



Offline: In defence of precision public health



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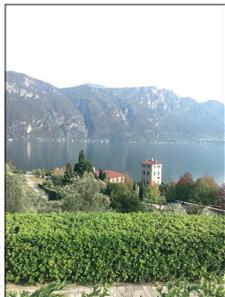
Writing in the *NEJM* recently, Merlin Chowkwanyun, Ronald Bayer, and Sandro Galea questioned and then attacked the emerging concept of precision public health. They labelled the “precision medicine” movement a “bandwagon”. They drew attention to the way organisations, such as the Bill & Melinda Gates Foundation, had extended the idea of “precision” to public health. They suggested that precision public health could represent “an abandonment of our mission of enhancing population wellbeing”. The core of their criticism was that whereas public health starts with populations, the word “precision” implies a concern only with individuals. The risk is that precision public health would, by its very definition, ignore the broader social, political, economic, and environmental determinants of health. Calling for public health to take a precision approach, they argued, was nothing more than a “rebranding” exercise. It might invite a new era of “magic bullets”. They foresaw precision public health edging towards an individualised, genomics-focused enterprise. They concluded their perspective by stating that, “we believe there’s no need to add the word ‘precision’ to ‘public health’”. I think Chowkwanyun et al are mistaken. Precision public health offers a compelling opportunity to reinvigorate a discipline that has never been more important for advancing the health of our most vulnerable and excluded communities.



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What is precision public health? Put at its simplest, precision public health is about using the best available data to target more effectively and efficiently interventions of all kinds to those most in need. Nothing in this definition excludes the traditional concerns of public health. On the contrary, precision public health emphasises the importance of those determinants for communities that have been invisibilised. The fact is that the power of data to transform what we understand about the health predicaments of communities has entered a new era. Two examples. Work from the Institute for Health Metrics and Evaluation, published last month, reviewed over 200 geographically detailed surveys and censuses on child mortality across 46 African countries. When under-5 mortality was estimated at a spatial resolution of 5 km×5 km pixels, a remarkable and disturbing picture emerged. Far from showing the



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advances in child survival that many of these countries have reported at national level, these new “precision” maps uncovered serious disparities in child mortality that clearly demanded urgent political attention. As Nick Golding and his colleagues wrote, their work “provides key information for decision makers to target interventions at populations in the greatest need”. A second example also comes from Africa. Zachary Wagner and colleagues linked data on child survival to areas within 50 km of an armed conflict in 35 African countries. From 1995 to 2015, Wagner and co-workers identified over 15 000 conflicts that led to almost a million combat-related deaths. They found that a child born within 50 km of a conflict zone had a 27% higher risk of death when that armed conflict was associated with more than 1000 deaths. Across the continent, child mortality linked to armed conflict was over three times greater than the number of deaths in the conflict itself. To those who worry that precision public health strips politics out of public health, these findings argue exactly the opposite. Precision public health repoliticises public health.

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Last week, the Rockefeller Foundation convened a small group of health (and digital health) specialists to scrutinise and critique the idea of precision public health. Some present welcomed the concept. Others were more reticent. But all agreed that a precision approach had impressive potential to accelerate advances in health. There are certainly dangers. Precision public health should not be a platform for uncritical techno-optimism. Context—the historical evolution of a country’s health system, for example—matters. While digital tools offer tremendous opportunities, they cannot deliver their full value unless equal attention is paid to enlarging and improving the skills and capabilities of the health workforce. “Pilotitis”—a preoccupation with pilot projects that are ultimately unsustainable—must be avoided. Precision public health is about using the power of data to improve health and achieve social justice—equity, social inclusion, and empowerment. It should not be feared. It should be embraced.

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