

March 2025

## Background

Antimicrobial resistance (AMR), caused by overuse and inappropriate use of antibiotics, has emerged as one of the leading public health threats of the twenty-first century. AMR threatens the ability to treat common infections by reducing or eliminating the effectiveness of antibiotics against bacteria. It is estimated that 1.3 million lives are lost annually due to AMR and this toll is expected to increase to 10 million lives per year by 2050 (Lancet, 2022). The burden of AMR is greatest in low and lower-middle income countries (LMICs) with sub-Saharan Africa carrying the highest burden (Lancet, 2022). In LMIC settings, AMR is not only a public health threat but it is also associated with several negative health outcomes at an individual level including increased intensive care unit admissions and prolonged hospital stays (Kraker, 2023).

Current guidance around country-level AMR reduction is largely clinical in nature, however, various financial and behavioral motivations have been well documented to drive overuse of antibiotics (Li, 2023; Belachew, 2021). Antibiotic stewardship efforts have not addressed these drivers, which reflects an underappreciation of the market forces that contribute to misuse. The lack of a holistic approach has created unfavorable conditions for all ecosystem players including providers, patients, and the pharmaceutical supply chain.

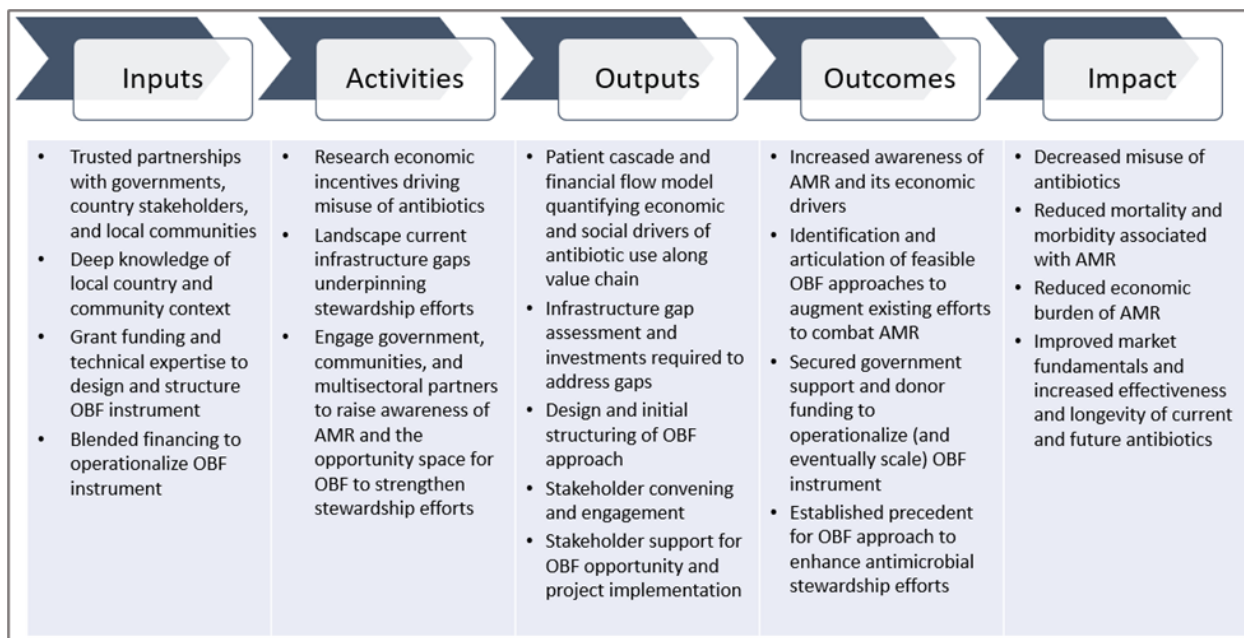
While incentive structures to reduce AMR have been explored and successfully implemented in high-income countries such as the United Kingdom (Aliabadi, 2021) and Japan (Okubo, 2023), limited investments have been made in exploring similar models in LMICs.

Outcomes-based financing (OBF) is an incentive system which could complement stewardship activities by more directly addressing the behavioral and financial drivers of misuse. OBF allows donors and implementers to direct the attention of service providers to desired outputs and outcomes of stewardship efforts versus the traditional focus of donor grants on upfront inputs. The growing burden of AMR necessitates innovation and novel solutions to be explored and implemented.

## Project Aims and Goals

PATH aims to design and pilot an OBF mechanism to incentivize antimicrobial stewardship (AMS) efforts in LMICs to support and improve human health. This mechanism aims to address the underlying infrastructure and health systems gaps necessary for a comprehensive stewardship approach while incentivizing health provider networks to pilot innovative business models and service delivery approaches that prevent or counteract the economic and social incentives driving the misuse of antibiotics in LMICs. The impact resulting from this initiative is decreased misuse of antibiotics, improved market fundamentals and effectiveness of current and future antibiotics, and reduced mortality and morbidity associated with AMR. The theory of change for this initiative is shown below.

**Figure 1.** AMR OBF Initiative Theory of Change

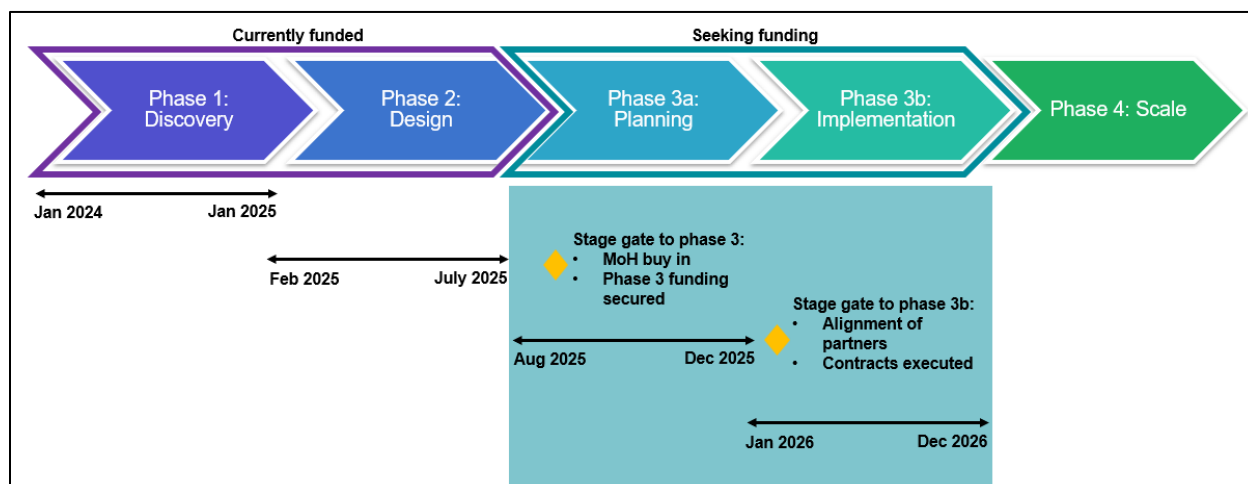


OBF remains an underutilized tool in the global health community. This work will generate new evidence on how financing mechanisms and well-designed incentive structures can enhance healthcare delivery and improve outcomes.

The schematic below outlines the four phases of this work. With funding provided by Pfizer Inc., PATH initiated the discovery phase (Phase 1) in January of 2024 in two geographies, Dakar, Senegal and Dar es Salaam, Tanzania. Phase 1 was completed in February 2025 and PATH plans to share preliminary research results in March 2025. The PATH team has also secured funding from Pfizer Inc. for the design phase (Phase 2) which will commence in March 2025.

**PATH is now seeking partnership from interested donors and stakeholders to co-design the OBF instrument in addition to seeking funded commitments for the pilot implementation phase (Phase 3) to enable swift transition from design to implementation without a lapse in time.**

**Figure 2. AMR OBF Initiative Phases**



## **Project Approach and Timeline**

In partnership with Pfizer, PATH has completed Phase 1 in which the team completed Institutional Review Board (IRB) approved research in Senegal and Tanzania to develop a contextual understanding of economic and social incentives currently driving overuse or misuse of antibiotics and current infrastructural and capacity gaps underpinning AMS programs. The research findings will be shared with interested stakeholders in March 2025. PATH will leverage these findings to inform the design phase, which will commence in March 2025 in partnership with Social Finance UK who will lead the iterative design process in coordination with the Ministry of Health (MOH) in Senegal and Tanzania, interested donors, and other key stakeholders (see supplementary documentation for more details on Phase 1 and Phase 2).

To move to Phase 3, pilot implementation, the project team will require MOH buy-in in Senegal and Tanzania along with firm funding commitments from a donor or a consortium of donors. Once these two criteria have been achieved, the PATH team will begin the planning stages of pilot implementation in Q3 of 2025 with the expectation of launching the pilot implementation in January of 2026.

The team expects pilot implementation to take approximately 12 months to enable iteration and course correction along the way. Interim analysis will take place at appropriate timeframes to identify areas for refinement and inform a continuous improvement plan. At the conclusion of the implementation, the team will analyze and report final results, capturing the outcomes and lessons learned from the intervention. The analysis will focus on narrowing in on the most effective interventions and corresponding OBF approach that aligned with performance indicators and yielded the expected outcomes. Using these findings, the team will design a scale-up plan based on proven performance and key insights gained throughout the implementation. To ensure smooth transition and long-term sustainability, the team will identify transition partners and implementers who will carry the work forward and oversee its continued success. All results will be published or appropriately disseminated. PATH will proactively socialize findings and advocate for scale-up based on the outcomes of the implementation.

## **Budget**

The budget required for Phase 3 pilot implementation is expected to range between \$2-4M assuming implementation in both Senegal and Tanzania. Further details can be provided upon request.

## About PATH

PATH is a global nonprofit dedicated to achieving health equity. With more than 40 years of experience forging multisector partnerships, PATH develops and scales up innovative solutions to the world's most pressing health challenges. Our team of innovators comprises more than 1,500 employees in offices in 20 countries. With expertise in science, health, economics, technology, advocacy, and dozens of other specialties, PATH develops and scales solutions—including vaccines, drugs, devices, diagnostics, and innovative approaches to strengthening health systems worldwide. We work in more than 70 countries to transform bold ideas into sustainable solutions that improve health and well-being for all, reaching over 150 million people, on average, each year.

## Additional resources on PATH's AMR OBF Initiative

- Clinton Global Initiative Commitment to Action Announcement: [link here](#)
- PATH project overview – Slide presentation from UNGA
- PATH AMR OBF Initiative Overview, attached below – 2 page document



PATH project



PATH AMR OBF  
Initiative Overview.pdf

## References

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