Many current challenges in maternal health are complex. For example, designing and implementing a functional emergency referral system might require creating effective communication channels among facilities, improving knowledge among health workers, establishing reliable transportation systems, ensuring healthcare staff do not request “informal fees” from patients, and changing deeply embedded community preferences about where to give birth. A comprehensive referral system would therefore need to be multi-faceted, and be designed to function in the context of a complex health system.

Randomized controlled trials and other quasi-experimental methods generate critically important evidence about many innovations, such as which drugs or intervention to use when a woman is referred for obstructed labor. However, these methods cannot provide all of the necessary information to implement comprehensive public health interventions in real-life settings. Implementation science can help to fill this gap.

Implementation science is the close study of implementation. It involves studying the process of introducing, institutionalizing, and sustaining policies, programs, and activities in complex settings. By their very nature, experimental methods fail to answer questions that may be decisive in shaping implementation. Experimental methods seek to control the context in which interventions are tried. However, when interventions are implemented, local political, social, programmatic, and cultural variables, such as the supply chain and the social class of providers and patients can be significant. In the domain of public health programming, experimental methods look for a correlation between an intervention and an outcome of interest; implementation science attempts to explain that link and deeply examine the execution process of an intervention.

The field of implementation science — which is still relatively new to the field of public health — offers multiple approaches to building the more detailed and specific (while still generalizable) evidence base needed to answer critical questions about how to promote equitable access to maternal healthcare. Implementation science can assess fidelity (e.g. was the program carried out as intended?), elucidate causal mechanisms, and identify contextual factors that may explain variation in outcomes. Contextual factors relevant to implementation can be specific to a public health project or more general, encompassing issues such as health providers’ attitudes, health system resources, public health activities carried out by other actors and programs, and national political changes. By addressing implementation fidelity, causality, and context, implementation science seeks to answer questions that can inform scale-up and sustainability.

AMDD’S Contribution to Implementation Science

Columbia University’s Averting Maternal Death and Disability (AMDD) Program is committed to promoting equity and universal coverage. Achieving meaningful progress in these areas requires acknowledging and understanding deep, systemic problems that can undercut the best-laid programs and policies. For example, when the system for assigning healthcare posts and granting transfers to health workers and administrators is inconsistent or non-transparent, clinics can be left without key staff, which in turn foments apathy among workers and distrust among patients. Other examples of problems that might benefit from implementation science are the high, out-of-pocket costs that even the poorest must pay to access “free” services, or the disrespect and abuse directed at poor women while delivering their babies. Such dynamics ultimately shape the fate of evidence-based clinical interventions and globally-endorsed “best practices.” To understand those dynamics, AMDD has undertaken a series of implementation research projects to extract broadly applicable implementation lessons.

Realist Evaluation

Within the field of implementation science, AMDD uses realist evaluation as a tool to understand what works, for whom, in what setting, and why. Realist evaluation uses the basic logic of “theory-driven inquiry” that is often used in the social sciences. Realist evaluation is premised on the insight that programs, which are efforts to introduce interventions
this capital spurred behavior change among health providers and pregnant women.

In another realist evaluation, AMDD worked in partnership with the BRAC School of Public Health and the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) to conduct a review of UNICEF’s three major rural maternal and newborn health programs in Bangladesh. The research identified key program drivers and bottlenecks, as well as overarching lessons for implementation.

Among the overarching lessons, AMDD and partners found that “implementation support” and “implementation assessment” are indispensable and often ignored health system functions. Implementation support ensures health practitioners and administrators have access to knowledgeable support teams to help make the needed shifts in individual and organizational structures within the healthcare setting. Implementation assessment is the continual process of generating and analyzing data from the field that can feed into policymaking and implementation processes. It also involves helping decision-makers and managers understand ongoing efforts to introduce change in the system, to problem-solve at the local level, and to ensure that the system ultimately delivers as intended. Variation in implementation support and assessment, in conjunction with contextual differences across rural Bangladesh, explained some of the variation in program outcomes. In this case, the multiplicity of activity-specific findings were synthesized to generate broader lessons about implementation.

AMDD’s experience in implementation science, including the realist evaluations of BRAC and UNICEF programs, has shown that even when a health program is designed and implemented to focus only on biological health outcomes, its actual functioning in the lives of its stakeholders (clients, providers, and policymakers) is always a far more complex affair. Implementation science can capture some of this complexity, providing insights to be harnessed for improving the program researched, scaling up, and addressing similar maternal health challenges in different settings.

Notes