A toolkit to think local: on decentralised health planning

Policymakers in India need reliable disease burden data at subnational levels. Planning based on local trends can improve the health of populations more effectively. Till now, a comprehensive assessment of the diseases causing the most premature deaths and ill health in each State, the risk factors responsible for this burden and their time trends have not been available. To address this crucial knowledge gap, a team of over 250 scientists and others from around 100 institutions who are part of the India State-Level Disease Burden Initiative has analysed and described these trends for every State from 1990 to 2016. Its report was released by the Vice President of India, and a technical paper published in the journal Lancet recently.

The findings of the study are based on analysis of data from all available sources. This includes vital registration, the sample registration system, large-scale national household surveys, other population-level surveys and cohort studies, disease surveillance data, disease programme data, administrative records of health services, disease registries, among others. The estimates were produced as part of the Global Burden of Disease Study 2016, which uses standardised methods in a unified framework. The key metric used to assess burden is disability-adjusted life years (DALY), which is the sum of the number of years of life lost due to premature death and a weighted measure of the years lived with disability due to a disease or an injury. This allows comparisons of health loss between diseases, risk factors, States, sexes, age groups, and over time.

The per person disease burden, measured as DALY rate, has dropped in India by 36% from 1990 to 2016, but there are major inequalities among States with the per person DALY rate varying almost twofold between them. The burden of most infectious and childhood diseases has fallen, but the extent of this varies substantially across India. Diarrhoeal diseases, lower respiratory infections, iron-deficiency anaemia, neonatal disorders, and tuberculosis still continue to be major public health problems in many poorer northern States.

The contribution of most major non-communicable disease categories to the total disease burden has increased in all States since 1990. These include cardiovascular diseases, diabetes, chronic respiratory diseases, mental health and neurological disorders, musculoskeletal disorders, cancers, and chronic kidney disease. The contribution of injuries — the leading ones being road injuries, suicides, and falls — to the total disease burden has also increased in most States since 1990.

The continuing high burden of infectious and childhood diseases in poorer States along with the rising tide of non-communicable diseases and injuries poses a particularly ominous challenge for these States. Substantial increases in health spending by the government and expansion of suitable preventive and curative health services are necessary to prevent this potentially explosive situation. It is important to note that the State-specific DALY rates for many leading individual diseases varies five- to tenfold between States. Major differences are also observed for individual diseases between neighbouring States that are at similar levels of development. This points to the need for State-specific health planning instead of generic planning.

Disease burden can be reduced by addressing the risk factors for major diseases. The findings of the study reveal that three types of risks – undernutrition, air pollution, and a group of risks causing cardiovascular disease and diabetes – are akin to national emergencies as these have the potential to significantly blunt the rapid social and economic progress to which India aspires.

First, it is remarkable that even though there is a declining trend in child and maternal undernutrition, this is still the single largest risk factor in India, responsible for 15% of the total

disease burden in 2016. Undernutrition increases the risk of neonatal disorders, nutritional deficiencies, diarrhoeal diseases, and lower respiratory and other common infections. This burden is 12 times higher per person in India than in China. While this risk factor is relatively worse in the major northern poor States and Assam, it is amazingly the leading risk in over three-fourths of the States across India.

Second, air pollution levels in India are among the highest in the world, making it the second leading risk factor in 2016, responsible for 10% of the total disease burden in the country. Air pollution increases the risk of cardiovascular diseases, chronic respiratory diseases, respiratory infections, and cancer. The burden of outdoor air pollution has increased in every part of India since 1990 because of pollutants from power production, industry, vehicles, construction, dust and waste burning. Air pollution is higher in the northern States, but is considerable even in the southern States. The unacceptably high disease burden due to undernutrition and air pollution in most of India must be brought to an end through systematic large-scale interventions with robust short- and long-term goals.

Third, a group of risks that include unhealthy diet, high blood pressure, high blood sugar, high cholesterol and overweight, which increase the risk of ischaemic heart disease, stroke and diabetes, contributed a tenth of the total disease burden in India in 1990, but increased to a quarter of the total burden in 2016. While these risks are currently higher in the relatively more developed States, their phenomenal increase in every State over the past quarter of a century poses a grave threat. Unless serious attempts are made soon to address this surge through massive upscaling of interventions in the health, food, agriculture, housing and urban development sectors, these risks can result in major deterioration in the health status across all States, rich and poor. An important point to note related to undernutrition, air pollution, and the risks causing cardiovascular disease and diabetes is that the interventions needed to address them have to involve extensive collaborations between the health sector and other relevant sectors.

These findings reported by the India State-Level Disease Burden Initiative provide the most comprehensive mapping so far of the magnitude of diseases and risk factors in every State, their age and sex distributions, and trends over a quarter century — all in a single standardised framework. The chances of achieving the overall health targets for India and of reducing health inequalities among States would be higher now if the biggest health problems and risks identified for each State are tackled on priority basis rather than with a more generic approach that does not take into account these State-specific trends. This new knowledge base and the annual updates planned by the India State-Level Disease Burden Initiative will provide important inputs for the data-driven and decentralised health planning and monitoring recommended by the National Health Policy 2017 and the NITI Aayog Action Agenda 2017-2020.

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The definition of harassment needs to be constantly updated, and the process for justice made more robust

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