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Nanotechnology at the Frontiers of Global Health

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Abstract

Low- and middle-income countries (LMICs) bear the largest burden of preventable death and disability, but are underserved by nanotechnology innovation in healthcare. Nanotechnology can be used not only to develop new diagnostics and treatments, but also to make existing interventions more accessible in LMICs. This includes improving thermal stability and shelf-life, reducing cost and complexity of administration, and modifying release kinetics and side effect profiles. We will discuss opportunities for nanotechnology innovation, approaches for prioritizing across biomedical needs in LMICs, and methods for developing target product profiles for nanotechnology that saves lives, improves quality of life, and reduces global health inequality.