COMMENTSARY

The case for investing in public health surveillance in low- and middle-income countries

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ABSTRACT

Surveillance is central to public health. In the absence of comparable data from most low-income and middle-income countries, national and international agencies use estimates to monitor health targets. Although morbidity and mortality estimations generated by statistical modelling can fulfill national and global reporting requirements, locally generated data are needed to guide evidence-based local action. The focus on measurement around the sustainable development goals provides an opportunity for WHO and the global health community to make a case for increased investment by governments to strengthen local surveillance systems.

Surveillance is central to public health[1] and defined as “the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice”[2]. Data are needed to define the problem, to assess and quantify associated risk and protective factors, to define and evaluate interventions and to inform areas for additional research[3]. Data are needed on leading causes of illness, disability and death. In all countries, administrative processes or documentations during healthcare provision continuously generate raw health data. Despite the importance of these data, most low- and middle-income countries lack a process to systematically collect, analyse and use these data. Lack of reliable routine data has been identified as one of the main overarching barriers for effective public health action at country level[4].

In September 2016, all member countries of the United Nations (UN) committed to The 2030 Agenda for Sustainable Development and its accompanying goals[5]. The global community agreed that the sustainable development goals (SDGs) can’t be achieved without addressing the inequalities and exclusions that exist between and within countries. In regard to public health, countries committed to monitor 13 targets linked to the health goal (SDG 3: To ensure healthy lives and promote well-being for all at all ages) and other health-related targets that are incorporated into the other goals[6]. Monitoring these targets to track progress will require quality data at the subnational and national levels[7]. Given the cross-cutting nature of the SDG indicators, official statistical data sources from the health sector as well as other sectors, such as environment, transport, and agriculture, will need to be used to fulfil countries’ SDG reporting requirements. However, according to the SDG Indicator Working Group, the limitations with national surveillance and statistical systems make them unsuitable to be used as the sole data sources[8]. The implementation of the sustainable development agenda also requires determining who is left behind. The Working Group and other researchers have identified lack of accurate and timely information as the main reason why numerous groups and individuals are left behind and remain “invisible” and why many development challenges are still poorly understood[8,9]. For example, according to the 2017 WHO World Health Statistics report, of the 194 World Health Organization (WHO) Member States, 42% (81 countries) have very low quality or no data to report on how many of their citizens died in a given year, and what they died from[7]. The universal health coverage target of SDG 3 (Target 3.8) states that everyone should have access to affordable and quality health services. Lack of reliable patient outcome data has been reported as one reason for the lack of progress in improving quality of care in many countries. Routine information systems in low- and middle-income countries are inadequate to be used for measuring quality of care[10]. For example, measuring care-sensitive patient outcomes requires patient-specific input data, but existing systems in low- and middle-income countries often collect and report aggregate data.

To address the data gap from official statistical and surveillance systems, bilateral and multilateral agencies have used innovative data collection methods and statistical modelling techniques to generate estimates for global indicators[11,12]. In the last 15 years, this approach, with all its limitations, allowed governments to fulfil their reporting commitment to the UN and to benchmark themselves with other countries. However, global estimation becomes insufficient for national-level assessment, planning or evaluation. Citing lack of...
The importance of data for public health is a universally accepted concept. WHO has several recommendations to countries on how to strengthen their local surveillance systems and recommended minimum data sets on different health topics [16,17]. While it is the responsibility of governments to collect data to evidence progress on SDGs, the focus on measurement around the SDGs provides an opportunity for all stakeholders to align their efforts – financial and technical – to support countries to strengthen their local surveillance systems. Although morbidity and mortality estimations generated by statistical modelling can fulfil national and global reporting requirements, locally generated, analysed and disseminated routine data are needed to guide evidence-based local action.

Conflicts of interest

The author declared no conflict of interest.

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