

# Chapter 7

## Responding to needs: institutions, incentives and finance for future health R&D

This Report has highlighted a set of major challenges to global health at the end of the 20th century: an unfinished agenda of overcoming avoidable maternal and childhood conditions; a continually changing threat from microbes; rapidly emerging epidemics of noncommunicable diseases and injuries; and an acute shortage of data and knowledge to inform health policy and to combat inefficiencies and inequities in health systems. These challenges will place governments and health service providers under considerable strain, particularly in low-income and middle-income countries. And they will test, perhaps more than ever before, the capacity of the international health R&D community to respond with timely and appropriate solutions.

Yet that R&D community—a loose “system” made up of investors, research networks and research institutions in every specialty—is currently falling short of its potential to rise to these challenges. As the previous chapters have shown, the distribution of resources and effort across the spectrum of health problems appears to reflect uneven advocacy and special pleading rather than rational and coordinated responses to need. Some work is duplicated; significant gaps remain; and dispersion of resources constrains capacity to focus resources on the completion of high-priority R&D efforts.

At the crudest level, it is clear that the health needs of poor populations are receiving inadequate attention. The allocation of R&D resources in both public and private sectors reflects the preoccupations of the established market economies, with as little as 5% of total R&D resources being devoted to the health needs of developing countries where 90% of the world’s disease burden is carried (Annex 5). The unevenness of this distribution appears to have persisted for some time, as the Commission on Health Research for Development observed a similar pattern when it began work almost a decade ago (Commission on Health Research for Development 1990). It is, of course, important to question the implicit assumption that these health problems are qualitatively different from those of the industrialized world, particularly as the distinction is being gradually blurred by demographic and epidemiological changes. However, in practice there are important distinctions. In particular, the responses that are appropriate to the emerging epidemic of noncommunicable diseases in developing countries must necessarily be different. If resource-poor countries are to provide equitable health services for their populations, they need to develop more cost-effective solutions for these diseases than those deployed in the rich countries.

The bias away from the needs of poor populations is exacerbated by the structure of incentives within the international market for researchers. The vast majority of high-quality scientists are drawn away from the areas of greatest need in the low-income and middle-income countries by the attractions of good facilities, easier links with their colleagues and better rewards for their efforts in the established market economies.

In the Committee’s view, obstacles such as these are hampering the effectiveness of the overall R&D effort. Yet certain limited changes could, we believe, greatly enhance the prospects for responding to global needs. This chapter sets out some of the key problems and puts forward a number of realistic and practical proposals which, we argue, could help to harness R&D for international public good in a climate of restricted resources. Before discussing these proposals, however, we begin with a brief descriptive background on the current structure of the international health R&D system.

### 7.1 The international health R&D system

Health researchers and those who fund them are a highly diverse group. In the simplest scheme, the major players in the health R&D community may be divided into those who *do* research—the operational level—and those who *finance* research—the resource allocation level. Within each of these two broad categories there are further groupings which we set out below. The system is shown graphically in Figure 7.1.

#### 7.1.1 The operational level of R&D

This consists of:

- **The health service providers** which, while rarely conducting any R&D directly, are inextricably linked with health research because they are the source of information about R&D needs, the end users of R&D products and the focus of most clinical research involving human subjects;
- **The institutions**, both discrete and linked into functional networks, that conduct R&D. At national level, these include universities, private institutes, government institutes, health care settings and the pharmaceutical industry. At the international level, there are