

How did COVID-19 impact development assistance for health? – The trend for country-specific disbursement between 2015 and 2020

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Abstract: This study aimed to examine the changes that took place between 2015–2019 and 2020 and reveal how the COVID-19 pandemic affected financial contributions from donors. We used the Creditor Reporting System database of the Organization for Economic Cooperation and Development to investigate donor disbursement. Focusing on the Group of Seven (G7) countries and the Bill and Melinda Gates Foundation (BMGF), we analyzed their development assistance for health (DAH) in 2020 and the change in their disbursement between 2015 and 2020. As a result, total disbursements for all sectors increased by 14% for the G7 and the BMGF. In 2020, there was an increase in DAH for the BMGF and the G7 except for the United States. The total disbursement amount for the "COVID-19" category by G7 countries and the BMGF was approximately USD 3 billion in 2020, which was 3 times larger than for Malaria, 8.5 times larger for Tuberculosis, and 60% smaller for STDs including HIV/AIDS for the same year. In 2020 as well, the United States, the United Kingdom, Japan, Italy, and Canada saw their disbursements decline for more than half of 26 sectors. In conclusion, the impact of COVID-19 was observed in the changes in DAH disbursement for three major infectious diseases and other sectors. To consistently address the health needs of low- and middle-income countries, it is important to perform a follow-up analysis of their COVID-19 disbursements and the influence of other DAH areas.

Keywords: development assistance, health finance, COVID-19, low- and middle-income countries, Sustainable Development Goals

Introduction

When the novel coronavirus infection (COVID-19) caused a global pandemic, the director general of the World Health Organization (WHO) declared COVID-19 a Public Health Emergency of International Concern on January 30, 2020 (1). In response, donors worldwide increased their development assistance for health (DAH) funding. Early in the pandemic, the WHO and its partners launched a global framework titled "The Access to COVID-19 Tools (ACT) Accelerator" (2). Funding for the ACT Accelerator from governments, private sectors, and philanthropic and multilateral contributors collected commitments of USD 23.7 billion between April 2020 and the end of September 2022 (3). One study estimated that USD 54.8 billion was disbursed for DAH in 2020, of which USD 13.7 billion was allocated to COVID-19 health response (4). Meanwhile, during the pandemic, the

donors also experienced economic and social backlash (5,6). We anticipate disbursement changes for categories not related to COVID-19 in the health sector or other sectors, but such changes have not been subjected to a data-based review.

Given the rapidly changing patterns of DAH, donors and recipients must capture how much aid is given to evaluate whether the amount is sufficient, addresses needs, and is effective (7). The Organization for Economic Cooperation and Development (OECD) registers its official development assistance (ODA) in a database called the Creditor Reporting System (CRS). SEEK Development, a Germany-based consulting group, visualizes ODA data including health, and the US-based Institute for Health Metrics and Evaluation visualizes health financing based on the CRS and their methodology (8,9). "Countdown to 2015" and the "Muskoka Initiative" method are concept for estimating the value of aid that

targets reproductive, maternal, newborn, and child health (10,11). Those estimations would be helpful in finding the of health disbursements. However, comparing DAH against estimated disbursements in other sectors has been difficult because of the complexity of estimation. Hence, Institute of Global Health Policy Research developed a web-based online database (12) that can visualize country-specific disbursements for recipients. This database aims to investigate effective involvement in global health, especially in COVID-19 and the three major infectious diseases (HIV/AIDS, tuberculosis, and malaria), comparing nonhealth sectors or health categories.

DAH is a significant financial support for providing sustainable health services in low- and middle-income countries (LMICs). In 2016, the average estimated proportion of dependence on health financing out of total health spending was 25.4% in low-income countries and 3.2% in LMICs (13). Both a stable DAH and adequate DAH contributions based on urgent needs such as COVID-19 response are important components of healthcare financing in LMICs. This study sought to investigate the change in disbursements for DAH and other sectors by comparing 2020 and the previous five years (2015–2019), exploring the annual trend for DAH breakdown from 2015 to 2020, and comparing the disbursements for the three major infectious diseases to distinguish the impact of COVID-19 on DAH.

Materials and Methods

Data source

Member countries of the OECD's Development Assistance Committee (DAC) register their ODA annually in the CRS, the direct figures of which were used in this study. The governments of all 29 DAC countries submit to the committee their ODA data for the previous three years in a specific form in January. The DAC compiles and validates the data, and detailed information on total resource flows are made available throughout the second half of the year. The open database can be freely accessed to the OECD website (14).

Target data range

To identify trends for ODA disbursement by sector in each country and private philanthropy foundation, we combined the databases of DAC member countries and private philanthropy foundations. Similar to the 29 DAC countries, more than 40 private philanthropy foundations, including the Bill and Melinda Gates Foundation (BMGF), have registered their funding data in the CRS since 2009. This study focused on the DAH from the BMGF and the Group of Seven (G7) countries, namely, French Republic (France), the United States (US), the United Kingdom (UK), Federal Republic of Germany

(Germany), Japan, Italian republic (Italy), and Canada. This is because disbursements from G7 countries account for approximately 80% of their total ODA, with these countries ranking first to sixth in total ODA among the 29 DAC countries, and BMGF is the largest private philanthropy organization, accounting for more than 46% of total private philanthropic funding (15) and focusing its funding on global health compared to other sectors in global development (16).

ODA has two channels: bilateral and multilateral aid. This study examines bilateral aid and earmarks multilateral aid through multilateral agencies to determine their recipients and volume in specific sectors. The core funding of multilateral agencies that do not specialize in each aid sector was not included in this study.

This study focuses on 2020, the latest available data as of the end of January 2023, and data from the previous five years (2015–2019) to explore recent trends for DAH and analyze the impact of COVID-19.

Measures

Sector and program area: The aid sectors were based on the OECD's purpose codes for sector classification (17). The sectors of these purpose codes were grouped into broad three-digit sector categories further classified into five-digit purpose codes. We defined each three-digit series as sector and five-digit category as program area. For example, the 120 series refers to the "Health" sector and consists of 19 program areas categorized into three groups: "Health, general" (CRS code: 121 series), "Basic health" (122 series), and "Noncommunicable diseases (NCDs)" (123 series). The program area "COVID-19" has the CRS purpose code 12264, "Basic health", under the "Health" sector. Details of the DAH program areas are provided in Supplemental Table S1 (<https://www.globalhealthmedicine.com/site/supplementaldata.html?ID=74>), and details of the sector categories are presented in Supplemental Table S2 (<https://www.globalhealthmedicine.com/site/supplementaldata.html?ID=74>) The definition of DAH with CRS purpose codes was defined by sector codes for health (120 series) and population policy and reproductive health (130 series) as well as other studies (18,19).

Analysis

First, we analyzed the percentages of disbursement increase or decrease in 26 sectors by comparing 2020 and the average for the previous five years between 2015 and 2019 (Table 1). Supplemental Table S3 (<https://www.globalhealthmedicine.com/site/supplementaldata.html?ID=74>) shows the disbursement data by each sector. Second, we examined the disbursement volume for six health areas from the DAH data from 2015 to 2020 (Figure 1). To show the disbursements for

Table 1. The percent change in disbursement by sector between 2020 and the average of 2015–2019

Sectors	G7 countries							BMGF	Total
	France	US	UK	Germany	Japan	Italy	Canada		
All sectors	54%	-1%	3%	21%	20%	-39%	23%	16%	14%
Education	27%	-12%	-31%	38%	9%	22%	26%	226%	19%
Health	135%	-6%	44%	254%	180%	33%	-8%	31%	65%
Population Policies and Reproductive Health	18%	-5%	-22%	2%	-47%	-44%	45%	-3%	-5%
Water Supply and Sanitation	6%	-19%	-42%	4%	-43%	30%	-42%	-20%	-14%
Government and Civil Society	199%	-3%	-14%	65%	-32%	-42%	103%	133%	31%
Other Social Infrastructure and Services	233%	-37%	-13%	274%	49%	-14%	-33%	-54%	123%
Transport and Storage	34%	-68%	-55%	-4%	10%	189%	-38%		7%
Communications	-16%	45%	773%	73%	-59%	65%	30%	-96%	7%
Energy	8%	15%	18%	-3%	-0.4%	56%	128%		3%
Banking and Financial Services	169%	-20%	-1%	18%	-5%	-88%	-34%	2%	20%
Business and Other Services	332%	15%	-52%	51%	1%	44%	-16%	-95%	28%
Agriculture, Forestry, Fishing	101%	-28%	-30%	64%	21%	45%	49%	-10%	21%
Industry, Mining, Construction	263%	-80%	33%	136%	102%	256%	-36%	-100%	94%
Trade Policies and Regulations	-27%	-32%	7%	-57%	-59%	-28%	-59%		-42%
General Environment Protection	104%	-33%	-28%	20%	-70%	-33%	0.5%	-11%	10%
Other Multisector	28%	-30%	0.1%	57%	34%	88%	-13%	-28%	27%
General Budget Support	-59%	72%	-100%	-100%	376%	-100%	-13%		98%
Development Food Assistance	-35%	-34%	54%	39%	-2%	-45%	-10%	-100%	-2%
Other Commodity Assistance					-98%	-34%			-89%
Action Relating to Debt	205%	2597%	10729%	-69%	-100%	-44%	-100%	7%	158%
Emergency Response	34%	19%	8%	12%	-43%	-16%	-5%	-55%	12%
Reconstruction Relief and Rehabilitation	-36%	-100%	-17%	-59%	-8%	55%	-3%	73%	-49%
Disaster Prevention and Preparedness	-39%	19%	20%	-24%	-81%	145%	-77%	-100%	-11%
Administrative costs of donors	19%	4%	35%	43%	6%	19%	31%		19%
Refugees in Donor Countries	76%	-13%	61%	-44%	11%	-81%	51%		-30%
Unallocated / Unspecified	0.4%	424%	-19%	14%	-41%	-54%	-53%	9%	8%

"Red" means decreased disbursement in 2020 comparing average disbursement between 2015 and 2019. "Orange" means increased disbursement in 2020 comparing average disbursement between 2015 and 2019 (The increase of below 100%). "Green" means increased disbursement in 2020 comparing average disbursement between 2015 and 2019 (The increase of 100% or more). Blank means no distribution from 2015 to 2019.

the three major infectious diseases, we summed the disbursements for the "Malaria control" (CRS code: 12262), "Tuberculosis control" (12263), and "STDs control including HIV/AIDS" (13040) program areas. Then we subtracted the disbursement volume for these diseases from "Basic health" (122 series) and "Population policies and reproductive health" (130 series). Supplemental Table S4 (<https://www.globalhealthmedicine.com/site/supplementaldata.html?ID=74>) shows the annual DAH disbursements between 2015 and 2020 by G7 countries and the BMGF. Third, we analyzed the rate of increase or decrease by comparing annual disbursements in 2020 and the average disbursement for the previous five years between 2015 and 2019 for health (Figure 2). Supplemental Table S5 (<https://www.globalhealthmedicine.com/site/supplementaldata.html?ID=74>) shows the detailed data for these calculations. Lastly, we examined the annual disbursements for COVID-19 and the three major infectious diseases in G7 countries and the BMGF in 2020 (Table 2).

Results

The total ODA of G7 countries and the BMGF increased by 14% in 2020 compared with the previous five years (Table 1). France increased its total ODA by 54%, the highest among the G7 countries, saw its ODA grow in 20 of the 26 sectors, and had more than a 100% increase rate in 10 sectors, including "Health" (CRS

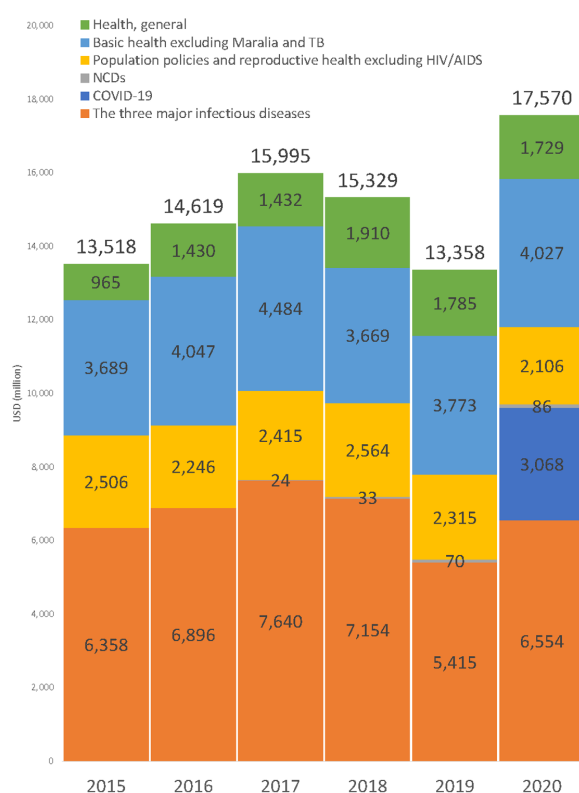


Figure 1. Development assistance for health of the six health areas between 2015 and 2020.

code: 120 series), "Government and civil society" (150 series) and "Banking and financial services" (240 series). Meanwhile, the US saw its total ODA in 2020

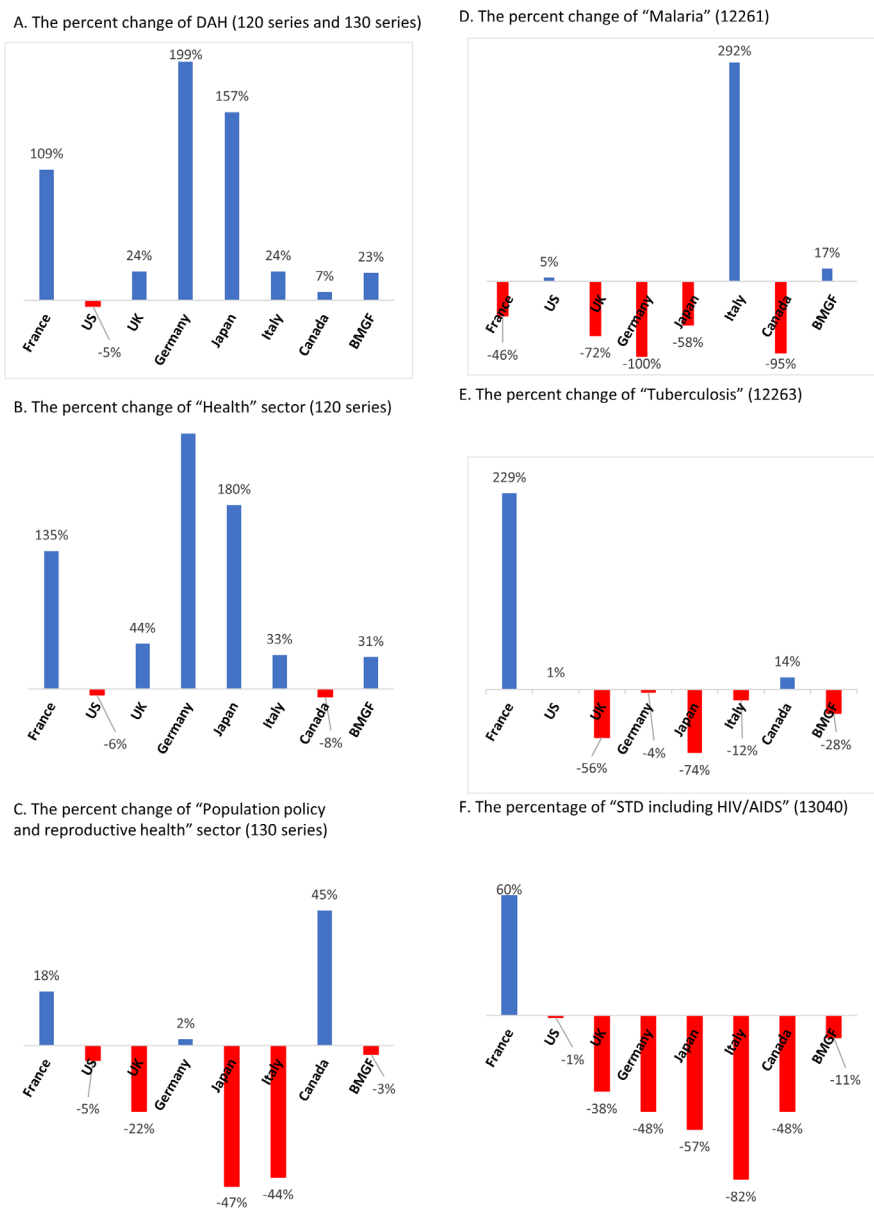


Figure 2. The percent changes in disbursements between 2020 and the average of 2015–2019 in the international Group of Seven (G7) countries and the Bill and Melinda Gates Foundation (BMGF).

decrease by 1% from the previous five-year average. In addition, the US, the UK, Japan, Italy, and Canada reduced their disbursements for more than half of the 26 sectors in 2020. For example, disbursements by the US had decreased for 16 sectors including "Education" (110 series), "Health" (120 series), "Population policies and reproductive health" (130 series), "Water supply and sanitation" (140 series), "Government and civil society" (150 series), and "Transport and storage" (210 series). As a health-related sector, "Water supply and sanitation" (140 series) saw lower disbursements from the US, the UK, Japan, Canada, and the BMGF.

Figure 1 shows the DAH disbursement trend for six categories (CRS code: 120 series and 130 series) from 2015 to 2020. In 2020, COVID-19 disbursements accounted for 17% of the total DAH (\$17.5 billion). A comparison of the disbursement data for each health area between 2019 and 2020 showed that "Health, general" decreased by 3%, "Basic health excluding malaria and

tuberculosis" increased by 7%, "Population policies and reproductive health excluding HIV/AIDS" decreased by 9%, "NCDs" increased by 23%, and "the three major infectious diseases" increased by 21%. The three major infectious diseases accounted for USD 6.4 billion in 2015 (47% of the total DAH), USD 6.9 billion in 2016 (47%), USD 7.6 billion in 2017 (48%), USD 7.2 billion in 2018 (47%), USD 5.4 billion in 2019 (41%), and USD 6.6 billion in 2020 (37%), while NCDs accounted for USD 24 million in 2017 (0.15%), USD 33 million in 2018 (0.21%), USD 70 million in 2019 (0.52%), and USD 86 million in 2020 (0.49%).

The study found that disbursements for "Health" (CRS code: 120 series) had more than a twofold increase in Germany, Japan, and France in 2020 compared with the previous five-year average (Figure 2). The DAH of the BMGF was larger than that of six of the G7 countries in 2020 and the average of the previous five years. In 2020, the BMGF increased its contribution to "Health"

Table 2. Comparison of annual disbursements (2020) for COVID-19 and for the three major infectious diseases by the international Group of Seven (G7) countries and the Bill and Melinda Gates Foundation (BMGF)

Disbursement	G7 countries							Total
	France	US	UK	Germany	Japan	Italy	Canada	
Annual disbursement for "COVID-19" (USD)	5,016,701	436,301,169	418,086,580	921,671,539	778,702,904	28,796,937	114,492,987	3,067,648,740
Annual disbursement for "Malaria" (USD)	717,283	707,740,640	23,811,291	0	1,067,204	575,753	110,898	262,112,950
Ratio for "COVID-19" vs. "Malaria" "Tuberculosis" (USD)	7.0	0.6	17.6	N/A	729.7	50.0	1032.4	1.4
Ratio for "COVID-19" vs. "Tuberculosis"	1,371,364	228,961,915	3,799,954	3,352,671	1,228,742	634,189	12,675,216	106,508,581
Annual disbursement for "STDs including HIV/AIDS" (USD)	3.7	1.9	110.0	274.9	633.7	45.4	9.0	3.4
Ratio for "COVID-19" vs. STDs including HIV/AIDS	18,272,237	4,917,561,729	12,172,740	18,814,940	715,870	515,868	4,249,145	227,127,867
Annual disbursement for the three major infectious diseases (USD)	0.3	0.1	34.3	49.0	1087.8	55.8	26.9	1.6
Ratio for "COVID-19" vs. the total of the three major infectious diseases	20,360,884	5,854,264,284	39,783,985	22,167,611	3,011,816	1,725,810	17,035,259	595,749,398
	0.2	0.1	10.5	41.6	258.5	16.7	6.7	0.6

(120 series) and "Population policies and reproductive health" (130 series) compared with the average of the past five years. However, disbursements for "Population policies and reproductive health" declined in the US, the UK, Japan, and Italy from the previous five-year average.

Table 2 compares the annual disbursements for COVID-19 and for the three major infectious diseases in G7 countries and the BMGF in 2020. Disbursements for "COVID-19" (CRS code: 12264) were larger than the total disbursements for the three major infectious diseases in the UK, Germany, Japan, Italy, and Canada in 2020. Among G7 countries and the BMGF, the US accounted for 89% of the total disbursements for the three major infectious diseases and 14% of the total disbursements for COVID-19.

Discussion

This study illustrated the changing patterns in DAH in 2020, the year the COVID-19 pandemic began. In most of the G7 countries, total ODA increased in 2020 but with an apparent trade-off with disbursements for other sectors. Most countries increased their disbursements for the "Health" sector in relation to their COVID-19 response but reduced their aid for other sectors. Worldwide DAH reached \$40.4 billion in 2019 and increased to \$54.8 billion in 2020 because of the additional resources necessary for COVID-19 response (4). This study found that the total disbursement amount for the "COVID-19" category by G7 countries and the BMGF was approximately USD 3 billion in 2020, which was 3 times larger than for "Malaria", 8.5 times larger for "Tuberculosis", and 60% smaller for "STDs including HIV/AIDS" for the same year. A larger disbursement amount was provided for COVID-19 than for the three major infectious diseases, but it is necessary to further analyze the gap between the actual costs and disbursements to implement COVID-19 response considering the proportion of DAH dependence among LMICs.

Our study revealed the decline in donor contribution in many sectors in 2020 compared with the previous five years. The governments of LMICs have yet to consider health as a high enough priority as evidenced by the proportion of all government spending devoted to the health sector (20). Increasing COVID-19 funding may lower the prioritization of domestic health expenditures because the government may reallocate such spending to other sectors; such a phenomenon known as aid fungibility (21). In addition, they would expect constant disbursements by donors in sectors besides health and may reallocate their budget for their priority areas because of donors' reduced funding for such areas and higher funding for COVID-19. The year 2020 was an acute phase of the pandemic, and many countries did not have the budget for COVID-19 response. Budget data for COVID-19 in 2021 and 2022 must be collected

to examine the impact of the pandemic. A national-level analysis of changes in budgets for certain sectors in the following years may reveal whether the recipient countries prioritize "health" in their domestic budgets to combat COVID-19 or increase their dependence on DAH.

As a health-related sector, "Water supply and sanitation" (CRS code: 140 series) saw its total disbursements from G7 countries and the BMFG drop by 14% from the previous five years. While "Water supply and sanitation" remains vital for the Sustainable Development Goals, some African countries have already shown a decline in wash services between 2000 and 2015 (22). The reduced disbursements for "Water supply and sanitation" in 2020 may help lessen the mobilization of resources toward projects related to the sector.

HIV/AIDS is a health program area that has received the highest contribution since 2004 (23). In this study, the largest contributor to HIV/AIDS funding was the US both in 2020 and in terms of the previous five-year average. Compared with the disbursement volume for HIV/AIDS (approximately USD 4.9 billion in 2020), disbursements for COVID-19 in 2020 were much smaller (USD 436 million) in the US. In 2020, the US announced that it would suspend its contributions to the WHO to focus on its COVID-19 response (24) and, starting from May 4, 2020, would not host the ACT Accelerator for Coronavirus Global Response (25). In 2021, newly elected US president Joe Biden announced the resumption of funding for the WHO (26) with a \$4 billion contribution to COVAX, a pillar of the ACT Accelerator (27). On the other hand, Germany and France proposed WHO reform in 2020 and attempted to strength WHO for pandemic (28). These circumstances may reflect disbursements directed toward COVID-19.

Our study observed that most donors reduced their disbursements for each of the three major infectious diseases in 2020, the starting year of the COVID-19 pandemic, compared with the previous five years, although the total disbursement volume for the three major infectious diseases was the largest in DAH. It is also important to evaluate the disbursement trends within program areas in health. NCDs indicated a larger burden of disease defined by death and disability-adjusted life years (29), but DAH for NCDs was much smaller than for infectious diseases as one study showed (4). This study found that the disbursement volume for NCDs since 2017 was less than one-hundredth of those for COVID-19 and the three major infectious diseases. The large disbursements for infectious diseases including COVID-19 are likely to continue as long as the US, the biggest DAH funder, prioritizes aid for infectious diseases as a matter of global health security (30).

This study showed the change in disbursements for DAH and other sectors and compared the disbursements for three major infectious diseases and COVID-19 to

investigate the impact of the pandemic. However, there are some limitations. One study that tracked the sectoral allocation of ODA from 2011 to 2018 among 29 DAC countries identified health as the sector with the highest average annual ODA contribution at USD 20.3 billion (17). In the previous study, the volume of DAH was larger because the aforementioned study included the estimation for core funding to multilateral agencies. Our study focused on country-specific funding, which consists of bilateral assistance and earmarked contributions through multilateral agencies, but did not include core funding to multilateral agencies. Nevertheless, the DAH in our study had a large distribution volume for other sectors both in 2020 and in terms of the previous five-year average in G7 countries and the BMGF. Our study is presumed to cover approximately 75% of the estimated total DAH, which is based on a study that showed the same figure for country-specific funding (31).

Conclusion

In sum, DAH increased in the BMGF and in the G7 countries except the US in 2020. Disbursements for "Health" including "COVID-19" more than doubled in Germany, Japan, and France in 2020 compared with the average of the previous five years. The disbursement amount for COVID-19 was larger relative to the total disbursements for the major three infectious diseases in 2020 except for France, the US, and the BMGF. This necessitates a follow-up study on COVID-19 disbursements and the influence of other DAH categories to appropriately address health needs in LMICs.

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