

• The science of implementation: from effective innovations to sustainable interventions

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Background

Implementation science is concerned with the ways in which interventions based upon solid data are put into practice in real environments. In the field of healthcare, translational research (or transfer studies) exists at the intersection of fundamental research, concerned with understanding the mechanisms which underpin medical pathologies, and clinical research, which seeks to evaluate the efficacy and tolerance of new treatments or care strategies. Nevertheless, although the development of biomedical innovations is an essential element of the solution to health problems, these innovations alone are often not sufficient to have a real and lasting impact on epidemics. Implementation science, usually focused on the uptake of innovation, must thus seek to engage more with subsequent challenges associated with upscaling and securing interventions for the long term. In doing so, it can draw upon some of the key concepts of sustainability science: interdisciplinarity, intersectionality, holistic perspectives and local and global scales.

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Further reading

http://www.equitesante.org/wp-content/uploads/2017/04/mst-308579-la_mise_en_uvre_des_interventions_de_sante_publique_en_afrique_un_theme_strategique_neglige-WPe@uH8AAQEAAFNxq8AAAAAA-a.pdf

Obstacles to the transferral of innovation: the example of HIV in Africa

In the 1980s, a vast amount of research into the replication methods of HIV led to the development of new treatments. The arrival of antiretroviral treatments in 1996 constituted a genuine therapeutic revolution. Nevertheless, it was not until 2004 that the first programmes providing free access to antiretroviral drugs were launched in Africa, thanks to innovations in financing mechanisms (the establishment of the Global Fund to end AIDS in 2002 and the American PEPFAR programme - the President's Emergency Plan for Aids Relief - in 2003), drug production (particularly generic drugs) and improvements to healthcare systems. The number of people in the world living with HIV and receiving treatment thus increased from around 100,000 in 2003 to almost 19.5 million by 2020, and over the same time the number of recorded AIDS deaths decreased massively. This increased access to care also required certain innovations in terms of diagnostic tools. Rapid tests capable of detecting HIV within 30 minutes were developed in the 1990s, but here again it took many years for such testing services to reach low and middle-income countries. One major innovation has been the development of so-called "community" testing, as recommended by the World Health Organization since 2013, with testing delegated to non-medical partners trained in the necessary techniques. More recently, the advent of pre-exposure prophylaxis (PrEP), involving drugs which prevent HIV-negative persons from contracting the virus, has radically

changed the biomedical prevention of HIV. PrEP is highly effective, on the condition that it is accessible and that users take it regularly. The Princesse project, co-coordinated by the IRD and focusing on female sex workers in Ivory Coast, has shown that the efficacy of PrEP is hindered by the living conditions of these women. PrEP medication must be taken orally every day and supervised by means of quarterly check-ups, something which is not particularly compatible with the highly mobile lives of these sex workers, and the time they are willing or able to devote to their health. The benefits of the treatment are not immediately visible, and thus do not compensate for the very real constraints of the follow-up work.

Interdisciplinarity and intersectionality

Given the complexity of the mechanisms at work in the production of healthcare inequalities, particularly in situations involving prostitution, it is crucial to diversify our investigative methods and combine multiple disciplinary perspectives on the same subject, establishing a dialogue between social sciences, health sciences and biological sciences, but also, both upstream and downstream, between local and international decision-makers, operators and, above all, beneficiaries themselves. Involving these different stakeholders allows us to mobilise and compare scientific knowledge, experiential knowledge and expertise from the field, and to better identify measures for experimentation. The Princesse project was co-constructed by means of a series of workshops involving various community NGOs and

the national anti-AIDS programme. Implementation in partnership with the NGO Aprosam, and maintaining a constant open dialogue with the medical team and peer-educators (community members trained in support provision), made it possible to more effectively identify operational and logistical challenges. Better appropriation of the research results by the population directly affected, by civil society and by political decision-makers (including the national anti-AIDS programme, in the case of the Princesse project) is a key component of lobbying efforts. Similarly, knowledge transfer should involve more than simply presenting research results; we need to think more comprehensively about the processes and activities most conducive to sharing and disseminating the knowledge produced by research.

A holistic vision of health

The WHO defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” This definition reminds us that health is not merely a clinical affair, inviting us to take full consideration of the other dimensions which make up our lives, including the social dimension. The silo organisation of care provision, with funding earmarked for specific conditions, has been the subject of regular criticism for decades. When it comes to health interventions, where it is impossible to tackle all health needs in a single operation, it is important to identify opportunities for pooling care resources and achieving economies of scale. It is, for example, entirely possible to plan actions from a population perspective



**Mobile sexual health clinic
in a red light district, ANRS Princesse project,
San Pedro region, Ivory Coast.**

rather than the perspective of a specific pathology or department. Multi-pathology approaches provide opportunities to get people thinking about health issues which may not be top of their list of priorities. The Princesse project demonstrates that a paradigm shift is possible. While the initial brief was to develop a PrEP programme, with broader sexual health services as a recommended adjunct, the intervention we ultimately developed in partnership with Aprosam encompasses a range of sexual health services, including PrEP, while remaining open to HIV-positive women, those who do not wish to take PrEP, and those suffering from Hepatitis B. Integrated approaches make it possible to provide a better quality of care and, in return, to maintain the motivation levels of medical personnel and community agents, which is essential to the sustainability of the project.

Local appropriation of global challenges

Global health challenges transcend national borders, and require collective action by the international community. As such, it is essential to consider how the lessons learned from local experiments can feed into the drafting of international recommendations. But it is every bit as important to re-examine policies and programmes with reference to the local context specific to each intervention. It is not possible to develop effective innovations

without ensuring that, at the local level, interventions take full account of the structural and social barriers which people face. The somewhat disappointing results of the Princesse project stand in stark contrast with the enthusiasm for PrEP shown by many development agencies. This is by no means a miracle solution. What we need now are new tools, tools which are easier to use and more accessible. The forthcoming arrival of long-lasting treatment solutions could be a major step forward, as long as the follow-up process is revised and simplified.

KEY POINTS

Issues of implementation and upscaling are not simply operational problems. Developing effective tools is not enough; they also need to be deployed correctly, and tailored to the realities of the field in order to be effective. This requires a clear understanding of how interventions can accommodate the constraints faced by beneficiaries, as well as the structural, organisational, economic and political constraints inherent to healthcare systems. In order to secure the long term future of health interventions, implementation science needs to become even more interdisciplinary and intersectional, with the active involvement of decision-makers, actors in the field and the beneficiaries themselves.

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