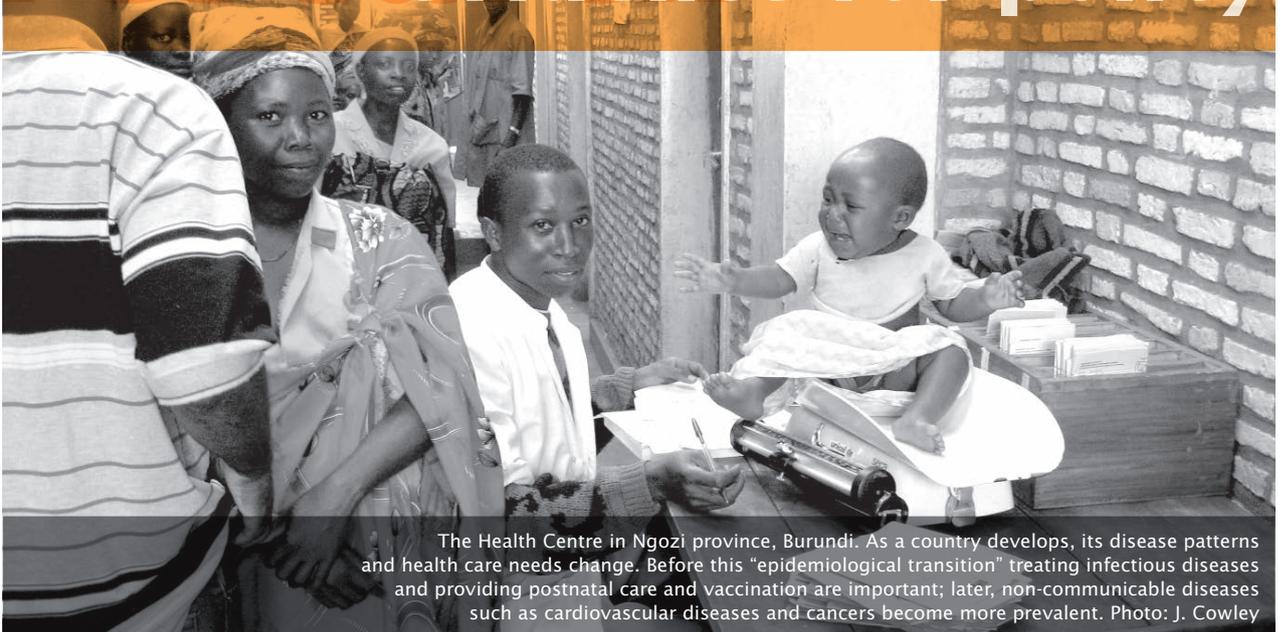


research evidence for policy



The Health Centre in Ngozi province, Burundi. As a country develops, its disease patterns and health care needs change. Before this “epidemiological transition” treating infectious diseases and providing postnatal care and vaccination are important; later, non-communicable diseases such as cardiovascular diseases and cancers become more prevalent. Photo: J. Cowley

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Upholding health for all



Case studies featured here were conducted worldwide.

Policy message

- Health is a crucial determinant of sustainable development. Further investments are required to secure progress towards the Millennium Development Goals beyond 2015.
- The Millennium Development Goals focus on child mortality, maternal health, HIV/AIDS, tuberculosis, and malaria. But there are many other important infectious and non-infectious diseases, zoonoses, and health threats. Cardiovascular diseases, diabetes, obesity, and cancers are rapidly gaining importance in developing countries as their health problems come to resemble those in the developed world.
- Better information, a stronger health workforce, and a systemic approach are needed to achieve lasting improvements in health systems and enable them to serve everyone.

- “The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being.” But in 2013 we are still far from fulfilling this statement by the World Health Organization. While progress has been made towards the three health-related Millennium Development Goals, big differences remain between developed and developing regions, with sub-Saharan Africa in particular falling behind. Without continued funding, progress in combating disease will be short-lived. Further, poor health is not just a consequence of disease: it is also closely linked to social, economic, and political factors. This issue of *evidence for policy* examines what needs to be done to account for these factors.

Global trends and changing patterns of disease

- Hunger and malnutrition, particularly in children, are still alarmingly widespread in parts of sub-Saharan Africa and South Asia, affecting over 1 billion people in 2009, according to FAO. Hungry, malnourished people are more likely to fall ill; and they are less able to grow food and earn money, leading to a vicious circle: poverty leads to illness; illness leads to more poverty. As a result, people in low-income countries have a much lower life expectancy at birth (57 years) than do those in high-income countries (80+).

Meanwhile, a changing and more variable climate will bring numerous risks: changes in patterns of infectious diseases, effects on food yields, problems with water supplies and sanitation, and more migration. Urbanisation and industrialisation are affecting the pattern of diseases, most obviously through air pollution, but also through societal changes.

Poor countries tend to have different disease patterns than more affluent countries. **Communicable diseases** such as HIV/AIDS, tuberculosis, malaria, and numerous neglected tropical diseases (such as Chagas disease or visceral leishmaniasis) are still

Definitions

Health systems: the organisations, people, and institutions that deliver health care services. They may include government, private, non-profit, and faith-based providers.

Millennium Development Goals: three of the Millennium Development Goals focus explicitly on health: reducing child mortality (goal 4), improving maternal health (goal 5), and combating HIV/AIDS, malaria, and other diseases (goal 6).

Epidemiological transition: the change in disease patterns as a country develops. Before the transition, infectious diseases dominate, infant mortality is high, and life expectancy is low. The transition leads to a dominance of non-communicable diseases such as cardiovascular diseases, while infant mortality is low and life expectancy tends to be high.



Trained staff and adequate equipment are vital for health. Searching for helminth eggs under a microscope in a laboratory in Menghai, Yunnan province, China. Photo: Z. Hui

- rampant and affect hundreds of millions of people (WHO 2010a).
- While such differences remain, the health problems in developing countries are becoming more like those in the developed world, where chronic, **non-communicable diseases** have replaced infectious diseases as the most important causes of ill health.
- The developing world is now following this trend. Cardiovascular diseases, diabetes, obesity, cancers, and respiratory diseases already account for almost two thirds of annual deaths worldwide.
- **Mental health problems** also significantly contribute to the global burden of disease, but are particularly neglected in countries with limited resources for health services and/or limited capacities for coping with mental health disorders. Although many of these ailments can be diagnosed, treated, and even avoided, they still represent a substantial addition to the behavioural, societal, and environmental factors that contribute to the burden of disease.
- **Zoonoses** (animal diseases that can be transmitted to humans) are also

important. The recent appearance of the H1N1 pandemic, although comparatively harmless, has given us a glimpse of what future outbreaks might look like and how difficult it is to adequately prepare for them, even in wealthy countries.

The Millennium Development Goals are focused narrowly on a few important aspects of health and the classic diseases of poverty. They ignore other infectious diseases, particularly neglected tropical diseases, as well as emerging and chronic diseases. And they do not address the complex problems facing health systems.

Need to improve health systems

In both developing and developed countries, health interventions tend to focus on technical solutions, or “magic bullets”. They should instead try to improve the performance of the broader health system that delivers health interventions – preventive, curative, or awareness-raising – to the population (de Savigny and Adam 2009).

In developing countries, health services are still focused on communicable diseases, and are poorly suited to dealing with the increasingly important non-communicable diseases. Such countries can scarcely afford the technology needed to address these new disease risks. That threatens to widen the health divide between rich and poor countries.

At the same time, developing countries must expand their health services to under-served populations and regions. An example of how to do this is to combine primary health care for humans and livestock in remote rural areas, as promoted in the One Health movement (see “Featured case studies”).



Greater emphasis is needed on preventive and primary health care. Examining a baby in a Moldovan hospital. Photo: T. Schuppisser (2007)

Industrialised countries also face problems in securing the care, support, and funding for an aging population and keeping pace with advances in medical technology.

Information on what works

Health is subject to severe imbalances between the types of problems faced and efforts to solve them. Only 10% of worldwide expenditure on health research and development is devoted to the problems affecting 90% of the world's population (this is known as the "10/90 gap").

The information needed to design, steer, and monitor health interventions is lacking in many countries. Not enough is known about health problems or the effectiveness of interventions. Even if information is available, its quality is frequently inadequate and rarely reliable enough for evidence-based decision-making. Moreover, funding bodies (and the constituencies behind them) want to know what has been achieved. The funding of an intervention is increasingly tied to rapid impact.

Shortages of health personnel

The demand for qualified health personnel worldwide is affecting both developed and developing countries. Demand in the developed world attracts workers from developing countries, causing "brain drain" and shortages of doctors, nurses, and other staff in poorer countries. But even countries with little emigration suffer from serious shortages of trained health workers (Medicus Mundi Switzerland 2012).

The World Health Organization has developed a voluntary code of practice to discourage the recruitment of

health personnel in countries facing shortages, and to help such countries overcome their shortages through training, technology, and skills transfers (WHO 2010b). But it is one thing for a country to agree to such a code, and another thing to actually follow it.

Health governance

Health systems are not isolated, but are part of larger national, regional, and global systems. Plus, problems of inadequate resources, insufficient information, and brain drain are not limited to the health sector. That means that a systemic approach is needed that promotes good governance at all levels – not just in the health sector.

WHO's Commission on Social Determinants of Health found that most health inequities are linked to social, economic, and political factors, and recommended tackling the inequitable distribution of power, money, and resources. But most health systems have yet to incorporate this recommendation.

Governments are not the only provider of health care: non-profit, faith-based, and for-profit organisations are also important stakeholders. Despite this, they are often ignored in planning health care provision. Their roles and responsibilities need to be defined for each system setting, especially in countries with limited resources.

Back in 1978, an international conference in Alma Ata (now Almaty in Kazakhstan) outlined the need for primary health care. This took a systems view of health problems and emphasised community participation. More than 30 years later, there is growing recognition that this approach is still the way forward.

Featured case studies

Drugs for Neglected Diseases Initiative

The Drugs for Neglected Diseases Initiative (DNDi) is a collaborative, demand-driven, non-profit organisation that is developing new treatments for malaria and three diseases caused by protozoans. So far, it has developed two treatments for malaria, one each for sleeping sickness and Chagas disease, and several for visceral leishmaniasis.

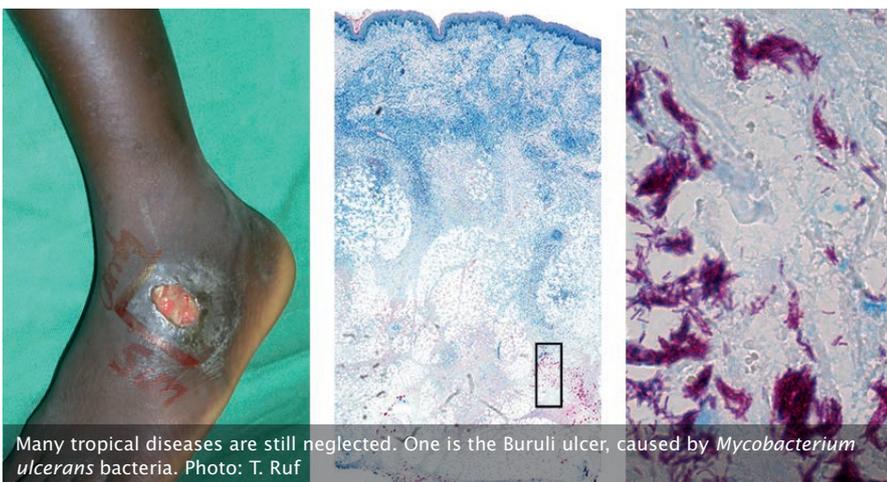
DNDi coordinates collaborative research involving the international research community, the public sector, the pharmaceutical industry, and others. It aims to deliver six to eight new treatments for these diseases by 2014 and to establish a strong research and development portfolio. It has the world's biggest research and development portfolio on protozoan diseases. Seven clinical/post-registration and four preclinical projects are currently underway.

DNDi uses and strengthens the research capacities in countries where the diseases are endemic, and raises awareness about the need for new treatments for the most neglected diseases. It is supported by the Swiss Agency for Development and Cooperation, among other donors (www.dndi.org).

One Health: combining human and livestock health care

It is a challenge to provide health care in remote, sparsely populated areas that are inhabited by mobile livestock herders. These pastoralists move from place to place with their animals in search of grazing land and water. They find it difficult to visit clinics for things like vaccinations and routine check-ups.

The NCCR North-South and the Swiss Tropical and Public Health Institute (Swiss TPH) are testing and promoting a solution in Chad, Kenya, and Mongolia. It combines veterinary and human health care. Pastoralists depend on their animals, so are eager to make sure they stay healthy. At the same time, many skills and treatments are the same in humans and animals: diagnosing problems, deciding on treatments, storing and prescribing medicines, giving injections, and referring complicated cases to more qualified staff and better-equipped centres. By collaborating with veterinary service providers and giving animal health staff the extra skills needed to treat humans, it is possible to make human health care far more efficient and effective in pastoralist areas (<http://tinyurl.com/d46zklf>).





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Policy implications of NCCR North-South research

Health must remain prominent on the development agenda. It is important at both the macro- and micro-economic levels, and it is of both individual and public concern. That makes it an obvious cornerstone for promoting sustainable development and improving people's well-being.

Further investments are necessary to achieve the Millennium Development Goals. Even if the goals are achieved, considerable resources will be needed to maintain the results. Plus, health interventions must be expanded to address crucial health threats not covered in the current goals: they must also tackle other key infectious diseases, zoonoses, non-communicable diseases as well as the health aspects of aging populations and dynamics like migration.

Health systems must be strengthened to ensure equitable access, provide essential care, and secure sustainable funding. Greater emphasis is needed on preventive and primary health care – not just on vaccines. Governments, research institutions, and civil society organisations must act jointly – with clearly defined roles and responsibilities – to strengthen health systems in a systemic way.

More and better information on health problems and interventions is needed. Monitoring and evaluation must be strengthened, and novel, cost-effective approaches developed.

Better ways are needed to ensure that developing countries can train and retain the health personnel they need. Developed countries have agreed to a code of practice on managing the migration of health personnel. They should implement this agreement.

Health is not an island; it is part of a larger environment. Overcoming health problems will depend on a systemic approach built on better governance and broader economic improvement.

Further reading

Blas E, Sivasankara Kurup A (eds). 2010. *Equity, Social Determinants and Public Health Programmes*. Geneva, Switzerland: World Health Organization.

Medicus Mundi Switzerland. 2012. *Human resources for health: Global shortage*. <http://tinyurl.com/cxwj5zb>

Savigny D de, Adam T. 2009. *Systems thinking for health systems strengthening*. Geneva, Switzerland: World Health Organization. <http://tinyurl.com/cn-2414v>

WHO. 2010a. *First WHO report on neglected tropical diseases: Working to overcome the global impact of neglected tropical diseases*. www.who.int/neglected_diseases/2010report/en/

WHO. 2010b. *Managing health workforce migration: The global code of practice*. Geneva, Switzerland: World Health Organization. www.who.int/hrh/migration/code/practice/en/index.html

The National Centre of Competence in Research (NCCR) North-South is a worldwide research network including six partner institutions in Switzerland and some 140 universities, research institutions, and development organisations in Africa, Asia, Latin America, and Europe. Approximately 350 researchers worldwide contribute to the activities of the NCCR North-South.

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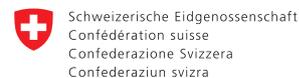
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