CONCLUSION

This study carefully documents a trend that is widely recognized in the field of global health, namely that development assistance for improving health in developing countries has expanded significantly in the last 18 years. The study provides the first systematic and comprehensive estimates of the total envelope of health aid from both public and private sources from 1990 to 2007, as well as an in-depth analysis of the individual contributions of different global health actors and the distribution of health aid across priority diseases and recipient countries.

Global health resources have more than quadrupled from 1990 to 2007, with the rate of growth accelerating beginning in 2002. The increase in aid for health has been fueled by a huge expansion of dollars for HIV/AIDS, but other areas of global health have also grown dramatically. The influx of resources has been not only from public sources but also from private philanthropy. Philanthropic contributions to US nongovernmental organizations (NGOs) have been even larger than the dramatic scale-up of the Bill & Melinda Gates Foundation (BMGF). In addition to private contributions to NGOs and foundations, drugs and medical equipment from corporate donors have also expanded substantially.

Donated drugs and medical equipment have been counted as in-kind donations in this study. Other in-kind assistance includes all technical assistance, grant management, and aid coordination provided by global health actors. In-kind transfers accounted for \$8.6 billion out of \$21.8 billion in health assistance, the remainder being financial transfers in the form of grants and loans. The surprisingly large volume of in-kind health aid raises several questions both about how in-kind transfers are valued and what their opportunity costs are. First, the true value of drug donations to recipients in developing countries may be less than the book value that was recorded on US tax returns and is therefore reflected in this analysis. Second, the hiring of international experts from donor countries to administer health programs and provide technical assistance has often been decried as "phantom aid"

by many aid advocacy groups. Whether dollars spent on paying staff at global health institutions constitutes a waste of global health resources or is the necessary cost for generating useful and much-needed knowledge, policy guidance, and training is a research question in its own right about the cost-effectiveness of this mode of development assistance.

The expansion of resources for global health, especially in the last 10 years, has been accompanied by a major change in the institutional landscape. Two new and large channels of resource transfer, the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and the Global Alliance for Vaccines and Immunization (GAVI), constituted 12.5% of flows in 2007. While the UN system's contribution has increased from \$1.8 billion to \$3.1 billion from 1990 to 2007, as a fraction of the total, it has declined from 32.3% to 14% over the same time period. The role of NGOs in terms of spending public monies and monies raised from the private sector has expanded tremendously, as has direct bilateral assistance to governments in developing countries. The shift is not only towards a smaller relative role for the UN system and the World Bank but also for the changed status of these organizations. Over time, the share of their expenditure from voluntary contributions as opposed to assessed contributions has grown steadily. De facto, to sustain their current role, the UN agencies, especially the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), must compete with recipient countries, NGOs, and other organizations for available development assistance for health (DAH) funds. This steady shift to a competitive model of funding runs the risk of undermining the critical role of the UN agencies as trusted neutral brokers between the scientific and technical communities on the one hand and developing country governments on the other.

While aid for HIV/AIDS, tuberculosis, and malaria accounts for a significant part of the expansion in resources, there have been large increases in other areas of health as well. The rising tide of interest in global health appears to be having an effect on

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funding across the sector. While there is much rhetoric about increasing funds transferred to developing countries through general health sector support, the data suggest that it remains a very small part of health aid, less than 5% in 2007. The disconnect between the rhetoric about the importance of shifting to sector support and the reality, as captured in these results, highlights the importance of data on the actual flows. Such a policy-evidence disconnect is perhaps perpetuated by the complexity and difficulty of tracking resource flows in the first place.

Examining the distribution of health assistance across countries reveals a complex picture. It appears that countries with higher disease burden and poorer countries are on the whole receiving more health assistance than their healthier and wealthier counterparts. However, this relationship is far from being completely predictable. At the same level of disease burden, countries received remarkably different amounts of health aid. Small island nations and target countries for leading global health programs, such as the US President's Emergency Plan for AIDS Relief (PEPFAR) and GFATM received considerably more assistance than their total disease burden would predict. Historical, economic and political factors that are unrelated to health also determine which developing countries donor governments favor. These facts, in and of themselves, do not mean that scarce global health dollars are either being misallocated or used inappropriately. However, they do suggest that the allocation of health dollars across countries is complex and more research is needed to understand the underlying patterns.

Any presentation or analysis of DAH will inevitably lead to debate about the validity of figures for each of the institutions presented here. Even financial officers of the organizations we are tracking may disagree with our exact figures. The differences can, in most cases, be understood in terms of differences in the financial years, cash or accrual accounting methods, techniques used to estimate disbursements from commitments, and our inclusion of administrative and

technical assistance costs in the total disbursements of institutions. The best way forward will be to foster a vigorous open debate about all of our figures so that a broader understanding of the intricacies involved will, we hope, engender better data in the future. For most of the key organizations included in these analyses, we believe that our figures provide an accurate portrayal of the reality of global health resource flows. Nevertheless, there are some key limitations of this study.

A first limitation is that we have not included private resources raised by non-US NGOs and foundations. We obtained data on health expenditure for one to seven years for some of the biggest non-US NGOs in the period 2000 to 2006, but we did not include these figures in our totals as we were missing information on health expenditure for years prior to 2000. A second major limitation is that our tracking efforts do not capture financial flows from developing countries to other developing countries, nor from non-Organisation for Economic Co-operation and Development (OECD) high-income countries to developing countries. The most important case in this category is likely to be China, which is believed to be scaling up international assistance to other low- and middle-income countries.55 Third, we had to estimate disbursements from commitments for many donors. The validity of our results thus depends on the mapping of commitment to disbursement by donor. It would clearly be desirable to have donors provide the full sequence of disbursements going back in time to 1990. While some of the quantities are estimated using statistical methods, we are unable to report uncertainty for our estimates at this time. We will work to improve all these areas in future years.

In this study we report on health aid through 2007; due to the lags in data reporting, we were unable to report on global health disbursements or commitments in 2008. The current 14- to 20-month reporting lag in most of the data sources made it extremely difficult to track trends in a timely way. The importance of this has been highlighted by the current financial

crisis. Concerns that development assistance may drop have been widely expressed. 10-13 At present, we have no real data on what is actually happening. Private giving to NGOs is likely income elastic, although formal analysis of this is not available. The key unknown is whether public monies for global health will grow at a slower rate, stay constant, or contract. A critical early indication of this will be the appropriation discussions for PEPFAR reauthorization. The need for timelier reporting of commitments and disbursements by institutions is only reinforced in this setting of global recession and financial turmoil.

In this report, we have not examined what happens when resources are received by an implementing government or NGO or what fraction of these resources is spent at different points in the system. Answering these questions is essential for advancing our understanding of the actual flow of resources within recipient countries. We believe that this requires a case-study approach. Following a random sample of projects in selected countries to understand where and when the resources are expended would be an important adjunct to this global analysis. A related issue is what developing country governments do with their own resources when they receive increased health aid. In related work, some of the authors of this report are using the country disbursement database and government expenditure data to investigate this critical question.

Our analysis of DAH provides one perspective on the global health landscape. However, there are important global public goods for the advancement of global health that are not included here. ⁵⁶ Funding by major research councils and the pharmaceutical industry of products for diseases that predominantly impact lowand middle-income countries is an important example. In future work, we believe that it will be important to expand the types of analyses of global resource flows in support of global health to carefully quantify the funding of global public goods.

Timely and reliable information on global health resource flows is an essential ingredient for policy-making and planning at the national level. It is also needed for monitoring whether donors are honoring their commitments, for fostering greater transparency in aid reporting, and for accurately evaluating the impact of global health interventions. As the debate on aid effectiveness intensifies, careful documentation of the magnitude of global health resources can serve as a key building block for an evidence-based debate. The Institute for Health Metrics and Evaluation is committed to providing an annual assessment of DAH as a resource for an enhanced debate on the role of development aid in improving global health.

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