

**Impact of Pharmaceutical Marketing  
on Healthcare in the District of Columbia**

**Between Restoration and Restructuring:  
Expenditure Patterns  
in the Second Year of the Covid-19 Pandemic**



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## Executive Summary

This report compares marketing expenditures by manufacturers of prescription drugs and medical devices in the District of Columbia in 2020 and 2021 to the six years immediately preceding the onset of the Covid-19 pandemic, 2014-2019. It presents time profiles of expenditures by recipient type, nature of payment, medical specialty, manufacturer, and prescription drug or medical device.

The publicly available data are based on reports submitted by the manufacturers to the Open Payments program, which is administered by the Centers for Medicare and Medicaid Services.

### Notable Findings

- The number of payments by manufacturers of prescription drugs and medical devices to recipients in the District of Columbia in 2021 was 54% relative to the 2014-2019 average, up from 46% in 2020.
- The value of payments in 2021 was 79%, up from 75% in 2020.
- The number of payments to physicians in 2021 was 58%, up from 36% in 2020.
- The number of payments to hospitals in 2021 was 25%, down from 34% in 2020.
- The value of payments for travel and lodging and for food and beverage in 2021 was 25% and 57%, respectively, up from 4% and 30% in 2020.
- The value of payments for consulting and speaking engagements in 2021 was 94% and 82%, respectively, up from 90% and 43% in 2020.
- There was substantial variation in the decline of the value of payments by medical specialty, by manufacturer, and by prescription drug or medical device.
- Four of the five products whose marketing payment totals were not cut in 2020 were all medical devices used in surgical procedures; in 2021, the marketing payment totals for four of these five products were cut by 60 percentage points or more.

## I. Introduction

On February 25, 2020, the Centers for Disease Control and Prevention (CDC) announced that the Covid-19 epidemic was approaching pandemic status. On March 13, President Donald Trump declared a national emergency and the District of Columbia banned gathering of 50 persons or more (DC Policy Center, 2022). On March 30, the governors of Virginia and Maryland and the mayor of the District of Columbia issued stay-at-home orders. On May 28, the number of Covid-19 deaths in the United States reached 100,000 (American Journal of Managed Care, 2021). On December 11, the Food and Drug Administration (FDA) issues an Emergency Use Authorization (EUA) for the vaccine from Pfizer / BioNTech; on December 18, it issues an EUA for the vaccine from Moderna.

The pandemic shifted the priorities of the entire health care sector. Patients and providers of medical care postponed non-emergent procedures, and pharmaceutical manufacturers allocated funds towards the research, development, and marketing of products and services related to this new infectious disease.

Stay-at-home orders and social-distancing practices constrained how marketers could attempt to reach providers and patients. Providers converted to virtual formats or canceled altogether gatherings that would have been held in person.

This report offers an anatomy of the way manufacturers adjusted their marketing activities and expenditures in the first two years of the emerging pandemic. After the Covid-19 had reached most areas in the United States in the first quarter of 2020, the year 2021 was the first full year in which the Covid-19 pandemic affected the United States, including the District of Columbia.

This report highlights how the number and total value of payments in select expenditure categories, such as the provision of food and beverage or travel and lodging changed over the course of the first year of the Covid-19 pandemic and how they evolved in the second year.

The month-to-month time profiles of expenditures as well as the disaggregation of expenditures by recipient type, nature of payment, medical specialty, manufacturer, and prescription drug or medical device reveal how the disease burden and the response by health care providers imposed constraints and altered the incentives for specific marketing efforts.

The addition of data for the year 2021 allows for an examination which expenditure types reverted to their pre-pandemic averages at which speed. These data thus offer a first impression which of the changes observed in 2020 were likely transitory and which represented a permanent shift in expenditure patterns that may carry over into the post-pandemic period.

## II. Data Sources and Methods

To examine marketing expenditures, this report uses data sets compiled by the Open Payments program. The Open Payments program mandates that manufacturers report all “payments or other transfers of value made that are not in connection with a research agreement or research protocol” (Appendix A). It requires companies across the country to report gifts to physicians and teaching hospitals. The Physician Payments Sunshine Act of 2010 established the national Open Payments program, and it requires all pharmaceutical and medical-device manufacturers to report payments to physicians and teaching hospitals to the Centers for Medicare and Medicaid Services (CMS).

These data are available by year and jurisdiction. Payments to physicians and teaching hospitals are searchable online through Open Payments, allowing researchers to track patterns in gifts. Individual patients can see whether their physicians have accepted gifts from pharmaceutical companies.

This report is based on Open Payments marketing data of payments made to physicians and teaching hospitals in the District of Columbia between January 1, 2014, and December 31, 2021, the most recent year available. Data from 2013 were only available for the second half of the year and therefore omitted from this analysis.

Open Payments data, including physician names, are publicly available and were retrieved from this website: <https://openpaymentsdata.cms.gov/>. The website allows users to download subsets of the data. For the purpose of this report, the data were limited to payments to recipients in the District of Columbia.

All calculations, tables, and figures in this report were performed using version 17.0 of the Stata statistical software package.

### **III. Total Payments**

Between 2014 and 2019, the average number of payments by manufacturers of prescription drugs and medical devices to health care providers in the District of Columbia was 3,343 per month (Figure 1 top panel). The number of payments dropped precipitously in the second quarter of 2020 to fewer than 1,000 payments per month and then rebounded somewhat to average 1,538 payments per month, or 46% of its pre-pandemic level, for the entire year 2020. The recovery continued in 2021 with an average of 1,798 payments per month, or 54%.

Of note is the pronounced seasonality of the payments. In 2014-2019, the number of payments typically peaked in March or April and then again in October. This pattern was disrupted in 2020, as the Covid-19 virus started spreading in the United States in March of that year. Despite the sudden and severe disruptions to the marketing plans of pharmaceutical manufacturers in that year, the number of payments still reached its peak in October, in line with prior years. In 2021, January and February were the weakest months, October and November were the strongest months.

The seasonality of the total value of payments was as pronounced but less regular than the seasonality of the total number of payments (Figure 1 bottom panel). In the second half of the year, the value of all payments typically peaked in December.

In the first year of the pandemic, the value of total payments declined less than the number of payments. The average in 2014-2019 was \$1,428,859 per month. By contrast, the value of payments in 2020 was \$1,072,129 and thus 75% of the pre-pandemic average. As was the case for the number of payments, the value of payments was in line with pre-pandemic trends in January and February but then declined rapidly, reaching its low in May of 2020. The average value of payments in 2021 was \$1,126,064, or 79% of the pre-pandemic level. This figure is influenced heavily by the spike in the value of payments in December of 2021.

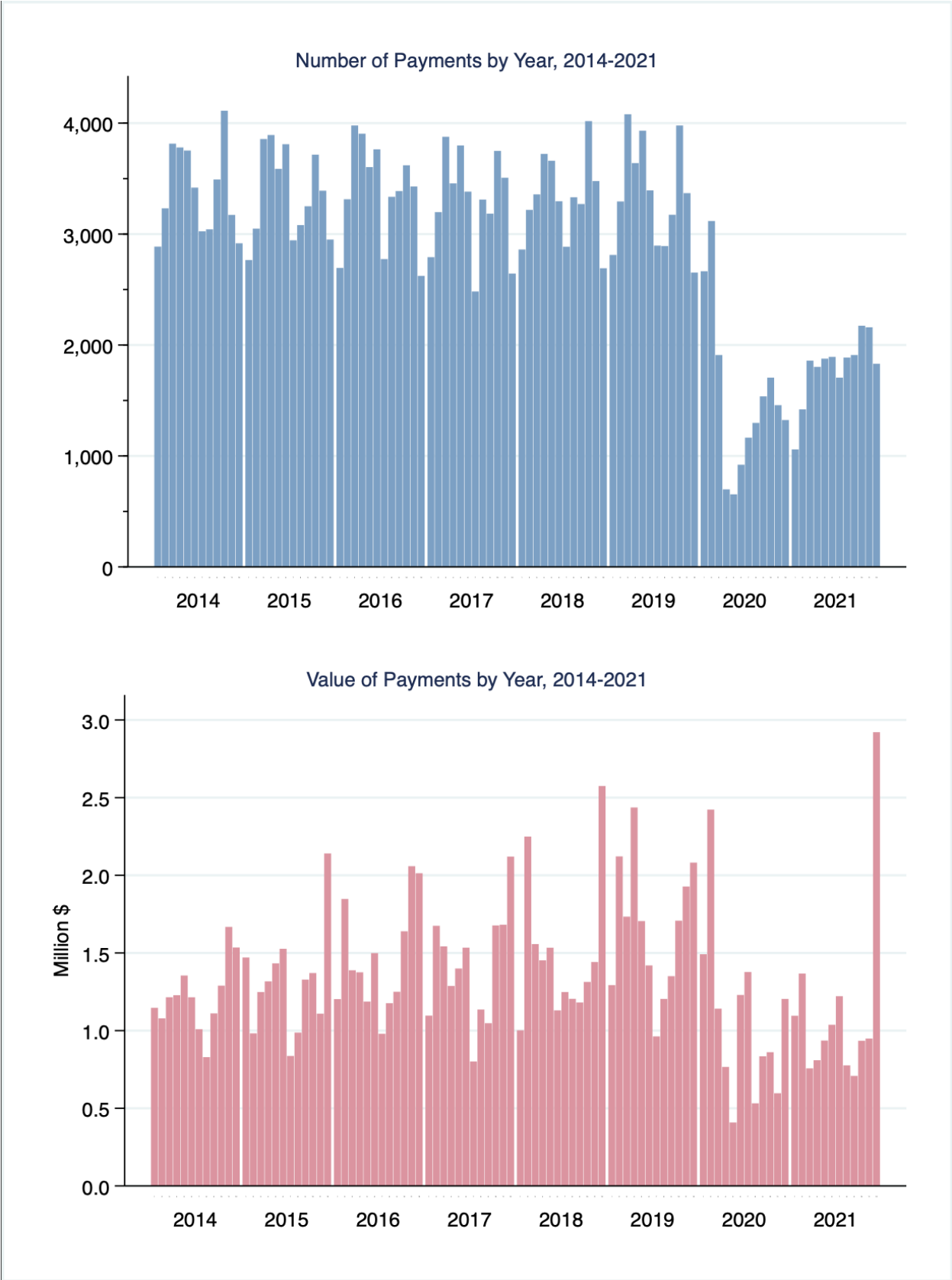


Figure 1. Number and Value of Payments by Year in the District of Columbia, 2014-2021



## **IV. Payments by Recipient Type**

In the years 2014-2019, 238,357 or 98.80% of payments reported to the Open Payments program went to physicians, the remaining 2,886 or 1.20% went to teaching hospitals.

### **Payments to Physicians**

In the pre-pandemic period 2014-2019, the number of payments to physicians broadly remained between 3,000 and 4,000 per month with little variation across years (Figure 2 top panel).

There was a marked seasonality of the number of payments over the course of the year. The number of payments peaked in March and October and was lowest in January, July, and December.

The red line shows the number of payments to physicians in 2020. Payments were tracking the pre-pandemic trend in January and February but then started to decline sharply in March to reach a low in April. In the subsequent months, the numbers began to recover slowly.

The orange line shows the number of payments to physicians in 2021. The March 2021 figure was nearly identical to the March 2020 figure, but the April 2021 figure was nearly triple the April 2020 figure. The extent of the recovery was somewhat smaller in the second half of 2021.

To filter out the influence of seasonal variation in the number of payments, the bottom panel of Figure 2 shows for each month the number of payments in 2020 and 2021, respectively, relative to the 2014-2019 average.

As suggested by the top panel, payments were tracking the pre-pandemic volume at nearly 100% in January and February of 2020, then dropped to 50% in March and to less than 20% in April and May. In the subsequent months, the volume increased to stabilize between 40% and 50% of pre-pandemic levels in the second half of 2020.

In 2021, the recovery continued nearly monotonically throughout the year, starting at just under 40% in January and ending at just under 70% in December, compared to just under 50% in December of 2020.

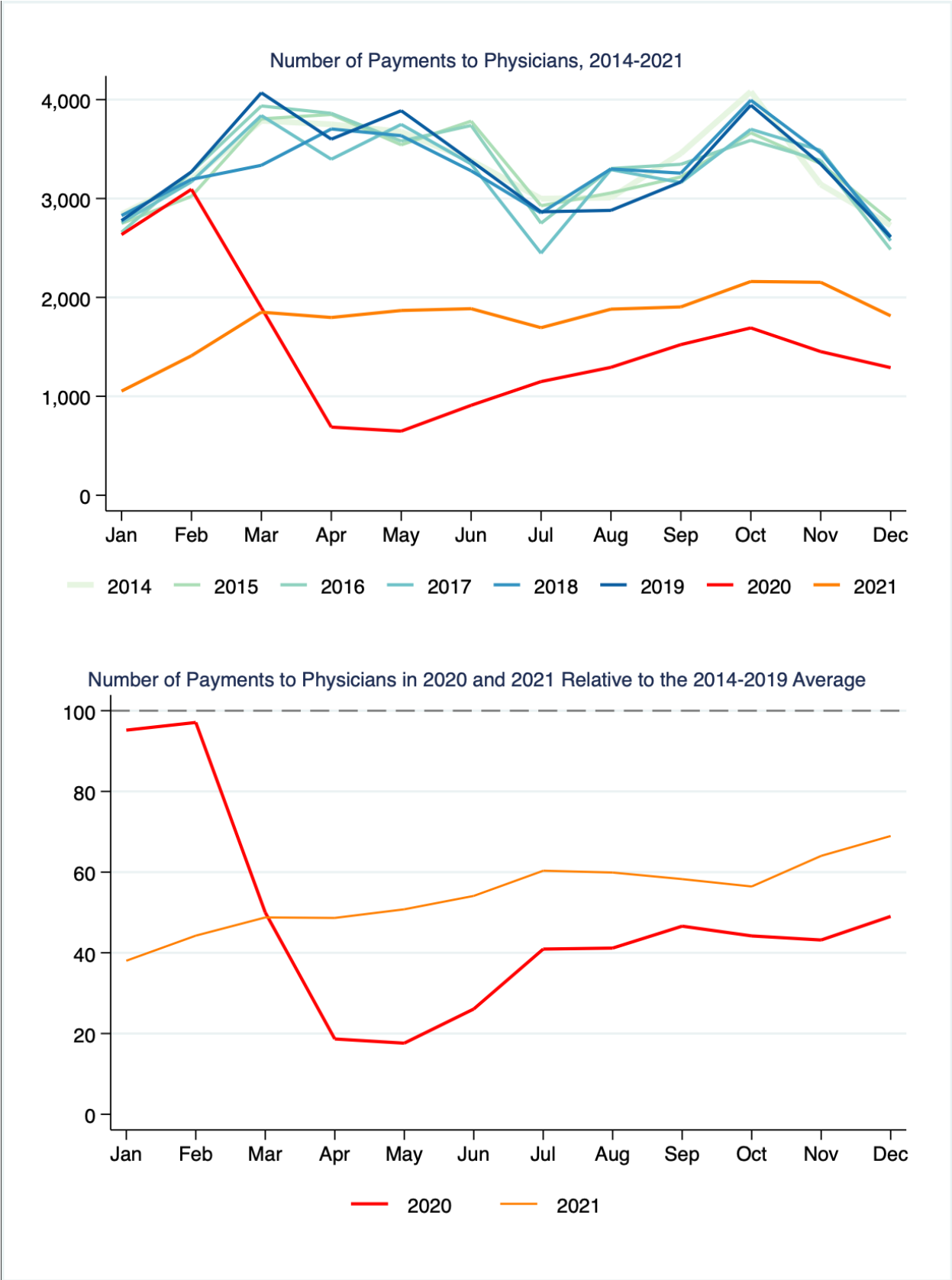


Figure 2. Payments to Physicians by Month, 2014-2021

## Payments to Teaching Hospitals

Manufacturers of prescription drugs and medical devices reported payments to nine teaching hospitals over the observation period (Table 1).

**Table 1. Number of Payments to Teaching Hospitals, 2014-2021**

Hospitals	2014	2015	2016	2017	2018	2019	2020	2021	Ratio 2020*	Ratio 2021*
<b>Children's National</b>	23	26	36	37	32	31	19	0	62	0
<b>George Washington Univ</b>	119	106	114	54	50	29	28	19	36	24
<b>Georgetown University</b>	122	85	182	195	52	33	23	16	21	14
<b>Howard University</b>	44	40	42	49	31	34	2	8	5	20
<b>National Rehabilitation</b>	5	3	2	0	2	4	0	0	0	0
<b>Providence</b>	8	47	32	10	7	8	10	0	54	0
<b>Sibley Memorial</b>	15	9	0	2	9	7	14	3	200	43
<b>St. Elizabeth's</b>	0	0	0	0	0	1	1	0	600	0
<b>Washington Hosp Ctr</b>	267	239	124	117	156	170	88	61	49	34
<b>Total</b>	603	555	532	464	339	317	185	107	41	23

\* Volume relative to the 2014-2019 average (percent)

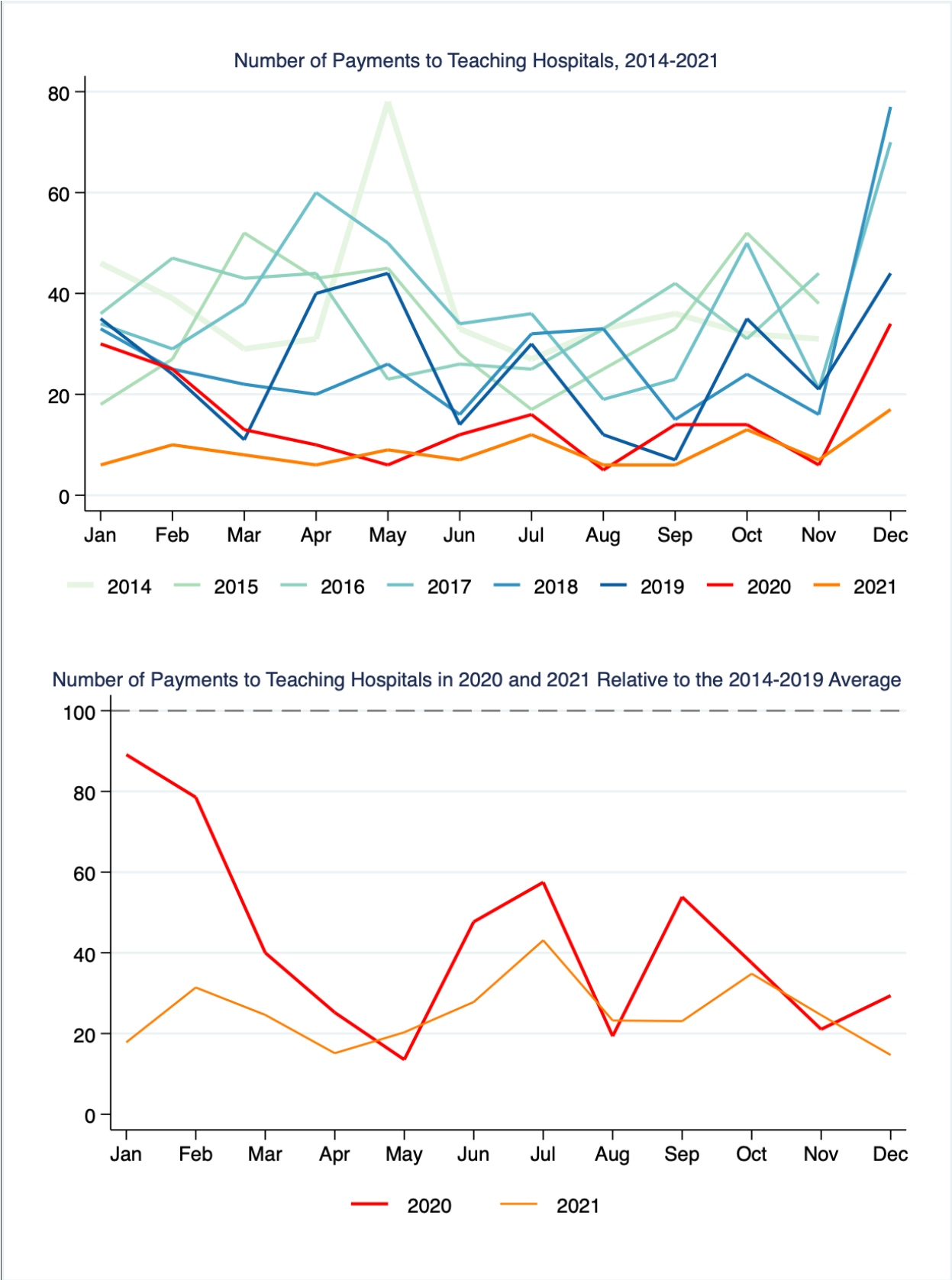
Washington Hospital Center, Georgetown University Hospital, and George Washington University Hospital received the most payments both in the pre-pandemic period (2014-2019) and in 2020. St. Elizabeth's Hospital, the National Rehabilitation Hospital, and Sibley Memorial Hospital received the fewest payments. These hospitals each recorded no payment in at least one year before the pandemic.

The number of payments to all teaching hospitals in 2020 and 2021 were 41% and 23%, respectively, of the 2014-2019 average. There was substantial variation in the declines in payments experienced by the nine teaching hospitals. Among the six hospitals that received at least one payment in each pre-pandemic year, Howard University Hospital experienced the largest drop in payments, a decline of 95% in 2020. In contrast, Children's National Hospital saw its payments decline by less than 44% in 2020 but reported no payment in 2021. Relative to their 2020 level, the number of payments to George Washington University Hospital, Georgetown University Hospital, and to Washington Hospital Center declined by about a third.

These percentages overstate the impact of the pandemic on payment volume somewhat, as the number of payments had been declining in each year before 2020 so that in 2019 manufacturers made only half as many payments as in 2014 (Figure 3 top panel).

On a seasonality-adjusted basis, payments to teaching hospitals declined sharply in the first half of 2020 to a low of 14% in May, rose above 40% in June and September, then fell below 40% in October through December (Figure 3 bottom panel).

In 2021, the variability of monthly payment volume was less pronounced but remained at a lower level, relative to the pre-pandemic average, than in 2020. Only in July did the number of payments reach 40% of the pre-pandemic average. In fact, the 2021 levels were below the 2020 levels in six out of the nine months between April and December.



**Figure 3. Payments to Teaching Hospitals by Month, 2014-2021**

## V. Payments by Nature of Payment

The pattern of payments over the course of the first two years of the pandemic varied substantially across the different purposes for which the payments were made (Figure 4). These time profiles reveal how quickly manufacturers adjusted their marketing activities as the pandemic reached the District of Columbia and as public agencies and private organizations implemented measures in response to the increasing rates of community transmission of the Covid-19 virus. These time profiles also show if and how fast manufacturers raised the number of payments for different purposes later in the year and thus how fast the recipients of different expenditure types were able to adjust.

Payments for three expense categories that reflect in-person events – food and beverage, space rental, travel and lodging – declined sharply as soon as the Covid-19 virus was presumed to have reached most parts of the country in March of 2020.

Payments for space rental started to decline already in February and continued declining until they reached a minimum in May. In the subsequent months, payments for space rental increased slowly and finished the year at 40% of the pre-pandemic average. Payments for food and beverage and for travel and lodging started declining in March and reached a minimum in April and May, respectively. While payments for food and beverage recovered somewhat and ended the year at about 50% of the pre-pandemic average, payments for travel and lodging remained depressed well below 20% throughout the remainder of the year 2020.

In 2021, the number of payments in the “food and beverage” and “travel and lodging” categories increased, respectively, from less than 10% and 50% in January to about 50% and 70% of their pre-pandemic level. The number of payments in the “space rental” category remained below 20% for most of 2021 but showed a sharp increase in November and December.

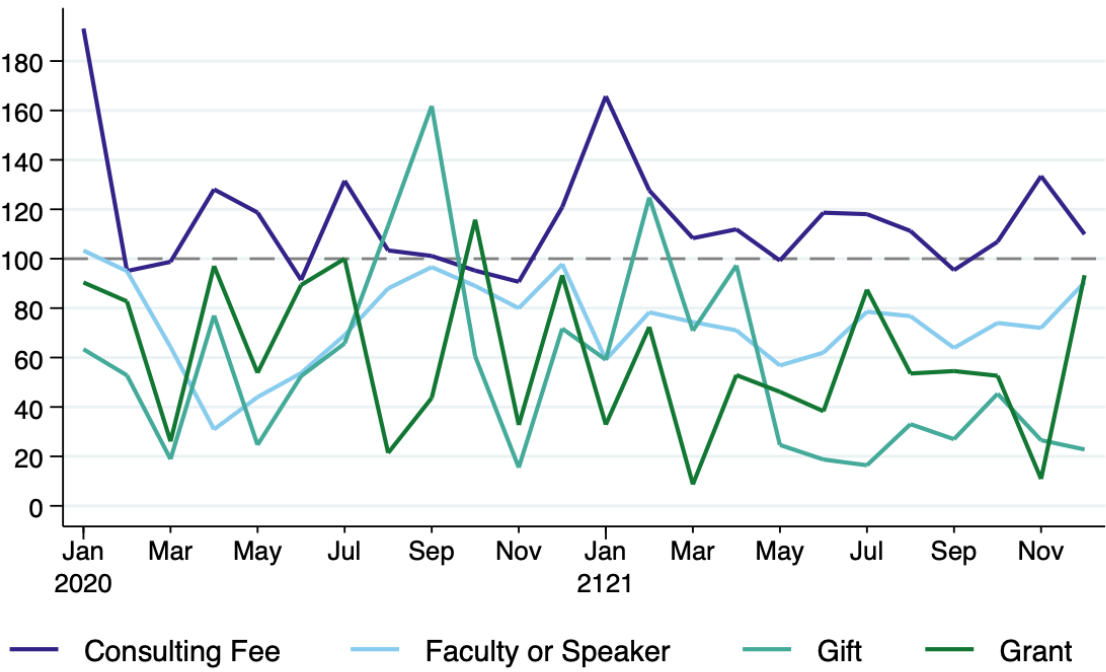
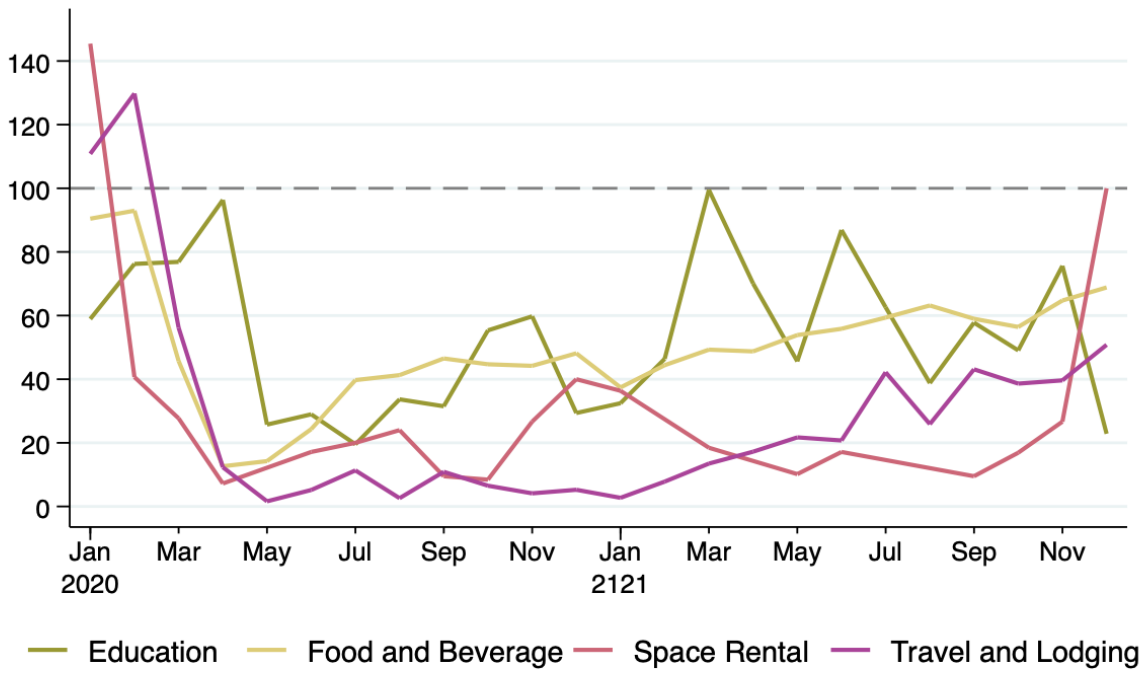
By contrast, payments for educational programming rose in the first four months of 2020 and nearly reached the pre-pandemic average in April of that year. As payments in the aforementioned categories had declined sharply by that time, it is possible that manufacturers sought to boost educational programming, perhaps delivered in an online format, as a substitute for the three categories that reflect in-person events. By May of 2020, the payment volume in this category had dropped to 30% but started to rise in August and continued to increase in 2021, albeit with substantial month-to-month variation.

In 2020, Payments for faculty and speaking engagements dropped from above-average levels in January and February to a low about 30% in April but regained their pre-pandemic level in September. This pattern may reflect the switch from in-person to online-only formats for these services. In 2021, the payment pattern is less variable month-to-month: it remains between

60% and 80% of pre-pandemic levels in all months except December. Payments for gifts and grants, which disproportionately went to teaching hospitals rather than individual physicians, were below the 2014-2019 average even in the first two months of 2020 but also spiked briefly in April. The small numbers of these two expense categories are reflected in the month-to-month variation. Payment volume in both categories remained significantly below pre-pandemic levels in 2021: Starting in May 2021, the number of gifts barely exceeded the 40% mark throughout the remainder of the year.

Consulting services appear to be the one category that has been immune to the pandemic-related disruptions is. After February 2020, the monthly number of consulting engagements remained stable in both 2020 and 2021 and in fact exceeded pre-pandemic levels in select months.

Number of Payments in 2020 and 2021 Relative to the 2014-2019 Average by Nature of Payment



100 = average number of payments 2014-2019

Figure 4. Payments in 2020 - 2021 Relative to the 2014-2019 Average, by Nature of Payment

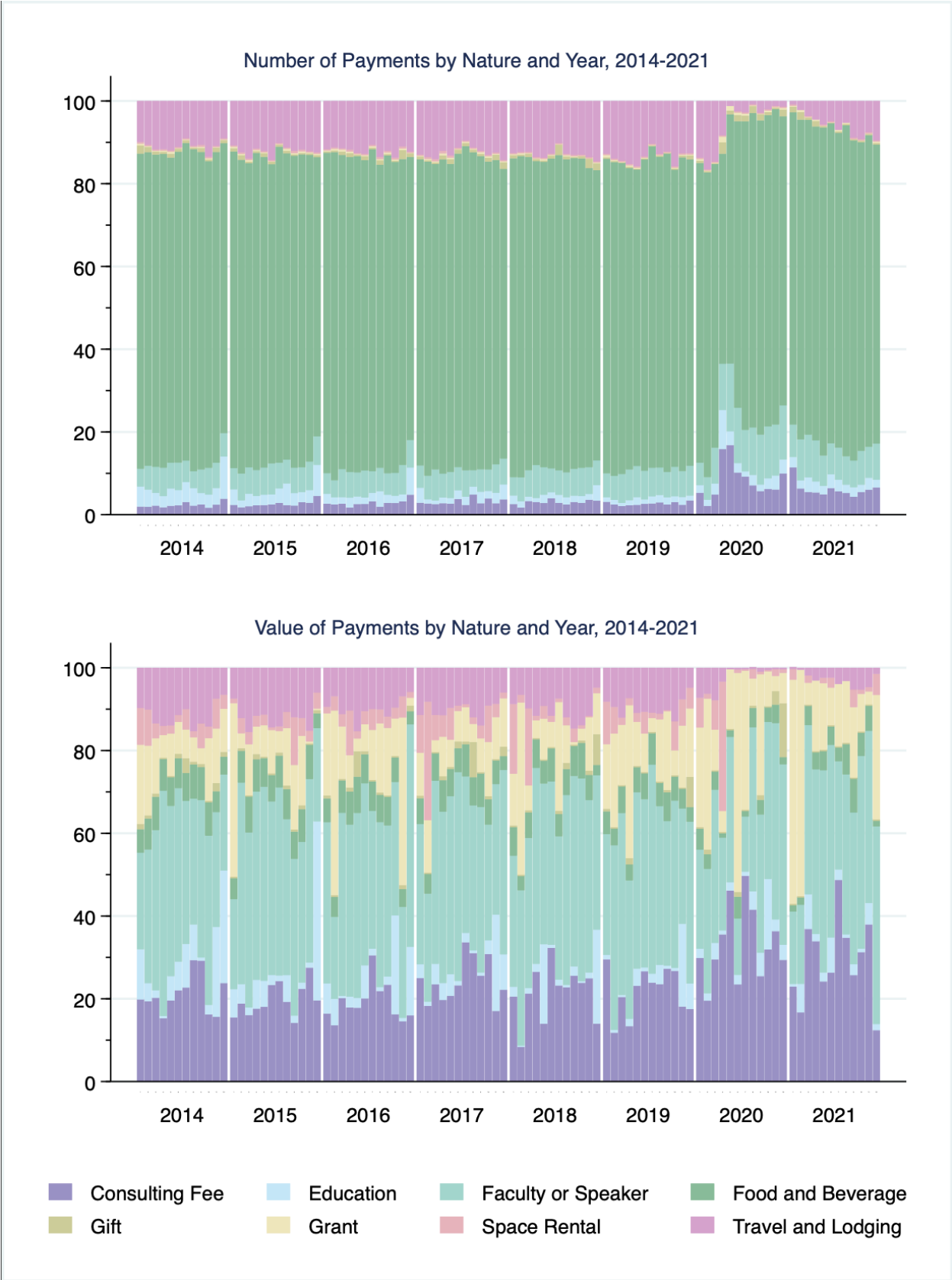


The different time profiles of the expenditure categories are reflected in the distribution of the number of payments by nature and year (Figure 5 top panel). The significant shift in the composition of the expenditure categories is most salient for April and May of 2020, when the number of payments in the “food and beverage” category was cut in half and payments in the “travel and lodging” category nearly ceased entirely, while the number of payments for consulting services, educational programs, and speaking engagements spiked. In 2021, the number of expenditures in the “travel and lodging” category gradually increased as a share of all payments but remained short of its pre-pandemic share. After the initial spike in the first half of 2020, the number of consulting engagements declined but its share of all payments remained more than twice as large in 2021 compared to its pre-pandemic average.

The bottom panel of Figure 5 shows that in May 2020, pharmaceutical manufacturers cut sharply the fraction of their marketing budgets that were allocated to the “travel and lodging” category. The share increased gradually throughout the remainder of 2020 and throughout 2021 but did not reach its pre-pandemic level. By contrast, the shares allocated to grants and to consulting services increased significantly in 2020. These increased shares were sustained in 2021.

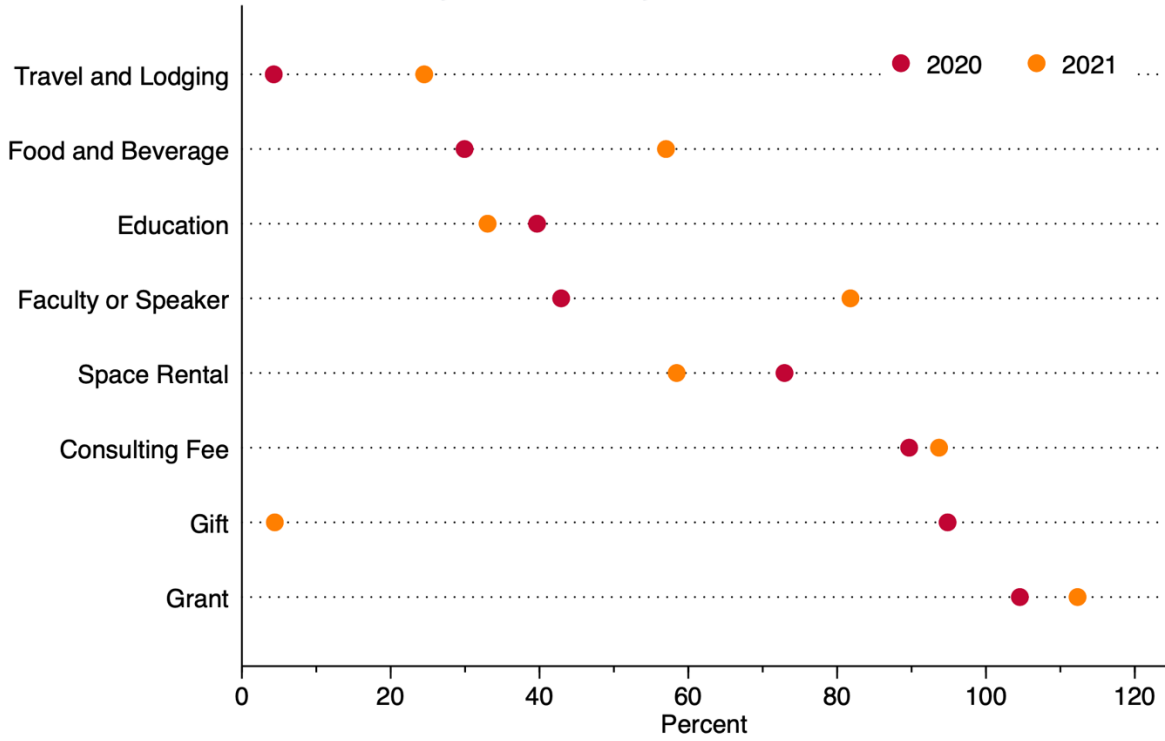
A comparison of the total value of payments for the years 2020 and 2021 relative to the average of the pre-pandemic three-year 2017-2019 average shows significant variation across expense categories (Figure 6).

In the months March through December of 2020, payments for travel and lodging and for food and beverage declined to 10% and 32%, respectively. These payments rebounded to 23% and 57%, respectively, in 2021. Payments for educational activities and for faculty or speakers declined to less than 50% in 2020 but their trajectories in 2021 diverged: Payments for education declined further, while payments for faculty and speakers rose to nearly 80%. Payments for space rental declined to 71% in 2020 and then declined further to 45% in 2021. By contrast, at 90%, gifts and consulting fees remained nearly at their pre-pandemic levels in 2020. But the total reported value of payments categorized as gifts declined to less than 10% in 2021. The contrarian category was grants: Total payments in the form of grants rose above their pre-pandemic levels in 2020 and then rose further in 2021.



**Figure 5. Distribution of Number and Value of Payments by Nature and Year, 2014-2021**

### Value of Payments in 2020 and 2021 Relative to the 2017-2019 Average by Nature of Payment



All years include only the months April through December to filter out the 2020 pre-pandemic months (January - March).

**Figure 6. Value of Payments in 2020 and 2021 Relative to the 2017-2019 Average  
by Nature of Payment**

## VI. Payments by Medical Specialty

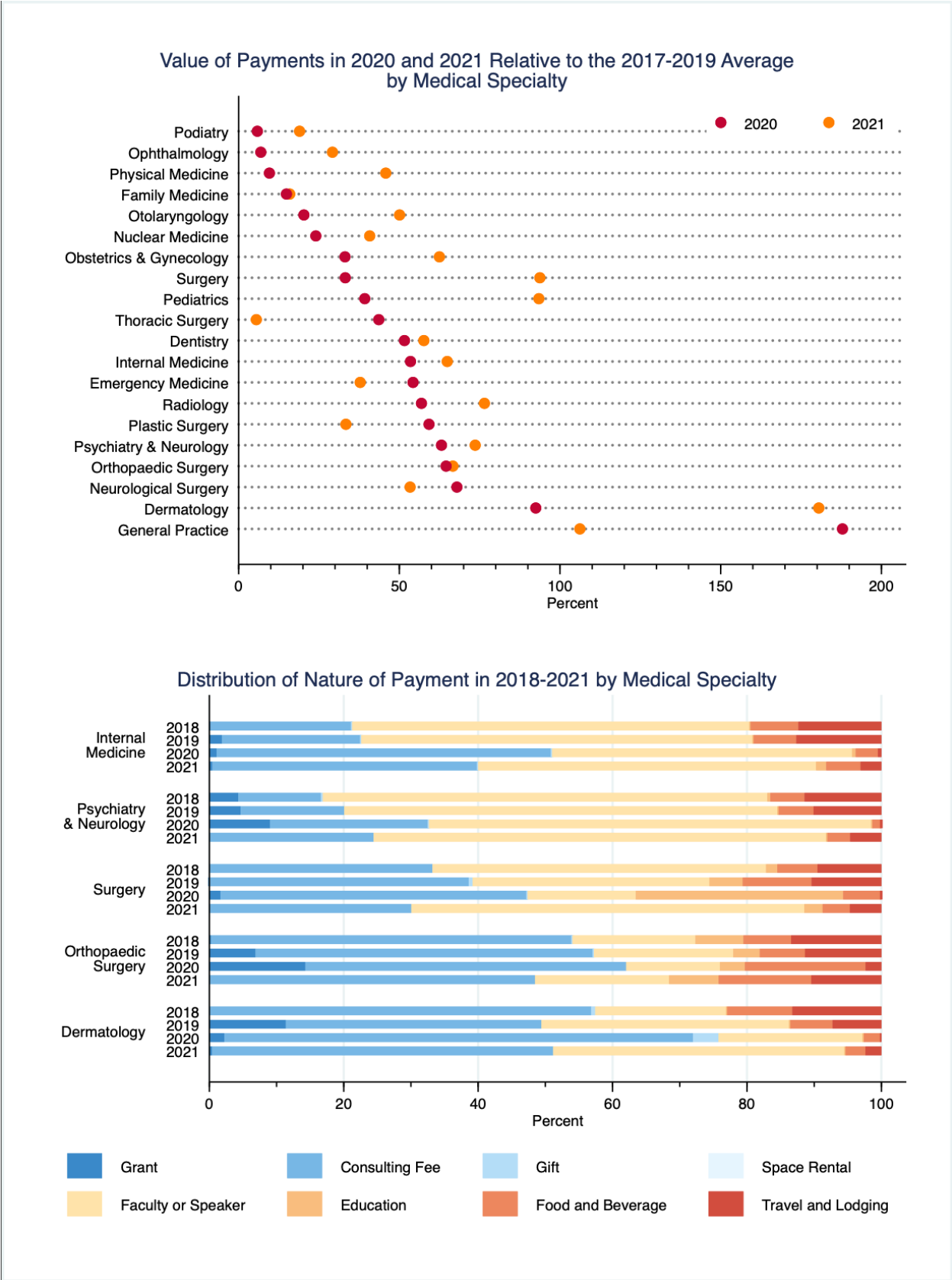
There was substantial variation in the decline in the sum of payments received by the top twenty medical specialties, as measured by their total receipts between April and December of 2020 and 2021 relative to the pre-pandemic period 2017-2019 (Figure 7 top panel). Physicians and practitioners in the fields of podiatry, ophthalmology, and physical medicine (rehabilitation) received no more than 10% in 2020 compared to the average of the three years immediately preceding the first year of the pandemic (red dots). Payments recovered for all three specialties in 2021, however, reaching just under 50% for physical medicine (orange dot). Overall, exactly 10 of the top 20 medical specialties experienced a decline in the total volume of payments of more than 50% in 2020. Payments to all ten specialties recovered in 2021, reaching about 90% of the pre-pandemic level for surgery and pediatrics.

The two medical specialties with the smallest declines in 2020 were dermatology (91%) and general practice, whose total payments received nearly doubled to 188%. In 2021, total payments to general practitioners dropped to close to their pre-pandemic level, while total payments to dermatologists rose to 180%.

One possible reason for the variation in the decline of payments is that the medical specialties differed in their pre-pandemic reliance on the various expenditure categories. The bottom panel of Figure 7 shows the distribution of the nature of payment for the five largest medical specialties, as measured by total receipts, in the months April through December for the two years immediately preceding the pandemic, 2018 and 2019, and the first two years of the pandemic, 2020 and 2021.

In the first year of the pandemic (2020), total payments for consulting remained constant or increased in all five specialties. The increases were most pronounced in internal medicine and dermatology. Grants increased sharply in psychiatry and neurology and in orthopedic surgery. By 2021, payments for consulting and especially payments in the form of grants were declining, often falling below the levels registered in the two most recent pre-pandemic years.

As suggested by Figure 6, payments for travel and lodging dropped to near-zero levels in all five specialties, and payments for food and beverage dropped sharply as well. By 2021, total payments in both categories had recovered somewhat but the combined payments for travel and food only exceeded their 2018-2019 levels for orthopedic surgery.



**Figure 7. Payments in 2020 and 2021 Relative to the 2017-2019 Average by Medical Specialty**

## VII. Payments by Manufacturer

Of the 20 manufacturers that paid the most in the months April through December in the three years preceding the first year of the pandemic, all but one, Biogen, reduced their spending in 2020 (Figure 8 top panel). Merck and Boston Scientific reduced their spending by 78 and 80 percent, respectively. By comparison, Pfizer, which is one of the manufacturers of Covid-19 vaccines approved by the Food and Drug Administration, barely reduced its spending at all (98%). Thirteen out of the top twenty manufacturers reduced their spending by 50% or more.

In 2021, five manufacturers maintained their total reported spending in the close vicinity of their 2020 levels. In relative terms, Boston Scientific, Abbvie, Cook Medical, and Neurocrine raised their total payments the most in 2021, with Cook and Neurocrine reaching about 90% of their pre-pandemic levels. Boston Scientific raised its 2021 payments total to 178% of its pre-pandemic level. Abbott, Gilead, Pfizer, and especially Biogen reduced their total payments the most in 2021.

The bottom panel of Figure 8 shows that in 2020 all five top manufacturers, as measured by their annual payment totals, reduced payments for travel and lodging.

Medical device makers Medtronic and Boston Scientific reported the largest shares of payments constituted by grants in the pre-pandemic years. Medtronic and Gilead, the two manufacturers reporting the largest payment totals, raised substantially their payments in the form of grants in 2021 and 2020, respectively. Abbot and GlaxoSmithKline raised their payments in the form of consulting fees.

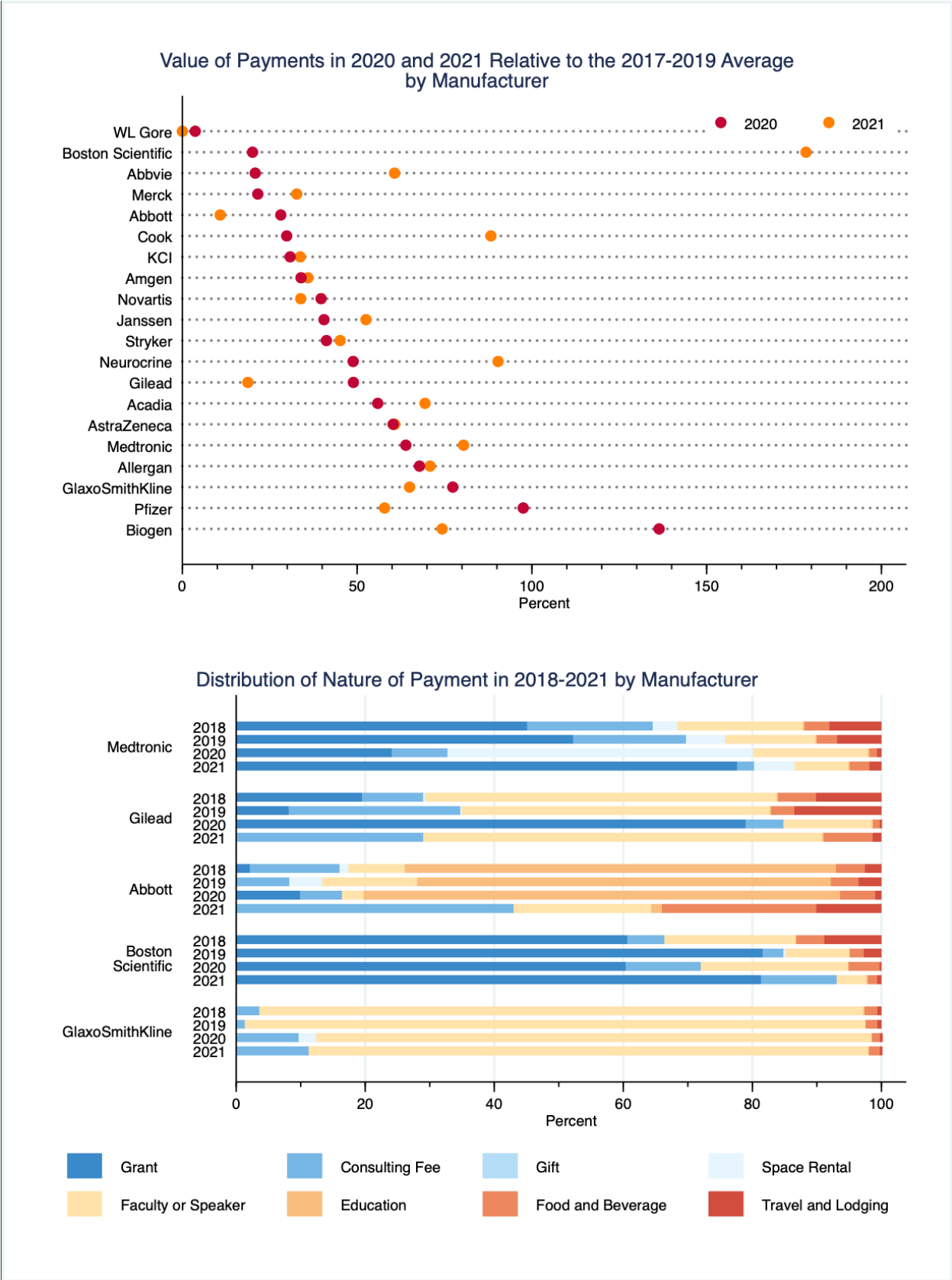


Figure 8. Payments in 2020 and 2021 Relative to the 2017-2019 Average by Manufacturer

## VIII. Payments by Prescription Drug or Medical Device

In 2020 manufacturers cut their marketing expenditures for all but five of the twenty prescription drugs and medical devices that recorded the largest payment totals. Of note, four of the five products whose marketing payment totals were not cut in 2020 were all medical devices used in surgical procedures. The exception was Rytary, a combination of two medications used to manage the symptoms of Parkinson's disease.

Except for Corevalve (96%) Acthar (53%), the marketing totals for the remaining products were all reduced by at least 50% in 2020. The marketing totals of seven of the top twenty drugs or devices were reduced by more than 80%.

There was no clear association between the total drug- or device-level marketing payments in 2020 and 2021. The total marketing expenditures for the five drugs or devices whose budgets were increased in 2020 declined in 2021 for all but one – SIR-Spheres. The marketing total for Prevena dropped to 6% in 2021 relative to its pre-pandemic average. The totals for Impella and Dupixent were raised from 0% and 34% in 2020 to 93% and 148% in 2021, respectively.

Consistent with the figures above, expenditures for travel and lodging were practically nil in 2020 for four of the top five drugs or devices, as measured by their pre-pandemic payment totals. The exception was the Da Vinci Surgical System. The share allocated to travel and lodging reverted to its pre-pandemic average for Ingrezza, a medication used to treat tardive dyskinesia, Nuplazid, an antipsychotic medication, and the da Vinci system.

In 2020, the manufacturers of Nuplazid and Dupixent, a medication used for allergic diseases, raised substantially the share of payments allocated to consulting services but decreased those shares 2021. (All 2019 payments made to promote Invisalign, a teeth-straightening treatment, were allocated to the “food and beverage” category and recorded in the first quarter of that year.)

Of note, the largest share of payments to promote the da Vinci system, the only device among the top five, was represented by payments for educational activities. This share grew to about 90% in 2020, then shrank to less than 70% in 2021.



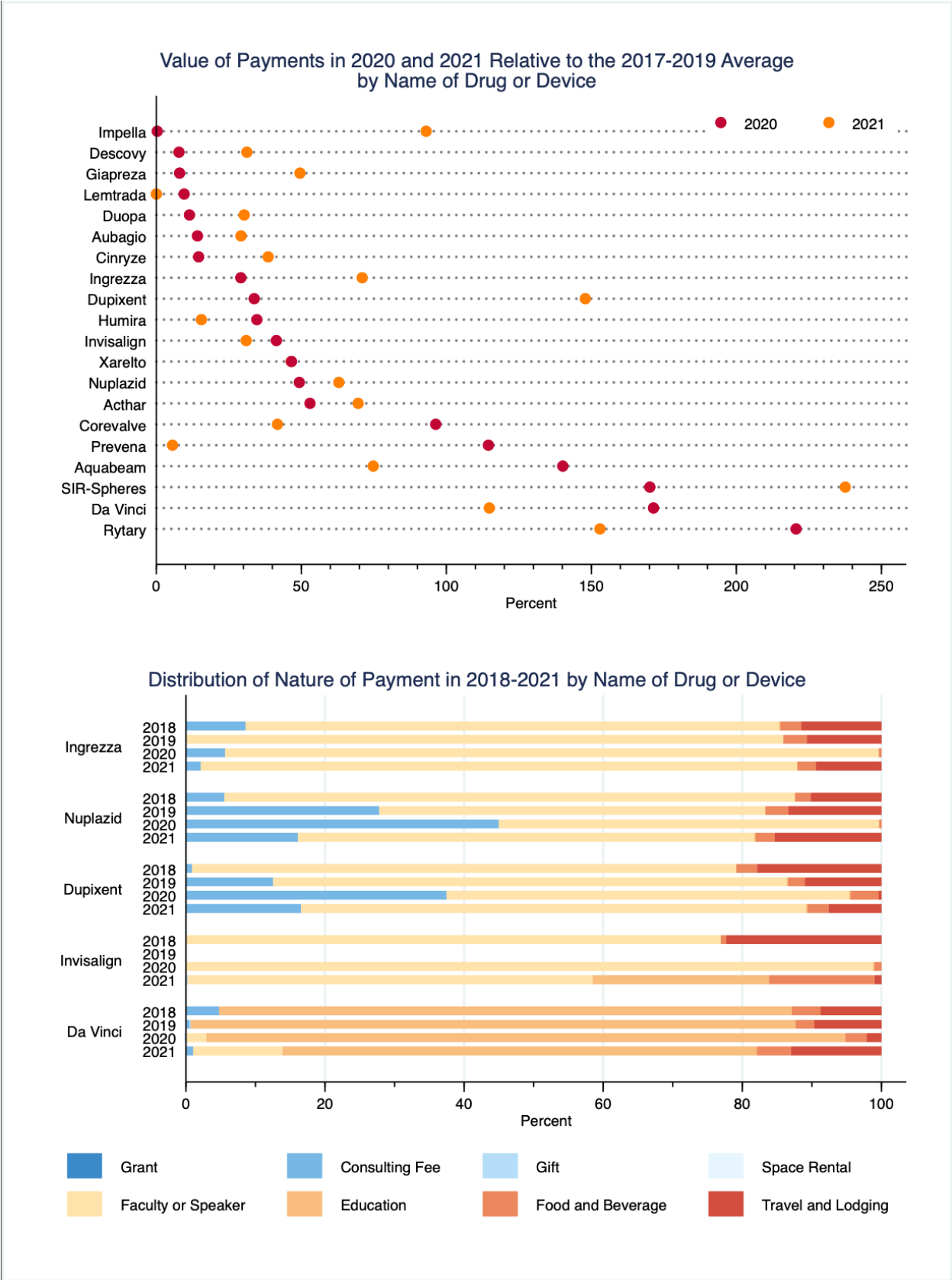
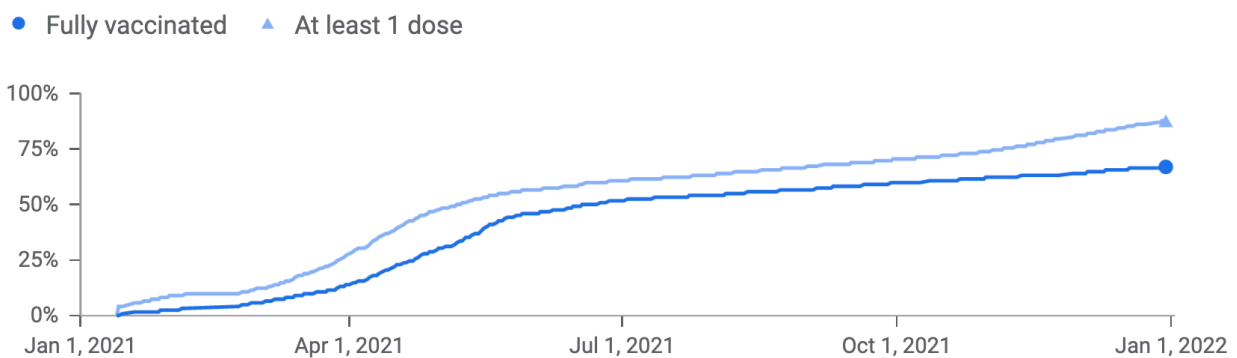


Figure 9. Payments in 2020 and 2021 Relative to the 2017-2019 Average by Drug or Device

## IX. Discussion

The year 2021 was the first full year of the Covid-19 pandemic in the United States. It also was the year in which vaccines against the disease became available for the general public. After issuing emergency use authorizations (EUAs) for the vaccine from Pfizer / BioNTech on December 11, 2020, and for the vaccine from Moderna on December 18, 2020, the Food and Drug Administration (FDA) issued its third EUA, for the vaccine from Janssen, on February 27, 2021 (U.S. Department of Health & Human Services, 2023). On March 2, 2021, teachers, school staff, and childcare workers became eligible for COVID-19 vaccinations, and on April 19, 2021, eligibility was expanded to all people aged 16 and older.

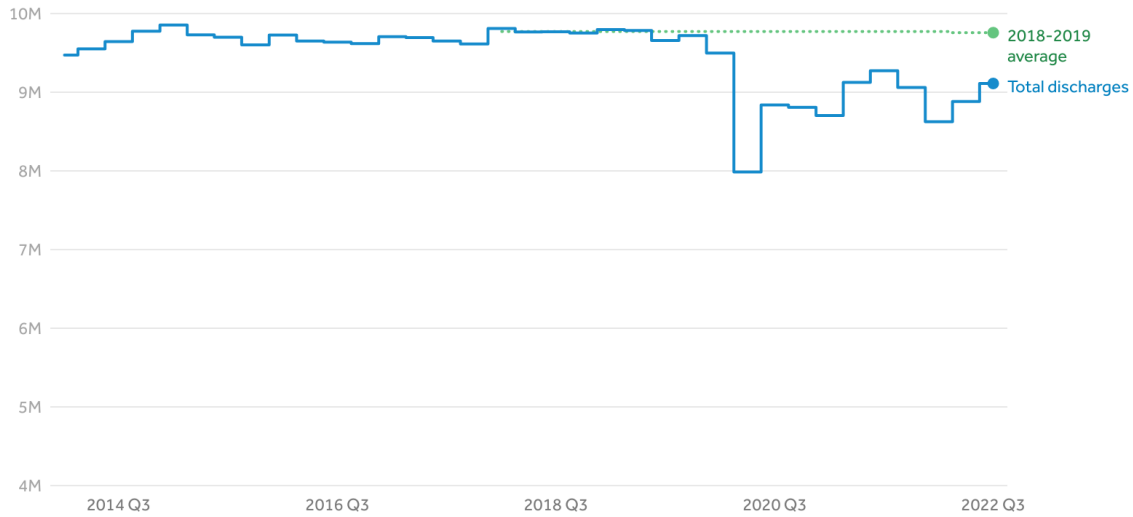
By April 1, 2021, 14% were fully vaccinated; by July 1, 2021, that figure had increased to 52%; by October 1, 2021, the figure had increased to 60%; and by December 30, 2021, that figure had reached 67% (Figure 10).



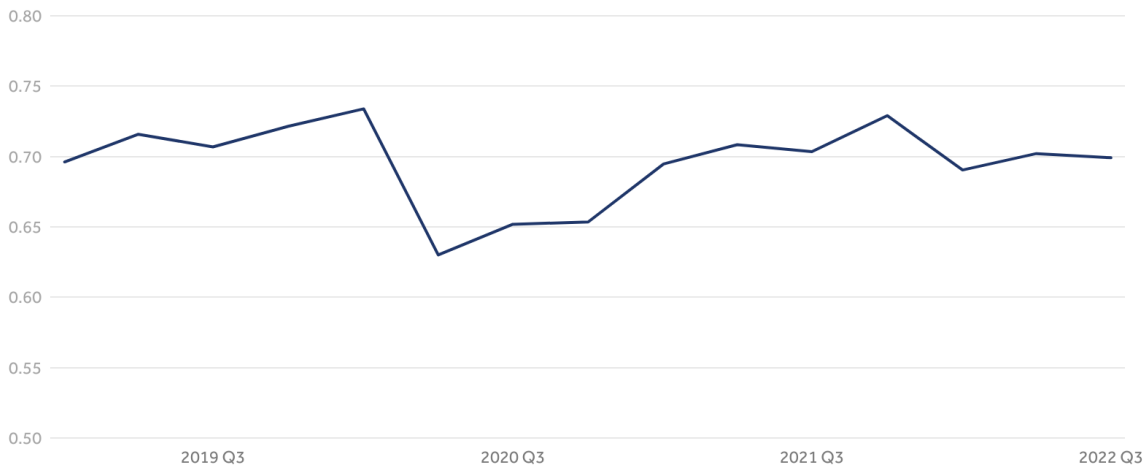
**Figure 10. Percentage Vaccinated Against Covid-19, District of Columbia, 2021 (Source: Google)**

The growing percentage of people vaccinated against the disease allowed patients and health care practitioners to return to hospitals and physician offices (Figures 11 and 12).

Between the first and second quarters of 2021, the number of hospital discharges nationwide rose by 4.6% from 8.7 million to 9.1 million. By comparison, between the first and second quarters of 2019, the last year before the onset of the pandemic, hospital discharges were practically unchanged at 9.8 million. The number of hospital discharges rose to 9.3 million in the third quarter of 2021 and then fell back to 9.1 million in the fourth quarter – about 9.4% below the level reached in the fourth quarter of 2019, 9.7 million.



**Figure 11. Hospital Discharges per Quarter, United States, 2014 - 2022 (McGough et al. 2023)**



**Figure 12. Physician Encounters per Member per Month, 2019 - 2022 (McGough et al. 2023)**

By contrast, the number of physician encounters per member per month rose from 0.69 in the first quarter of 2021 to 0.71 in the second quarter of 2021. By comparison, the corresponding figures for the first and second quarters of 2019 were 0.7 and 0.72, respectively, or about 1.5% higher than in the comparable period of 2021.

The experience to date suggests that so far hospital stays have not returned to their pre-pandemic levels, while physician encounters have. These divergent trends may point to two distinct response patterns:

- On the one hand, to the extent that the decline in health care use were transitory in the immediate aftermath of the onset of the pandemic and before vaccines became available, pent-up demand for procedures that were deferred should *restore* this type of health care use back to its pre-pandemic level or even above it.
- On the other hand, the sudden and substantial shift away from in-person encounters and towards digitally enabled care may have prompted health care providers to *restructure* the way they deliver care and thus may permanently depress the use of certain services and delivery modes in years to come.

A comparison of the expenditure patterns in 2020 and 2021 offers preliminary clues as to which response pattern dominates.

Relative to the pre-pandemic average, the number of payments to physicians grew from 36% in 2020 to 58% in 2021. Similarly, after declining to 4% and 30% in 2020, respectively, the value of payments for travel and lodging and for food and beverage rose to 25% and 57% in 2021. Thus, while both the number and total value of expenditures for select recipient groups and categories rebounded modestly in 2021, it remains to be seen if these trends continue or if these spending levels will remain at a permanently reduced level.

By contrast, the value of payments for faculty and speaking engagements fell to 43% in 2020, then recovered to 82% in 2021. Similarly, payments to practitioners in the medical specialties surgery and pediatrics fell to 33% and 39%, respectively, in 2020 but then rose to 94% and 93%, respectively, in 2021. Boston Scientific reduced its total reported marketing expenditures in the District to 20% of its pre-pandemic spending in 2020 but then raised it to 178% in 2021. In 2021, Boston Scientific also raised the shares of expenditures allocated to grants and consulting engagements and reduced the shares allocated to food and beverage and travel and lodging. After slashing total expenditures to 30% and 49%, respectively, in 2020, Cook Medical and Neurocrine Biosciences raised their spending to 88% and 90%, respectively.

The large variation in expenditure trends and allocations to expenditure categories among pharmaceutical products and medical devices does not yet allow for definitive conclusions. This variation may reflect the large diversity of assessments that manufacturers may have with respect to the effectiveness of marketing expenditures. By disrupting patterns of health care use, the pandemic also has disrupted patterns of diagnosis and treatment. As the disease profile of the population has changed, so has the demand for certain medical products.

Finally, as manufacturers began to experiment with and scale up virtual and online methods of communication and sales in 2020, in 2021 some may have reoriented their marketing budgets permanently towards digital – and less costly – channels, such as online advertising, social media, and telemedicine.

## X. References

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## Appendix A. Open Payments Program Requirements

The Patient Protection and Affordable Care Act of 2010 established the Open Payments system through the Centers for Medicare and Medicaid Services. The regulation was promulgated on February 8, 2013, requiring data collection beginning on August 1, 2013. 42 CFR Parts 402 and 403 requires<sup>1</sup> “applicable manufacturers of drugs, devices, biologicals, or medical supplies covered by Medicare Medicaid or the Children’s Health Insurance Program (CHIP) to report annually to the Secretary [of the Department of Health and Human Services] certain payments or transfers of value provided to physicians or teaching hospitals...”

(a) General rule:

(1) Direct and indirect payments or other transfers of value provided by a manufacturer to a covered recipient during the preceding calendar year, and direct and indirect payments or other transfers of value provided to a third party at the request of or designated by the applicable manufacturer on behalf of a covered recipient during the preceding calendar year, must be reported by the applicable manufacturer to CMS on an annual basis.

(b) Covered Products:

(1) Any drug, device, biological, or medical supply that is eligible for payment by Medicare, Medicaid, or CHIP either individually or as a part of a bundled payment (such as the inpatient prospective payment system), and requires a prescription to be dispensed (for drugs and biologicals) or requires premarket approval by, or premarket notification to, the U.S. Food and Drug Administration (for devices, including medical supplies that are devices).

(c) Recipients for whom gifts must be reported:

(1) Physicians, which include those with credentials of Doctor of Medicine, Doctor of Osteopathy, Doctor of Dentistry, Doctor of Dental Surgery, Doctor of Podiatry, Doctor of Optometry, or Doctor of Chiropractic Medicine.

(2) Teaching Hospitals that received payment for Medicare direct graduate medical education (GME), inpatient hospital prospective payment system (IPPS) indirect medical education (IME), or psychiatric hospitals IME programs during the last calendar year.

(c) Limitations. Certain limitations on reporting apply in the following circumstances:

(1) \$10, indexed to inflation, provided total payments to a recipient less than \$100 a year.

(2) Applicable manufacturers that had less than 10 percent gross revenue during the fiscal year preceding the reporting year from covered products are only required to report payments or other transfers of value related to covered products, not all products.

(3) Drug samples intended exclusively for distribution to patients are excluded from the reporting requirements (see rule for more)

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<sup>1</sup>Federal Register. 42 CFR Parts 402 and 403. Accessed December 15, 2021.  
<https://www.gpo.gov/fdsys/pkg/FR-2013-02-08/pdf/2013-02572.pdf> .

## **Appendix B. Previous Impact Reports**

Expenditure Patterns in the First Year of the Covid-19 Pandemic (2021)

Large Payments to Health Care Providers in the District of Columbia, 2014-2018 (2020)

The Marketing and Prescribing of Hepatitis C Drugs in the District of Columbia (2019)

The Marketing and Prescribing of Anticoagulants in the District of Columbia (2018)

The High Cost of Highly Promoted Drugs in the District of Columbia (2017)

Diabetes in the District of Columbia (2016)

Reporting Changes and the Effect of Gifts on Prescribing Behavior (2015)

Focus on Gifts to Organizations and Influential Physicians (2014)

Focus on Use of Antipsychotics in Seniors (2013)

Report on the Use of Antipsychotics in Children (2012)