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DATAWATCH

Vast Majority Of Development Assistance For Health Funds Target Those Below Age Sixty

Development assistance for health targets younger more than older age groups, relative to their disease burden. This disparity increased between 1990 and 2013. There are several potential causes for the disparity increase.

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Since 1990, development assistance for health to low- and middle-income countries to improve health has more than quadrupled, reaching $36.4 billion US dollars in 2015.[1] Despite this remarkable growth, numerous mechanisms are in place that could make development assistance for health less than responsive to changes in the population structure or underlying disease burden of recipient countries. Against the background of ongoing demographic and epidemiological transitions that shift the burden of disease toward people in older age groups,[2,3] it is important to assess which age groups benefit the most from the assistance.

We investigated the benefits from develop-

EXHIBIT 1

Spending on development assistance for health in 2013, by age range and health focus area
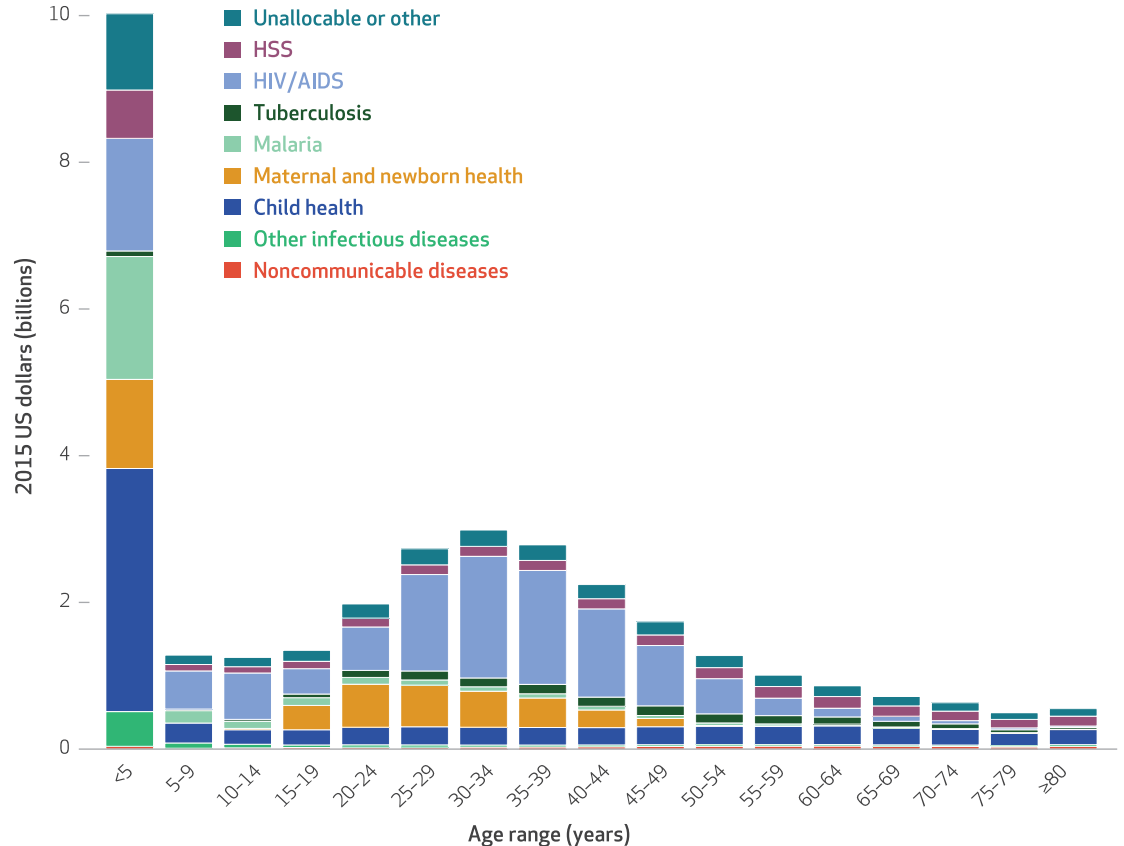
SOURCE Authors' analysis. **NOTE** HSS is sectorwide health system strengthening.

ment assistance for health by age group. We studied to what extent older age groups benefit less from the assistance compared to younger ones and why this is the case. Our findings regarding development assistance for health in 2013 by age group and health focus area are shown in Exhibit 1 and discussed in detail below.

Study Data And Methods

For this analysis, we combined publicly available data from two sources. The first source was the Institute for Health Metrics and Evaluation's *Financing Global Health 2015* report.[1,4] The institute annually tracks development assistance for health from all major international development agencies that work to maintain or improve health in low- and middle-income countries. We examined all twenty-seven assistance program areas that identified the cause of disease or the type of intervention targeted. Data that track the assistance to the recipient country exist for the period 1990–2013 and were extracted for this study.

The second source of data was the Global Burden of Disease Study 2015.[5–7] Disease burden estimates, measured using disability-adjusted life-years (DALYs) stratified by age and sex, were extracted from the study database. DALYs are the sum of years lived with disability and years of life lost because of premature mortality. These data were available for five-year intervals for the period 1990–2015 and accounted for both epidemiological and demographic shifts. We estimated distributions of DALYs for 2013 based on a weighted average of the 2010 and 2015 estimates.

We disaggregated disbursements for development assistance for health across age groups based upon mortality and morbidity age distributions for each disease targeted. More specifically, we matched the development assistance for health program area to one or more causes of disease from the Global Burden of Disease Study 2015 database (for more on the matching procedure, see the online Appendix).[8] For each cause, we calculated the country- and year-specific DALY age profile. Each profile tracked the share of the DALYs accrued by each age and sex group for that cause, country, and year. Next, we multiplied these age and sex proportions by the development assistance for health for that program area received by each country for each year. Lastly, we aggregated country-specific assistance estimates, stratified by age, to generate global yearly estimates.

The resulting estimated age distribution for development assistance for health reflects the ages at which individuals would experience health benefits from the intervention financed by the assistance. For example, for assistance that targeted HIV treatment, we assumed that the age groups that would benefit from it were those of people suffering from HIV. Similarly, health interventions like vaccines are often provided at an early age, while the diseases targeted by the vaccines can also affect individuals at older ages. We assumed that the ages at which the benefits of development assistance for vaccines would accrue are reflected in the age distribution of those who currently have the relevant disease or diseases. In other words, we assumed that development assistance for health uniformly targeted the populations affected by the diseases (for the procedure used to match the development assistance for health with the disease data, see the Appendix).[8]

Combining the development assistance for health and DALY data sets provides one estimate of how the assistance might benefit each age group. However, the estimates are inexact, and this is not the only possible way to match funding and benefits. One challenge is that some development assistance program areas are not obviously matched with specific causes of disease. In these cases, we made our best attempt to identify the diseases targeted by the assistance, and we provide the assumptions we made in Appendix Exhibit A-2.[8]

An additional reason for imprecision is that these estimates are based on the assumption that within a program area, development assistance for health is distributed in proportion to the burden experienced by the members of each age group. For example, if an HIV prevention program focuses on a specific demographic subgroup, such as men who have sex with men or intravenous drug users, distinct age-of-benefit profiles may exist. Because we lacked data on the exact ages of people targeted by each intervention, and because the development assistance for health project foci are not clearly identified in the underlying project-level data, more precise age-of-benefit mapping was not possible.

Study Results

We found that development assistance for health benefited younger age groups more than older populations, with 90 percent of the assistance going to people younger than 60 (data not shown). In 2013 the assistance benefited people younger than age five the most, with spending on this age group being over three times more than spending on any other age group. Many development assistance program areas benefit this age group, especially assistance for child health, maternal and newborn health, and malaria. Peo-

EXHIBIT 2

Development assistance for health and health burden in 2013, by age range
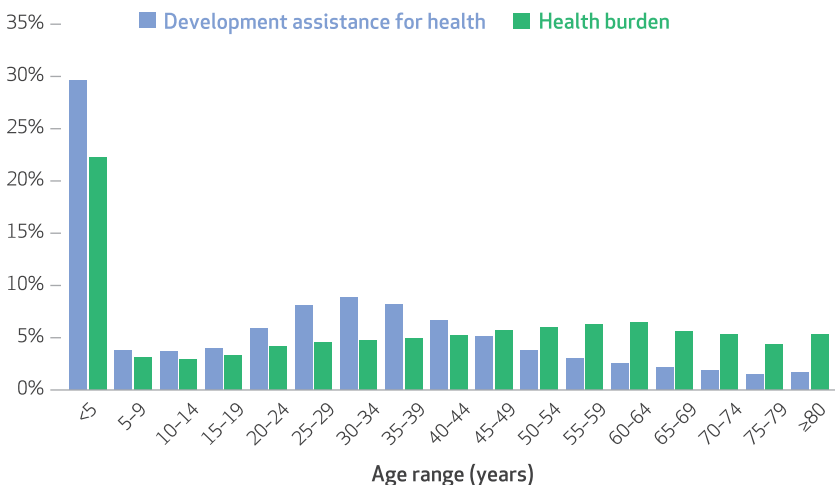
SOURCE Authors' analysis. NOTE Health burden is measured using disability-adjusted life-years in low- and middle-income countries.

ple in their twenties and thirties also received relatively large amounts of the spending for development assistance for health, primarily driven by HIV/AIDS funding.

Exhibit 2 contrasts the age groups targeted for benefit from development assistance for health with the overall disease burden by age groups in 2013. Our analysis revealed that younger age groups benefited more from assistance relative to their disease burden. For example, development as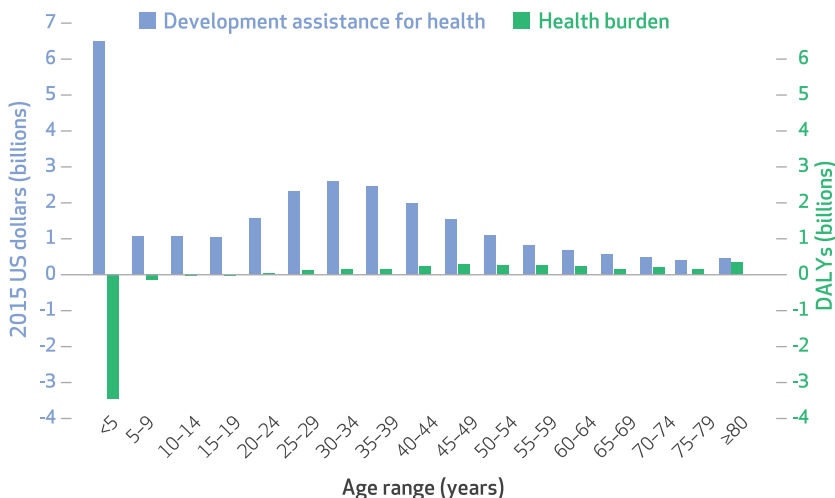sistance for health per DALY globally was $3.13 per person younger than age sixty in recipient countries, but $0.91 per person ages sixty and older (data not shown). The gap between share of development assistance for health and share of DALYs was even higher at the extremes of the age distribution: People ages seventy and older received only $0.80 per DALY.

When we compared changes in development assistance for health and DALYs from 1990 to 2013—a period of epidemiological and demographic change during which the disease burden shifted toward older ages—we found that assistance increasingly targeted children. For example, people younger than age five had $6.49 billion more assistance in 2013 than they had in 1990 (Exhibit 3). Older age groups received smaller increases. For example, people ages 80 and older received $0.46 billion more assistance. In contrast, disease burden in low- and middle-income countries fell by 3.46 billion DALYs for people younger than 5 years but increased 0.34 billion DALYs for those ages 80 and older.

We also compared the change from 1990 to 2013 in development assistance for health per DALY for each age group. The largest increases that we observed were for people ages 5–14 years, while the smallest increases were for people ages 60 and older (Exhibit 4). The increase in development assistance funding relative to disease burden was 1.9 times greater for those younger than 60 compared to those ages 60 and older (data not shown). This means that the difference in funding relative to the disease burden between younger and older age groups has grown instead of diminished over time.

Discussion

Our results revealed that development assistance for health is likely to target diseases that occur early in life, and that the discrepancy between the age of benefit of health assistance and the age variation in the observed all-cause disease burden is increasing over time. However, the assistance does not necessarily need to be distributed equally across age groups or in proportion to disease burden to be equitable or otherwise appropriate.

One reason why development assistance for health might disproportionately target certain age groups may be related to considerations of cost-effectiveness. Younger groups might be prioritized over older groups if interventions targeting diseases that affect youth are considered to be more cost-effective than interventions targeting diseases that affect older people.[9,10] For instance, malaria and TB interventions, which commonly target younger age groups, have become increasingly cost-effective in recent

EXHIBIT 3

Changes from 1990 to 2013 in spending on development assistance for health and in health burden, by age range

SOURCE Authors' analysis. NOTE DALY is disability-adjusted life-year.

years.[11] However, in recent years better and more cost-effective treatments have also emerged for many diseases that are common at older ages, including cardiovascular diseases.[12]

Another driver for prioritizing younger over older populations may be that children are seen as representing the future. For example, the CRC Policy Center asserts that the main reason for giving priority to children's rights is "the fact that children are the future and if we do not invest in them we do not invest in the future."[13] Another, quite different, idea is that younger people—especially children—should be given priority because they are more innocent, in the sense that health risks and diseases that affect them are hardly due to behavior for which they could be held responsible. In contrast, adults may be seen as responsible for their own health to a greater extent, and many diseases that affect them could be less likely to invoke empathy[14]— particularly when the diseases are perceived to follow from lifestyle choices.[15] Age discrimination in development assistance for health is a potential cause of differential treatment of older versus younger people. Fund-raising campaigns frequently use images of children, but seldom those of older people.[16] Moreover, older people may generally evoke less empathy, compared to younger people.[17] A final explanation relates to age variation in economic activity and the potential to be a caretaker or family breadwinner,[18] which is a reason why results from some of the earlier versions of the Global Burden of Disease Study attributed lower weight to older adults.[19]
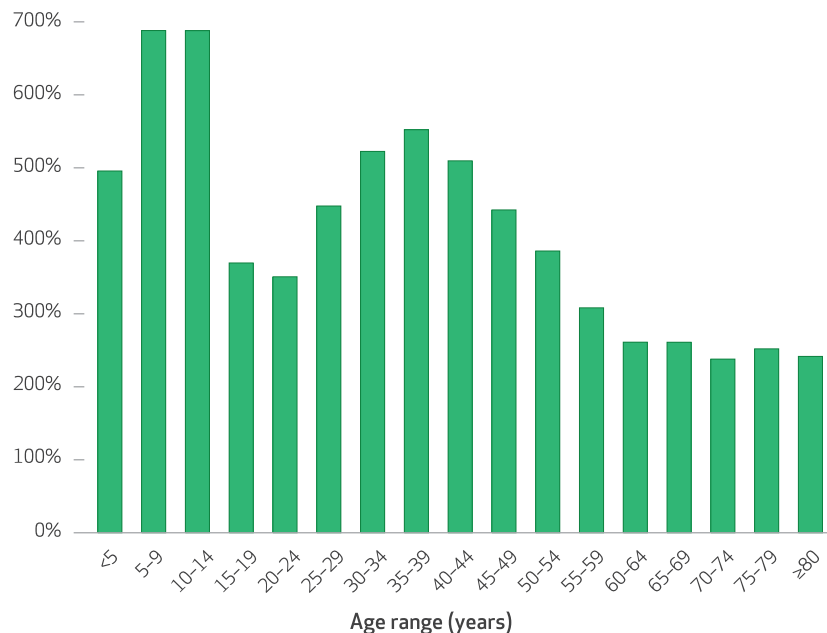
Conclusion

We found that more development assistance for health is available for diseases that affect younger people than for those that affect older people, when age variation in disease burden is controlled for. Furthermore, diseases causing health burden at older ages were deprioritized between 1990 and 2013, in spite of demographic and epidemiological changes that increased their importance.

Noncommunicable diseases are more common among older than younger people and ac-

count for the majority of the burden of disease among those ages sixty and older in all countries in the world. Yet the share of development assistance for health devoted to noncommunicable diseases is only 2.3 percent. Certain disease categories that are particularly important at older ages, such as mental health conditions (including Alzheimer's dementia, depression, and anxiety), receive 0.3 percent of all development assistance for health.

More attention to the needs of aging populations in low- and middle-income countries is required to allow them to effectively adapt to changes in the disease burden over time.[20] The age variation that we identified in terms of who benefits from current funding decisions could motivate stakeholders to reexamine their practices with regard to diseases more common later in life. ■

EXHIBIT 4

Increase from 1990 to 2013 in development assistance for health per disability-adjusted life-year, by age range

SOURCE Authors' analysis.

NOTES

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8 To access the Appendix, click on the Appendix link in the box to the right of the article online.

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