Health-system performance

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Population health in terms of life expectancy at birth has a strong positive correlation with economic prosperity (per-head gross national product [GNP]). Two other factors that have a bearing on life expectancy are income and public expenditure on health. Despite the extremely low GNP per head in China, Sri Lanka, and Kerala state (India), in 1994, life expectancy was disproportionately higher than in Namibia, Brazil, South Africa, and Gabon. This difference was a result of better access to health care, basic education, and other social services.

WHO first attempted to assess and rank the health-system performance of all member countries by linking resources and achievements in terms of level and distribution of health status and system responsiveness. This ranking system provokes members to scrutinise their own performance and improve their health systems accordingly.

In 1995, China and Sri Lanka had a similarly low GNP per head, which was 50–60% of that in Gabon. China and Sri Lanka had a better income distribution as measured by the Gini coefficient (41·5% and 30·1%, respectively) than Brazil (63·4%), and South Africa (58·4%). Nigeria is the poorest among the six countries, with a poorer income distribution (Gini coefficient 45%). Better income distribution could reflect more resources available to allow the poor to access social services.

Total health expenditure (both public and private sources) as a percentage of GDP in South Africa (7·1%) and Brazil (6·5%) were more than twice that of China (2·7%), Sri Lanka (3%), Gabon (3%), and Nigeria (3%). Despite the low level of income and health-care resources in China and Sri Lanka, these countries have better health performance in terms of mortality in children younger than 5 years (47 and 19 per 1000 livebirths, respectively) than Gabon (145), and South Africa (65). The latter two countries are richer and have spent more on health. Nigeria spent less and had a poorer outcome. China has a better performance than Brazil because China has a similar under-5 mortality rate to Brazil, but Brazil spent significantly more on health than China. Sri Lanka has the best performance in terms of good health at low cost.

Non-health-sector determinants, especially female literacy rates, influence infant and child mortality. Nigeria and Gabon have low female literacy rates—51% and 57%, respectively. Both countries have particularly high under-5 mortality rates. Four other countries (China, Sri Lanka, Brazil, and South Africa) achieved high female literacy rates (75–88%) and lower under-5 mortality rates (19–65).

Spider-web diagrams show us that more health spending does not always result in better health—the reason being variations in health-system performance (figure).

If GNP per head for all countries were plotted against child survival, four quadrants (Q) associated with the average value of GNP per head and child survival would emerge: Q1, low income but good performance; Q2, low income and poor performance; Q3, high income but poor performance; and Q4, high income and high performance. China and Sri Lanka fall into the upper left Q1, Nigeria into lower left Q2, South Africa and Gabon into lower right Q3, and Brazil upper right Q4.

Countries in Q1 do very well under severe resource constraints, and those in Q4 do well with higher resource inputs. Countries with scarce resources and poor performance, as in Q2, require significant resource mobilisation and improvements in efficiency in resource allocation through more investment in cost-effective interventions and non-health-sector determinants (eg, education of girls). Such improvements cannot be achieved without concerted efforts by the international community, and by bilateral, multilateral, and private enterprises. Public–private partnership (eg, Global Alliance on Vaccine and Immunisation Initiative) can provide extended networks of support. However, countries need to commit to achieving long-term sustainability of such initiatives.

More affluent countries in Q3 (high income but poor performance) have an uneven distribution of wealth and poor accessibility to health and social services by the less well off. Efficiency could be achieved through streamlining of capital investment, regulation of improper uses of high-cost technologies, and revision of incentives for health-care providers to make savings. Strengthening the capacity of health-systems analysis and policy research is essential for countries in Q2 and Q3 to achieve goals.

Unfortunately, information on flow of health expenditure from sources (public and private) and type of spending is inadequate in most less-developed countries. National health accounts (NHAs) help to map the parts of a health system that consume the most resources. By outlining such areas countries can plan and streamline spending. Only a very few governments of less-developed countries have a practical and useful model of NHAs to serve as a tool for system analysis and amendment. Without a good map, how do we know which path to take because we do not even know where we are?
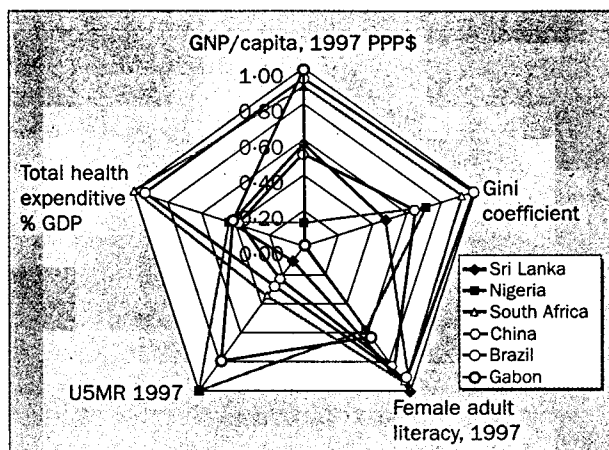
Health expenditure and health-system goal attainment
U5MR=mortality rate in under 5s; GNP= gross national product;
GDP=gross domestic product; PPP=purchasing-power parity.

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