

## PERSPECTIVE ARTICLE

Why embedded technical assistance builds  
stronger health systems: Lessons from SenegalSeyni Mbaye<sup>1</sup> , Shivani Shukla<sup>1,2</sup>, Parfait Uwairaye<sup>1</sup>, Soleine Scotney<sup>1</sup>, Amit Chandra<sup>1,3</sup>, Daniel Palazuelos<sup>1,4,5</sup>, and Kiana Sinclair<sup>1</sup><sup>1</sup>Department of Country Engagement, Financing Alliance for Health, Nairobi, Kenya<sup>2</sup>Department of Global Health and Development, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine, London, United Kingdom<sup>3</sup>Department of Global Health, School of Health, Georgetown University, Washington, D.C., United States of America<sup>4</sup>Division of Global Health Equity, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, United States of America<sup>5</sup>Partners In Health, Boston, Massachusetts, United States of America

## Abstract

Technical assistance (TA) in low- and middle-income countries has traditionally prioritized producing strategies, frameworks, and policy documents. While these outputs remain necessary, this model is increasingly misaligned with health system reforms, which are now constrained less by design and more by the institutional capacity required to implement decisions across budgets, programs, and political processes. Drawing on experience in Senegal, this perspective article examines how “embedded” technical advisors working within the Ministry of Health over two years supported coordination, continuity, and access to decision-making processes during reform implementation. We argue that conventional TA is limited by discontinuity, fragmentation, and insufficient proximity to government systems, which may reduce its ability to support implementation. Embedded TA offers a stronger alternative by enabling sustained engagement within government processes, improving cross-actor coordination, and allowing real-time adaptation to implementation constraints, though isolating its specific contribution from other enabling conditions, such as prior institutional strength or favorable funding priorities, remains a limitation of single-case evidence. Embedded TA also introduces risks, including substitution of government functions, accountability drift, political exposure, and conflict between government priorities and advisor judgment, which require deliberate mitigation through strong government ownership, clear role definition, and structured transition planning. This perspective article argues that TA models should shift toward longer-term, flexible engagements that prioritize implementation support and institutional problem-solving, with progress tracked through diagnostic indicators tied to these specific risks rather than deliverable counts alone.

**Keywords:** Health system strengthening; Health financing; Technical assistance; Sub-Saharan Africa; Senegal

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## 1. Introduction

Across many low- and middle-income countries, Ministries of Health are pursuing ambitious reforms in health financing, including strategic purchasing and optimizing public financial management. These reforms aim to expand service coverage, improve equity, and strengthen the reliability of frontline services. Achieving these goals requires ministries to manage complex institutional tasks such as aligning national priorities with budget cycles, coordinating across disease programs, negotiating resource allocation decisions, and sustaining implementation across multiple fiscal years (Travis *et al.*, 2004).

For more than two decades, conventional technical assistance (TA) has supported these efforts by helping produce policy frameworks, investment cases, and national strategies, typically through international experts based outside the country, engaging via short-term field visits and desk reviews. This model remains well suited to design-stage work that benefits from comparative, cross-country expertise. However, the environment in which reforms are implemented has changed: fiscal space is tightening, and donors are reassessing spending priorities, pushing ministries to deliver more ambitious reforms with fewer resources (Andrews *et al.*, 2017).

Reflecting on three decades of TA to ministries of health, Solter and Solter (2013) stated that designing reforms on paper is rarely the hardest part; managing the politics, institutions, and budgets needed to implement them is. Governments increasingly report the same constraint: not design, but execution capacity (Kanagat *et al.*, 2021). This is where conventional TA struggles. Because engagements are short-term, externally managed, and deliverable-driven, they are too discontinuous to support iterative implementation, too fragmented across the many actors a reform touches, and too distant from government systems to adapt as priorities shift. A recurring consequence is capacity substitution, where advisors absorb government functions rather than building institutions' ability to perform them independently (Nastase *et al.*, 2021).

This article argues that embedded TA, advisors placed continuously within government institutions, typically over multiple years, is better suited to these challenges. By remaining alongside government teams, embedded advisors build the institutional relationships, trust, and contextual knowledge needed to sustain reforms through implementation, complementing rather than replacing conventional TA's design-stage strengths. The approach resembles what Paul Farmer called "accompaniment": being "present on a journey with a beginning and an end" (Farmer, 2011), applied here to institutions rather than

patients. The Financing Alliance for Health, an Africa-based, African-led health financing technical partner, has adopted this model across its work with African governments (Financing Alliance for Health, 2026).

We examine Financing Alliance for Health's engagement in Senegal following a 2023 Memorandum of Understanding with the Ministry of Health and Public Hygiene. The analysis draws on direct experience of embedded advisors over a two-year, end-to-end reform process, including funding requests, costing models, workplans, consultation records, and reviewer feedback, interpreted alongside the broader TA literature and an independent multi-country evaluation of Global Fund advisors (Andrews *et al.*, 2017; Nastase *et al.*, 2021; Richardson & de la Peza, 2019). Rather than claiming causal attribution from a single case, we used Senegal to identify mechanisms through which embedded TA can complement conventional approaches, and to draw transferable lessons for governments and development partners strengthening implementation capacity under tightening resource constraints.

## 2. The structural limits of conventional technical assistance

Commissioning a blueprint does not build the structure; someone still has to lay bricks, adjust for shifting ground, and stay on site when the design faces a problem not drawing anticipated. Health system reform works the same way. The hardest work is the coordination and course-correction needed to carry it into implementation, and conventional TA is structurally ill-suited to that work, for three related reasons.

The first is discontinuity. Policy design is only the starting point of reform (Organization for Economic Co-operation and Development, 2023); implementation depends on a long sequence of smaller decisions, aligning proposals with budget ceilings, closing planning gaps, absorbing administrative delays, that can take months or years and often outlast changes in leadership (Peters *et al.*, 2013). Conventional TA is built to produce outputs within fixed timeframes; valuable as those outputs are, engagements rarely last long enough to support the iterative adjustments that determine whether a reform advances (Andrews *et al.*, 2017).

The second is fragmentation. Reforms move across planning units, budgeting teams, disease programs, community health departments, and subnational authorities, and when their contributions are not aligned, progress slows, and coordination costs rise (Kanagat *et al.*, 2021; Travis *et al.*, 2004). For many ministries, the binding constraint is not design but keeping these actors coherent as a reform moves from plan to practice.

The third, and most consequential, is distance. Reform happens inside budget negotiations, procurement bottlenecks, and shifting political dynamics, where priorities evolve mid-cycle and approvals stall without warning. Support outside government structures typically lacks visibility into these rhythms and cannot adapt as quickly as context demands. What ministries need is support close enough to see these dynamics form and able to move with government rather than on a fixed external timeline.

Together, these weaknesses trace back to one gap: conventional TA delivers a defined output within a fixed period, while implementation demands sustained presence through a process that is neither defined nor linear. Section 3 shows how Senegal's engagement, through the Global Fund's Grant Cycle 7 and its national community health strategy, addressed each in practice, before Section 4 turns to the risks embedded TA introduces in return.

### 3. Embedded technical assistance in practice

In Senegal, embedded advisors addressed discontinuity through sustained presence across the reform cycle, fragmentation through coordination across ministry units and disease programs, and distance through daily proximity to how decisions are made. The engagement was governed by a memorandum of understanding with the ministry setting out collaboration objectives, the advisors' role, and an explicit mandate to progressively transfer analytical and coordination functions to named government counterparts. Multi-country evaluations found that such positioning improves advisory access to informal decision-making and reduces coordination costs (Oxford Policy Fellowship, 2020).

The clearest illustration is Senegal's 2023 application to the Global Fund's Grant Cycle 7, a multi-disease grant covering human immunodeficiency virus, tuberculosis, malaria, and health system strengthening. Securing it demanded months of iterative work: aligning funding requests with national priorities, reconciling programmatic needs, and revising budget assumptions across successive review rounds. Embedded advisors worked alongside ministry officials through each round, ensuring changes in one component carried across the others and that late revisions did not leave earlier commitments unfunded. The application succeeded, securing USD 50 million.

That outcome cannot be attributed to the advisory model alone. Senegal entered the Global Fund's Grant Cycle 7 as an established Global Fund implementer with technically strong disease programs, favorable regional funding priorities, and relative continuity of ministry

leadership, conditions that would have supported a strong application regardless of advisory input. The more defensible claim is narrower: advisors added value at the seams between these already-strong programs, keeping cross-disease budget assumptions consistent, rather than having built programmatic strength that did not otherwise exist.

Grant approval, however, was where implementation risk began. Disbursement conditions, sub-recipient contracting, and procurement authorizations create bottlenecks that organizations without on-the-ground presence typically learn of only after timelines have slipped (Andrews *et al.*, 2017). Because advisors were already inside the ministry, they identified blockages early, sequenced activities to protect milestones, and maintained continuity through the transition from grant-making to implementation, the phase where external support is most often withdrawn.

Senegal's national community health strategy shows the same model operating outside a donor grant cycle. Advisors organized consultations, so relevant units were engaged at the right moments and linked technical decisions to costing in real time, making financial implications visible as they were made. The process produced a costed, officially endorsed strategy in roughly seven months, with broad cross-government ownership.

Across both processes, what accumulated was institutional trust. Advisors who understand the politics behind a decision and know which officials must be engaged before a proposal can advance are treated as credible partners rather than external experts. This "institutional literacy," a working knowledge of informal norms, hierarchical sensitivities, and bureaucratic incentives, is what distinguishes embedded TA from conventional advisory support.

### 4. Risk management

The literature consistently documents the risks associated with embedded TA (Kanagat *et al.*, 2021; Williamson, 2015). The most serious is substitution: when advisors absorb coordination and analytical functions that should sit within the ministry, because they can do it faster, the reform may advance while institutional capacity does not keep pace. In Senegal, this was managed by assigning a named counterpart to each advisory function and including handover milestones in the workplan.

The second is accountability drift. Advisors funded by donors but working inside government can end up serving whoever pays, producing visible outputs rather than what the ministry needs (Organization for Economic

Co-operation and Development, 2023). In Senegal, accountability was anchored with the planning directorate, with donor reporting focused on implementation milestones rather than deliverable counts.

The third is political exposure. Advisors working close to budget negotiations, resource allocation, or procurement may be drawn into internal politics or influence decisions that should remain with the ministry. This was managed by combining technical expertise with political awareness, clarifying the limits of advisor authority, and designing agreements for flexible, context-aware engagement.

A fourth risk is conflict between the ministry's immediate priorities and the advisor's judgment about what the reform requires. A counterpart may press the advisor to expedite a sensitive approval or favor a visible deliverable over the more defensible path, and because advisors depend on continued buy-in, they face real pressure to accommodate rather than resist. This was managed by fixing the advisor's mandate and decision boundaries in the terms of reference at the outset, so disagreements were resolved against an agreed reference point rather than negotiated under pressure.

## 5. Suggested changes

For donors, the primary change is in how advisory performance is contracted and measured. Conventional TA ties value to output, deliverables produced on schedule, which undervalues embedded engagement, where consequential contributions such as brokering agreement between units leave no paper trail. Donors need to fund longer engagements and assess performance against institutional progress, not document counts.

For governments, embedded support should be concentrated where coordination is hardest, political dynamics most complex, and the cost of stalling highest, with the advisor's role and capability transfer defined before they move in.

Both changes raise the same question: if success is not deliverable counts, what should be tracked instead? A uniform indicator set is neither useful nor fair, since roles vary and progress cannot be traced to one individual, but an absence of progress reliably shows where a reform is stuck (Richardson & de la Peza, 2019). Indicators work best as diagnostics, each mapped to a risk: for substitution, the share of advisory functions led by government counterparts over time; for accountability drift, the balance of advisor time between agreed objectives and unplanned requests; for political and implementation risk, the proportion of bottlenecks resolved between reporting periods; and for

priority conflict, whether performance holds through leadership transitions. Tracked in workplans and reviewed each cycle, these make capacity transfer, and its absence, visible before an engagement ends.

## 6. Conclusion

As health financing reforms become more complex and resources more constrained, the challenge is not whether TA is needed but how it is structured. Senegal's experience suggests that embedded TA provides the continuity, coordination, and contextual awareness required to translate policy into implementation. Its value lies in supporting the everyday decisions that shape reform outcomes, not in producing additional documentation. For donors, this implies more flexible, longer-term financing models that prioritize implementation progress. For governments, it requires strategic deployment of embedded advisors and clear transition pathways to ensure institutional ownership and sustainability. Embedded models must also anticipate cases where government priorities and the advisor's technical judgment diverge, and build in a clearly defined mandate, so that these disagreements can be resolved without compromising either government ownership or technical integrity. When these conditions are met, embedded TA can reduce coordination costs, strengthen institutional memory, and bridge the gap between policy design, financing, and implementation.

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## Conflict of interest

Seyni Mbaye, Shivani Shukla, Parfait Uwaliraye, Soleine Scotney, Amit Chandra, Daniel Palazuelos, and Kiana Sinclair are employees of or affiliated with the Financing Alliance for Health (FAH), an organization that provides embedded technical assistance and whose model is discussed in this article. The authors therefore acknowledge a potential institutional conflict of interest.

## Author contributions

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## Ethics approval and consent to participate

Not applicable.

## Consent for publication

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Not applicable.

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