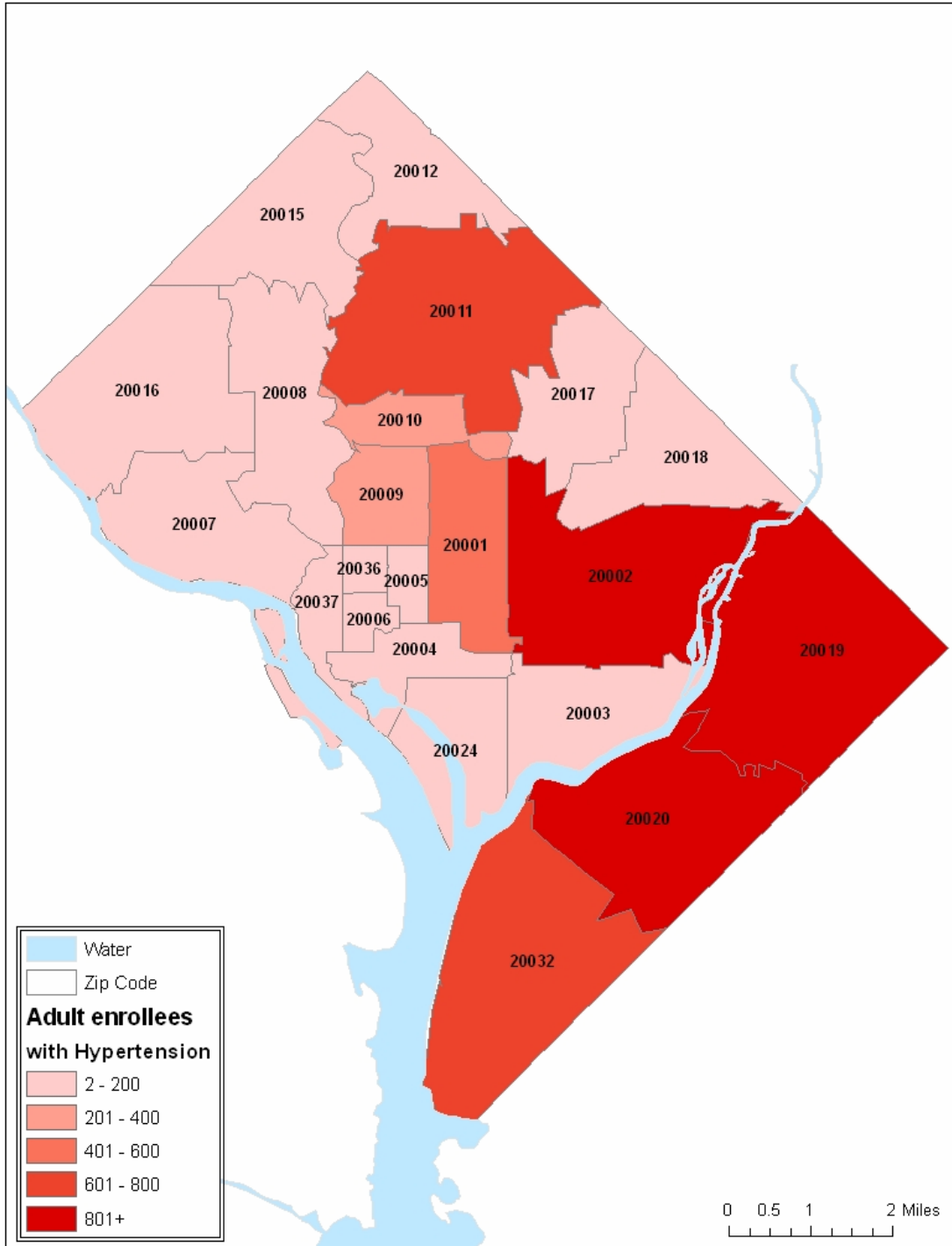


Map 1.3: Percentage of Adult Alliance Enrollees Who Have At Least One Office-Based Visit

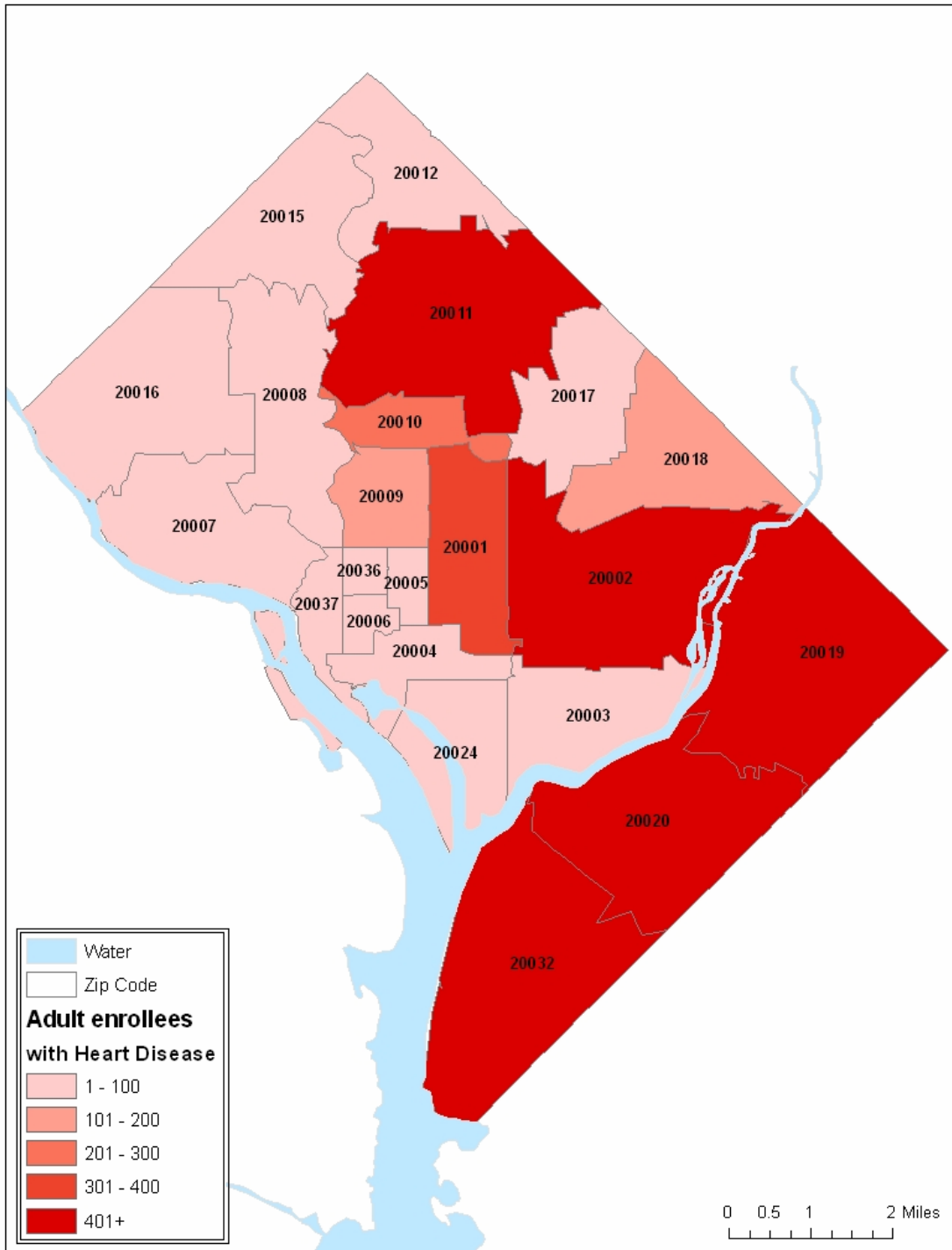


Map Appendix 2: Number Of Medicaid And Alliance Enrollees With Chronic Conditions, By Zip Code

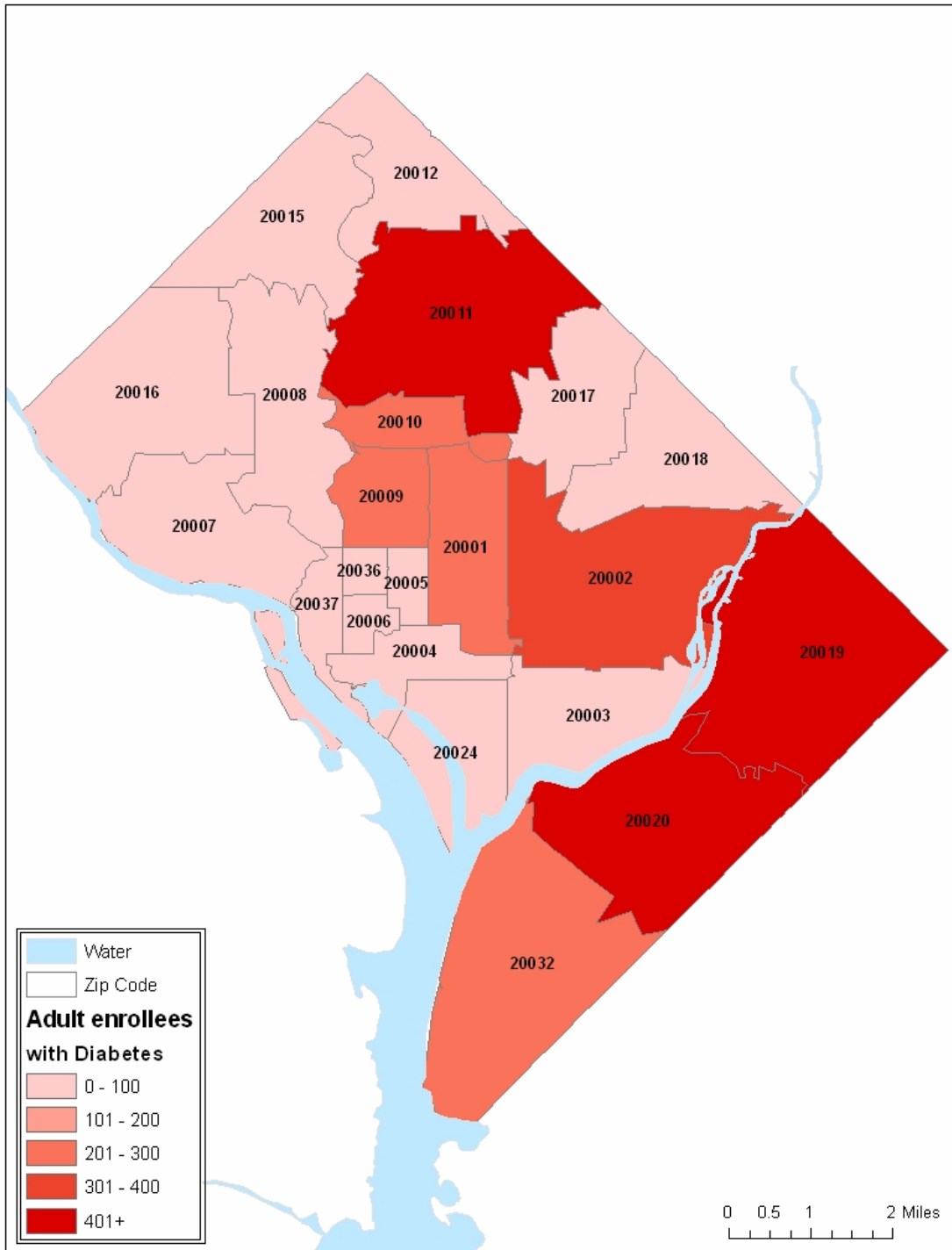
Map 2.1: Number of Adult Medicaid/Alliance Enrollees with Hypertension



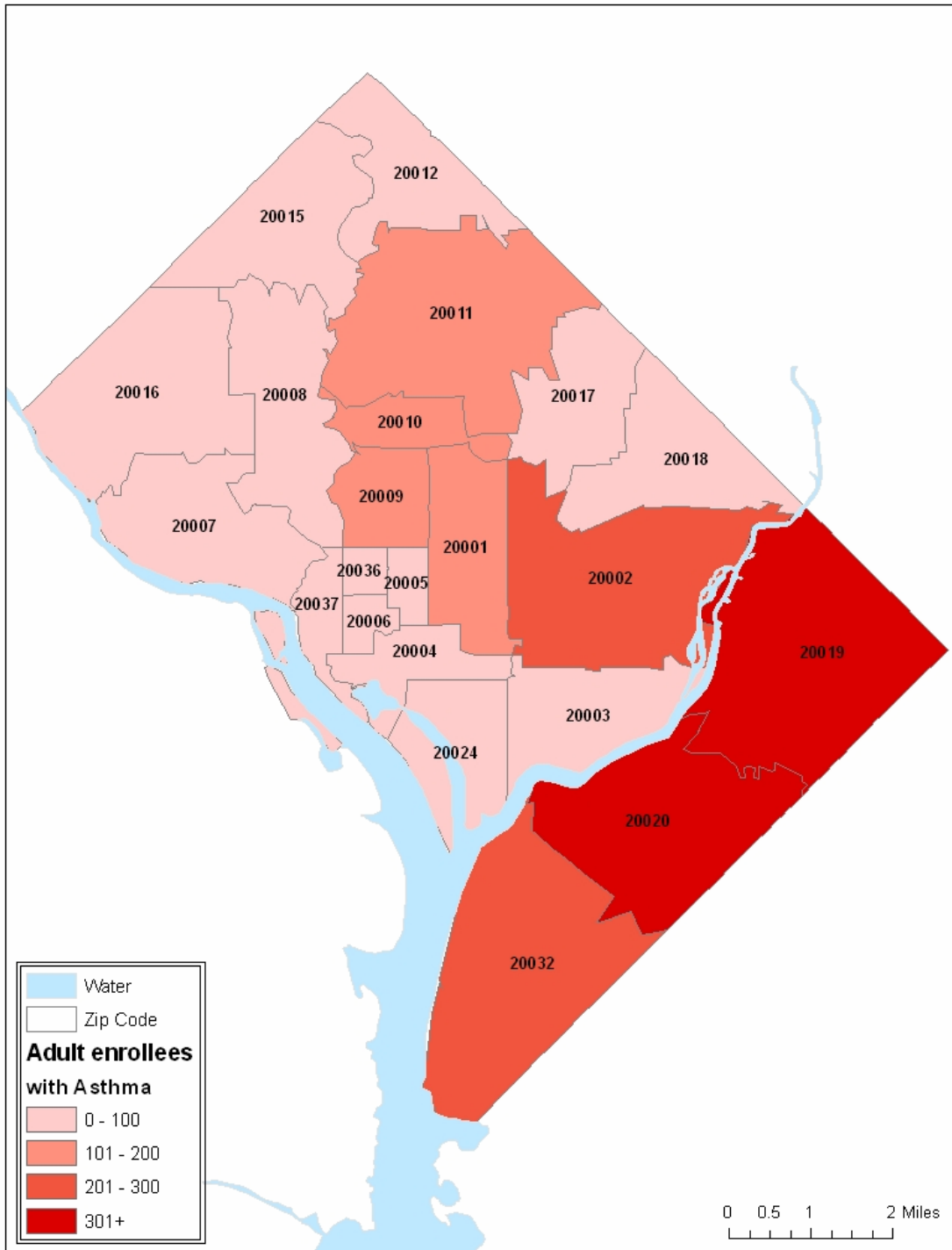
Map 2.2: Number of Adult Medicaid/Alliance Enrollees with Heart Disease



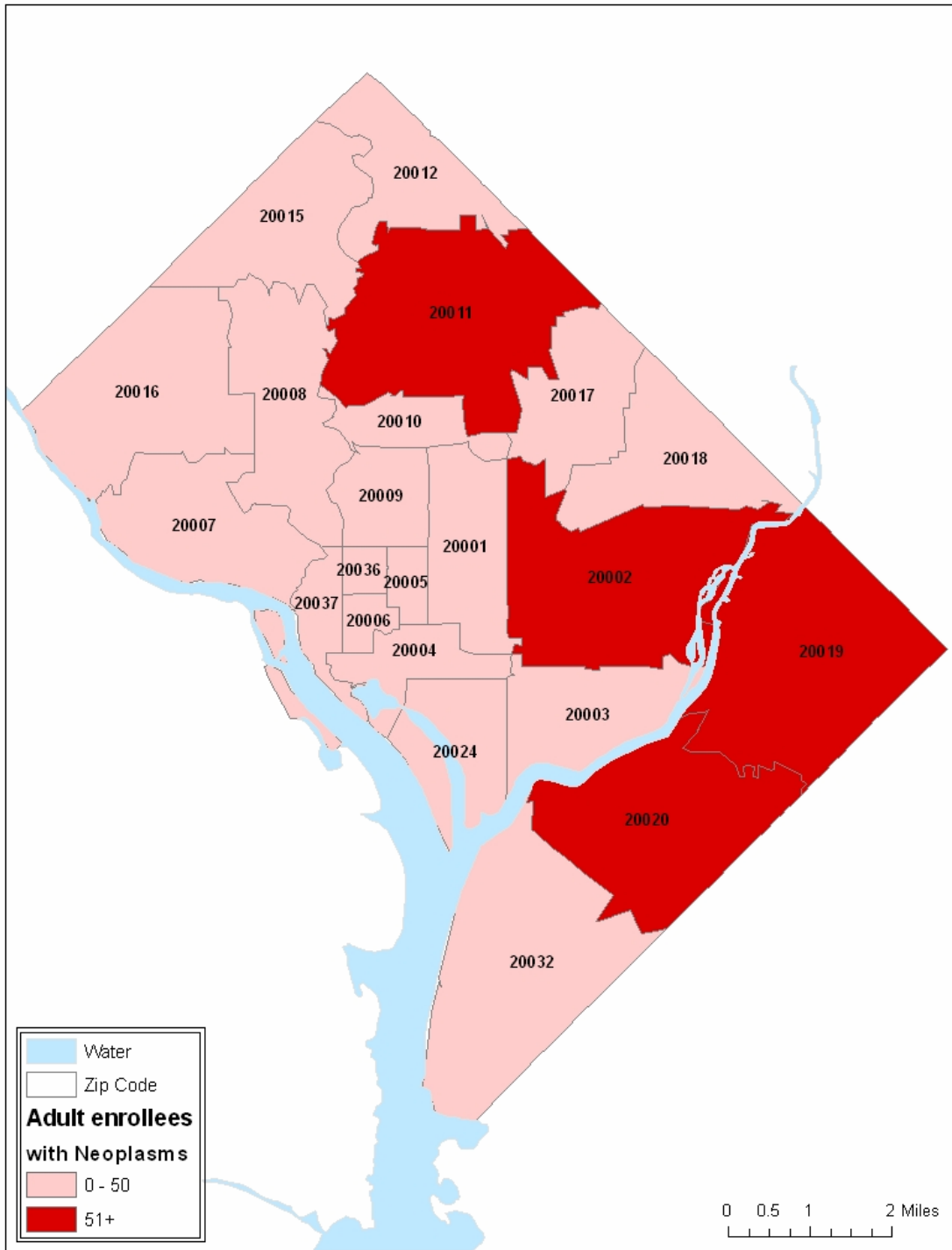
Map 2.3: Number of Adult Medicaid/Alliance Enrollees with Diabetes



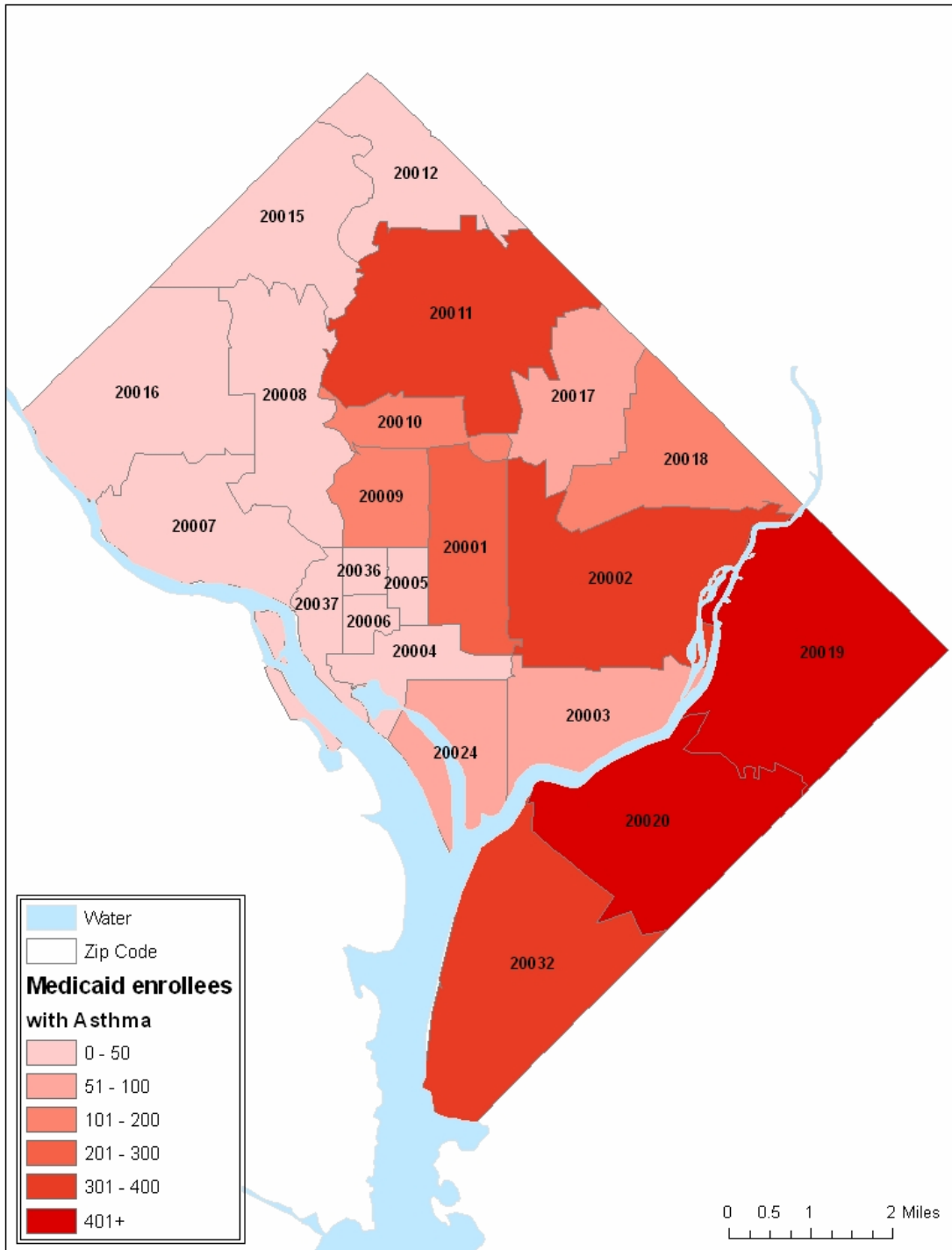
Map 2.4: Number of Adult Medicaid/Alliance Enrollees with Asthma



Map 2.5: Number of Adult Medicaid/Alliance Enrollees with Cancer



Map 2.6: Number of Youth Medicaid Enrollees with Asthma



Map Appendix 3: Number of ACS Hospitalizations, By Zip Code Of Patient Residence

Figure 3.1: Counts of ACS Hospitalizations Among District Residents Ages 0-17

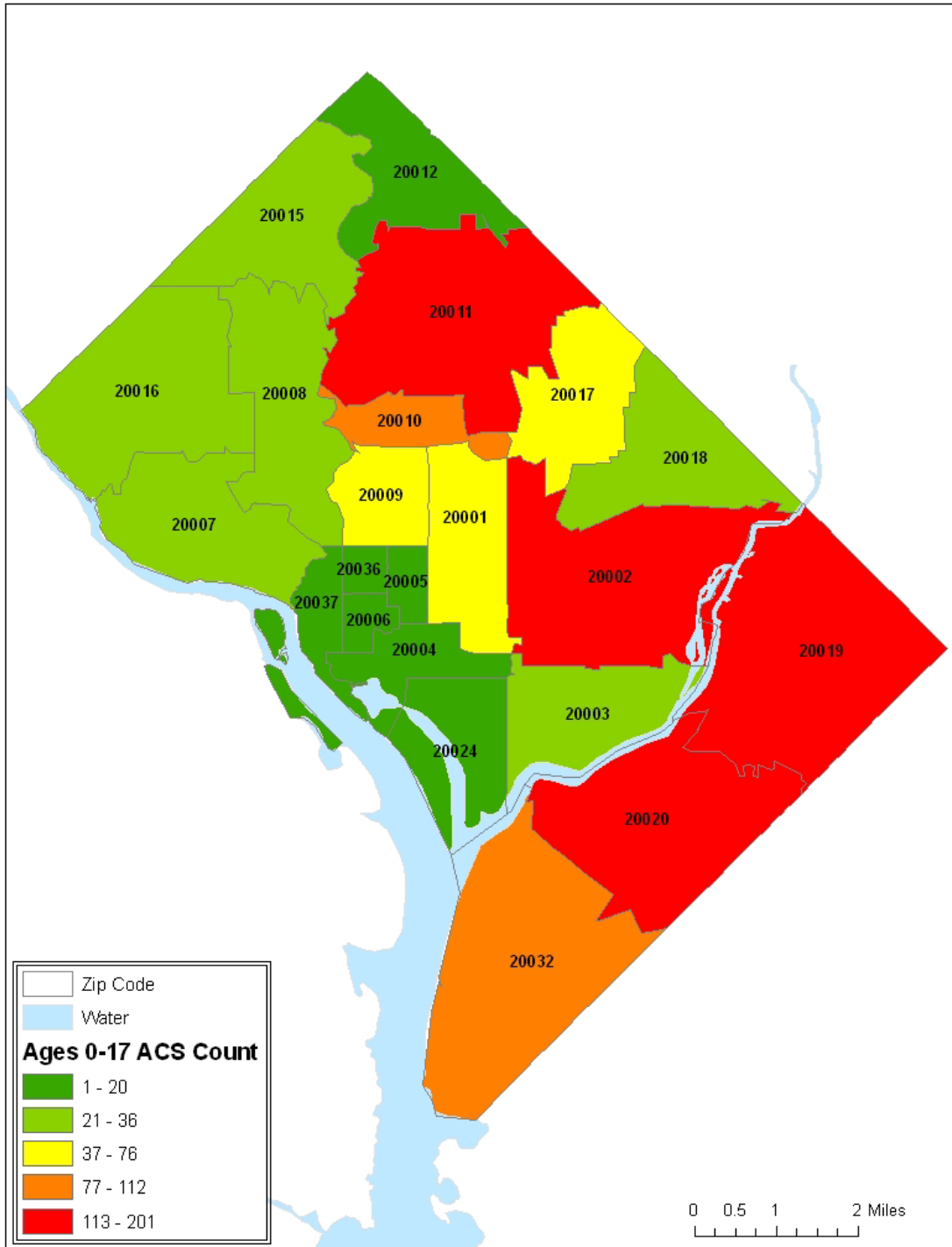


Figure 3.2: Counts of ACS Hospitalizations Among District Residents Ages 18-39

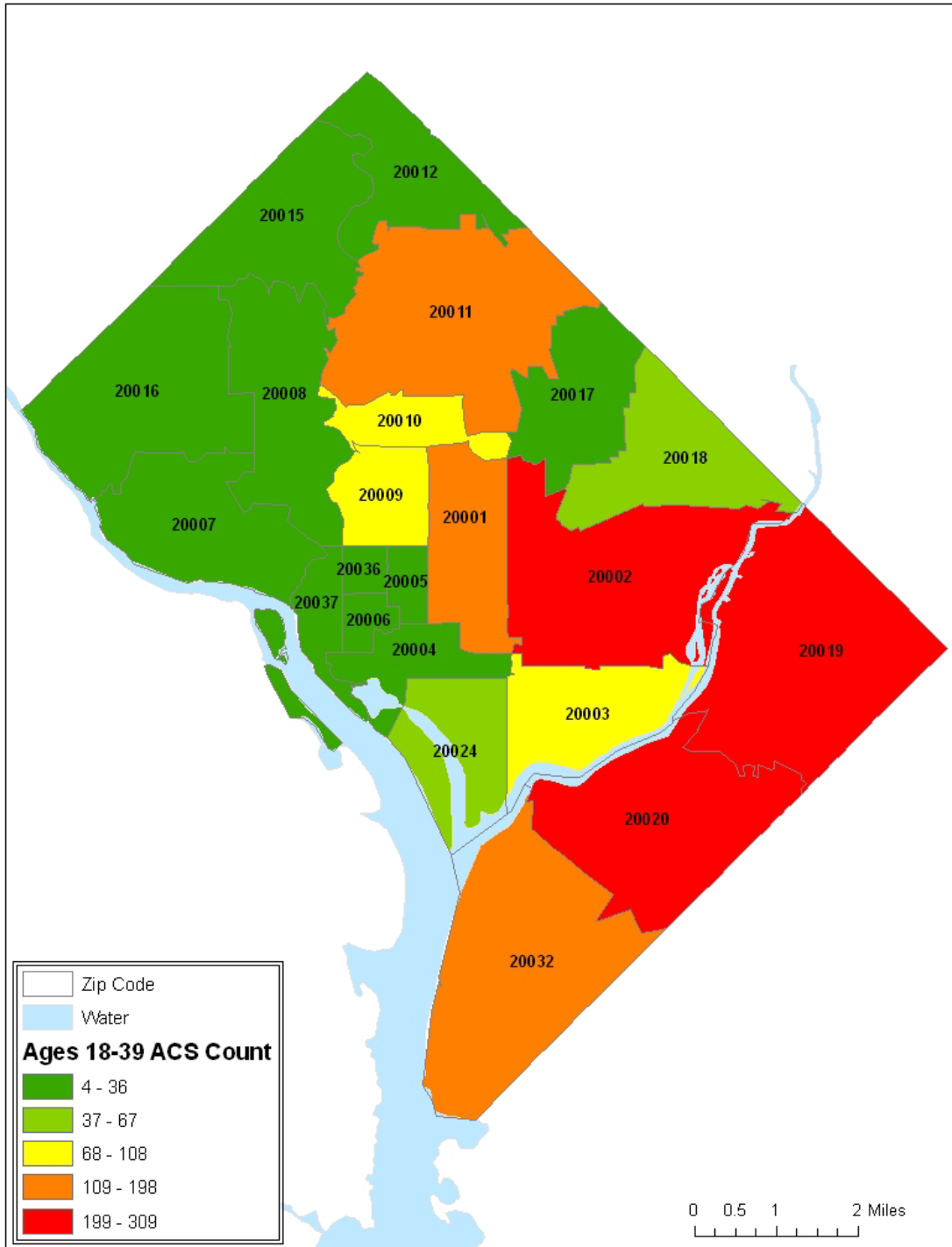


Figure 3.3: Counts of ACS Hospitalizations Among District Residents Ages 40-64

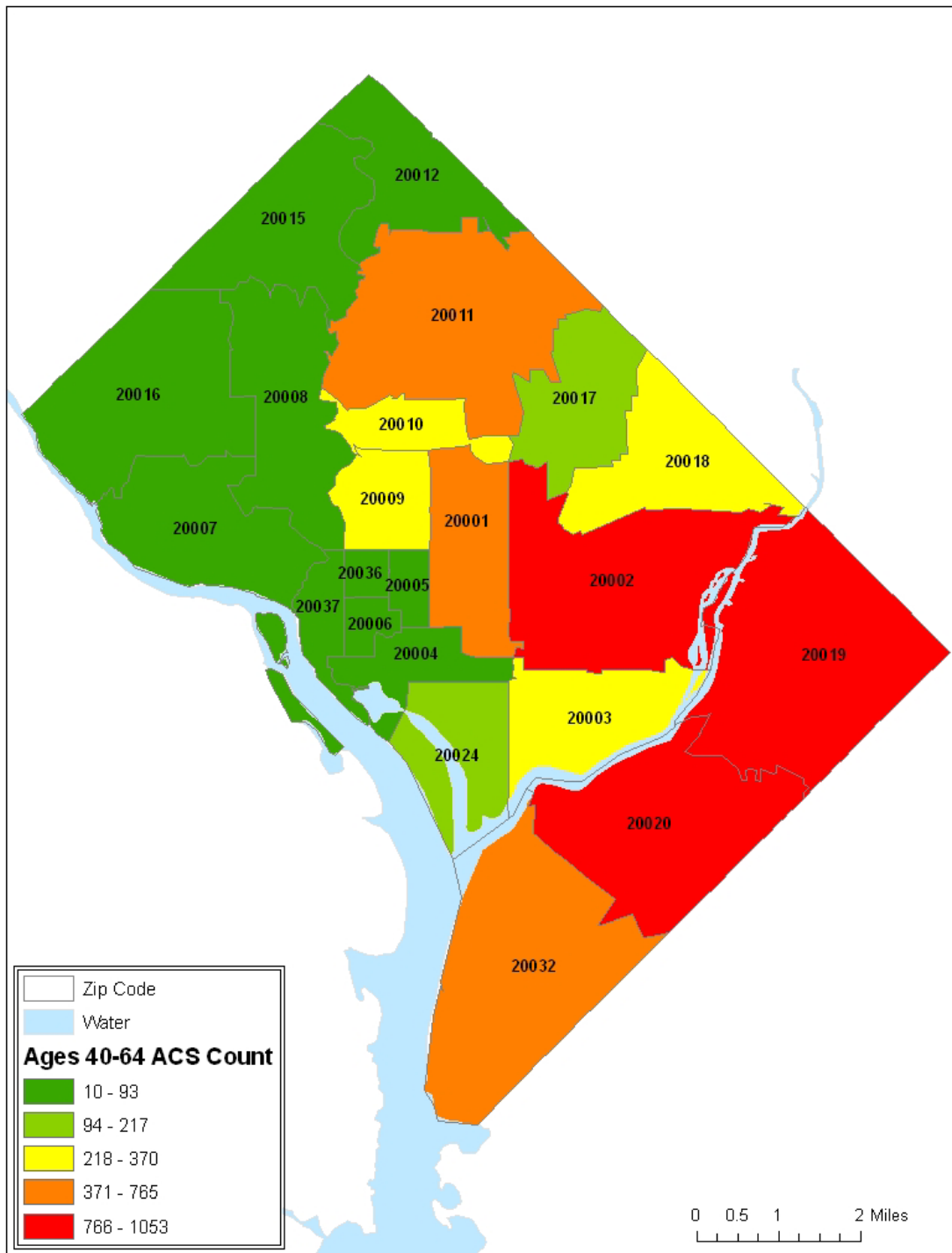
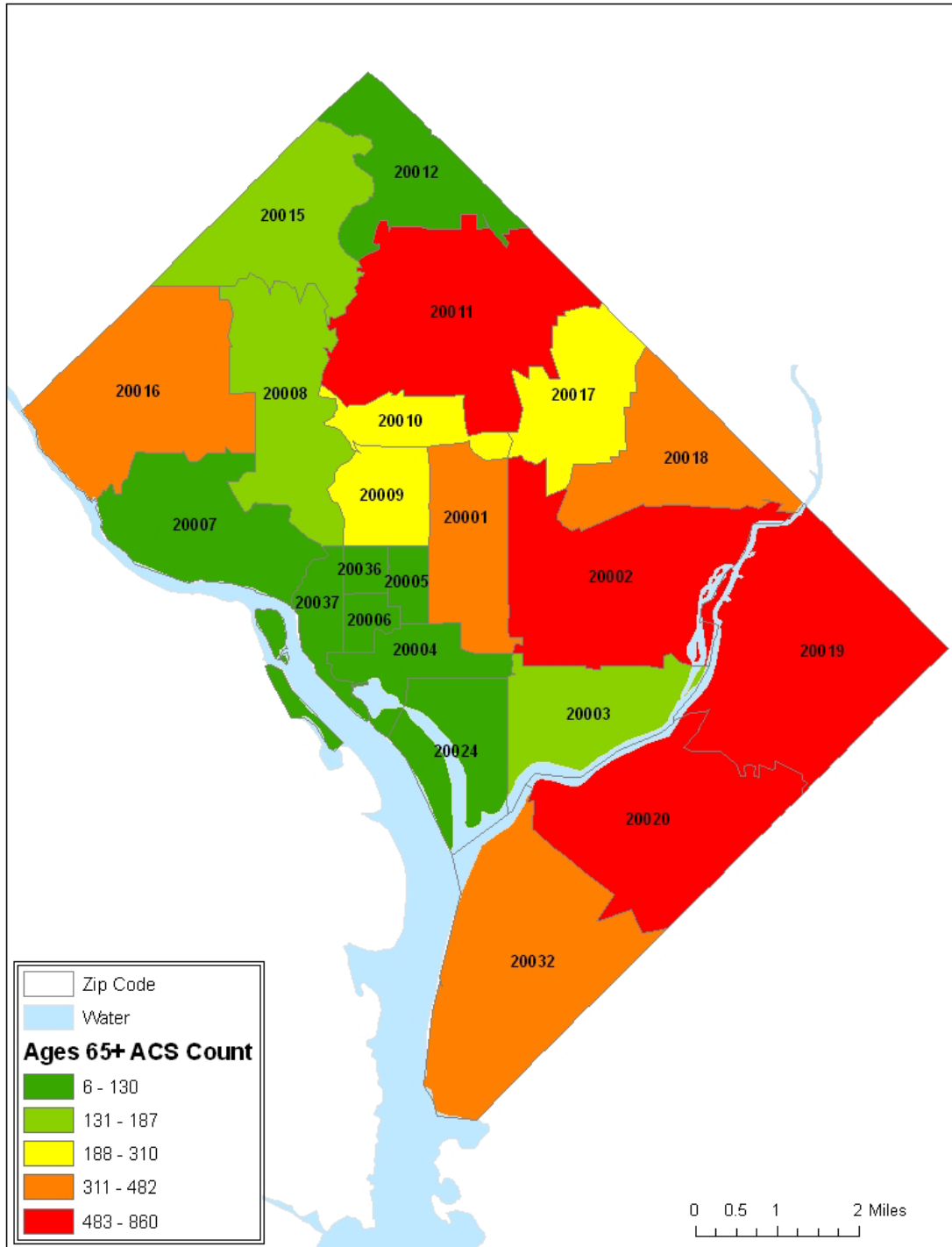


Figure 3.4: Number of ACS Hospitalizations Among District Residents Ages 65 +



Map Appendix 4: Number of PCS ED Visits, By Zip Code Of Patient Residence

Figure 4.1: Number of PCS ED Visits Among District Residents Ages 0-17

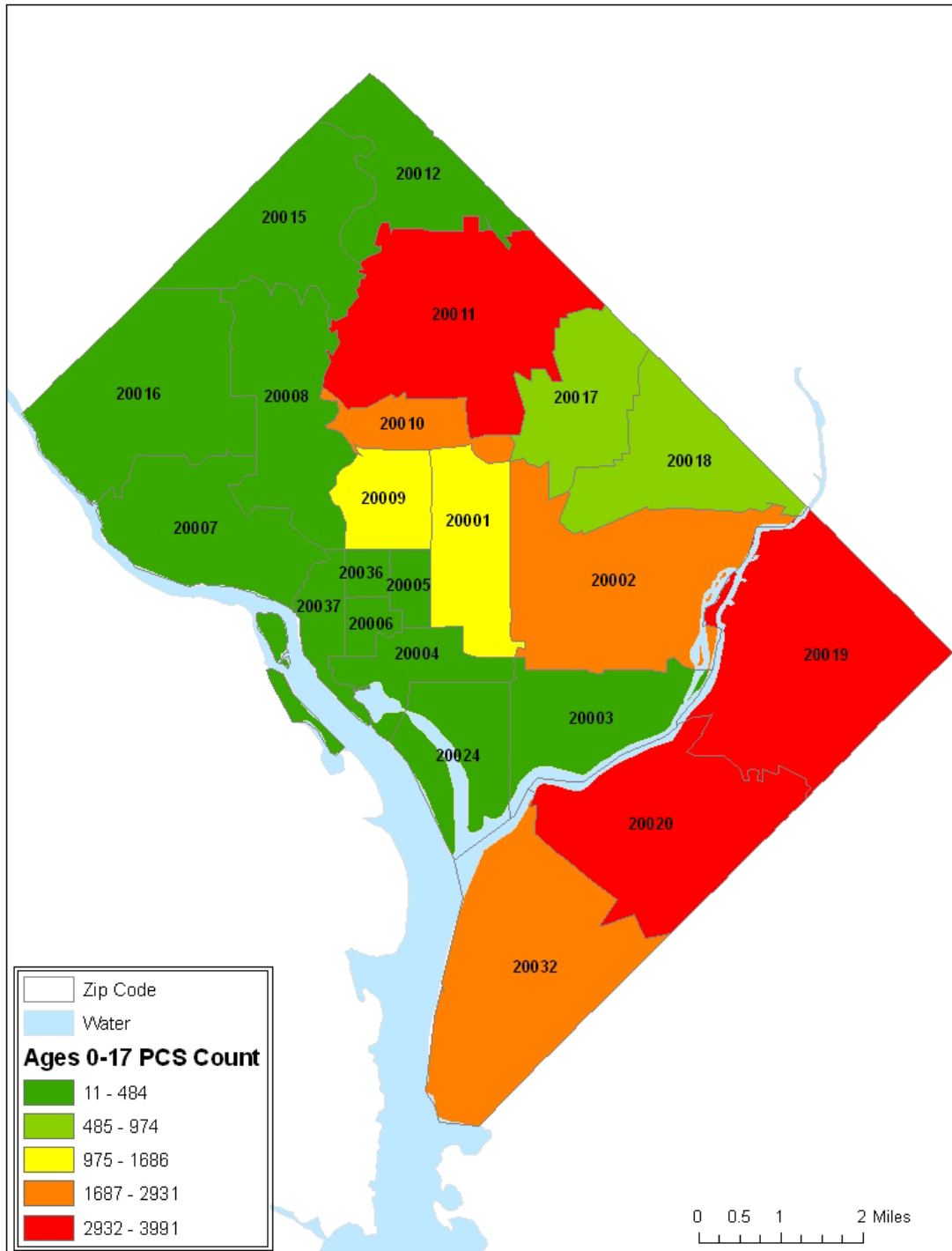


Figure 4.2: Number of PCS ED Visits Among District Residents Ages 18-39

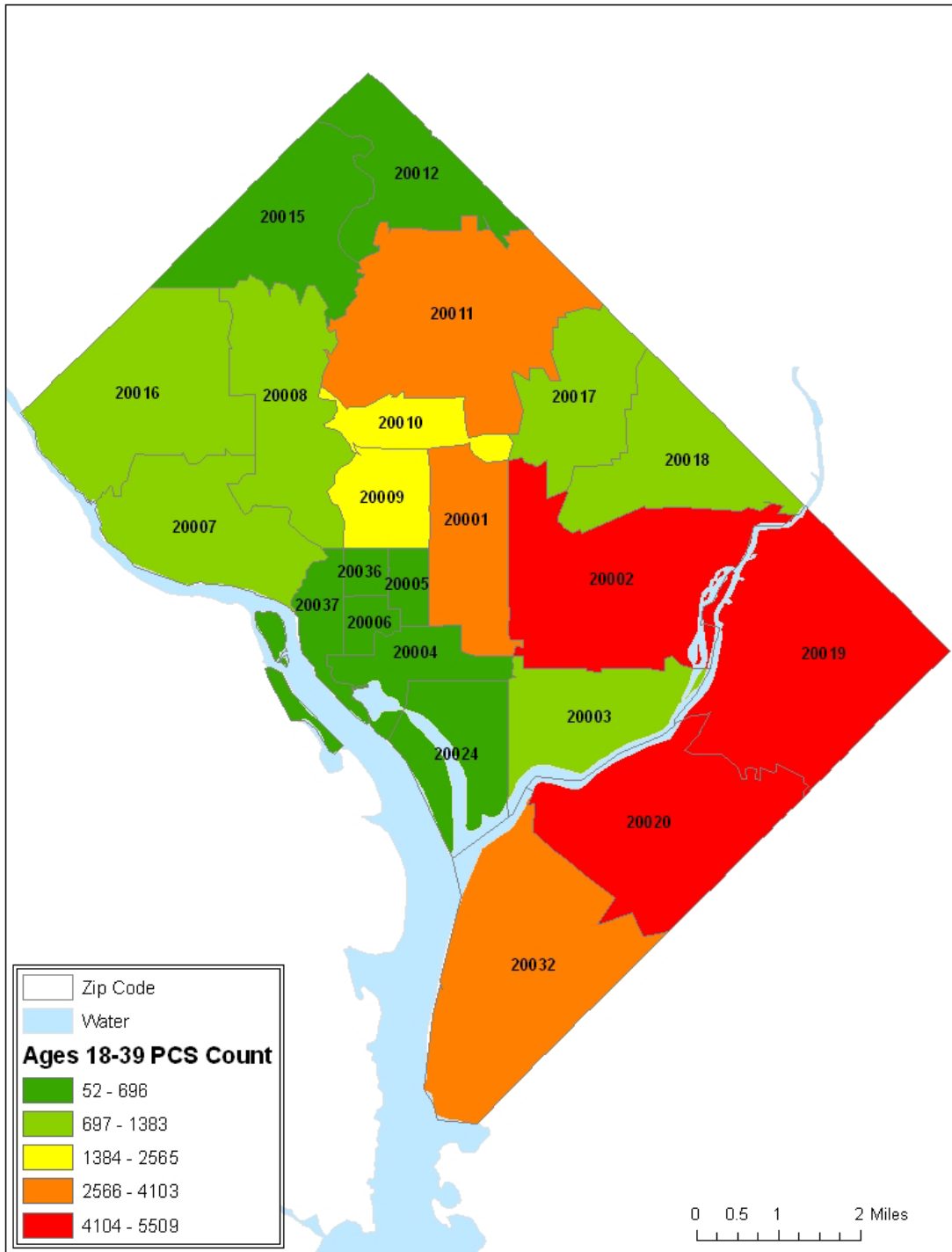


Figure 4.3: Number of PCS ED Visits Among District Residents Ages 40-64

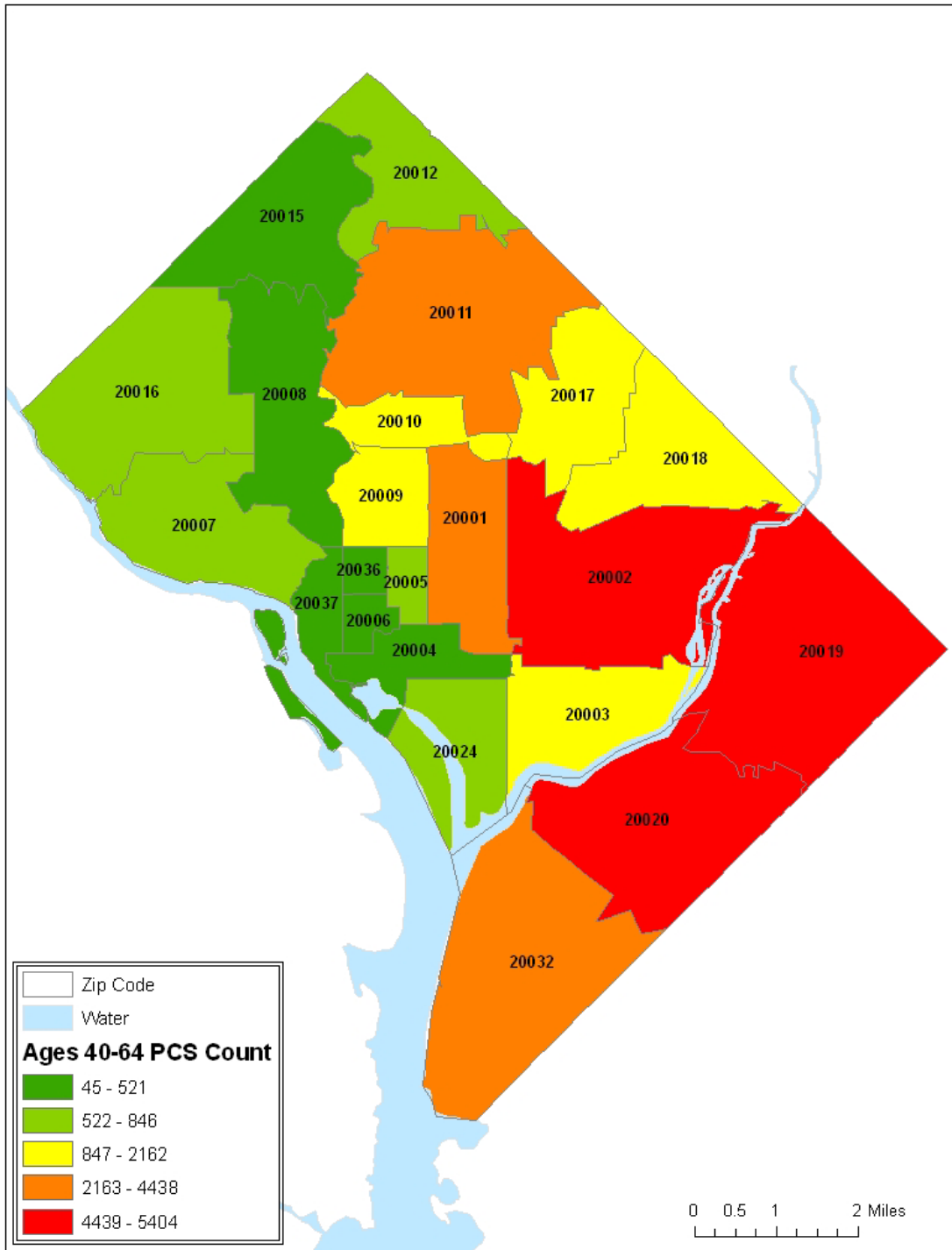
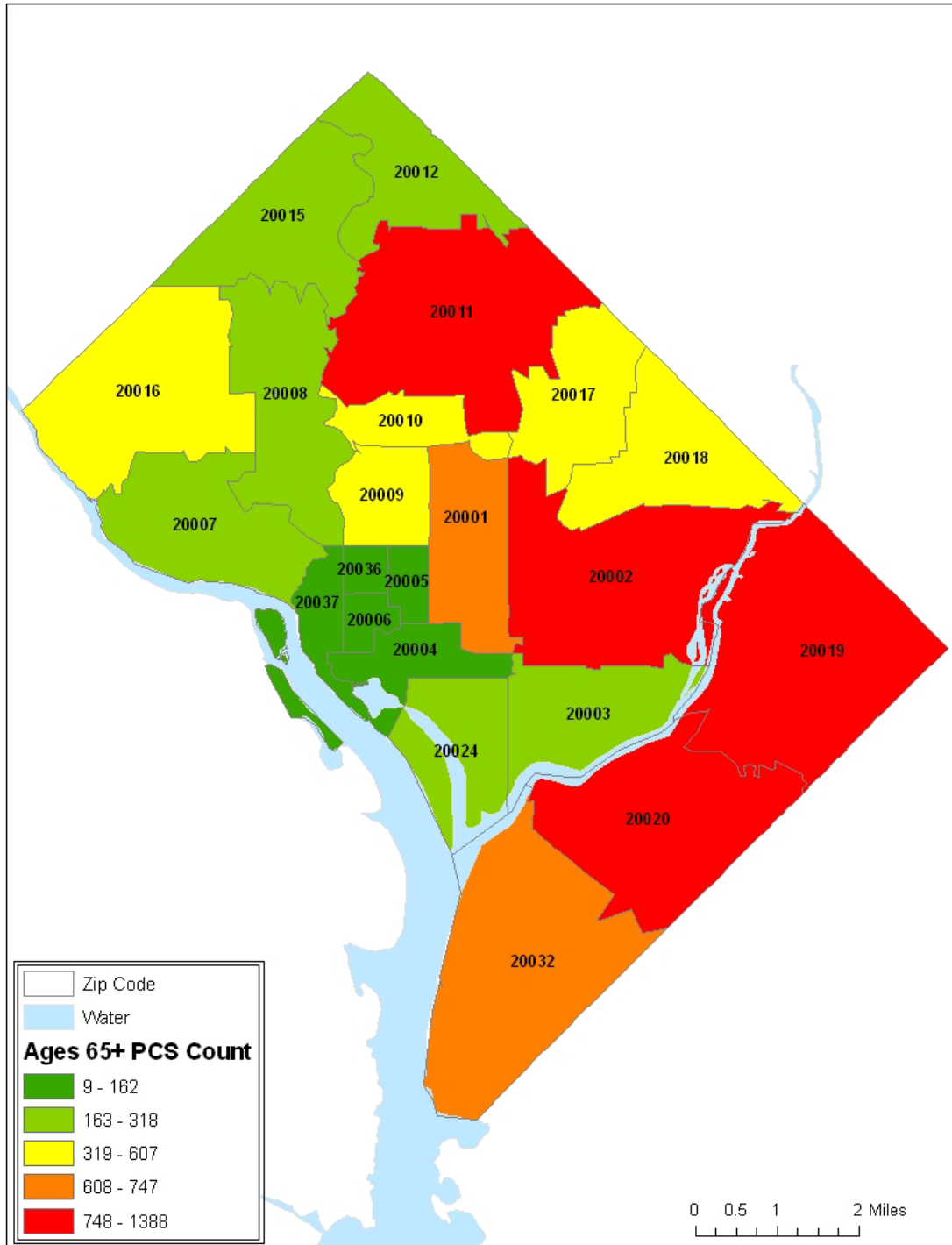


Figure 4.4: Number of PCS ED Visits Among District Residents Ages 65+



TECHNICAL APPENDICES

Technical Appendix 1: DCPCA Medical Homes Projects

Table TA1.1 below summarizes the organization, location, type of project, project cost and status of Medical Homes projects.

Table TA1.1 Medical Homes Capital Projects

| Organization | Ward | Award | Total Project Cost | Project | Status |
|---|------|---|--------------------------------|--|---|
| Unity-Hunt Place | 7 | Planning | \$ 8,400,000 | Development of a replacement center for the former PBC clinic in Ward 7 | Planning and site negotiation in process |
| Unity-Anacostia | 8 | Planning | \$ 15,000,000 | Development of a replacement center for the former PBC clinic in Ward 8 | Planning and site negotiation in process |
| Family and Medical Counseling Community of Hope | 8 | Planning, pre-development, construction | \$ 1,150,000 | Replacement of current facility | Permitting in process; construction to begin in late April; occupancy in July |
| | 8 | Planning | \$ 12,000,000 | Development of New Center in 8 | Planning and site negotiation in process |
| Whitman-Walker | 7 | Planning | \$ 15,000,000 | Development of New Center or Redevelopment of Max Robinson Center | Planning phase on hold until site identified |
| Unity-Walker Jones | 6 | Planning, pre-development, construction; assistance with lease payments | \$ 2,600,000 | Replacement of the existing Walker Jones Health Center in NW. | Construction began at the end of March 2008; occupancy expected in June 2008 |
| Mary's Center | 4 | Planning, pre-development, construction, acquisition | \$ 13,500,000 | New Center in Ward 4 | Planning completed, purchase and sale agreement in process; construction to begin late 2008 |
| SOME | 5 | Construction | (done—MH commitment of \$110k) | Expansion of dental department to increase capacity by 20% | Project completed in Spring 2006 |
| La Clinica del Pueblo | 5 | Planning | \$ 9,700,000 | New Center in Ward 4 or 5 | hold until work at existing site completed |
| Family Health and Birth Center | 5 | Planning | \$ 5,800,000 | Expansion of existing site in Near Northeast to provide primary care, either directly or by co-locating another primary care provider on-site. | Planning in process |
| Bread for the City | 2 | Planning, pre-development, construction | \$ 6,600,000 | Expansion of current facility on adjacent lot | Design development and approvals in process; construction to begin in late 2008 |
| Community of Hope | 1 | Planning and construction | (done—MH commitment of | Expansion of current facility and addition | Construction completed |

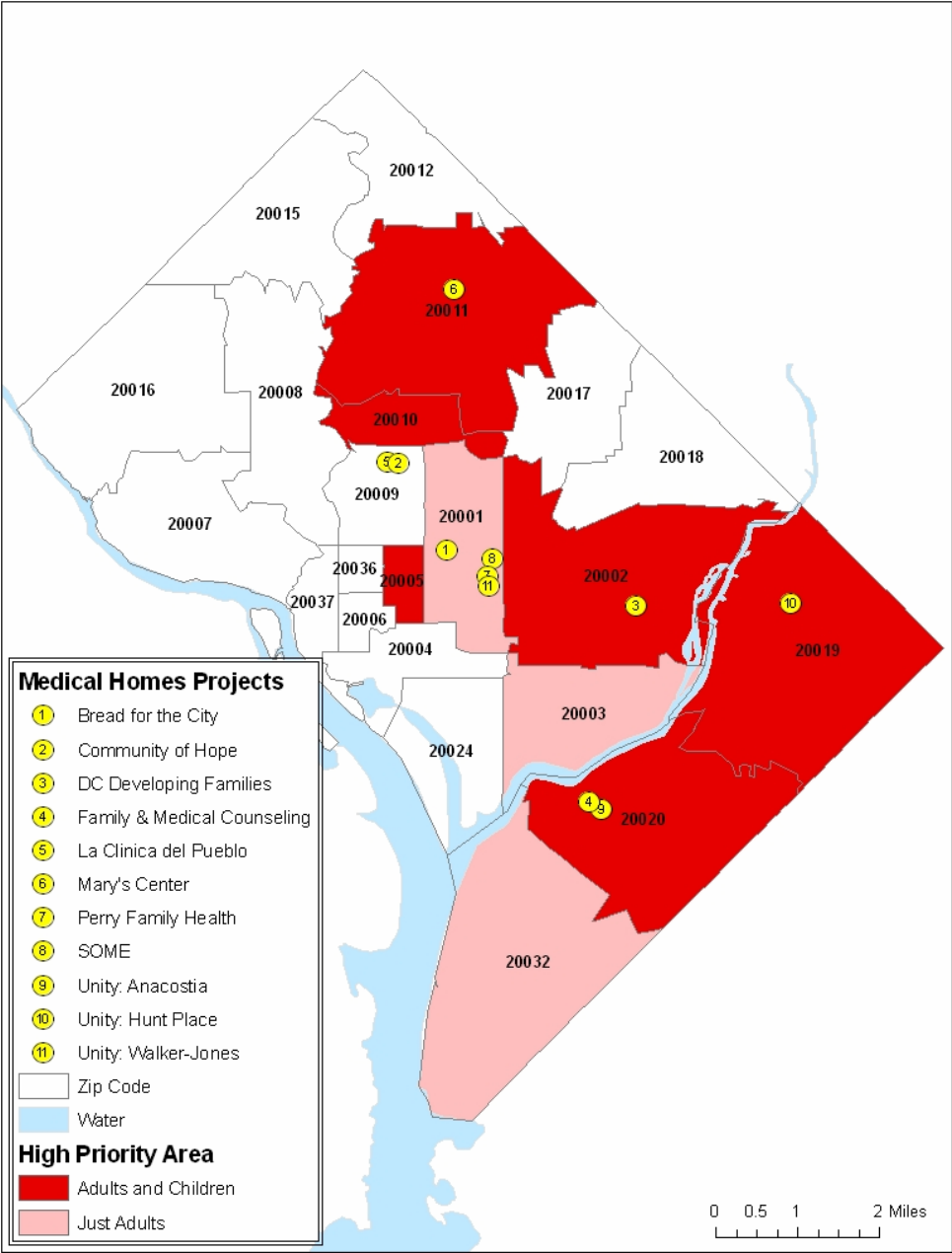
| | | | | | |
|--|---------|---|--------------|--|--|
| La Clinica del Pueblo | 1 | Planning, pre-development, construction | \$ 350,000 | \$281k) of dental clinic at Marie Reed site Renovate existing space to add financial intake and 2 new exam rooms | Design stage in process; construction to begin this summer |
| Community of Hope, Family Health & Birthing Center, Columbia Road, Carl Vogel Center | Various | EMR adoption | \$ 3,000,000 | Support adoption of EMR | Planned |

Two Medical Homes grants were awarded for health centers whose facility projects were ready to go into construction and the funding went directly for that purpose. These projects have been completed (a dental clinic at SOME and x at Community of Hope) have been completed for a total of \$770,000, of which \$391,000 was provided by Medical Homes. Eleven projects remain in progress, including four new clinics (in Wards 4, 4 or 5, 7 and 8), four replacement clinics (in Wards 6, 7, and 8), and three expansions (in Wards 1, 2, and 5). In addition, one non-facility Medical Homes project is support for EMR adoption among four clinics. DCPCA received a grant for \$5m for implementing EMR (specifically, eClinicalWorks) in six early-adopting clinics: Whitman-Walker, SOME, La Clinica, Mary’s Center, Family and Medical Counseling Services, and Bread for the City. The additional Medical Homes funds would implement EMR in four additional clinics: Community of Hope, Family Health and Birthing Center, Columbia Road, and Carl Vogel center. (Unity clinics are adopting eCW through a separate initiative.)

Total expected project costs (completed and in progress) total approximately \$94 million (including \$3m for EMR), and together these projects are expected to expand capacity by approximately 200,000 additional visits.

Figure TA1.1 below depicts high priority areas for primary care and the location of proposed Medical Homes projects.

Figure TA1.1 High Priority Areas for Primary Care Expansion and Location of Proposed Medical Homes Projects.



Technical Appendix 2: List of Interviewees—Emergency Care

We would like to thank all of those listed below for taking the time to speak with the project team, including:

Arlington County Fire Department

- James Bonzano, EMS Chief

Fairfax County Fire and Rescue Department

- Christine Woodard, Deputy Chief of EMS

Montgomery County Fire & Rescue Services

- Michael McAdams, Assistant Chief, Section Chief (EMS)

**Technical Appendix 3:
CAD, HealthEMS, and Hospital Survey Data Analysis Documentation**

TA3.1 CAD Data Analysis Documentation

1. Only calls for which there was both an incident record and a response record were included in the analysis. Unit responses for the period June-September 2006 were excluded.
2. Records with missing on scene arrival time were deleted (cannot calculate response time).
3. Response time was computed as on scene time minus dispatch time and converted into elapsed minutes including decimals (i.e. 8 minutes and 30 seconds is converted to 8.5 minutes).
4. When on scene time was before the dispatch time, response time was set to 0.
5. Response times greater than 30 minutes were deleted. Table A1 below indicates the number and percent of records that were deleted each year. In all cases, the number of records with response times greater than 30 minutes was less than 1% of the records.

Table A8.1 Records with Response Times > 30 Minutes

| Year | # records with response time>30 minutes | % of all records with response time>30 minutes |
|------|---|--|
| 2002 | 1061 | .57% |
| 2003 | 1193 | .66% |
| 2004 | 1324 | .70% |
| 2005 | 908 | .46% |
| 2005 | 280 | .21% |
| 2006 | 506 | .23% |

6. Calls with MPDS that were not emergency medical services such as “parking garage incident”, “person locked in car” (including codes of ‘AFA’, ‘BOAD’, ‘DECH’, ‘ACC’, ‘LCAR’, ‘MSB’, ‘MTB’, ‘MTBS’, ‘MTBP’, ‘ELEV’, ‘RFA’, ‘STCT’, ‘TRA’, ‘TRCH’, ‘ACCP’, ‘WIDO’, ‘PGAR’, ‘AGAS’, ‘TRDN’) were deleted.
7. Acuity code was obtained from the third character of the MPDS value. For MPDS=ETR7 (emergency transport unit, 132 records) the records were retained, but acuity was set to missing.
8. Type of unit was obtained from the first character in the Unit variable:

A, B, M = transport unit
E, T, R = Fire apparatus
CAR, etc= other

9. Information about how to correctly classify units (ALS, BLS, other) was provided by DC FEMS (Table A-2). DC FEMS also provided specific criteria to reclassify units as ALS according to the PECS calendar (Table A-3). Those units were classified as BLS before the PECS date and as ALS on or after the PECS date. In addition, engines with a “P” at the end of the unit label (e.g. E17P) were considered ALS units.

| TYPE of Unit | UNIT names | TYPE of Unit | UNIT names | TYPE of Unit | UNIT names |
|--------------|------------|--------------|------------|--------------|------------|
| BLS | A01 | BLS | B27 | see list | E29 |
| BLS | A02 | BLS | B30 | see list | E30 |
| BLS | A03 | BLS | B31 | see list | E31 |
| BLS | A06 | BLS | B32 | see list | E32 |
| BLS | A07 | BLS | B38 | see list | E33 |
| BLS | A08 | oth | BC1 | oth | EAG# |
| BLS | A09 | oth | BC2 | oth | EAGL |
| BLS | A10 | oth | BC3 | ALS | EMS1 |
| oth | A119 | oth | BC4 | ALS | EMS16 |
| BLS | A12 | oth | BC5 | ALS | EMS2 |
| BLS | A13 | oth | BC6 | ALS | EMS23 |
| BLS | A15 | oth | BC7 | ALS | EMS3 |
| BLS | A16 | oth | BCC | ALS | EMS4 |
| oth | A179 | oth | BCC1 | ALS | EMS45 |
| BLS | A18 | oth | BX21 | ALS | EMS5 |
| BLS | A19 | oth | CAR0 | oth | EMS6 |
| BLS | A20 | oth | CAR1 | oth | FB1 |
| BLS | A21 | oth | CAR2 | oth | FB2 |
| BLS | A22 | oth | CAR3 | oth | FB3 |
| BLS | A23 | oth | CAR4 | oth | FBSU |
| BLS | A24 | oth | CD1 | oth | FFD |
| BLS | A25 | oth | CD2 | oth | FTES |
| BLS | A26 | oth | CISU | oth | FTO |
| BLS | A27 | oth | CU | ALS | FTO1 |
| BLS | A30 | see list | E01 | ALS | FTO2 |
| BLS | A32 | see list | E02 | oth | FU1 |
| BLS | A33 | see list | E03 | oth | FU2 |
| BLS | A37 | see list | E03R | oth | HM |
| BLS | A38 | see list | E04 | oth | HMSU |
| BLS | A39 | see list | E05 | oth | JACK |
| oth | AFCO | see list | E06 | oth | K9 |
| oth | AIR1 | see list | E07 | ALS | M01 |
| oth | AIR2 | see list | E08 | ALS | M03 |
| oth | AMB0 | see list | E09 | ALS | M04 |
| oth | ATV1 | see list | E10 | ALS | M06 |
| oth | B#03 | see list | E11 | ALS | M08 |
| BLS | B01 | see list | E11R | ALS | M09 |
| BLS | B03 | see list | E12 | ALS | M10 |
| BLS | B04 | see list | E13 | ALS | M11 |
| BLS | B06 | see list | E14 | ALS | M14 |
| BLS | B08 | see list | E14R | ALS | M15 |
| BLS | B09 | see list | E15 | ALS | M19 |
| BLS | B10 | see list | E16 | ALS | M23 |
| BLS | B11 | see list | E17 | ALS | M24 |
| BLS | B14 | see list | E18 | ALS | M25 |
| BLS | B15 | see list | E19 | ALS | M26 |
| BLS | B19 | see list | E20 | ALS | M27 |
| BLS | B24 | see list | E21 | ALS | M30 |
| BLS | B25 | see list | E22 | ALS | M31 |
| BLS | B26 | see list | E23 | ALS | M311 |

| TYPE | UNIT names in | TYPE | UNIT names | TYPE | UNIT names |
|----------|---------------|----------|------------|------|------------|
| | | see list | E24 | ALS | M32 |
| | | see list | E25 | ALS | M33 |
| | | see list | E26 | ALS | M37 |
| | | see list | E27 | ALS | M38 |
| | | see list | E28 | ALS | M39 |
| see list | E26 | ALS | M38 | ALS | M37 |
| see list | E27 | ALS | M39 | BLS | T13 |
| see list | E28 | ALS | M40 | BLS | T14 |
| see list | E29 | ALS | M50 | BLS | T15 |
| see list | E30 | ALS | M51 | BLS | T16 |
| see list | E31 | ALS | M52 | BLS | T17 |
| see list | E32 | ALS | M53 | oth | TAU2 |
| see list | E33 | ALS | M54 | | |
| oth | EAG# | ALS | M66 | | |
| oth | EAGL | ALS | M69 | | |
| ALS | EMS1 | ALS | M72 | | |
| ALS | EMS16 | oth | MCA1 | | |
| ALS | EMS2 | oth | MCAS | | |
| ALS | EMS23 | oth | MCFR | | |
| ALS | EMS3 | oth | MCM1 | | |
| ALS | EMS4 | oth | MCU | | |
| ALS | EMS45 | oth | MPD | | |
| ALS | EMS5 | oth | NDE4 | | |
| oth | EMS6 | oth | NDFU | | |
| oth | FB1 | oth | NDT2 | | |
| oth | FB2 | oth | NDWE | | |
| oth | FB3 | oth | NDWF | | |
| oth | FBSU | oth | PGA5 | | |
| oth | FFD | oth | PGA7 | | |
| oth | FTES | oth | PIO | | |
| oth | FTO | ALS | R02 | | |
| ALS | FTO1 | ALS | R08 | | |
| ALS | FTO2 | oth | R1 | | |
| oth | FU1 | ALS | R12 | | |
| oth | FU2 | ALS | R13 | | |
| oth | HM | oth | R1SU | | |
| oth | HMSU | oth | R2 | | |
| oth | JACK | ALS | R21 | | |
| oth | K9 | ALS | R26 | | |
| ALS | M01 | oth | R2SU | | |
| ALS | M03 | oth | R3 | | |
| ALS | M04 | oth | R3SU | | |
| ALS | M06 | oth | REHA | | |
| ALS | M08 | oth | RHM | | |
| ALS | M09 | oth | SAFO | | |
| ALS | M10 | oth | SO1 | | |
| ALS | M11 | oth | SO2 | | |
| ALS | M14 | oth | SO3 | | |
| ALS | M15 | oth | SOBC | | |
| ALS | M19 | BLS | T02 | | |
| ALS | M23 | BLS | T03 | | |

| TYPE | UNIT names in | TYPE | UNIT names |
|------|---------------|------|------------|
| ALS | M24 | BLS | T04 |
| ALS | M25 | BLS | T05 |
| ALS | M26 | BLS | T06 |
| ALS | M27 | BLS | T07 |
| ALS | M30 | BLS | T08 |
| ALS | M31 | BLS | T09 |
| ALS | M311 | BLS | T10 |
| ALS | M32 | BLS | T11 |
| ALS | M33 | BLS | T12 |

| List of PECS Units: | Date in service (ALS): | FY: |
|----------------------------|-------------------------------|------------|
| PEC 3 | Nov. 26, 2006 | 2007 |
| PEC 7 | May 28, 2006 | 2006 |
| PEC 9 | Sept. 18, 2005 | 2005 |
| PEC 10 | Dec 5, 2004 | 2005 |
| PEC 11 | Apr. 16, 2006 | 2006 |
| PEC 13 | Apr. 29, 2007 | 2007 |
| PEC 15 | Nov. 26, 2006 | 2007 |
| PEC 16 | May 18, 2003 | 2003 |
| PEC 18 | Sept. 18, 2005 | 2005 |
| PEC 19 | Apr. 16, 2006 | 2006 |
| PEC 20 | Oct. 14, 2006 | 2007 |
| PEC 22 | Dec 5, 2004 | 2005 |
| PEC 25 | May 18, 2003 | 2003 |
| PEC 26 | Apr. 16, 2006 | 2006 |
| PEC 27 | Jan. 5, 2007 | 2007 |
| PEC 30 | Oct. 19, 2003 | 2004 |
| PEC 31 | Apr. 4, 2004 | 2004 |
| PEC 32 | Jan. 12, 2007 | 2007 |
| PEC 33 | Aug. 6, 2006 | 2006 |

TA3.2 HealthEMS Analysis Documentation

Data were extracted and downloaded from the HealthEMS website for the period 11/1/2006-12/31/2006. The social security numbers were deleted and a unique (and not identifiable) number was assigned to each individual in the database. The number of calls per individual was computed and the frequencies were tabulated for the type of complaint, transport destination and location of EMS call.

TA3.3 Hospital Survey Analysis Documentation

The George Washington University (GWU) developed a 57 question hospital survey to collect data related to patient flow and emergency department crowding. The hospital survey was provided to the Chief Executive Officer (CEO) or President of each of the eight acute care hospitals in the District of Columbia both on paper and electronically (through e-mail). Surveys were distributed in July and August of 2007. The survey requested data from both the month of May 2007 and the latest 12 month period.

Each of the eight hospitals returned the survey either partially or wholly completed. Missing, unclear or inconsistent survey responses were verified with hospitals. Survey data was used to report on hospital and emergency department capacity, hospital structure and workforce, special populations and services, data collection, and hospital innovations.

Technical Appendix 4: ***Urgent Matters Strategies & Associated Tools***

TA4.1 Helping Frequent Users of Emergency Departments Find Their Medical Home

BryanLGH Medical Center, a 583-bed hospital located in Lincoln, Nebraska, was selected as one of 10 hospitals nationwide to participate in the Urgent Matters learning network in May 2003. Like many other hospitals in the learning network, BryanLGH's emergency department treated many patients whose conditions did not require care in an emergency department setting. In fact, an analysis of its emergency department patients showed that 35 percent of ED visits could have been safely cared for in settings other than the ED. About three years later, BryanLGH started working with its chief competitor to help vulnerable populations throughout Lincoln find a medical home.

The result was a program known as ED Connections, a cooperative effort between Saint Elizabeth Regional Medical Center and BryanLGH. The program helps coordinate care for people in Lincoln who are most in need and who previously turned to local EDs repeatedly for their medical care. ED Connections helps vulnerable people with chronic medical or mental health issues better understand available services in the community by providing access to appropriate medical providers, information on insurance coverage options, needed medications and referrals to other community services.

The program identifies patients who regularly come to any of the city's hospital emergency departments for non-emergent care and matches them with appropriate resources in a very hands-on way. By formalizing a case management network between the two hospitals, staff at both sites identify individuals visit Lincoln's emergency departments three or more times in six months and also meet various other program eligibility criteria. With this information, the ED Connections staff coordinates their care in ways that are more appropriate.

Case managers contact eligible patients sometime during or after treatment to talk about the ED Connections program. They help them coordinate their own care, follow up on treatments, access the medications they need and take advantage of the community services available to them. Patients who agree to participate in the program are immediately enrolled and provided with resources including a network of hands-on providers who agree to see the patients. A patient "contract" is signed to assure their understanding and compliance with their plan of care.

Patient information is also enrolled in a database that can be accessed at either hospital, so staff at both hospitals can better coordinate a patient's care if he or she arrives at the emergency department. Staff follow up after the ED visit, helping the patients set goals for managing their care, or understanding when a visit to the ED is appropriate.

The hospitals have seen a 60 percent decrease in ED visits from program participants, when comparing ED visits for six months prior to enrollment with the six-month period post-enrollment. Based on this information, the reduction in charges for these patients – most of which are uncompensated, is \$217,000.

TA4.2 Comprehensive Diversion Reduction Plan Improves Efficiency in Hospital Discharges

The Massachusetts Department of Public Health has made improvements in decreasing ambulance diversion throughout the state. Ambulance diversions first emerged as a problem in Massachusetts during the late 1980s, when there was an acute labor shortage in hospitals and nursing homes statewide. At that time, adherence to a centralized radio system to alert ambulance services when local emergency departments were diverting was voluntary and variable statewide. The five regions in the state continued to monitor ambulance diversion through the radio system, but beginning in 1998 began to see another upswing with hospitals reporting record numbers of hours on diversion – particularly in the metropolitan Boston area. The trend continued, so in the spring of 1999, the Department of Public Health convened the first meeting of a designated Ambulance Diversion Task Force, representing hospitals, emergency physicians, ambulance providers, emergency nurses and others.

The state Public Health Commissioner met with hospital CEOs in January 2001. The following month, the Department conducted an ambulance diversion survey with 76 out of the 77 hospitals in the state responding. The survey found that no hospital was immune to ambulance diversion, and diversion itself correlated with hospital occupancy. The majority of hospital respondents felt enhanced coordination among hospitals was a necessary first step.

There was universal recognition that the health system needed a tool that could immediately report which hospitals were on diversion in real-time. Hospitals were required to participate in the system through the Department's hospital licensing regulations.

Currently, the original plan remains in place, but the Task Force continues to work on enhancements. Following September 11 and the subsequent Rhode Island nightclub fire of February 2003, the team realized they needed to add real-time information on available beds in order to manage catastrophes.

Associated Tools:

Ambulance Diversion Task Force Participants and Recommendations
(http://urgentmatters.org/media/file/enewsletter_volume1_issue5_99dec.pdf)

Diversion Survey Findings
(http://urgentmatters.org/media/file/enewsletter_volume1_issue5_div2.pdf)

Online Reporting Tool for Diversion Status of All Hospitals
(http://urgentmatters.org/media/file/enewsletter_volume1_issue5_Status.pdf)

TA4.3 Regionalization of Cardiac Care

Hospitals currently measure the time a heart attack patient waits before receiving balloon angioplasty, the treatment most effective in reducing damage to the heart muscle (also known as door-to-balloon time). In 2006, the Centers for Medicare & Medicaid Services' (CMS) door-to-balloon performance measure for heart attack patients with STEMI changed from 120 minutes to within 90 minutes.

Duke University Medical Center, in Durham, North Carolina, receives STEMI patients that have been transferred from hospitals that cannot perform percutaneous coronary intervention (PCI) (also known as angioplasty). While time spent at a non-PCI hospital is not included in the publicly reported measure, Duke recognized that excessive time delays existed before the patient received appropriate reperfusion treatment.

In 2003, Duke conducted a survey of surrounding non-PCI hospitals to determine the total first door-to-balloon time for these STEMI patients. The results showed that the median door-to-balloon time was approximately 180 minutes, with at least half of that time spent by patients waiting to be transferred in the ED at a non-PCI hospital. No system was in place to coordinate rapid transfers to Duke's catheterization lab. This delay not only affected the patient needing PCI, but also diverted resources and provider attention from other patients needing care in the ED of the non-PCI hospital, slowing patient flow overall.

In a one year period (2003-2004), Duke was able to reduce its median door-to-balloon time for STEMI transfer patients from 180 minutes to less than 120 minutes. Achieving this 33 percent reduction in door-to-balloon time meant working with their surrounding non-PCI hospitals and EMS as well as making changes within Duke itself. Duke piloted the Reperfusion of Acute MI in Carolina Emergency departments (RACE) program.

Protocols included:

- Supporting reperfusion decisions from ED physicians at non-PCI hospitals to improve transfer times;
- Creating a toll-free single activation telephone number, "the hotline" for ED physicians at non-PCI hospitals to directly access Duke Cardiology, activate the cath lab, & coordinate transfers between non-PCI hospitals and Duke;
- Having the catheterization lab available 24 hours a day so the lab is ready to perform PCI within 30 minutes after receiving the Code STEMI alert;
- Designating a direct transfer route and elevator from the Duke ED reception area to the cath lab;
- Standardizing the protocol/STEMI order set and most efficient method of transfer options at non-PCI hospitals.

Time-saving processes include:

- Utilizing local EMS whenever available to transfer within 50 miles of the PCI hospital;

- Keeping EMS-delivered patients suspected of STEMI on the EMS stretcher and monitoring leads at the non-PCI hospital so that they are ready to be placed back in the original EMS ambulance for transfer when the ambulance is available;
- Standardizing Code STEMI kits (including medications, IV quick start materials, orders, etc.);
- Avoiding IV continuous medication- thus eliminating pumps and tubing changes.
- Advanced Modalities:
- Providing EMS the capability to bypass non-PCI hospitals when a PCI center is within time-to-treatment goals;
- Allowing paramedics to utilize prehospital ECG to activate Code STEMI and call in the cath lab team.

RACE staff created a form for the RACE Regional Coordinators to collect data on the timeliness of care provided during pre-RACE implementation at the non-PCI hospitals and one year after the project. This form allows hospitals to measure their success throughout the RACE intervention. The pre-RACE data from 55 non-PCI hospitals across North Carolina yielded similar delays as the Duke experience. The median time the STEMI patients remained in the non-PCI ED was 89 minutes.

With a program that is now nearly statewide, North Carolina's RACE Program is sharing lessons learned along with a handful of other metropolitan regions that have adopted similar code STEMI programs. Atlanta, Boston and Los Angeles have each established city-wide programs and Texas is in the early stages of establishing a statewide approach. Minneapolis has established a regional transfer program as well.

Associated Tools:

RACE Description

(http://urgentmatters.org/media/file/enewsletter_volume4_issue1_Innovations_RACE%2520description.pdf)

RACE Point of Care Operations Manual

(http://urgentmatters.org/media/file/enewsletter_volume4_issue1_Innovations_Raceopmanual.pdf)

Referring Hospitals Collection Form

(http://urgentmatters.org/media/file/enewsletter_volume4_issue1_Innovations_RACE%2520Hospital%2520Data%2520Collection%2520Form.pdf)

TA4.4 Avoiding ED Gridlock and Effectively Managing Diversion

In 2005, the Centers for Medicare & Medicaid Services (CMS) published a memo warning hospitals that failure to release ambulances back into the field in a timely manner poses safety concerns and could result in an Emergency Medical Treatment and Labor Act (EMTALA) violation.

Los Angeles County set a new rule for hospital ED closures in mid-2006. After going on ambulance diversion for one hour, area hospitals now have to reopen their EDs for at least 15 minutes. Hospitals must report the reasons for closing to the local authorities, and document the need to do so by tracking the number of patients waiting in the lobby, the number of occupied, monitored beds, and the hospital's ability to move patients from these beds.

Presbyterian Intercommunity Hospital is southeast of the city, in an area where refineries and other industries, a psychiatric facility, and a sheriff's training facility supply the ED with a steady stream of sick and injured patients—some 65,000 a year.

In 2005, the hospital regularly turned away ambulances in an attempt to catch up and clear the backlog of emergency patients; the ED was on ambulance diversion nearly 20 percent of the time. Administrators recognized that going on diversion was a symptom of larger workflow problems.

To find ways to improve patient flow, ED leaders reached out to frontline staff and managers from departments across the hospital, including critical care, radiology, case management, social services, registration, and environmental services. This multidisciplinary group, known as the Emergency Department Focus Team, began meeting for weekly sessions. The goal was to promote a culture change within the hospital and to understand what the hospital gained from going on diversion.

During the first few focus group sessions, participants tended to deflect responsibility or point fingers at the ED staff. Based on issues raised during the discussions, the ED began making small changes, typically giving staff a week's notice and testing a new system before implementing it throughout the hospital.

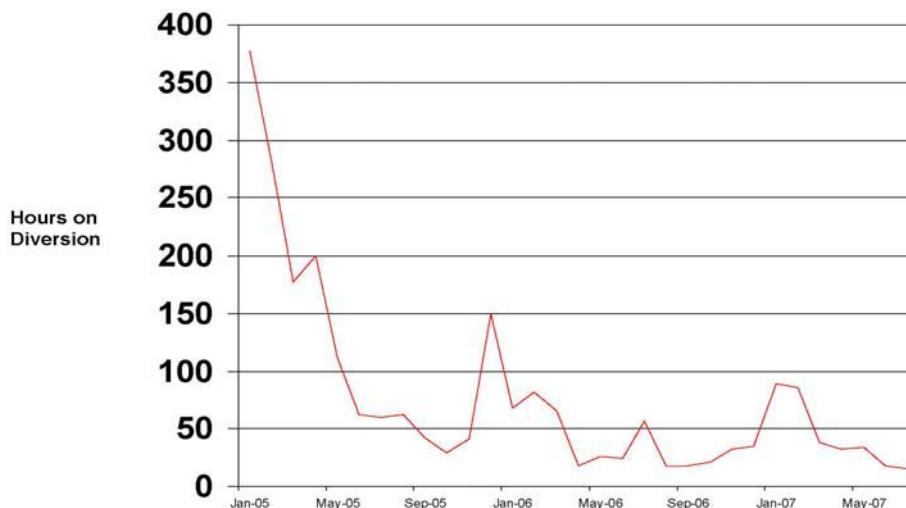
For example, the ED began point-of-care testing to avoid delays from waiting for lab results. To expedite the admission process, they initiated bedside registration. Eventually, departments beyond the ED began to suggest areas for improvement. To ensure beds were open for arriving patients, inpatient departments began discharging patients earlier in the day. Even environmental services got involved, developing a checklist system to ensure that the bathrooms in the ED lobby were cleaned every hour.

After much discussion, the hospital brought case managers into the ED. At first, ED staff thought the case managers would slow down processes or prevent them from admitting patients. Soon after implementation, ED staff soon realized that the case managers were able to facilitate movement of patients and make recommendations for home care, skilled nursing or other needs.

Staff felt that case managers in the ED are much better equipped than clinicians to coordinate care, particularly for elderly patients who have multiple conditions and providers.

These workflow changes and additional staff resources have resulted in change at Presbyterian Intercommunity Hospital. In January 2005, the ED went on diversion a quarter of the time, turning away 69 patients in that month. Since then, the overall trend in diversion rates has declined. By July 2007, the ED went on diversion just 15.75 hours, or about 2 percent of the time.

Hours Spent on Ambulance Diversion, Jan 05–July 07



Source: Presbyterian Intercommunity Hospital

By staying open more of the time, the ED has been able to accept more ambulance arrivals—some because other area hospitals are on diversion, and some because of patient requests. Over the past five quarters, Presbyterian's ED has treated an additional 668 patients, compared with the baseline of the second quarter of 2006, leading to a significant increase in operational revenue.

TA4.5 Using ED Dashboards and Real-Time Data to Improve Operational Efficiency

LDS Hospital, the flagship hospital for Intermountain Healthcare in Salt Lake City, Utah, is a hospital that has experienced the benefits of using IT in the ED. LDS is a 520-bed Level 1 trauma center, tertiary care center and referral trauma center for a three-state region. Its ED is a 31-bed department with 40,000 patient visits annually and the highest case mix index in the state. Although six years ago LDS had an advanced IT system in place throughout the hospital, it did not have a patient information tracking system to collect and analyze data on quality of care. By tracking ED patients throughout their visit, the hospital could gather data that showed where

patient flow problem areas were, thus allowing the hospital to improve patient flow and department efficiency."

The hospital needed a tracking system that would meet the needs of their continuous quality improvement program and that could be easily integrated into their existing information systems. With several concepts in mind, the hospital's EDIS team designed and built a comprehensive patient data tracking system that would interface with LDS' existing computer systems.

This system was developed to:

- Provide real-time ED patient data
- Capture time and volume data
- Provide detailed ED operational data

The tracking system would become the center of the ED information system, serving as 'command central' where all communications are shared. The IT department built a data dashboard that clearly shows key ED operations - that is continuously updated by real-time data from the tracking system. While the patient tracking system showed data for individual patients, the dashboard showed the status of the ED overall. The EDIS team ultimately found that there were seven time stamps that patients may pass through - and even get hung up in - on a trip through the ED.

They are:

- Triage
- Door to M.D.
- Lab
- Radiology
- Nursing Intervention
- Inpatient Admit
- Discharge

The dashboard includes a top navigation bar with 'HELP clinical desktop' and 'LDS Hospital' logos, and various utility icons like Refresh, Remove Filters, Zoom In, Zoom Out, Add Patient, Merge, Columns, Areas, Location, and Rooms. Below this is a status section with traffic light indicators for Triage (Green), Door2MD (Yellow), Lab (Red), Rad (Yellow), Admit (Yellow), Discharge (Green), Orders (Green), and Resources (Yellow). It also displays 'Ave. LOS: 01:51', 'Pt. Count: 18', 'Ave. Lab TAT: 00:11', 'Ave. Xray TAT: 00:35', and 'Critical Lab Alerts'. A 'Charge Nurse: Bickmore, Ann Marie' and 'Triage Nurse: Hoss, Susan' are listed, along with a 'View Nurse:Patient Ratio' link.

| Rm | Sex | Age | Complaint | LOS | Reg | Stat | MD | Res | RN | ORD | L | U | R | E | RT | CH | Cons | Comments | |
|----|-----|-----|--------------------|-------|-----|------|------|------|-------|-----|---|---|---|---|----|----|------|-----------------|-------------------------|
| 02 | F | 54 | CP | 01:39 | | Seen | Mark | MSIV | LORAN | | R | | | | | | | | |
| 03 | M | 57 | CHEST PAIN | 00:34 | | Seen | Pete | | Rob | C | P | | O | R | | | | ct | |
| 04 | F | 56 | LT LEG PAIN | 00:34 | | | Mark | | JenPK | | | | | | | | | | |
| 06 | M | 43 | FEVER | 00:19 | | | SJU | | JenPK | | | | | | | | | | |
| 07 | M | 48 | WITHDRAWAL SYMP... | 02:20 | | Seen | Mark | | Li | | R | | | | | | | | |
| 08 | M | 33 | FINGER LAC | 00:38 | | | CB | | JenPK | | | | | | | | | | |
| 09 | F | 30 | AUTO/PED | 00:58 | | Seen | Pete | | Li | | | | | | | | | | |
| 11 | M | 51 | DETOX | 00:54 | | | SJU | | LORAN | | | | | | | | | | |
| 12 | F | 47 | NAUSEA Pt Has R... | 02:19 | | Seen | Mark | | Li | C | R | R | P | | | | | abd series done | |
| 13 | M | 38 | CHST PAIN | 04:39 | | Seen | Pete | | LORAN | C | R | R | R | R | | | | | ct abd/pel, ct pulm ... |
| 14 | F | 47 | Abdominal pain | 01:17 | | Seen | Mark | | LORAN | | R | R | | | | | | | |
| 15 | M | 43 | ABN PAIN | 01:23 | | Seen | Pete | | Rob | | R | | | | | | | | |
| 16 | M | 35 | ABO PAIN | 01:14 | | Seen | Mark | MSIV | Li | Y | P | O | O | | | | | | ct abd pel, need us ... |

As you can see on the figure above, the status of each of these time stamps is listed on the top of the dashboard screen.

Using color indicators, the system alerts the ED charge nurse when there is a backlog (patients waiting for this service) or delay (time delays for this service).

- Green indicates that the marker is functioning well
- Yellow signifies caution, or an early warning that there could be a delay
- Red indicates a backlog or delay

Using the dashboard system, staff in the ED are now able to make real-time process improvements. For each indicator, thresholds were set for backlogs and delays. For example, in triage, if more than five people were waiting, a yellow indicator would appear.

Besides high staff satisfaction ratings, one of their strongest results is door-to-physician times, which went from 41 minutes to just 21 minutes. Although census has gone up 20 percent, departmental efficiency has been maintained: Overall turnaround time for the department remains at under three hours.

Association Tools:

ED Dashboard Definitions

(http://urgentmatters.org/media/file/enewsletter_volume2_issue6_ED_Dashboard_Indicators.doc)

Technical Appendix 5: New York City's Primary Care Information Project

The program's mission is to improve population health through appropriate technology and health information exchange. The Primary Care Information Project is part of a \$27 million Mayoral initiative to improve the quality and efficiency of health care in NYC (www.nyc.gov, 2008). The initial deployment will support 1,300 physicians in four provider groups in New York City: community health centers, small primary care practices, those providing health care services in correctional facilities, and primary care physicians located within municipal hospital facilities (Holland, 2007).

Eligible practices will receive:

- "eClinicalWorks EHR applications and licenses.
- 2 years worth of maintenance and support costs.
- Extensive training for all levels of staff.
- Interfaces to common laboratory and billing systems.
- NYC DOHMH Take Care New York customizations, encompassing public health functionalities." (Press release, 2008)

To qualify for participation in the Primary Care Information Project EHR expansion initiative, primary care practices must meet the following minimum criteria: 1) the primary care practice must care for underserved populations (i.e., specified by specific zip codes) or 2) serve patients in NY State-funded insurance programs (including Family Health Plus, Child health Plus) or patients who are self-pay, sliding scale, or charity care.

Providers must fully participate in the Primary Care Information Project's quality improvement efforts including:

- "Automated confidential quality reporting.
- Decision support tools for priority preventive care services.
- Linkage to public health information systems (immunization registry, school health).
- Practices must demonstrate readiness to:
- Budget \$4,000 per provider for PCIP technical assistance fund.
- Commit protected time for clinicians and staff training and allow for lowered productivity during implementation.
- Demonstrate required technical infrastructure (e.g., high-speed internet connection, IT support staff)." (Press Release, 2008).

The Health Department is also helping non-eligible practices integrate the new prevention tools into their own EHRs. The initiative is supported by a \$3.2 million grant from New York State and evaluated through \$5 million in funding from the Centers of Disease Control and Prevention and the Agency for Healthcare Research and Quality (Press Release, 2008).

The Health Department's prevention-oriented EHRs improve health care by:

- "Giving doctors the fuller picture of a patient's health by integrating the patient's medical history, lab results and current medications into one electronic interface

- Improving follow-up care by prompting the doctor's front office to send reminders to patients
- Increasing preventive screenings, such as mammograms, colonoscopies and pap smears, by providing automatic reminders during routine medical exams
- Reducing the risk of adverse drug reactions by tracking prescriptions and flagging potential interactions
- Allowing doctors and patients to track blood pressure and cholesterol control with simple charts and graphs
- Ensuring best practices and reducing errors by highlighting the most effective drug treatments (and doses) when a diagnosis is made
- Expediting care by providing instant referral when a patient needs care
- Reducing delays in treatment by sending prescriptions electronically or by fax
- Tracking medication use and identifying patients who need more assistance to take their prescribed treatment
- Tracking quality of preventive care over time, and in a comparable way between different doctors and different practices” (Press Release, 2008).

Technical Appendix 6: Evaluations Of Community Health Worker Programs

In what follows, we review literature describing the effectiveness and cost-effectiveness of CHW programs.

TA6.1 Disease-Specific CHWs

One program, focused on urban African American individuals with type 2 diabetes, randomly assigned 186 patients to one of four treatment groups: usual care only, usual care + nurse case manager, usual care + community health worker, and usual care + nurse case manager and community health worker. Of the 186 patients included in the program, 149 (84%) completed the 2-year follow-up. Nurse case managers and community health workers implemented individualized programs to improve diet, physical activity, foot care, vision care, blood glucose self monitoring, blood pressure control, and plan adherence. The decrease in glycosylated hemoglobin, HbA_{1c}, for the treatment groups (individuals working with a community health worker or nurse case manager) was minimal (0.3%). Although the combined treatment (nurse case manager and community health worker) had a larger effect (0.8%) than the individual treatments, the effect is not statistically significant. After adjusting for baseline differences and/or follow-up time, the combined treatment groups showed statistically significant improvements in triglycerides (-35.5 mg/dl) and diastolic blood pressure (-5.6 mmHg), compared to the usual care group (Gary et al., 2003).

The Campesinos Diabetes Management Program uses promotoras to build social support among people with diabetes, with the objective of improving self-management behaviors and clinical outcomes. In this program, a promotora worked with diabetes patients in a clinic and assisted patients with cross-referrals, taught basic diabetes education, scheduled appointments for program participants, and interacted with providers on patient issues. Promotoras also implemented a community based intervention that included support groups, home/hospital visits, telephone support, and advocacy to people with diabetes. A 12-month study design was used to investigate the relationship between promotora contact, perceived support, and clinical outcomes for patient who completed a baseline physician visit and a one-year physician visit. This evaluation includes 70 participants and used a questionnaire to measure perceived support and self-management practices at baseline and again after one year. Key results include a 1% decrease in glycosylated hemoglobin (HbA_{1c}) levels for this patient group as well reports of increased support from family and friends and more comfort speaking about diabetes with family and friends (Ingram et. al., 20007). The study limitations include small sample size, no control group as well as restricting the sample to only patients who received physician care at baseline and again after one year. The generalizability of these results is limited.

TA6.2 Emergency Room Diversion

In New York, the Northern Manhattan Community Voices partners established a program with community health workers to help reduce emergency department visits for non-urgent care. This program serves the Central Harlem and Washington Heights-Inwood communities through a large partnership of community organizations, health care providers, social/human services

providers and faith-based organizations. This program was designed to identify patients who frequently use the emergency department for non-emergent episodes through the use of Event Monitor Software. The purpose of this project is to promote more appropriate use of the ED and primary care services with the intent of benefiting the community and decreasing financial strain. As ED frequent flyers (i.e., patients who have used the ED three or more times in the past six months) were identified, the system sends a message to the Health Priority Specialist who then contacts the patient to begin a thorough assessment of barriers and circumstances that led to the frequent visits to the ED. The patients all received medical care in the ED before being referred to the Health Priority Specialist. Patients were identified and assessed three times (baseline, 3 months and 6 months). Of the 711 patients identified as frequent flyers, 177 (24.9%) patients completed all three assessments. In this sample, a significant decrease in the number of ED visits was observed. No major differences in ED use were attributed to severity of emergent care. More interactive interventions were associated with decreases in ED use, specifically health education and counseling for social and emotional issues (Michelen et. al., 2006).

Community health workers assisting Medicaid diabetes patients in Baltimore helped patients schedule medical appointments, checked on patients to ensure they were looking after themselves, offered general social support and determined Medicaid eligibility. An evaluation of the program shows that emergency room visits declined by 38% and hospitalizations declined by 30% (Fedder et al., 2003).

TA6.3 Cultural-Specific CHWs

Cultural sensitivity is one of the key features of the community health worker and patient navigator programs. In a qualitative study of why a promotora (or community health worker) increased adherence to chronic disease screening among women along the U.S. – Mexico border, results indicate that clients appreciated the promotora’s sociocultural characteristics and her personal skills and qualities (Reiunshmidt, 2006). The Community Voices North Manhattan program in New York City uses lay health workers and ‘promotoras’ because they have the trust of neighbors and receive training in a specific area (such as asthma or nutrition) (Meyer et al., 2004). Community health workers and patient navigators are better able to bridge the gap between communities and the health care system because they come from the same underserved neighborhoods and share in the same cultural experiences as the people they serve (Ro et al., 2003). They also play an important role in breaking down the cultural divides that often exist between providers and communities by working as both linguistic and cultural interpreters (Ro et al., 2003).

In a review of research examining the impact of culturally tailored programs, Fisher and colleagues found that using culturally specific patient navigators and community health workers was among the most successful strategies in their literature review (Fisher et al., 2007). Key findings from different studies include: significant improvement in cancer screening; statistically significant decrease in blood pressure and decreased progression of left ventricular hypertrophy (although control group showed similar improvement); statistically significant improvement in colonoscopy completion at 6 months compared with control group; improved maternal documentation of infant immunizations and higher 12-month infant mental development scores,

and significant improvement in cancer screening (although control group also showed significant improvement) (Fisher et al., 2007).

TA6.4 Cost-Effectiveness

Community health worker programs have the potential for cost-savings as they promote the use of appropriate health care resources. There are few studies that examine on the cost-effectiveness of community health worker programs. Ro and colleagues reviewed and available data and found that the average cost of services provided by community health workers is significantly lower than care provided at the next level (Ro et al., 2003).

In the Baltimore community health worker program for African-American Medicaid patients with diabetes (described above), they found that emergency room visits decreased significantly (approximately 38%), while hospitalizations decreased 30%. Using the Medicaid Claims Database, they calculated that this results in a 27% reduction in Medicaid reimbursement. Without factoring in all costs, they estimate gross savings per community health worker at \$80,000-\$90,000 per year (projecting a caseload of 30 patients) (Fedder, 2003).

An analysis of Denver Health Patients using community health workers compared medical utilization of patients before and after contact with a community health worker. They found that primary and specialty care visits increased after patients were visited by a community health worker, and more expensive urgent and inpatient care use declined. They calculated that the community health worker program saved \$2.28 for every \$1 invested (Whitley, 2006). Another program redirecting non-urgent health care from emergency departments to primary care also achieved cost savings. At Presbyterian Hospital in New York, community health workers met with patients using the emergency department for non-urgent care. After the patient received medical care, the community health workers made follow-up primary care appointments and followed up after the appointment. Over a three-year period that this program was in place, the broken appointment rate for follow-up visits dropped from 50% to 15%. During this time, non-urgent adult ED visits declined by 42%. Additionally, the emergency department closed one of its triage units and reduced staff saving \$250,000 (Ross and Patrick, 2007).

There are large differences in estimated program costs among different community health worker programs. The Health Plus managed care organization in NYC employs 35 full time community health workers. The community health workers earn \$35,800 per year, plus benefits and the organization has committed \$3 million per year to the program. The funding also includes other services for Medicaid patients and other low-income individuals. The health plan has determined the program is cost-effective due to the savings achieved through community health worker services exceeding program costs (Ross and Patrick, 2007).

Technical Appendix 7: List of Community Contacts

| Date | Description |
|-------------|--|
| 2-Nov* | RAND Advisory Committee Meeting (Wilson Building) |
| 10-Jan | Grand Rounds, George Washington University Hospital (Briefing on RAND evaluation) |
| 30-Jan | Briefing of interim findings to DC City Council members (Wilson Building) |
| 6-Feb | Testimony before Committee on Health (Wilson Building) |
| 25-Feb | Briefing to Rob Maruca, Director, DC Medicaid Assistance Administration (at GWU) |
| 29-Feb | Phone interview with Dr. Lisa Alexander, Director, DC AHEC Program Office and Assistant Dean for Community-Based Partnerships, GWU School of Medicine and Health Sciences |
| 3-Mar | DCPCA Standards of Care Committee (medical directors of each of the DCPCA clinics) (at DCPCA) |
| 4-Mar | Meeting with Vincent Keane, CEO, Unity Health Care Inc. |
| 5-Mar | Meeting with department chairpersons, Howard University Hospital |
| 10-Mar | Meeting with medical directors, DC Hospital Association |
| 11-Mar | Focus group with community residents from Ward 8 at Councilmember Barry's Ward 8 Constituent Services Office (to discuss adult health issues) |
| 11-Mar | Focus group with parents from Ward 8 at Councilmember Barry's Ward 8 Constituent Services Office (to discuss child health issues) |
| 12-Mar | Meeting with department chairpersons, Howard University Hospital |
| 20-Mar | Focus group with practicing providers at GWU hospital (7) (General Internal Medicine, Geriatrics, Cardiology, Infectious Disease, Pediatrics) |
| 20-Mar | Phone interview with pediatrics practicing provider |
| 20-Mar | Phone interview with pediatrics practicing provider |
| 21-Mar | Phone interview with hematology/oncology practicing provider |
| 24-Mar | Phone interview with pediatrics practicing provider |
| 24-Mar | Phone interview with psychiatry practicing provider |
| 26-Mar | Phone interview with pediatrics practicing provider |
| 26-Mar | Phone interview with pediatrics (hematology/oncology) |
| 26-Mar | Focus group at Unity—Upper Cardozo with practicing providers at safety net clinics (Unity/SOME/Bread for the City) (12) (General Internal Medicine, Family Practice, Obstetrics/Gynecology, Pediatrics, Dentistry) |
| 27-Mar | Meeting with Board of Directors, DC Hospital Association |
| 27-Mar | Phone interview with pediatrics practicing provider |
| 30-Mar | Focus group with residents/fellows at Howard University Hospital (13) (General Internal Medicine, Family Practice, Pediatrics, Gastroenterology, Cardiology, Podiatry, Neurology, |

Psychiatry)

- 1-Apr Meeting with Tamara Smith, Patrina Fowler, Carolyn Colvin; CEOs of Chartered, Health Right, and Amerigroup (at Chartered Headquarters)
- 1-Apr Focus group with practicing providers (7) at Howard University Hospital (General Internal Medicine, Endocrinology, Cardiology, Nephrology, Geriatrics)
- 1-Apr Meeting with internal medicine practicing provider
- 2-Apr Focus group with residents/fellows at GWU hospital (8) (Internal Medicine, Cardiology, Geriatrics, Infectious Disease)
- 2-Apr Meeting with Ruth Lubic, founder, DC Developing Families Center, and tour of facility
- 2-Apr Tour of facility—Bread for the City
- 3-Apr Focus group with parents from Wards 1 and 4 at Mary’s Center (to discuss child health issues)
- 3-Apr Focus group with community residents from Wards 1 and 4 at Mary’s Center (to discuss adult health issues)
- 4-Apr Phone interview with hematology practicing provider
- 4-Apr Phone interview with family practice practicing provider
- 4-Apr Meeting with Anna-Maria Izquierda, former Medical Director, Spanish Catholic Center, and tour of SCC facility
- 4-Apr Meeting with Dr. Maurice Wright, Medical Director, SOME, and tour of facility
- 4-Apr Meeting with Lyda Vanegas, Development and Communications Officer, Mary’s Center, and tour of facility
- 7-Apr Meeting with Senior Management, Providence Hospital (at Providence)
- 8-Apr Meeting with Dr. Janelle Goetcheus, Vice President for Medical Affairs & Chief Medical Officer, Unity Health Care Inc., and Tracy Harrison, Health Center Manager, Unity-Congress Heights, and tour of Unity- Congress Heights
- 8-Apr Focus group with residents at Washington Hospital Center (11) (General Internal Medicine, Obstetrics/Gynecology, Oral/Maxillofacial Surgery, Pathology, General Surgery, Podiatry)
- 9-Apr Focus group with residents at Children’s National Medical Center (CNMC) (15)
- 9-Apr RAND Advisory Committee Meeting (Wilson Building)
- 9-Apr Focus group with psychiatry practicing providers and residents at GWIU hospital (4)
- 10-Apr Focus group with adolescent medicine-practicing providers and fellows at CNMC(5)
- 10-Apr Phone interview with internal medicine practicing provider
- 10-Apr Meeting with Department Chairpersons, Washington Hospital Center
- 14-Apr Focus group with parents from Ward 7 at Plummer Elementary School (to discuss child health issues primarily)
- 15-Apr Meeting with Dr. Richard Becker, CEO/managing director, GWU Hospital
- 17-Apr Phone interview with Dr. Janelle Goetcheus, Chief Medical Officer, Unity Health Care Inc.
- 17-Apr RAND Advisory Committee Meeting (at DOH)
- 23-Apr Phone interview with Dr. Duane Smoot, Professor and Chief, Department of Medicine, Howard University Hospital
- 25-Apr Roundtable on ED Diversion including Pat Fisher (Director, Health Education and Community Engagement, DC AHEC), Dave Chandra (Special Assistant to the Director, DC Department of

Health), Sharon Baskerville (Executive Director, DCPCA), and Dr. Carlos Cano (Senior Deputy Director, Community Health Administration) (at DCPCA)

28-Apr RAND Advisory Committee Meeting (at DOH)

22-May RAND Advisory Committee Meeting (at DOH)

**2007; all other dates are 2008*

RAND ADVISORY COMMITTEE
MATERIALS

RAND Advisory Committee Overview

The legislation that authorized funds for the RAND evaluation (Community Access to Health Care Amendment Act of 2006) also established a RAND Advisory Committee. Section 103 of the Act describes the Committee:

- (a) There is established an advisory committee to provide oversight and review of the assessment and analysis described in subsection (b) (7) of this section. The advisory committee shall consist of 5 members, 2 of whom shall be appointed by the Mayor and 3 of whom shall be appointed by the Council.
- (b) The advisory committee shall meet at a regular time and place to be determined by the committee. The advisory committee shall dissolve when its oversight and review role is complete.

In accordance with the legislation, the RAND Advisory Committee was formed and included the following individuals:

- Sylvia C. Brown
- Victor Freeman, MD
- Virgil Clark McDonald
- Maria Gomez
- Mohammed Akhter, MD

The Mayor's office convened the initial RAND Advisory Committee meeting on November 2, 2007. The Committee was convened again in April 2008 (April 9th, April 17th, April 28th) and for a final time on May 22, 2008.

The Committee was invited to provide a unified statement to accompany the RAND Phase 2 report. Instead of a unified statement, selected individual members provided feedback. The statements of Sylvia Brown and Victor Freeman are included in this Appendix.

Ms. Sylvia C. Brown
920 52nd St. NE
Washington, DC 20019

June 4, 2008

The Honorable Adrian M. Fenty
Mayor
John A. Wilson Building
1350 Pennsylvania Avenue, NW
Suite 310
Washington, DC 20004

The Honorable Vincent C. Gray
Chairman
District of Columbia City Council
John A. Wilson Building
1350 Pennsylvania Avenue, NW
Suite 504
Washington, DC 20004

Dear Mayor Fenty and Chairman Gray:

As a member of the RAND Corporation Assessment Advisory Committee, I respectfully submit this letter in conjunction with the release of the RAND Corporation's report on health care needs for the District of Columbia. The Advisory Committee along with the RAND study were established by the Community Access to Health Care Omnibus Amendment Act of 2006 (L16-0288).

I greatly appreciate the Chairman's confidence in appointing me to serve the Ward 7 community participation and interests. The opportunity was worthwhile, and I look forward to participating in and informing the ensuing dialogue about the RAND recommendations.

Congratulations and commendations on the work of the Corporation led by Nicole Lurie, City Administrator staff led by Julie Hudman, and George Washington University researchers. They were professional and open.

Generally, I expected a more robust public discourse for the RAND Study. My expectations and suggestions at the outset were to have:

- Periodic fact sheets developed and distributed;
- Launch and maintenance of a basic website to upload RAND Corporation presentations and provide a repository for the fact sheets; and
- Broadly announced public meetings.

Regrettably, this public discourse and disclosure process did not happen and/or was not a priority. Consequently, I do not believe a topic of this magnitude and interest was duly serviced.

On the matter of expenditure recommendations I do not believe the RAND Study informs the question of how and where new capital (i.e., construction) dollars can be spent. Certainly, current health facilities, particularly those in Wards 5-8 are on the radar for cosmetic rehabilitation and technological upgrades. However, planning for newly constructed health facilities, whether a hospital, ambulatory care centers, and/or healthplexes, should be viewed through a comprehensive lens—economic development, access to quality, affordable health care services, and population growth—that considers not just black-and-white data but also on the ground evidence and experiences.

Frankly, there is still too much siloed information and the perception of health care in the District as only a social benefit is too pervasive. Those matters are certainly outside the scope of the

RAND Corporation's tasks and are issues that must be addressed by elected leadership and the City's health care industry and advocacy community in a forthright and innovative way.

Health care is no longer only a social benefit. It is an economic development component. Across the country, let alone in our metropolitan region, health care is viewed and treated as an economic engine. As an economic engine health care has a role in spurring and enhancing the economic base of specific Wards, the City, and the metropolitan region. From the basics of having a healthy workforce to attracting ancillary commercial ventures, such as health food stores and eateries, medical office towers, and physical fitness centers, health care plays a role in economic development discussions. Astonishingly, the fitness industry is a \$14.8 billion industry!

An additional point of economic development involves matching health care services and facilities to the City's growth plan and population shift. Offices and residential planning are shifting to communities west of Rock Creek Park. These office workers and residents should be able to have a medical appointment let alone hospital services near their job sites and homes to cut down on absenteeism. There are large numbers of older residents living east of the Anacostia River, a population under age eighteen, and low health indicators. These facts, while supporting prevention techniques, can be used to the communities' and City's long-term advantage by bringing university medical research facilities and their dollars to bear and thusly reaping benefits for our residents in a broader health care economy that extends beyond health service careers and worker productivity.

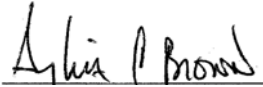
It is my belief that the RAND Study does inform policymaking decisions and priorities and puts the spotlight on the City to centralize and regularize data collection, analysis, and usage and to reconcile health delivery biases based on geography, income, and private and public payers. Areas not extensively discussed during the Advisory Committee were the ambulance service and fees and Greater Southeast Hospital (now rebranded as United Medical Center); issues that should be a part of health policy planning. It goes without saying funding should be provided to prevent and treat prevalent health conditions. Additional priorities in need of funding and exploration include:

- Health literacy campaigns, including how to talk *with* your doctor and determining whether a condition meets a threshold for an emergency room visit;
- Cultural sensitivity training for frontline professionals (i.e., receptionists) and medical professionals;
- Soft skills employment training for frontline professionals and medical professionals;
- Standardizing required data collection from health providers, including insurance companies, medical professionals, and medical institutions/facilities;
- Integration of city planning data (i.e., demographics, residential and commercial construction, school siting, etc.) with health care needs and status;
- Implementation of health information technology methods, including electronic medical records, in the City and in the metropolitan region;
- Stronger federal government relations activities to: ensure federal reimbursements are received (including school Medicaid receipts), leverage local advocacy efforts with those by national organizations and national trade associations (e.g., National Association of Public Hospitals, National League of Cities, American Medical Association, etc.)

Again, thank you for the opportunity to serve. The RAND Corporation's work sets the City on a path to a quality, affordable, inclusive, and integrated health care system. With the release of the study, RAND's recommendations, and insight from the Advisory Committee members, it is

imperative for stakeholders to view the work done and the work ahead with fresh eyes looking toward the possibilities and options with the goal of creating a “world-class city” that serves all of its citizens equitably.

Sincerely,

A handwritten signature in black ink that reads "Sylvia C. Brown". The signature is written in a cursive style and is underlined.

Sylvia C. Brown

cc: The Honorable David Catania
Chairman
Committee on Health
John A. Wilson Building
1350 Pennsylvania Avenue NW
Suite 115
Washington, DC 20004

The Honorable Yvette M. Alexander
Ward 7 Council Member
John A. Wilson Building
1350 Pennsylvania Avenue NW
Suite 400
Washington, DC 20004

Feedback to RAND Advisory Committee (RAC)

From Victor Freeman, MD, MPP – RAC Member

June 6, 2008

First, and foremost, I want to commend the researchers and authors that put considerable work in to the working paper, “Assessing Health and Health Care in the District of Columbia” (i.e. The RAND Report) as well as the additional DC emergency care analyses. However, the report, as written, does not give a level of detail or sufficient critical analysis to clearly inform the decision-making process concerning the appropriate use of the remaining ~\$150 million in Tobacco Settlement Funds. Furthermore, the late convening and unstructured process for the operation of the RAND Advisory Committee has resulted in inadequate deliberations and no meaningful guidance on how to appropriately invest capital expenditures to best enhance health and/or health care delivery in the District of Columbia.

The RAND Report Lacks Sufficient Detail and Critical Analysis for Policy Decision-Making

Contrary to news reports that the RAND Report is to present a “comprehensive” assessment of the state of DC’s health care, the report, in fact, is just an update of the District’s health and hospital statistics, with some new analytic techniques and concepts. Having trained as a health services researcher here in DC, my biggest concern is the lack of neighborhood-level health outcomes rate data. Many of the health and hospital statistics shown present rates averaged across each of the eight wards of the city or across each of the District’s five Public Use Microdata Areas i.e. PUMAs. However, such “average” statistics hide more information than they reveal. In addition, those statistics lead to a distorted view of the status of health and health care within our city neighborhoods.

A cursory look at the report will lead the reader to assume that the major health problems in DC are just in the “East of the River” areas (i.e. Wards 7 & 8), when we also have major health issues in pockets of Wards 1, 4, 5 and 6. The favorable statistics of wealthier/healthier residents in large sections of many wards actually overshadow (or “average out”) the negative health and health care statistics of poorer/sicker residents in those very same wards. This phenomenon of “averaging” statistics over widely varying sub-populations obscures the community-level realities and has great potential to result in flawed decision-making by well-meaning policy-makers.

In fairness to the researchers, they clearly indicated that they simply lack the detailed population data to produce zip-code, census tract or neighborhood-level rates. However, I did not read any critical analysis that highlighted the “average statistic” phenomenon or its implications for biasing policy decision-making. In addition, I saw no statements that emphasized the need to give special consideration to WEST of the river communities that are in need with regard to health-related capital expenditures.

RECOMMENDATION #1 – Develop a Neighborhood-Focused DC Health Data Infrastructure for 2010

The District needs to develop a plan for having a robust set of health and health care data monitoring systems in place, to coincide with the 2010 census. The coordination with the Census will allow more detailed assessment of health outcome rates and other health statistics at the neighborhood-level...

The RAND Report Fails To Address DC’s Hospital Bed Need Issue...

The most disturbing aspect of the report was the researchers’ non-critical acceptance of the DC hospital bed occupancy data. The simple inclusion of that data would have been acceptable if there had been some critical analysis of how “average” occupancy data hides the times when intensive care units, intermediate care (i.e. “step-down”) units and medical-surgical beds are overwhelmed. Given the widely varying bed occupancy demands across seasons of the year, days of the week and times of the day, a deeper analysis was warranted. Again the average statistic phenomenon and its implications for biasing policy decision-making are not highlighted.

I am particularly concerned that the RAND report did not acknowledge the insights on the bed occupancy issue that appeared in the “Minority Report to the Mayor’s Task Force Report” – 2006 (Excerpt: Page 14 Attached). I had hoped that the RAND Report would interweave lessons learned from both local and national sources. For example, the American Hospital Association and Institute of Medicine have numerous references attributing “emergency department overwhelm” to a lack of timely hospital bed availability. We must move past the myth that non-urgent patients in ER waiting rooms are the problem...

We, as a city, are failing to deal honestly with our hospital beds needs. With the notion of building a new hospital now clearly off the table (politically), I had hoped that we would deal with the issue of assessing our true need for hospital beds. Sadly, even the emergency care analysis done by George Washington University researchers fails to address the issue in a direct manner. During the writing of the “Minority Report” (referenced above), I learned that many health care providers/administrators that have worked on the Hospital-Bed Occupancy / Emergency Department Overwhelm issue were afraid of employer sanctions for honestly speaking to the real problems that have plagued the city for well over a decade. I am disappointed that the RAND research failed to make direct and objective assessment by sampling true bed occupancy at strategic times.

The RAND report does highlight DC’s Ambulance Diversion problem, deferring analysis to the George Washington University Researchers. Those researchers highlight some of the issues, but fail to do a full assessment of the hospital bed – emergency department – ambulance diversion infrastructure. I know another city that ignored a major infrastructure safety problem--- And that city paid for its neglect with citizens’ lives. New Orleans ignored its levy problem until Hurricane Katrina struck; I hope we won’t wait until disaster strikes to address our hospital bed needs problem. We are a city whose health care infrastructure is being routinely strained. We are not only at risk for terrorism and for natural disasters--- In our current strained state, we are at risk for being overwhelmed...by something as simple as a bad “flu” (i.e. influenza) season...

RECOMMENDATION #2 – Direct / Strategic Observation/Monitoring of Emergency Dept. Patient Flow

The District needs to do an independent sampling of emergency department patients that are awaiting a hospital bed (in each District hospital) at regular afternoon/evening intervals during 2 winter months-- the busy season... This assessment will determine how big the bed availability issue is for the District...

The RAND Report Introduces Concepts that May Be Misinterpreted By Non-Researchers

The RAND Report’s uses the concepts of “Ambulatory Care Sensitive” and “Primary Care Sensitive” conditions. Reporting rates of these “conditions” is very popular among primary care advocates and many health services researchers, yet these terms and statistics must be evaluated with a critical eye. Practicing clinicians will attest to the fact that use of their ambulatory office to treat an acutely ill patient with an “Ambulatory Care Sensitive” and “Primary Care Sensitive” condition, is often not only cost-prohibitive but also clinically impractical/inappropriate. Most ambulatory offices lack the diagnostic equipment that is readily found in most emergency departments (e.g. radiography, ultrasound, CT/MRI Scanning, rapid lab testing, Electrocardiography-EKG, etc.). Primary care providers and many specialists (in ambulatory settings) refer patients (who they know do not need hospitalization) to hospital emergency departments simply because that is the appropriate diagnostic venue and the place where those patients are most likely to be able to access timely specialty intervention or care. Investing in more primary care offices or office space is unlikely to change that clinical dynamic. Furthermore, investments in placing more diagnostic equipment in ambulatory offices, ignores the fact that most ambulatory care providers do not want to disrupt their routine patient flow to treat acutely ill patients. And finally, we must ask ourselves, “What patient or provider would want acute treatment in an ambulatory office, when the patient can go to an emergency department with appropriate procedural and specialty back-up support...?”

Even if we step away from the acutely ill patient and focus on those with chronic conditions, it is unclear how the RAND Report guides us on investment for better management of these patients. Although, a zealot for primary care will use this report to advocate for building more primary care facilities, policy-

makers need to be more reflective on what the report tells us. In fact, they need to think through what I believe to be the following classic primary/medical care myths:

- 1) The “Field of Dreams” Myth – Build Primary Care offices and they will come...!
- 2) The “More Primary Care (PC) is THE Answer” Myth – The Lack of PC is the problem;
- 3) The “More Medical Care is THE Answer” Myth – The Way To Make People Healthy;

The “Field of Dreams” Myth – Build Primary Care offices and they will come...!

One of the lessons learned from the Mayor’s Health Care Task Force – 2006 was that care availability did not necessarily produce care utilization. Unity Health Care’s representative to the Task Force noted that adding evening and Saturday hours did not necessarily produce significant utilization. The city’s poorest residents face multiple obstacles to accessing care even if it is in their own neighborhood. Daytime access of primary care is hampered by hourly wage jobs that often do not allow time off for seeking routine care. Many residents with multiple jobs and/or childcare demands also have limited transportation options. These demands compete with any motivation to seek routine care, no matter how convenient. In addition, travel (with or without children) during the dark of winter evenings raises safety concerns, especially for travel to proposed ambulatory care sites within poor neighborhoods. Without strategies to help residents overcome obstacles to seeking care, capital investments in community-based ambulatory care may not yield expected utilization.

Another issue that merits significant consideration is determining the target audience(s) of any proposed health care facilities. The types of services offered and who is offering those services will significantly affect who and whether different patients groups will seek care at proposed care sites. As a former member of the DC General Hospital board, I learned a lot about economically diverse patient audiences. Contrary to popular belief, DC General Hospital served a substantial middle-/working-class insured patient population, with support from Georgetown and Howard medical faculties. With the loss of hospital services and medical faculty support, the city saw a major drop in the utilization of ambulatory care services that remained at the DC General site. Many insured (former) DC General patients viewed the new site as relegated to poor patients; many poor patients questioned not only the quality of care, but also the value in coming to a care site that no longer offered “one-stop shopping” (i.e. rapid diagnostic and specialty procedure access, etc.) Services offered and who offers them are clear determinants of who, if anyone, will use any proposed ambulatory services.

For those who so desperately want to believe that building an Inova-type Healthplex will empty the District’s overcrowded emergency departments, please also consider how the aforementioned determinants (i.e. services offered and who offers them) will clash what is constitutes a viable business model within the District of Columbia. I invite you to review the excerpt from the Minority Report to the Mayor’s Health Care Task Force – 2006 (Excerpt: Pages 16-17 -Attached) for the reasons why the Inova model works in northern Virginia and why it has not been spontaneously reproduced in DC.

For those who so desperately want to believe that building primary care sites will lessen the demand on DC’s overcrowded emergency departments, please consider the fact that as general trend, Americans are finding very good reasons for preferring emergency departments over doctor offices. Patients of all economic levels are increasingly valuing access to same-day diagnosis and/or treatment, especially late-night and on weekends. As a recent Baltimore Sun Article indicates (attached), even well-insured patients, with ready access to primary care, are often using emergency rooms instead of their doctors’ offices. When we use the RAND Report to make decisions about capital investments, we cannot afford to simply assume that simply building ambulatory sites will mean that they will be used.

The “More Primary Care (PC) is THE Answer” Myth – The Lack of PC is the problem

Although primary care is an essential part of any community’s health care delivery system, we should not overestimate its impact on the health of residents. First, even if we can get patients to come to primary care offices, we forget that primary care offices are often dependent on specialty offices for diagnosis as well as for the treatment plan development for many patients. Even for the most basic screening, primary

care offices are dependent on gastroenterologists for colonoscopies and dependent on radiologists for mammography. And in terms of optimal treatment plans, primary care providers are often dependent on endocrinologists for diabetes management, cardiologists for heart failure management and pulmonologists for asthma and chronic lung disease management. In a largely Black population, urology will also be important for prostate cancer management and ophthalmology will be important for glaucoma screening/treatment. The list of needed surgical and medical sub-specialists is lengthy; and patients that have direct access to primary care but limited access to specialists will often have trouble achieving optimal health outcomes. Clearly, co-location of, or at least coordination of, specialty services with primary care offices must be considered even with neighborhood-based care facilities.

The “More Medical Care is THE Answer” Myth – Medical Care Makes People Healthy

Even if we achieved ideal co-location/coordination of specialty services for neighborhood-based primary care, coordinated medical care has still not proven effective in producing sustainable changes in patient behaviors. The American “medical care” model is designed to use medications and procedures to treat disease--- not to change patient behavior to prevent disease (or subsequent complications). Very few medical offices are designed, evaluated or compensated for achieving improved patient health outcomes. And very few offices are designed, evaluated or compensated for accommodating or coordinating care with non-medical services that support healthy behaviors or lifestyle change. Although diabetics and heart failure patients may often receive some medication management and/or nutrition counseling, few patient groups have ongoing support for improving patient physical activity, food preparation, smoking cessation or other basic health and hygiene education. Furthermore, stress management, emotional health and mental health are greatly neglected in the current American “medical care” model. With ~\$150 million to invest in capital development, we need to think beyond the “medical care” model and look for more holistic health facilities for promoting health and health care in District communities.

I am asserting the radical (and extreme) view that capital investments in facilities that engage and support patients (and communities) in healthy lifestyle changes will do more to impact health--- and to save health care dollars--- than investments in more medical care facilities. Such facilities could provide exercise coaching in climate-controlled environments for basic physical activity (e.g. an indoor walking track, basic weights for building muscle tone). In addition, these coaches would work with yoga, tai-chi and other instructors to teach about mind (meditative) and mind-body activities to provide clients with tools for better emotional health / stress management. Mental health and social work counselors would also find a home to screen for and treat mental/behavioral health issues as well as to identify social supports for clients in need. Dieticians would have “teaching kitchens” to teach people about healthier flavorful cooking. These facilities could host nurses for health screenings, medication management advising, health education and the training of lay health workers. I would anticipate that this “wellness model” would be nurse-led and would engage community members of all ages, not just as clients, but as lay health advocates/teachers/ambassadors in the community.

At this point in time, the “wellness” model that I propose is probably too radical for policy-makers, city administrators and even community members. Policy-makers should be demanding some proof of concept. City administrators will be struggling with how to coordinate the support of such a model between the DC Department of Health and the DC Department of Parks & Recreation (the latter of which manages the DC Senior Wellness Centers and the DC Recreation Centers). The visionary community members that accept the concept will be looking to see if they can own such a model and adapt it to their community’s needs, culture(s) and demographics. At this point in time, there is no broad base of support for the wellness model, and there are no prominent champions for its cause. But it is a concept that is worth developing. And if developed well, a wellness model would invite the participation of our academic medical centers and allied health schools, local/regional/national foundations, local employer health groups, local health insurers, potential corporate sponsors (e.g. Nike, Bally’s Fitness Centers, Weight Watchers, etc.) and even the federal government (e.g. National Institutes of Health [NIH], Health Resources & Services Administration [HRSA], etc.) The District of Columbia could become a national model for the investment of major capital funds for the purpose of genuine health promotion on a community-wide scale...

RECOMMENDATION #3 – Convene a Group of Specialists to Develop “Healthplex” Models

*The District needs to convene a group of individuals that understand the District / health care facilities---
To design appropriate models and to report back to the RAND Advisory Committee / District Officials....
E.g. DC Dept. of Health Director, DC Hospital Association representative, Unity Health representative
and I would be willing to serve as a community representative, reporting back to the current RAND
Advisory Committee in order to preserve its role as a balanced community representative feedback forum.*

RECOMMENDATION #4 – Convene a Group of Specialists to Develop “Ambulatory Care” Models

*The District needs to convene a group of individuals that understand the District / ambulatory facilities---
To design appropriate models and to report back to the RAND Advisory Committee / District Officials....
E.g. DC Dept. of Health Director, Mary’s Center, Whitman-Walker and Unity Health representatives
and I would be willing to serve as a community representative, reporting back to the current RAND
Advisory Committee in order to preserve its role as a balanced community representative feedback forum.*

RECOMMENDATION #5 – Convene a Group of Specialists to Develop the “Wellness Model” Concept

*The District needs to convene a group of individuals that understand the District / Wellness---
To design appropriate models and to report back to the RAND Advisory Committee / District Officials....
E.g. DC Dept. of Health Director, selected community health leaders/advocates and local researchers,
and I would be willing to serve as a community representative, reporting back to the current RAND
Advisory Committee in order to preserve its role as a balanced community representative feedback forum.*

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All I ask is that we not rush to throw money at more primary care or more medical care facilities, only to find that, in the end, we have made little difference. As we look forward to the presidential campaign season, there is great enthusiasm for change--- new beginnings... We now have an opportunity not just to “THINK outside the box”, but to take ACTION and invest \$150 million in a capital project that will change lives. It is my sincere hope that we will take the time to make that investment count--- We need more time, more deliberation and more community engagement to ensure that we use our precious dollars... with sense...

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**DC Hospital Association Statistics Conceal The “Lack of Beds” Problem...**

Prior to the closure of DC General Hospital, representatives of the hospital community insisted that there was an insufficient number of hospital beds. However, they have curiously reversed that argument, citing large numbers of unused “licensed” beds. However, DC hospitals have a long history of holding licenses for beds--- that do not exist. Furthermore, hospital rooms that used to hold beds cannot be readily converted for use as patient rooms. The spaces for many licensed beds were converted into much needed hospital offices, training rooms and storage areas long ago. Members of the hospital community now seem reluctant to acknowledge the fact that reclaiming significant numbers of those lost beds is a pointless endeavor. Some hospital executives cited DC Hospital Association statistics indicating that our DC hospitals only operate at 77-79% capacity. However, this “average” statistic hides more information than it reveals. Interviews with hospital officials who did not participate in the Mayor’s Health Care Task Force revealed that occupancy rates on weekends may be as low as ~60%, while occupancy rates during the week often exceed 85%. In addition, the occupancy rate of a hospital may be greater than 100% during the afternoon and evening. During these times, ERs typically fill with patients to be admitted, while hospital staff are trying to discharge or transfer patients that occupy the needed hospital beds. Although some are calling for an extensive “study” to obtain DC-specific ER overwhelm data, the data to be gathered is obvious and solutions to the problems are well documented in national reports. We need to monitor ER Closure, ER Patient Boarding and ER Drop Times and then set goals based on the best practices in the published literature. Given the overwhelming data about the relationship between the lack of inpatient beds and overwhelmed ERs, it is reasonable for DC citizens to be concerned that DC has insufficient beds to manage even a moderate flu outbreak. The issue of overwhelmed ERs must become a priority for District policymakers...



### **Introducing the Inova Healthplex**

Although outpatient care delivery models provide important services to local communities, they have limited usefulness in addressing the pressing DC health care needs as listed above. In examining outpatient care delivery models, one has to assess a facility’s financial viability as well as its ability to meet the particular service delivery needs of the local community. The most commonly discussed model for consolidating outpatient health care resources has been the Inova Healthplex, operated by the Inova Health System. The healthplex, located in Springfield, VA, is an impressive and successful integration of outpatient services. The Inova model contains a full-service emergency room, primary care and specialty physician offices, as well as an ambulatory surgery / outpatient procedure center and outpatient diagnostic services center, including lab and radiology. However, closer scrutiny of the healthplex reveals that its usefulness may be tied to its suburban location and relatively wealthy and healthy service population.

### **Why the Inova Healthplex ‘Concept’ Works In A Northern Virginia Suburb**

Interviews with Inova Healthplex administrators revealed that its success is related to servicing a largely privately insured patient population and its close operational integration with the Inova Fairfax hospital. With less than 10% Medicaid and charity care patients, the Inova Healthplex is not only a financially lucrative investment, but an attractive partnership opportunity for physician investors as well as for care providers. The fact that the healthplex is located in a relatively affluent commercial community makes it an ideal place for specialists to establish their offices. Because ambulatory surgery/procedures and lab/radiology services are consolidated on-site, the healthplex offers great convenience for patients and care providers. In addition, the healthplex’s integration with Inova Fairfax Hospital ensures that the healthplex will be maintained as part of the high standards expected for the hospital’s accreditation. However, the emergency room is the area of the healthplex that benefits most from integration with Inova’s flagship hospital.

### **Why the Inova Healthplex ‘Emergency Room’ Works In A Northern Virginia Suburb**

The Inova Healthplex offers a full service emergency room (ER) whose success also stems from its suburban location and its relatively healthy and well-insured clientele. The healthplex ER operates as an extension of the Inova Fairfax Hospital ER, employing the same ER physician group. Approximately one in ten patients require transfer from the healthplex ER to hospital care. As members of the same ER practice group, the healthplex ER physicians are always guaranteed the ability to transfer patients to their colleagues at the flagship hospital. In order to ensure optimal care during ambulance transfers, the healthplex uses a private ambulance service. Although an expensive service, the private ambulance service offers clear efficiencies. Inova does not pay for ambulances to sit at the healthplex. The private ambulances arrive promptly when called. The healthplex physicians also select the level of expertise of the ambulance crew to ensure optimal care during transport. With Inova Fairfax Hospital’s ER enjoying less than 5 hours per week of “closure/diversion ,” patient transfers are rarely blocked . Transfers typically take about an hour, and given the well-insured patient base, they are readily accepted by attending physicians and specialists. As a full service ER, the healthplex is required to provide a full array of specialty consultation services. Again, the private insurance status of most healthplex patients means that specialty on-call coverage should rarely be a major problem. Given the success of the healthplex model in suburban northern Virginia, it is no surprise that Inova is building additional healthplexes.

### **Why the Inova Healthplex Concept Would NOT Work In Eastern DC**

Adopting an Inova healthplex model for eastern DC offers a myriad of challenges. First and foremost, a healthplex established in an eastern DC area of need is likely to receive a patient population that is ~30% uninsured or with low-paying Medicaid or DC Health Care Alliance coverage. Attracting specialty physicians to establish their offices or to provide ER on-call coverage will likely be difficult. Given the high cost of malpractice coverage for procedures in DC (vs. northern VA), it may also be difficult to attract specialists to provide ambulatory surgery and outpatient procedures. A corporation that owns and operates an eastern DC healthplex would soon discover a relatively low financial reimbursement for ambulatory surgeries/procedures performed in free-standing facilities when compared with those provided

in a hospital setting. Clearly, the insurance status of eastern DC patients will adversely affect the financial viability of a healthplex in that area of the city. Ongoing subsidy from DC taxpayers would be inevitable.

#### Why the Inova Healthplex Emergency Room Would NOT Work In Eastern DC

Given the state of overwhelmed ERs and ER closure/diversion in the District, patient transfers to DC hospitals are likely to also offer major challenges. Interviews with care providers who worked at the free-standing ER that initially remained after DC General Hospital closed reveal serious concerns. Significant numbers of patients that were served at the free-standing ER, for what appeared to be manageable outpatient conditions, were found to have medical issues that merited transfers to a hospital (i.e. eastern DC patients tend to be a sicker patient population than those found in the northern Virginia suburbs). In addition, eastern DC has disproportionately more patients with substance abuse or mental health issues that complicate both their clinical presentation and their transfers to hospitals. Private ambulance transfers would be expensive and the use of DC government ambulance service is problematic, given the numbers of those ambulances that are taken out of service by patient transfer delays at overwhelmed DC hospital ERs. Most likely, it would be difficult to find a hospital and an ER physician group willing to incur the liability and operational costs of a healthplex in eastern DC. Downgrading a healthplex's ER to an urgent care center would address some of the ER issues, but might actually worsen community conditions.

#### American College Of Emergency Physicians (ACEP) Cautions Against Urgent Care Centers

ACEP issued a press release entitled, "*Gridlock in the Nation's Emergency Rooms Caused by Lack of Inpatient Bed Capacity, Not Patients with Non-Urgent Medical Conditions*" that speaks to problems with urgent care centers. Although urgent care centers do not receive ambulance transports, they are nonetheless likely to receive sick patients that require transfer to a hospital. In their capacity as urgent care centers, these facilities are less capable of providing stabilizing services prior to transport. Also, since urgent care centers are not legally required to care for every patient, they often serve privately insured patients rather than uninsured patients. This type of favorable patient selection leaves uninsured and other indigent patients to be cared for at already overwhelmed hospital ERs. Urgent care centers offer convenience for the treatment of non-emergency conditions, but like free-standing ERs they must be carefully evaluated in the care delivery context of the community they are intended to serve.

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**Baltimore Sun Article - *By Stephanie Desmon - Sun reporter - June 1, 2008 / Our Ailing ERs: Why are people with money and insurance crowding the nation's emergency rooms?***

There's no denying the emergency room at University of Maryland Medical Center is a busy place. On a recent morning, the beds that circle the nurse's station are quickly filling up. Plenty of seats are taken in the waiting room. There isn't time to close for repainting, so the painters applying a periwinkle blue to the corridors must dodge doctors and nurses at work.

The waits are long and will get longer as the lunch rush begins. And nearly every day the hospital must tell state emergency services officials that the place is full and ambulances will have to take patients somewhere else.

The story is the same at most emergency rooms in Maryland - and throughout the country. And the problem of emergency room crowding grows by the day.

Who is jamming up these emergency departments? Listen to the political rhetoric and you'll hear it's all those uninsured - 47 million and counting. But a new study - and conversations with experts in the field - suggests uninsured patients nationally make up a small portion of those who use the emergency room for their medical problems, big and small. It's just 15 percent, according to a recent study.

The fastest-growing group of ER users turns out to be middle-class patients with insurance, people who usually get their health care from primary care physicians. Their share of visits jumped from 52.4 percent in the late 1990s to 59 percent in 2003-2004, according to a recent study in the *Annals of Emergency Medicine*.

"We felt there would be much more political will behind solving the emergency room crowding problem if everyone understood that ... [the increase is] not poor, homeless and uninsured. These are mainstream Americans," said Dr. Ellen J. Weber, an emergency room physician at the University of California, San Francisco Medical Center and lead author of the study. "It's eventually going to affect you."

The emergency room, considered the health care option of last resort for the uninsured, has been transformed in the last decade. Between 1996 and 2003, annual emergency room visits in the United States rose from 90.3 million to 113.9 million, according to Weber's study, an increase of 26 percent. In Maryland last year, there were 2.4 million visits to emergency rooms, a number rising about 3 percent annually - that's an additional 90,000-plus visits each year.

There are many reasons why people use the emergency room, though a main one seems to be convenience. It is open 24 hours a day, 365 days a year - no appointment necessary. It's a place many come when they don't want to wait the several days it will take to see their doctor. And it's where everything from blood work to X-rays to treatment can be done in a compact amount of time, under one roof.

"The world is so busy. They just don't have time to be sick," said Jim Scheulen, chief administrative officer for Johns Hopkins Emergency Medicine. "It almost seems to reflect an overall societal change that's calling for everything to be instantaneous. They want a complete assessment and they want it relatively quickly and they want to move on."

"Typically you've got both spouses working," said Peter J. Cunningham, senior fellow at the Washington-based Center for Studying Health System Change. "It's not always easy for them to get off work and see the doctors. Sometimes it's just easier to go to the emergency room than to see their doctor."

That wasn't what the emergency room was supposed to be. But doctors say it has become a place where people know they can go for episodic care - often for emergencies, some of them life-threatening, many others not.

Primary care doctors have become increasingly reliant on the emergency room. When busy practices don't allow them to see all the patients who need to be seen, they send the overflow to the ER. When patients experience chest pains, the doctor sends them to the ER. When patients require tests beyond those that can be done in a doctor's office, to the ER they go.

"Who shows up here? Anybody who thinks they've got a problem - that's the definition of an emergency," said Dr. Brian J. Browne, chief of emergency medicine at the University of Maryland Medical Center in Baltimore. "It's your perception of the issue, not necessarily mine. ... I don't mind. It's my job." Improvements in technology and in treatment have also led to the increased use of ERs. "There are a lot of things we need to treat in hospitals," Weber said.

Take stroke. Fifteen years ago, it didn't change anything if you had a stroke and didn't see a doctor for three days, she said. Now, lives can be vastly altered if a stroke victim gets to the hospital quickly. Sometimes the uninsured will come in with minor problems - only because they cannot pay and have nowhere else to go. Much of the national conversation about the uninsured in recent months has been among Democratic presidential hopefuls talking about universal health coverage in the U.S. One of the underlying assumptions has been that if there were fewer uninsured, more people would have doctors and fewer people would end up in the ER. It turns out to be a false assumption, experts say, because the insured are using the ER at record rates.

"The question is, 'What are the solutions?' and, frankly, reducing the number of uninsured, while that's something that will have a lot of benefits to a lot of people, it's not something that will reduce the burden on emergency rooms generally," Cunningham said. It may result in hospitals being reimbursed more often for the care they provide, he said, "but it's not going to relieve overcrowding."

The United Kingdom and Canada, countries with universal health care, have also seen large increases in ER visits, Weber said.

In Maryland, hospitals are private and take all patients, whether they can pay or not. But because of the unique system here, the burden of uncompensated care is spread more evenly. In other states, emergency rooms at large public hospitals in urban centers see more uninsured than others.

One reason for the nationwide backlog in emergency rooms - some say the main reason - is a shortage of inpatient hospital beds. Between one-fifth and one-quarter of those who enter the ER will be admitted to the hospital. If no beds are available, patients stay in the ER, taking up space that could be used by the next patient in line.

Money plays a role here, too. Some of those beds are occupied by elective surgery patients - paying patients, Weber said.

Hospital expansions are being built in Maryland, but those are longer-term solutions to the crowding issue - and still won't be enough to fix the system. Some suggest that urgent care centers - which are designed to take patients without life-threatening problems and are open late - could ease the burden on emergency rooms. Jim Schulenberg, a spokesman for the Patient First chain of medical centers, said 70 percent of what is seen in the emergency room - specifically routine illness and injury - can be seen by its doctors.

Still, opening an urgent care center isn't always a panacea. A center near Washington Hospital Center in Hagerstown was supposed to relieve the load on its emergency room. The decrease in patients was small - and temporary - and soon the urgent care center was seeing tens of thousands of its own patients yearly.

A similar thing happened after a Patient First opened on the campus of Johns Hopkins Bayview Medical Center in December. It sees lots of patients, Scheulen said, but the ER remains overwhelmed. New strategies are needed. Nearly two years ago, as a pilot program, the Shady Grove Adventist Emergency Center in Germantown opened, said Pamela W. Barclay, an official with the Maryland Health Care Commission. It is a comprehensive, free-standing emergency room - open 24 hours a day, accepting ambulances and patients without insurance.

Still, doctors agree, patients are not regularly crowding emergency rooms for minor ailments or injuries.

"They're not coming in to get medication refills," Weber said. "They're not coming in to get their blood pressure checked." Nevertheless, some probably should have been treated elsewhere. The lowest-priority patients will wait, Browne said, "but I will get to them and they know it."

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