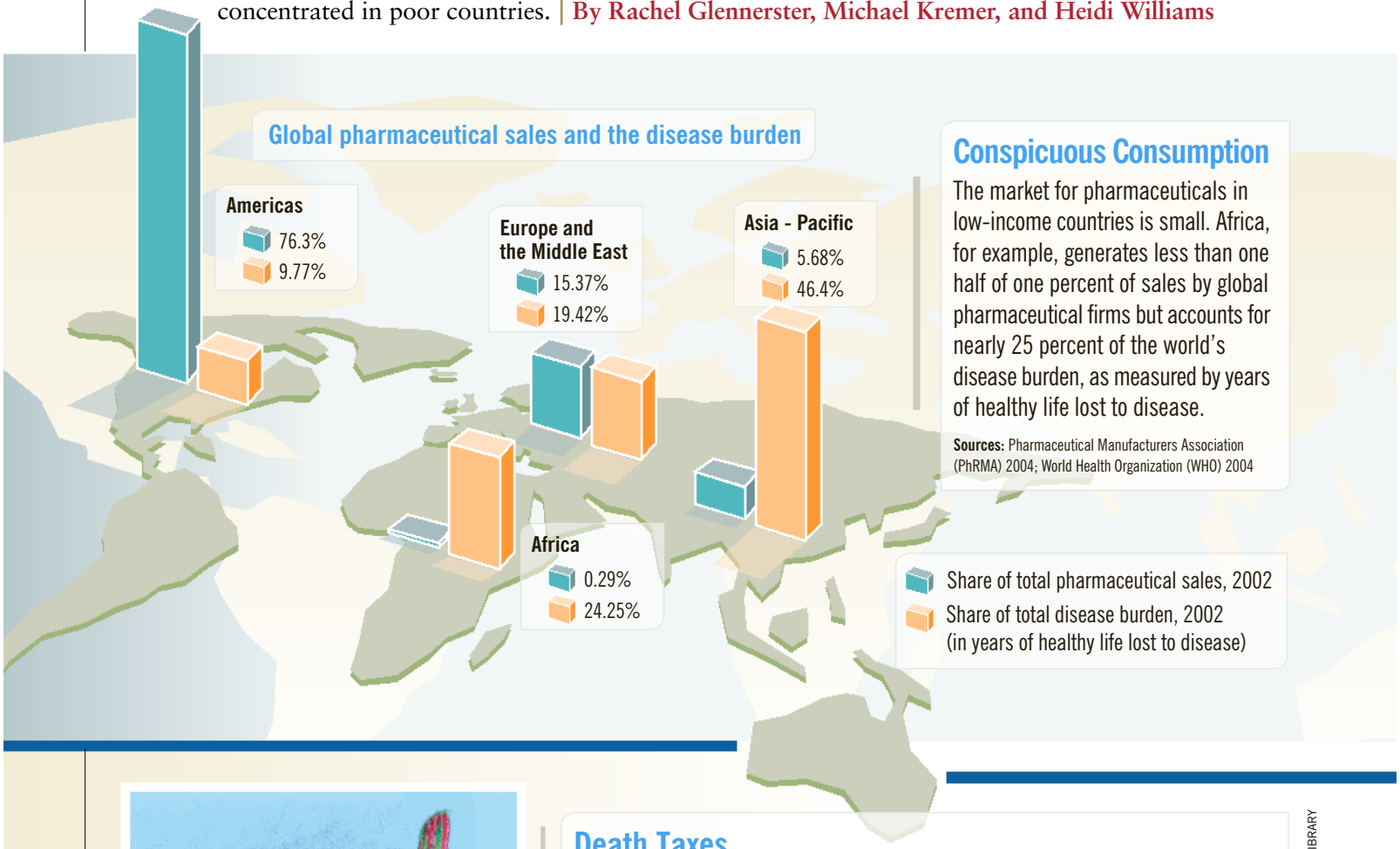
The Price of Life

The pharmaceutical industry spends billions of dollars each year developing drugs to fight disease. For the most part, though, the major drug companies respond to rich-country markets and neglect diseases concentrated in poor countries. | By Rachel Glennerster, Michael Kremer, and Heidi Williams

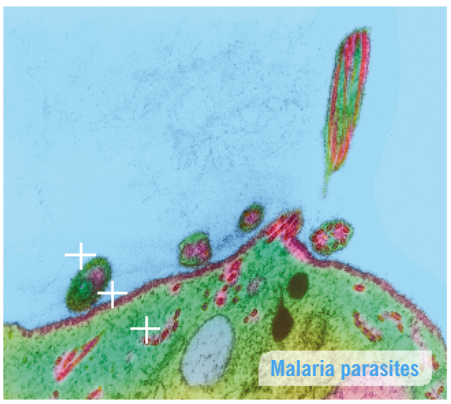
Global pharmaceutical sales and the disease burden



Conspicuous Consumption

The market for pharmaceuticals in low-income countries is small. Africa, for example, generates less than one half of one percent of sales by global pharmaceutical firms but accounts for nearly 25 percent of the world's disease burden, as measured by years of healthy life lost to disease.

Sources: Pharmaceutical Manufacturers Association (PhRMA) 2004; World Health Organization (WHO) 2004



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Death Taxes

People in poor countries face more dangerous disease environments than those in rich countries because of their geography, climate, and limited health systems. Infectious and parasitic diseases—among the world's leading causes of death—account for about 33 percent of the disease burden in poor countries, but only 2.5 percent in rich countries.

Source: *WHO Global Burden of Disease Project, 2004*

Selective Killers

Cause	Deaths per day in poor countries	Deaths per day in rich countries
Lower respiratory infections	7830	923
HIV/AIDS	5861	56
Diarrheal diseases	4210	16
Malaria	3409	<1
Tuberculosis	3000	41

Note: Data are for 2002.

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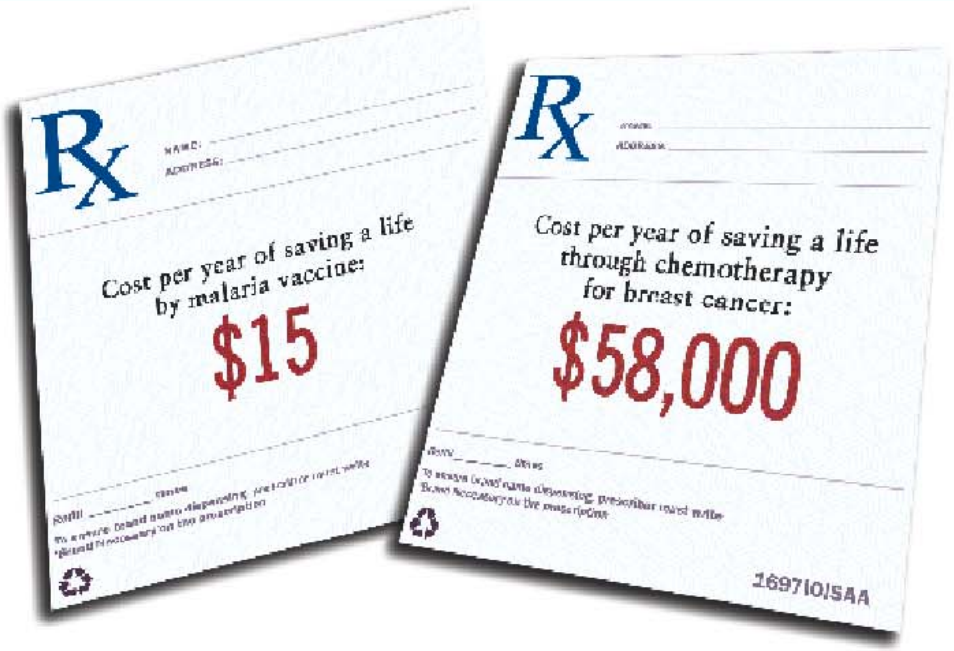
The Pill Bottleneck

Little private research and development (R&D) aims to solve health problems such as malaria or tuberculosis, which are concentrated in poor countries. Of all the new medicines licensed between 1975 and 1997, only a handful were for the deadliest tropical diseases.

Source: *Journal of the American Medical Association*

1,223 New medicines licensed worldwide between 1975 and 1997

Tropical disease medicines resulting from pharmaceutical industry R&D activities **4**



Shot in the Arm

One way to encourage the development of products that low-income countries need is for international organizations, national governments, and private foundations to guarantee a market for desired vaccines. Companies would then have an incentive to make the modest investments needed to develop vaccines for common diseases. The costs per year of saving a life would be dramatically lower than those for other major diseases.

Sources: *Health Affairs*; Center for Global Development; Global Health Policy Research Network

India and Goliath

With major drug companies focusing on rich-world diseases, it might seem that the developing world could direct its own research at the diseases that kill its people. Several developing countries have pharmaceutical industries, but their financial resources are minuscule compared to those for large pharmaceutical firms. The Indian pharmaceutical industry is the world's fourth largest, but its resources are small and its research is often directed at Western markets.

Not Even Close

	Indian Pharmaceutical Industry	Major Global Pharmaceutical Companies
Average percentage of sales spent on R&D (2003):	2	15.6
Estimated total R&D expenditures (2003, in millions):	$152	$33,200

Sources: Organization of Pharmaceutical Producers of India, PhRMA, *Pharmaceutical Industry Profile 2004*. Global industry figures are for PhRMA member companies.