Real-time learning, real-world impact

Unleashing the potential of 7-1-7

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From its inception in 2023, the 7-1-7 Alliance has engaged countries and partner organizations around the world to adopt and use the 7-1-7 target. This report is the first systematic evaluation of these efforts. The findings of the report align with the implementation experience of the 7-1-7 Alliance Secretariat and with guidance of the 7-1-7 Alliance Technical Steering Group.

Our learnings have informed the revision of the Alliance's strategy and workplan, which will address the following priorities:

- **Regional model** The Alliance is implementing a new regional model to further scale the use of 7-1-7, while demonstrating the target's impact by providing greater technical engagement within selected countries.
- **Enabling environment** In 2025 and beyond, the Alliance will also address the enabling environment in our partner countries. We will support efforts to enhance leadership and change management skills of technical leaders implementing 7-1-7. We will work with country champions and leaders to communicate the added value of 7-1-7 to stakeholders and build coalitions to sustain 7-1-7. In addition, we will facilitate integration of 7-1-7 from global and regional levels into national strategic frameworks. In selected countries, we will foster collaborations to ensure that sources of funding for early detection and response to outbreaks are mapped, and where possible, linked to 7-1-7 programming.
- **Data management** We will continue to encourage country teams to incorporate 7-1-7 data collection and analysis into existing electronic systems. Leveraging partnerships, we will improve data management of 7-1-7 in participating countries through data and use workshops targeting country epidemiologists and data managers. The workshops will enhance their skills to generate outputs for accountability, resource prioritization, and advocacy, by developing 7-1-7 bottleneck syntheses using consolidated data from multiple events.
- **Training and learning** Training at sub-national level is resource intensive. To address this problem, we will explore, optimize and pursue accreditation for e-learning and hybrid models to build capacity of the public health workforce to routinely use the target. Trainings will emphasize the benefits of leveraging the 7-1-7 target when conducting early action reviews, providing the opportunity to improve the response in real time. Communities of practice and global learning webinars will continue to be used for continuous learning on the 7-1-7 target, and to highlight insights and best practices that will emerge from the operational research platform that is supported by the Alliance.

I hope you will enjoy reading the report. We are extremely grateful to our country partners for agreeing to share their implementation journey and challenges and to the report authors, Marine Buissonière and Ethan Guillén, for their insightful analysis. As we look to the future, we remain committed to our mission to help all countries achieve the 7-1-7 target for outbreak detection and control.

Sincerely,

Dr. Mohammed Lamorde
Director
7-1-7 Alliance

Acronyms and abbreviations

AAR	After Action Review
U.S. CDC	United States Centers for Disease Control and Prevention
EAR	Early Action Review
EOC	Emergency Operations Center
FETP	Field Epidemiology Training Program
GPW 14	WHO Fourteenth General Programme of Work
HICs	High-Income Countries
IAR	Inter Action Review
IDSR	Integrated Disease Surveillance and Response
IHR M&E	International Health Regulations Monitoring and Evaluation
LMICs	Low- and Middle-Income Countries
MCMs	Medical Countermeasures
MDAs	Ministries Departments and Agencies
MoH	Ministry of Health
NAPHS	National Action Plan for Health Security
NGO	Non-Governmental Organization
NPHI	National Public Health Institute
PMEP	Program Management for Epidemic Preparedness
PPR	Pandemic Preparedness and Response
ROIF	Rapid Outbreak Investigation Funds
RRT	Rapid Response Team
RTSL	Resolve to Save Lives
SOPs	Standard Operating Procedures
WHO	World Health Organization
WHO AFRO	WHO Regional Office for Africa

Executive summary

From Kampala to Recife, Phnom Penh to Pima County, the 7-1-7 target has garnered significant global attention and a dedicated following, with 29 countries at various stages of adoption, implementation, and utilization. Prominent global institutions, including the World Bank, the Pandemic Fund, and the World Health Organization (WHO), have integrated the 7-1-7 target into their pandemic prevention, preparedness, and response frameworks. As momentum builds, this review takes stock of the achievements, enablers and barriers to the successful adoption, implementation, and use of the 7-1-7 target from the perspective of implementers, and to a lesser extent, from the perspective of those supporting them.

In addition to robust technical competencies and the active engagement of technical experts, the review highlights that the successful adoption and implementation of 7-1-7 as a systems improvement lever hinges heavily on several non-technical factors. These include political and technical leadership across different levels of government, understanding 7-1-7 as a tool for systems improvement rather than merely a measurement framework, fostering collaboration across sectors and partners, and deploying effective strategies to incrementally deploy and sustain change.

7-1-7 in action Countries predominantly implement 7-1-7 at the national level, with extension to subnational levels typically occurring when central teams are directly involved in the response. Subnational implementation of the 7-1-7 target is crucial as it brings capabilities closer to outbreaks, enhancing the speed and effectiveness of public health actions. Efforts to strengthen the capacity of subnational jurisdictions to independently implement 7-1-7 are gaining momentum, navigating challenges related to country size and governance, technical capabilities, and resource availability. 7-1-7 has been extensively used retrospectively and in after action reviews, with some countries reporting deriving great value in shifting to real time use.

Challenges and enablers Interviewees identified various aspects in the implementation of the 7-1-7 target that go beyond purely technical aspects but are essential for success. Challenges they reported facing include unclear leadership roles, nominal or inconsistent buy-in, limited understanding of the 7-1-7 tool, overextended staff, financial constraints, data management issues, and varying partners' priorities. Some of the strategies they have found effective to address these obstacles involve engaging high-level champions and subnational decision-makers, improving tool awareness through hands-on training and system alignment, designating dedicated staff, securing catalytic funding, integrating 7-1-7 actions into national plans, strengthening data systems, and fostering partnerships through tailored, collaborative approaches aligned with shared normative frameworks. Central to all these efforts is robust change management, which underpins successful adoption and buttresses buy-in, fosters dynamic collaborations, and long-term sustainability.

From data to action, from adoption to sustainability Several opportunities exist to enhance the continuum from collecting 7-1-7 metrics to achieving impactful action. Countries are demonstrating that robust planning, targeted stakeholder engagement, leveraging inclusive platforms for 7-1-7 analysis, reinforcing the use of root-cause analysis, and assigning accountability for remedial actions can all be effective strategies to counter the risks associated with partial, sub-par or distorted implementation. For lasting sustainability, the 7-1-7 target relies on robust global normative endorsement, seamless integration into national systems, strong national and local ownership, and the effective mobilization of adequate resources to support incremental improvements.

Support provided for 7-1-7 implementation and what else may be needed The support currently provided for 7-1-7 implementation, including funding, tools and resources, technical assistance, capacity building, and access to peer networks, is highly valued by stakeholders. Building on this foundation, the 7-1-7 Alliance might consider exploring additional areas of support where countries are facing persisting challenges including expanded accompaniment to access funding, enhanced capacity-building modalities for subnational dissemination and improved retention, streamlined data collection processes, and contextually tailored planning to fit varied government structures. In terms of leadership, the Alliance may consider offering greater support in cultivating change management skills, a key factor in 7-1-7 leaders' success, which can help mitigate resistance, foster ownership, and cultivate a culture of continuous improvement.

Wicked problems The 7-1-7 implementation encounters several "wicked problems" that complicate efforts to improve outbreak response systems, as highlighted by insights from country interviewees. Paradoxically, it is the target's rapid and successful adoption, along with the enthusiasm it has generated, that has brought these complex challenges to the fore. As the initial pilots and early rollout phases have been successfully carried out, the Alliance and its partners will increasingly confront complexities which include ensuring 7-1-7 is used as a transformative tool rather than merely a metric; strengthening leadership ability to drive change at all levels; identifying effective models for scaling at the subnational level; and maintaining the target's integrity and fostering continuous learning as it expands through diverse partnership modalities.

The 7-1-7 target stands as a powerful strategy for enhancing outbreak response systems. Insights gathered from implementers not only highlight the achievements and progress made but also point to some actionable pathways to further optimize implementation. By leveraging its existing successes and adapting to emerging complexities, the 7-1-7 Alliance has a unique opportunity to continue supporting its members toward a future where the 7-1-7 serves as a catalyst for resilient, responsive, and adaptive public health systems.

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Purpose and methodology

The purpose of this review is to take stock of the achievements, enablers and barriers to the successful adoption, implementation, and use of the 7-1-7 target in places where it has been rolled out (see full terms of reference in Annex I). The report describes and analyzes the 7-1-7 rollout to date from the perspective of implementers, and to a lesser extent, from the perspective of those supporting them. It captures their experience in introducing, establishing, and sustaining 7-1-7, surfaces conditions for successful implementation of 7-1-7 as a workflow enhancer and improvement tool. It also offers insights into possible additional support, particularly as it relates to leadership development, that the 7-1-7 Alliance could envisage to provide to its members to optimize rollout. Finally, the report captures some of the broader questions implementers are grappling with particularly around scalability and long-term sustainability.

In terms of methodology, semi-structured interviews served as the primary data collection method for this review. Over a two-month period, 23 interviews were conducted, primarily via video calls, with some in-person interviews taking place during country visits. An interview instrument helped standardize the process with open-ended questions used to elicit detailed responses, followed by clarifying questions. Interviews were transcribed, and anticipated themes were used for initial coding. As more interviews were conducted, themes were refined based on emerging patterns. A final coding scheme was agreed upon, and over 2,000+ coded excerpts (826 unique entries) formed the basis of the analysis. Patterns, connections, variations, and potential outlier ideas were identified, refined, and solidified to capture key insights and trends across the interviews.

The interviewees for this review were recommended by the 7-1-7 Alliance Secretariat and included a diverse group of stakeholders, both political and technical, from entities such as National Public Health Institutes (NPHIs), Emergency Operations Centers (EOCs), and Ministries of Health (MoHs). They represented countries across various geographies and at different stages of 7-1-7 implementation. Additionally, partners supporting the target's rollout—including RTSL, Vital Strategies, JHPIEGO and the United States Centers for Disease Control and Prevention (CDC)—also offered their perspective on the approach to adopting and scaling the target. This diverse group ensured a broad understanding of 7-1-7's implementation across multiple leadership tiers and contexts. Yet, while the interviewees were diverse, some perspectives may have been underrepresented, including that of subnational health officers or technical staff who grapple with the practical realities of implementing 7-1-7 at the local level, or international organizations and donors who have adopted 7-1-7 as part of their own approaches. Given the prominence of the challenges and dynamics related to scaling at subnational levels and adoption by global stakeholders, including these perspectives could have provided further insights.

The reviewers extend their sincere gratitude to the 7-1-7 Alliance leadership and team for their invaluable support in providing essential background information on the rollout of the 7-1-7 target, implementation strategies, and facilitating contacts across various countries. We are especially indebted to the implementers who, despite their demanding schedules and responsibilities, generously took the time to share their experiences with us. Their willingness to engage in this process and share their insights underpins the foundation of our findings; without it, this review would not have been possible. We have made every effort to ensure the review captures the essence of the information shared with us and honors the dedication of all those involved in the 7-1-7 implementation. Any errors, inaccuracies, or misrepresentations in this report are solely our own.

1. 7-1-7 in action

This section explores the evolution, current application, and motivations driving countries' adoption of the 7-1-7 target. It examines the stages of the rollout and highlights how early pilots informed the development of tools to support the framework's broader adoption, laying the foundations for the 7-1-7 Alliance's work. The section also explores the key factors motivating different stakeholders to embrace 7-1-7 and outlines the diverse ways in which countries are currently using the target.

1.1. Phased development of 7-1-7 and current country implementation

The rollout of 7-1-7 followed a phased approach, beginning with pilots led by Resolve to Save Lives (RTSL) in countries including Brazil, Ethiopia, Liberia, Nigeria, Uganda, and the U.S. from 2021 onwards. In these settings, strong domestic public health leadership and pre-existing RTSL relationships facilitated a collaborative hands-on approach to piloting and refining the 7-1-7 target. RTSL and country stakeholders engaged deeply throughout the process, testing the target's applicability and generating feedback to inform necessary adjustments. Political commitment and dedicated technical champions enabled these early adopters to integrate 7-1-7 into their existing systems.

Learnings from the pilot countries were instrumental in shaping the tools, processes, and guidance needed for broader implementation of 7-1-7. The pilots served as a testing ground and provided a proof of concept. Key findings highlighted, across jurisdictions, the critical importance of securing political commitment, designating a champion, identifying the institution with the appropriate mandate for pandemic preparedness and response (PPR) under which 7-1-7 could be deployed, and the need for a platform to facilitate bottleneck analyses and coordinate remedial actions. Another major takeaway was the importance of embedding the target into existing workflows. Based on these insights, a toolkit was developed, offering clear steps, resources and supporting materials to guide country adoption.

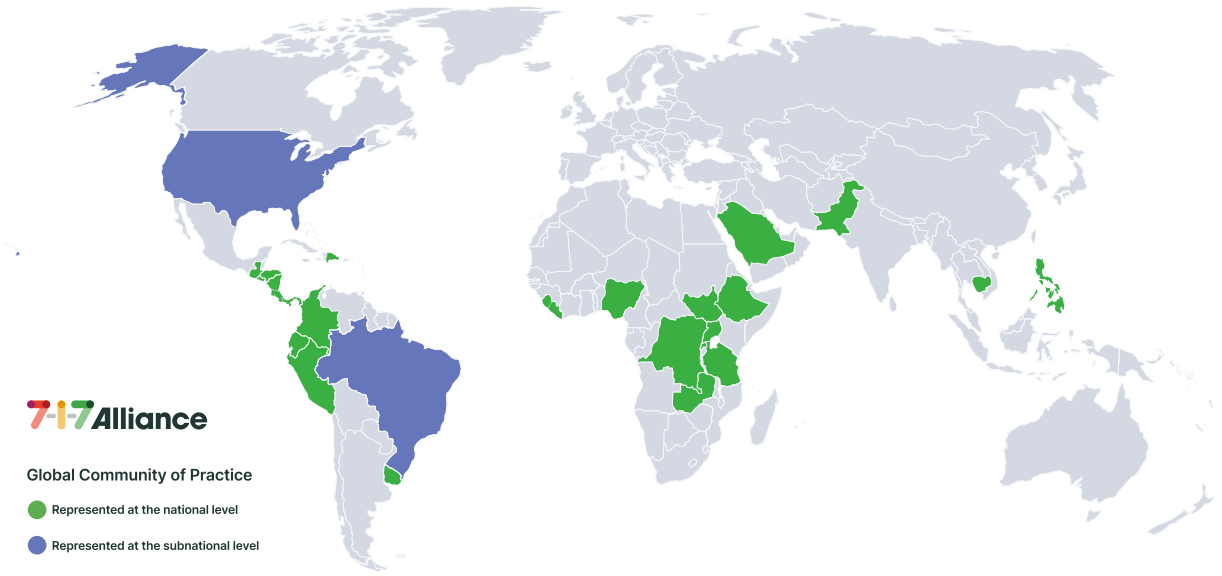
The 7-1-7 Alliance was then established in 2023 to scale the approach globally, transitioning from RTSL-led direct support to a broader platform providing structured and coordinated assistance. From then on, countries, whether affiliated with RTSL or not, could access publicly available resources on the Alliance website including toolkits and interactive training packages, and apply for catalytic adoption grants by submitting concept notes outlining critical steps for successful implementation. To further support this process, the Alliance created a system with technical advisors to help countries navigate implementation challenges—an identified need from the pilot phase. Additionally, the Alliance established a peer-learning mechanism through a global Community of Practice, complementing formal advisory support by providing implementers with practical, field-tested insights and fostering knowledge-sharing among countries.

While RTSL played a foundational role in the development of the 7-1-7 target, and while the Alliance Secretariat is hosted by RTSL, the 7-1-7 Alliance is structured so that countries lead the way in adopting and institutionalizing the target. The Technical Steering Group, led by country representatives alongside select technical partners, exemplifies this country-first approach. By placing the Alliance steering in the hands of those who are directly involved in implementing 7-1-7, the Alliance

fosters the type of ownership critical for sustainability and scale. Finally, the 7-1-7 Alliance most recently began striking partnerships with technically-aligned organizations to support expansion into new batches of countries.

These partners, such as the U.S. CDC, Burnett Institute or PATH, bring their existing networks, established relationships, and infrastructure within countries, that are critical in facilitating the scale-up of the 7-1-7 target.

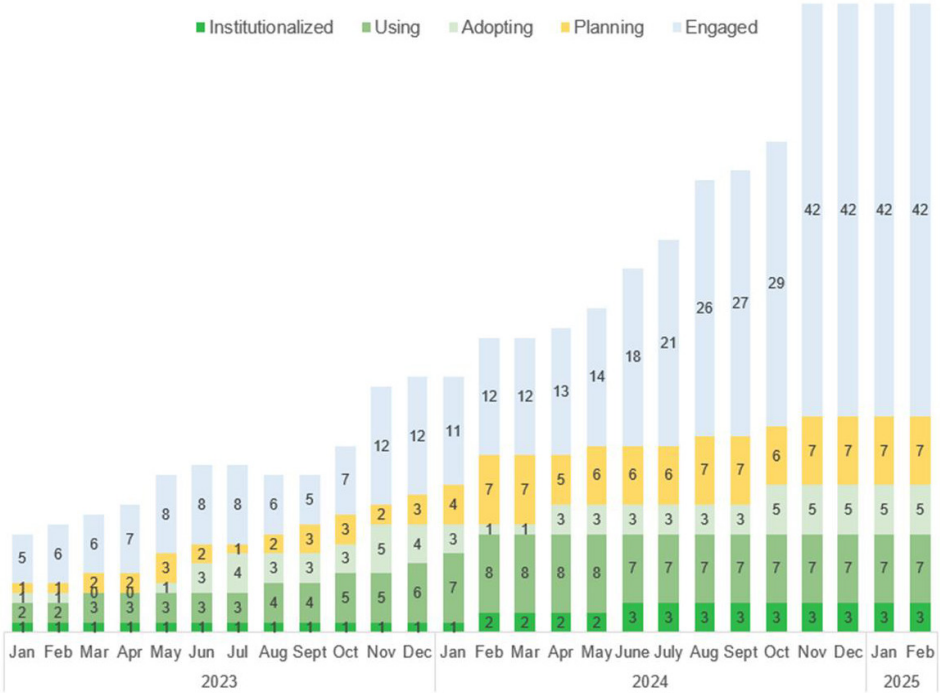
7-1-7 Global Community of Practice



Today, the 7-1-7 Global Community of Practice, hosted by the 7-1-7 Alliance, encompasses over 25 countries, each at different stages of adopting and using the 7-1-7 target (see map above and graph below). As of February 2025, seven countries were planning, five were adopting, seven were using, and three had institutionalized 7-1-7. Over 40 more had expressed interest in 7-1-7 and were in discussions with the Alliance and/or technical partners, and a growing number of others appear to have independently initiated the implementation 7-1-7. This rapid adoption over the span of two short years reflects the growing enthusiasm for and attractiveness of the target, which resonates with innovation-driven and outcome-focused champions, and across diverse country contexts.

With the target's rapid expansion happening through various modalities comes a new set of challenges: ensuring that quality, fidelity, and shared learnings are upheld across all implementing countries—enabling them to collectively benefit from insights and fully harness the potential of 7-1-7.

7-1-7 Alliance country implementation



Note: This progress chart has been updated to reflect more refined categories or country adoption and use processes to more accurately reflect progress. The country categories are defined as follows: (Institutionalized) 7-1-7 has been fully integrated into existing workflows and is being regularly and routinely assessed in near-real-time; (Using) 7-1-7 integration is underway and 7-1-7 assessments are being conducted with performance improvement intent (non-pilot) through those assessments may be intermittent, ad hoc or inconsistent. (Adopting) 7-1-7 adoption processes have begun, including stakeholder engagement, training, integration planning, tool adaptation, etc.; (Planning) country/partner has committed to adopting 7-1-7 and formalized that intent through a workplan, memorandum of understanding, grant application, etc.; (Engaged) country/partner has expressed interest in 7-1-7 adoption and use and have had direct engagement with 7-1-7 Alliance Secretariat or technical partners.

1.2. Why are people motivated to adopt 7-1-7?

From the interviews conducted, it became evident that motivations for adopting and sustaining the 7-1-7 target are strong, though they vary significantly depending on the type of stakeholders involved.

Political leaders and high-level officials are driven by a desire to improve public health outcomes. The 7-1-7 target, which assesses the performance of a complex system, is highly valued by leaders for its ability to provide a panoramic view, including real-time assessment of how effectively the system functions across different levels. The 7-1-7 target allows leaders to exercise leadership in outbreak management and drive system improvement, with success in these areas bringing significant recognition both domestically and on the global stage. Conversely, a demotivator can be the fear of scrutiny, particularly when data sharing might expose weaknesses in government response systems.

Technical and public health officials find 7-1-7 appealing due to its simplicity—though at times deceptively so—and its ability to provide clear, actionable data on outbreaks that other tools do not offer and/or do not offer in a timely manner. They appreciate that 7-1-7 can be used for real-time identification of bottlenecks and gaps in the system and the prompt formulation of corrective actions.

Demotivation arises when 7-1-7 is seen as an extra burden without sufficient support; when 7-1-7 data inquiries serves as the rare and insufficient point of interaction between national level and subnational staff; when technical staff fear 7-1-7 will be used in a punitive manner; and where 7-1-7 appears to be a data collection exercise that fails to drive remedial actions, leading to frustration and disillusionment.

External partners and international organizations adopting 7-1-7 are driven by a commitment to strengthen countries health security and outbreak response capabilities, with an emphasis on data-driven improvements and accountability. Initial caution about 7-1-7 stemmed from the novelty of the target and the fragmented landscape of health security, where numerous frameworks and strategies co-exist to shape global efforts. Some may also have perceived the 7-1-7 target as overlapping with other initiatives or too closely associated with an NGO. However, these reservations were quickly addressed, and key normative and lending institutions have recognized and embraced 7-1-7 as a valuable tool for the common good, solidifying its role in advancing global health security.

1.3. How are countries using 7-1-7 today?

From Kampala to Addis Ababa, Phnom Penh to Pima County, the 7-1-7 target has made its way into National Public Health Institutes or Ministers of Health, fostering system strengthening and progress toward more timely detection and control of outbreaks. The table below summarizes key insights from the interviews, highlighting current usage patterns across countries, including national and subnational adoption, systematic versus ad hoc use, and the role of retrospective analyses, Early Action Reviews (EAR), and After Action Reviews (AAR). Patterns of use have been highly varied, reflecting the influence of local dynamics and contexts.

National and **subnational** adoption

- To-date, most countries initiated and regularly use 7-1-7 at the national level and have started to roll out 7-1-7 to some subnational level divisions.
- In two highly federated countries, 7-1-7 started at and is used solely in some select subnational jurisdictions. These could possibly serve as model for other jurisdictions or be brought to the attention of central authorities if the national political context is favorable.
- None of the 7-1-7 implementers are consistently using the 7-1-7 framework at the national level and across all subnational divisions.

Systematic vs **ad hoc**

- In a majority of cases, the 7-1-7 target is systematically applied to all outbreaks where the national government is directly involved in the response.
- This is especially manifested through the deployment of Rapid Response Teams (RRTs) equipped to use 7-1-7 (including through trainings, SoPs, and pre-deployment breifings), for events that are risk-laden, exceed certain thresholds, or occur across multiple jurisdictions.
- In some rarer cases, the use is ad hoc, driven by a sense that “something may have been overlooked” and/or that applying 7-1-7 could lead to valuable insights.

Early action vs **after** action reviews

- Today, some countries report using 7-1-7 in real time as part of Early Action Reviews (EAR), largely guided by WHO's "Guidance for Conducting an EAR", which leverages the 7-1-7 target.
- In a number of cases (e.g., yellow fever, diphtheria, Ebola virus disease), 7-1-7 has been successfully used in real time to address early bottlenecks while an outbreak was ongoing.
- The choice to apply 7-1-7 as part of an After Action Review (AAR), rather than in real time, is often driven by resource availability during an outbreak.

Application to public health events

- 7-1-7 is primarily used as initially intended, i.e. for infectious diseases outbreaks in human.
- In some countries, One Health has been a part of implementation from the beginning, though in others integration of One Health is an ongoing, and often difficult endeavor.
- In rarer cases, 7-1-7 is implemented as an all-hazard tool or aplied to certain public health events, such as foodborne illnesses, contaminated food products, or cases of alcohol poisoning.

2. Challenges and enablers of 7-1-7 implementation

This section explores the key challenges and enablers related to implementing the 7-1-7 target, focusing on central themes that emerged form interviewees: in-country leadership, understanding of 7-1-7, staff bandwidth, financial resources, data systems, and partnerships. Of note, challenges and enablers vary based on the country's governance structure (see section 6.6 for more details) and when 7-1-7 was adopted, with expected differences between early adopters who experienced the process of refining and adapting the tools firsthand, and those who joined later when the road-map for implementation was already firmed up.

2.1. In-country leadership

"**Political was key for adoption.** And sustainment will all be about political commitment over time. I**mplementation relies on technical people.**"

"Leadership is one of the most difficult things to measure. Yet we know it is a critical part of our work – and **because 7-1-7 is asking for radical change, leadership is even more important.**"

"**Openness to change is also important.** Many things in health security are heavily codified, normalized. When X happens, you do Y, in Z amount of time, and then you do that next... there is not a lot of room for the imagination, or to think about how things could be or how you would want things to be."

"Most of the decisions that are being taken by the **leadership** are being **guided by the 7-1-7 indicators.**"

> **"You need someone who knows and is known and understands how to bring people together behind a vision, who knows how to build consensus to move forward."**

2.1.1. Related implementation challenges

Lack of clarity on leadership roles or responsibilities in the health system It is at times unclear which individual(s) or agency(ies) holds the authority to drive an initiative like 7-1-7. Competing mandates can exacerbate tensions, while the absence of a clear leader responsible for aligning strategies and making critical decisions can lead to fragmented efforts and accountability gaps. In seeking an institution with the mandate to lead, 7-1-7 often acts as a dye exposing the underlying fault lines and structural gaps in the system. Institutions designated to implement 7-1-7 may oversee all or only some aspects of pandemic preparedness and response, which creates coordination challenges among technical teams and institutions, especially when the 7-1-7 implementing institution does not have a mandate for coordination or lacks authority over other stakeholders whose involvement is needed. This can have ripple effects, including as it relates to rolling out remedial actions or embedding them into national plans, when those extend beyond the authority of the institution designated to lead 7-1-7 implementation.

Weak leadership / leadership in name only In a few cases, interviewees reported the risks associated with nominal or weak leadership, with leaders offering superficial approval but lacking the commitment or capacity to fully support 7-1-7 efforts. Even when there is a formal "yes" from leadership, it may not automatically translate into genuine engagement, leaving dedicated technical staff without the necessary backing or resources to address bottlenecks. In such cases, local political dynamics and a disconnect between leaders and technical teams tasked with implementing the 7-1-7 target appear to be at play.

Challenges in building government buy-in across sectors and levels Some form of government ownership is crucial for the successful adoption and sustainability of 7-1-7. However, interviewees that building ownership at all the necessary levels of government (central, subnational, and across sectors) could be challenging because of competing priorities and fragmentation. As noted above, the 7-1-7 lead may or may not have the mandate or authority to reach out and coordinate across sectors. The required nature and degree of government engagement also vary depending on whether a country operates under a unitary or federated system.

2.1.2. Related enablers

High-level / political champions: Driving momentum and sustaining success A key enabler for the success of the 7-1-7 target is the identification of a designated high-level political champion or leader, such as Ministers of Health, directors general, senior government officials or provincial leaders. Country interviewees emphasized that political champions were particularly essential in the initial stages to create momentum and good will and set clear direction. They are also seen as instrumental in the long-term success and sustainability of the 7-1-7, as they see the value of having a comprehensive overview of system performance. Of note, only a couple of interviewees explicitly referenced 7-1-7 as an accountability tool, at the notable exception of one who highlighted 7-1-7 role in driving improvements by increasing visibility into response performance beyond case counts, while another emphasized how 7-1-7 exposed system weaknesses and compelled action, introducing accountability for actions taken—or neglected—by decision-makers.

High-level leaders who support 7-1-7 tend to operate at the strategic and systemic levels, driven by a vision to enhance workflows within and across systems, foster learning organizations, and improve overall performance. While most are not typically involved in day-to-day operations pertaining to 7-1-7, they best use their influence to secure institutional buy-in, integrate initiatives into existing structures and frameworks, promote cross-division and department alignment and ownership, and mobilize critical resources such as policies, budgets, and staffing. Just as importantly, high-level leaders play a key role in bringing mid-level management on board, setting the strategic direction for technical teams and ensuring stakeholder's consistent presence and engagement, including in key meetings.

Leveraging pre-existing relationships, political capital, and the trust built by RTSL and the 7-1-7 Alliance Secretariat, along with Dr. Frieden's gravitas and extensive reach, has proven to be an effective

strategy to generate buy-in from high-level leaders, particularly among early adopters. A pre-existing foundation of trust and credibility goes a long way to signal to interlocutors the 7-1-7 target's potential to deliver results. International exposure also plays a role, as seen with high-level events such as the World Health Assembly, where 7-1-7 can be showcased as a global initiative rather than a local effort, attracting serious attention. Some leaders are particularly receptive to such global exposure, as it brings attention to their countries' efforts and achievements on an international stage, while also reinforcing their dedication to continuous performance.

National technical leaders: Bridging vision and operational excellence Technical leaders, including heads of departments or divisions such as epidemiology or surveillance, emergency response teams lead, and focal points within National Public Health Institutes (NPHIs), are crucial for the day-to-day management and technical implementation of the 7-1-7 target. Their role is pivotal in translating political directives into operational procedures and ensuring consistent framework application. Conversely, they play a key role in interpreting 7-1-7 technical data and presenting it in a way that appeals to political and financial decision-makers, helping bridge the gap between technical performance and the political will needed to drive change.

Successful technical leaders are those who manage to influence effectively even when formal authority may be lacking and coordinate operations across divisions and departments (e.g., surveillance and response) and with external partners (e.g., U.S. CDC, WHO), ensuring that staff are trained, data systems are functioning, key metrics (e.g., timeliness of detection and response) are collected and acted upon, and used to inform other processes (e.g., National Action Plans for Health Security or NAPHS). Their role is especially important when different teams, at times in different institutions, are in charge of collecting and analyzing data, identifying bottlenecks and corrective actions, integrating recommendations into plans, and overseeing their implementation. Interviewees also noted how technical leaders can help ensure the continuity of the approach by maintaining the use of the 7-1-7 metrics even during political transitions or periods of shifting priorities and de-prioritization.

Insights from interviews reveal that effective technical leaders in implementing 7-1-7 typically exhibit a rare blend of qualities. They display an openness to change while possessing the tenacity to consistently perform essential tasks, even in routine or repetitive settings. In optimal situations, they ensure that data isn't just collected and shared but actively used to drive change, keeping the focus on continuous improvement rather than becoming complacent with achieved metrics. Additionally, they are able to work with others, coordinating efforts across different divisions (e.g., surveillance and response), institutions, levels of government and partners to drive incremental change.

Subnational leadership: Sustaining implementation at the frontline When the goal is for 7-1-7 to be adopted at subnational levels, so that states/provinces/districts can autonomously apply the target to outbreaks within their jurisdiction, leadership at these levels becomes equally important. In a decentralized context, where power and decision-making authority are delegated to regional levels (e.g., to governors and provincial health directors), their leadership and technical expertise play a pivotal role in adoption and sustained use of the 7-1-7 target. Identification of champions at the subnational level, while difficult, is critical to create buy-in and ensure implementation.

In large outbreaks exceeding a certain threshold, national response teams from central agencies often lead the subnational response, and while local counterparts may be familiar with and use the 7-1-7 target, the national RRT mere presence does not automatically impart 7-1-7 knowledge or skills onto them. For effective subnational level response, especially in large, federated countries, interviewees highlighted a need for designated subnational focal points and tailored accompaniment to cultivate subnational level leadership.

Traits of effective high-level / political leaders implementing 7-1-7	
Interviewees, reflecting on their own roles and those of leaders around them, identified key traits of effective high-level political leaders who champion the implementation of the 7-1-7 target.	
Personally committed	Leaders show personal passion and deep commitment to the success of the 7-1-7 target. They invest time in understanding 7-1-7 and advocating for its integration, recognizing that individual conviction alone does not ensure collective ownership.
Challenger of the status quo	Leaders exhibit a certain "productive impatience." They are not satisfied with adhering to existing status quo. They push for better results and improvements, embracing innovative approaches with a readiness to bend bureaucratic or traditional norms.
Entrepreneurial	Effective leaders possess an entrepreneurial mindset, consistently seeking out opportunities for innovation and improvement—such as 7-1-7. They actively iterate on approaches, demonstrating curiosity and flexibility in problem-solving.
Strategic and system-oriented	7-1-7 leaders see beyond the technical realm, they are strategic and systems-oriented, driven by a vision to optimize workflows and enhance performance across systems. They are committed to building learning organizations.
Adept change manager	Successful 7-1-7 leaders excel in change management. They understand the complexities of change, from addressing resistance to fostering buy-in and creating a thriving improvement culture.
Builder of shared agenda / adept at collaboration	Leaders are skilled at building alignment on the bigger picture among diverse stakeholders. They are deliberate at fostering collaboration across levels / institutions to secure buy-in and coherent delivery.
Skilled at leveraging partnership	Champions excel at aligning internal efforts with available external support, maximizing impact by leveraging resources from technical partners and donors
Adept at delegating / empowering	Successful champions not only lead by example but also empower their teams by delegating responsibilities to plan and implement while maintaining oversight. The champion remains apprised of progress (or lack thereof) even if he/she is not directly involved.

2.2. Understanding of the tools

"Does 7-1-7 align with PHEM and if so, how? **How does it align with WHO guidelines?** I think this is human nature: when people come up with a new thing, **the audience needs to understand why and how that would work."**

"We were not able to factor in or prioritize training of the staff of the XXX. At the beginning, **we assumed they should just be able to go through the materials and understand what it is. The gap is now clear in our eyes."**

"**We faced all flavors of resistance.** The officers' resistance was particularly strong. They were used to IDSR. They did not think 7-1-7 was realistic. It took some time for me **to convince them to adopt what they saw as yet another framework."**

"There were people who said: **we already know what we're doing;** we don't need to do this. We already know we have outbreaks. Why do you want to spend time aggregating data when we are in react mode?"

"Just folks who were anxious that they were going to be getting in trouble because of the numbers. The nurse will say, well, the hospital didn't do this, and so why is that going to change our score? I'm like, **it's not a score. This is not a grade."**

> **"And then there were questions about the choice of the metrics. Our Epidemiologists wanted to know what was beyond the data: why 7 days for the first number? What calculation is behind it? Why did you choose 7-1-7 and how applicable is it across diseases? They wanted to understand what it was based on, what were the number behind the numbers, that this was not arbitrary."**

2.2.1. Related implementation challenges

Limited understanding of the tool and its underlying rationale Interviewees reported that, upon initial introduction in a country, there tended to be some confusion and lack of clarity amongst staff about the rationale for and purpose of the 7-1-7 target, with some finding it challenging to grasp the underlying reasoning and significance of the metrics. Despite efforts by the alliance clarify ambiguities and refine tools, some level of limited or superficial understanding still persists, particularly across ministries, departments and agencies (MDAs) and at subnational levels.

Tool perceived as a grading mechanism, rather than an improvement framework Interviewees from a handful of countries reported that some staff viewed the 7-1-7 approach as a grading mechanism or a form of assessment rather than as an improvement-oriented tool. This mindset led to anxiety about "failing" and at times, a performative approach with efforts directed towards superficially meeting targets, detracting from 7-1-7's core purpose as a system improvement tool.

Competition with other frameworks Despite extensive efforts to explain the role 7-1-7 occupies, many interviewees reported initial—and sometimes lingering—confusion about how the 7-1-7 target fits alongside other established tools like the Integrated Disease Surveillance and Response (IDSR), EAR or AAR. As a result, some reported staff's questioning of the need for 7-1-7 given the existence of other frameworks, leading to resistance and a perception of that it may be redundant.

2.2.2. Related enablers

Hands-on training Hands-on practical training (as opposed to more theoretical guidance or training) were mentioned as essential to deepen understanding of 7-1-7. Interviewees highlighted how key experiential learning—where teams apply the 7-1-7 target to current or recent events and observe what it reveals in practice—helped staff recognize 7-1-7 practical value. Such approaches help build a stronger understanding of 7-1-7, transforming initial skepticism into a deeper appreciation of the target and enabling teams to collectively internalize its principles.

Leadership support Strong backing from both technical and political leaders drives better understanding and implementation of 7-1-7. Leaders who dedicate time to sensitizing staff to 7-1-7 play a critical role in communicating the importance of the target for the jurisdiction, clarifying the additive, gap-filling value to existing tools and frameworks, promoting ownership across teams and addressing spoken and unspoken concerns (including as it relates to the non-punitive nature of 7-1-7).

Alignment with existing systems and contexts Continuously reinforcing the connection between 7-1-7 and existing global and national frameworks (e.g., IDSR, EAR, AAR) through context-specific, partner-supported examples can further help country teams view 7-1-7 as an enhancement to existing systems rather than a separate or competing initiative. Such an understanding eases integration of 7-1-7 into routine processes (see section 4.1 below for more on this).

2.3. Staff and bandwidth

"Today, we are supported by RTSL and have a dedicated team to do this. So it may be important to **guarantee that there is at least one person responsible to implement 7-1-7** in the country, even if inside the national government."

"Our epi program has a small team that supports the entire department and all epi activities for the whole department. There is one epidemiologist that sits within the communicable disease team, and she's the one that's been spearheading that effort. But she's the only one [...]. **So it's really just a resource constraint to have the time. And I have to basically force them to do it if I find the time.** That's why I said, we tend to prioritize these for things where I feel like it's going to have either consequence for another case, or I feel like I need it as a lever to be able to tell the story about impact."

> **"Resources also play a key role – conceptually, 7-1-7 is new and teams are already stretched and under-resourced. Being able to have someone dedicated to 7-1-7, able to talk about 7-1-7 to all stakeholders and get their buy-in has been extremely valuable."**

2.3.1. Related implementation challenges

Stretched human resources Staff responsible for implementing 7-1-7 are reportedly often stretched thin with multiple, competing priorities (e.g., regular surveillance activities, NAPHS and annual planning, IHR M&E, crisis response), even in resource-rich countries. This is true for both staff working in health and in adjacent sectors (e.g., animal health). The 7-1-7 workload is often perceived as an additional burden, introducing a new set of tasks. The challenge is in shifting perspectives so that it is seen as a tool to improve existing workflows rather than an extra burden. In some cases, interviewees reported that tasks tied to 7-1-7 were deprioritized unless explicitly part of job descriptions.

Leadership and staff turnover Changes in leadership, such as the appointment of new NPHI director, can disrupt continuity, as newly appointed leaders may not prioritize 7-1-7, potentially resulting in delays or setbacks in its implementation. Turnover of key personnel and institutional reorganization can also disrupt momentum in implementation and create knowledge gaps, often requiring renewed efforts to generate buy-in and (re)train new staff. Of note, however, as an increasingly large number of people become sensitized to 7-1-7, they can later resurface as valuable supporters of the program in different roles, which was noted in couple of countries.

Lack of knowledge retention, especially at subnational levels Some technical staff receive one-time training but may lack ongoing engagement afterwards, leading to inadequate application of 7-1-7 when they eventually use it, as they have not consistently flexed those muscles. Relatedly, superficial understanding of 7-1-7 can mean that while staff grasp the basics (detection, notification, and response), they struggle to effectively apply the target in real-world scenarios.

2.3.2. Related enablers

Dedicated staff Assigning a dedicated 7-1-7 focal person (staff or consultant) or team has been mentioned as crucial by many interviewees to ensure consistent focus, accountability, and follow-through. This role includes tracking the use of metrics, engaging stakeholders, and facilitating integration and implementation within and across departments. To date, external support from partners has been critical to help address this human resource gap and alleviate workload pressure.

Incorporation into existing systems Integrating 7-1-7 into pre-existing health security tools and frameworks, such as within IDSR or as part of deployment procedures for RRTs, ensures that it becomes part of routine operations rather than an additional responsibility. This approach significantly reduces the perception of 7-1-7 as “extra work,” and many countries have reported it as a game-changer (see also section 4.1 on how integration supports sustainability).

Flexible leadership and delegation Flexible leadership that effectively delegates tasks enables teams to balance competing priorities while maintaining focus on critical short-term 7-1-7 activities and long-term system improvement goals.

2.4. Financial matters

"There was support for the 7-1-7 adoption, but not to address the bottlenecks arising from 7-1-7 analyses. **Finding the funds needed to fix the challenges has been a problem** [...] resourcing those is a recurring challenge, mostly as it relates to outbreak response at subnational levels."

"It is the leadership who decides which priority activities can be funded during this year. So, with the explanation of 7-1-7 and so on, they found that this is very important, and **they accepted to prioritize some activities in the annual action plan."**

"And you need countries to see their own data, and the bottlenecks that must be addressed. **You need technical people in the country to show the data to politicians,** so they understand the value of the data and the importance to mobilize the resources and the means to address the bottlenecks."

> **"Now we have done more planning and in the NAPHS, we are looking forward to seeing how it will attract funding and implementing at a larger scale, which will be a challenge."**

2.4.1. Related implementation challenges

Recurring and scaling costs In resource-constrained countries, interviewees noted that beyond catalytic adoption grants, there were and would continue to be financial challenges when it comes to scaling 7-1-7 and ensuring sustained use. They point to modest but necessary funds required to cover recurring costs such as punctual training needs (new staff, refreshers), team incentivization, logistical costs (e.g., transport, accommodation), or essential work tools such as computers or MCMs for RRTs.

Resources to investigate and respond to outbreaks (e.g., Rapid Outbreak Investigation Funds or ROIF) continues to be challenging to secure, especially at subnational levels. The lack of pre-established quick-release funding mechanism delays central and/or subnational teams in investigating and responding to outbreaks, directly impacting 7-1-7 performance.

Bureaucratic delays in contracting, fund approval and disbursement (particularly with NPHIs) have been cited as challenges in couple of countries, affecting timely implementation. In another country, underutilization of funds related to administrative inefficiencies and absorption capacity was also noted as a barrier.

Short-term and long-term needs Addressing short-term bottlenecks can often be done without significant additional resources, and many countries reported being able to take decisive actions promptly with existing means (though one country noted that earmarked funds for quick fixes could further help). In contrast, addressing long-term and systemic challenges hinges on securing additional funding. Engaging with ministries of finance and other government entities to help ensure that critical systems improvements are prioritized in future budgets can be challenging, especially for technical teams at times unfamiliar with budget processes and advocacy approaches. While domestic resources

seen as critical for sustainability, fiscal constraints are real and advocacy efforts often face competing priorities, making it difficult to secure funding for all remedial actions identified through 7-1-7. Consequently, countries have largely remained dependent on the interest and financing of external partners to address the more complex issues surfaced by 7-1-7 analyses, and most low- and middle-income countries (LMIC) interviewees noted that failure to secure resources to address structural or systemic bottlenecks repeatedly identified through 7-1-7 analyses would pose a significant risk to sustainability.

2.4.2. Related enablers

Catalytic grants and early support Initial financial support from RTSL, the 7-1-7 Alliance and partners has been critical in jump-starting 7-1-7 adoption in most resource-constrained countries (NB: in some high-income countries (HICs) or middle-income countries settings, resources are not seen as a sine qua non to adoption, leadership is). These catalytic funds have, for the most part, been sufficient to introduce the tool and have enabled countries to conduct essential early-stage activities such as stakeholder engagement, introductory workshops, initial cohort training, retrospective reviews and roll out at national and/or in selected subnational jurisdictions.

Integration into national plans and domestic resource mobilization Embedding 7-1-7 activities into National Action Plans for Health Security (NAPHS), annual operational plans, and sectoral strategies that reflect national commitments is viewed by interviewees as the golden though arduous route to sustainability. A handful of champions have already reported successes in integrating some priority remedial actions into plans, paving the way to secure financial support through established planning and budgeting cycles. At the subnational level, engaging local authorities with financial autonomy and incentivizing them including through targeted matching funding mechanisms can also help promote subnational ownership of 7-1-7 implementation. Such efforts, however, require 7-1-7 technical teams to have a solid understanding of the processes, timelines, and entry points associated with annual and multi-year planning and budgeting efforts that guide policy and resource allocation. When these areas extend beyond technical teams' typical scope of work and expertise, additional support may be required in strategic communication, negotiation, and policy advocacy to secure leadership backing, legitimize engagement and funding requests, navigate inter-departmental competition, and effectively leverage formal and informal pathways to influence planning and budget allocation processes

Leveraging external partners The World Bank, the Pandemic Fund, and the Global Fund are emerging as important partners in 7-1-7's sustainability. Interviewees view these stakeholders as having the potential to play an outsized role in supporting their efforts to sustain and scale 7-1-7. Notably, several suggested that these external partners could further reinforce 7-1-7 integration by requiring countries applying for funds to submit 7-1-7 baseline data, and support 7-1-7 application beyond metrics reporting. This would encourage countries to incorporate 7-1-7 upstream in their proposals, fostering earlier adoption, signaling to political decision-makers that it is essential for securing funding, and incentivizing sustained use.

2.5. Data-related matters

"We recognized very early on that it was a workflow challenge. There are different systems in human health, and we saw potential opportunities to **use 7-1-7 information across different initiatives, not only to capture the data, but to use 7-1-7 as a lever towards integration of workflows and data."**

"We need to also train staff in the technical departments and working groups on use of the template and how to apply it for different situations. This way, we can be sure of the quality of **the data coming from the teams deployed to support outbreak management."**

"Data collection tools are just not working. You don't find the information; you don't get the bottlenecks right away. They are difficult to use, the tools are a challenge. We modified the tools, did hours of training. But **you don't get to the bottom of the bottleneck unless you ask why multiple times,** you cannot stop after the first "why." Often, they say it is a lack of resources and just stop there, failing to dig deeper about what the resources where needed for etc."

> **"We have rapid response teams. All those, we had to train them and give them data collecting tools so that when they go to the field to investigate an outbreak or threat, they go with this data collecting tool and collect this information for 7-1-7."**

2.5.1. Related implementation challenges

Data sharing / resistance to outside scrutiny A handful of countries reported being more comfortable sharing data with established, long-term partners —such as international organizations, regional bodies, or trusted bilateral collaborators—because of the familiarity, trust, and rapport built over time, than with NGOs. These relationships usually come with a history of cooperation, aligned interests, and a shared understanding of confidentiality, which helps ease concerns about how the data will be used or interpreted. In contrast, external NGOs that are not seen as embedded partners may face initial resistance when seeking to engage in sensitive data work.

Weak or not fit-for-purpose data system Existing tools used to collect data range from basic excel spreadsheets to google sheets or more sophisticated databases. They are often cited as a limitation to effective implementation. For example, when the tool is centralized (e.g., an excel sheet accessible only by a few at the national level or stored on an individual's laptop), subnational stakeholders (e.g., hospitals, districts) have limited access resulting in inefficient and cumbersome information collection and sharing.

Quality of data Retrospective reviews often reveal gaps or inaccuracies, with data frequently incomplete or inconsistent, making it challenging to trace the full sequence of events. In real time, RRTs sometimes struggle to collect data systematically or correctly during deployments. Additionally, fragmented coordination between levels (e.g., central vs. provincial) can complicates data sharing and staff often deprioritize requests for additional data after initial engagement.

2.5.2. Related enablers

Collaborative engagement Collaborative workshops have reportedly proven instrumental in overcoming existing and anticipated data challenges by bringing together technical teams to find improvements in data collection and analysis. Involving stakeholders in iterative processes to co-design and co-develop solutions enhances the practicality and ownership of outcomes. As explained by an interviewee, a fruitful approach is often to "not have all the answers," but rather for global and local experts to work together and identify context-relevant solutions. This collaborative method requires the authority, whether formal or informal, to convene key players across divisions, departments, ministries, and partner organizations. Engaging stakeholders regularly also helps clarify data collection expectations, creates a robust feedback loop and strengthens data-sharing between different levels of government.

Integration with existing data systems 7-1-7 has highlighted that outbreak and response management requires a data system that looks at the event level. Traditional surveillance systems have not had the capacity to be leveraged for 7-1-7 data collection but over the last several years, more countries have started to use event/emergency management systems (some DHIS-2 based), and this has proven instrumental to embed 7-1-7 into routine processes that staff are already familiar with. Incorporating 7-1-7 into these platforms can promote sustainability and scalability, ensuring consistent and reliable data management over time and across geographies.

Developing tools when systems don't exist / adapting tools for local contexts In cases where robust systems are lacking, partner support is often needed to set those up, including automating data collection and analysis using open-source platforms or enhanced systems which can help reduce errors from repeat manual entries and improve efficiency. Some countries' real-time collection and analysis of 7-1-7 metrics showcase how automation can contribute to quicker response times. Customizing data collection tools for local contexts, as done in some places, has also proven an enabler for making the process more efficient, as has ensuring tools are accessible at all levels to improve data input, accuracy and timeliness.

The paradox of sharing results

The tension between hesitancy to share poor performance data and the necessity of transparency to drive improvements reveals a significant paradox within public health response systems. On one hand, there is a natural reluctance from countries or teams to disclose gaps in their performance, as this could invite criticism, uncomfortable scrutiny, and lead to reputational damage. Sharing data that highlights failures can lead to defensiveness, pushback, or resistance from those feeling their hard work is unfairly judged. This instinct to protect organizational or individual reputation is understandable, especially in systems where accountability can sometimes lean toward punitive measures rather than constructive feedback.

However, the paradox lies in the fact that without transparent data sharing, it becomes almost impossible to address bottlenecks effectively, mobilize resources, or build trust in the system. In one country, for instance, sharing 7-1-7 metrics quickly surfaced bottlenecks in yellow fever vaccine access, leading to faster acquisition of vaccines—a clear demonstration of how transparent data can result in immediate, life-saving action. In such cases, openness about performance deficiencies is crucial to trigger the necessary support and interventions, particularly when external stakeholders (e.g., donors or technical partners) are poised to help.

This paradox also touches on the deeper issue of building confidence in the system. A health system that consistently shares data, even when it falls short of targets, signals to stakeholders that it is committed to learning, improving, and adapting based on evidence. Openly addressing response time gaps in the 7-1-7 target has been seen to spur changes that ultimately strengthen the system. This process fosters resilience, as stakeholders learn to engage with both successes and challenges in a way that builds collective problem-solving capacity. It also cultivates a more robust sense of trust among partners, who can see that the system is being transparently managed and improved. Systems that embrace transparency, even in the face of less-than-ideal outcomes, are more likely to gain the support they need to strengthen their response capacity and ultimately inspire greater confidence from both internal and external stakeholders.

2.6. The partnership equation

"It was initially a bit of **a showdown between 7-1-7 and the standard IDSR** approach. We were summoned to explain ourselves."

"It is key for countries to think about partners (e.g., bilateral, donors, technical partners) and related engagement at different levels. In XXX, where partners know about 7-1-7, they can be on standby during an event to support the country. Partners know there is no response feasible within 7 days without money for transportation for instance. **There is an awareness amongst partners about what the bottlenecks are going to be, which helps in giving them the flexibility to start contributing early.** It is a way of breaking the standard rule of waiting for the plan. This is placing anticipatory thinking front and center."

"What we wanted to **avoid at all costs was for this to be seen as a discrete project**, to be treated like all other projects financed by external stakeholders."

"Another enabler was when 7-1-7 was integrated in the WHO AFRO's regional strategy at the regional committee meeting. It was helpful for us as we could say: 'Look, Minister, this is adopted by member states and supported. So we as a country, we are going to have to report on this.' And then the World Bank also took it on as part of the Multiphase Programmatic Approach. Once more we could say: 'Look, it is not even about us, you are taking money from the World Bank, and they have embraced 7-1-7'. **So basically, all those external hooks helped a lot, when 7-1-7 became embedded in global normative instruments, so much so that now, it is actually them pushing for implementation.** Now, they are saying that 7-1-7 should be a priority."

"Then there is the fact that for most of the global funding coming in now, all always have 7-1-7 in it. Take the Pandemic Fund, etc. **With this, the government sees this concept as more serious."**

2.6.1. Related implementation challenges

Partner engagement International organizations and technical partners can significantly influence the success of 7-1-7 implementation, with their role as enablers shaped by their level of engagement and familiarity with the target. How funders intend to use 7-1-7 and the role they envision it playing in advancing health security also shape the impact they can have. As in any alliance, each partner brings distinct priorities and institutional dynamics, that can create political hurdles and complicate efforts to foster strategic collaboration at the country level. Unclear guidance from headquarters or hierarchies can also slow cooperation, leaving lingering gaps in country-level integration (e.g., absence of integration of 7-1-7 analyses in NAPHS development processes; limited change management across all needed levels).

Coordination and collaboration can be time consuming and complex. Some noted that while a welcoming tent is generally beneficial, large, unfocused coalitions can lead to lack of ownership, inefficiency and paralysis. The 7-1-7 systems approach nonetheless inherently calls for sharing of data and collaboration between technical areas and across a broad array of heath security partners. In current contexts where fragmentation is pervasive, it can be challenging to secure alignment and initial implementation, as seen in several countries, can opt for the path of least resistance, which may not always result in meaningful or sustained improvements over time.

2.6.2. Related enablers

Global alignment The embedding of 7-1-7 in global normative frameworks (e.g., GPW 14, WHO AFRO's regional strategy) and the support from technical partners such as the U.S. CDC create an imprimatur of trust for 7-1-7. Of particular importance, WHO's formal inclusion of 7-1-7 in Early Action Review guidance aligns it with established systems, lending credibility and legitimacy to the approach as a validated and internationally recognized method. While these make 7-1-7 easier for countries to adopt and more likely to be sustained at the national level (though related information can be slow to trickle down to staff at country level), many noted that integrating 7-1-7 into future IDSR revisions was the missing puzzle piece to decisively cement its role.

1:1 engagement Direct, individualized engagement with key stakeholders at country level has proven a time-consuming but foundational step in achieving buy-in in the adoption phase. By holding 1:1 consultations with influential partners, proponents of 7-1-7 can build initial support and address concerns in a low-pressure setting. Identifying and mapping key stakeholders early and understanding their context-specific roles and influence can ease targeted engagement. Notably, engaging purposedly those technical partners who chair or participate in platforms that lead response and review efforts—or who oversee related initiatives like IDSR, which are crucial to the success of 7-1-7 can help unlock support.

Collaborative approaches and dissemination of results Rightsized collaborative approaches that balance inclusion and efficiency, along with the routine dissemination of 7-1-7 analyses, can effectively demonstrate the framework's value. Providing partners with tangible evidence—such as metrics, bottleneck analyses and stories of early outbreak identification, faster response times, and effective mitigation—enhances the credibility and relevance of 7-1-7, creating a compelling case for ongoing support that partners can champion within their networks.

3. Making the most of 7-1-7: From data to action

Drawing from interview analysis, this section explores the key challenges and enablers to move from collecting 7-1-7 metrics to action.

"One of **the weaknesses is at the lower level.** The level of capacity is a lot lower in those states. We need to reach these people and train them to be able to apply 7-1-7. Now they are not applying it."

"At the provincial level, **it can be challenging to identify the focal person** to champion this where we don't have a particular presence, and they are far away from us. You have to make sure the focal person is committed."

"And there's a downside to not using the bottlenecks**, it risks emptying 7-1-7 out of its potential in terms of transformational change** that it can generate."

"Our main challenge is that we need a platform to discuss the results. **We don't have a platform or anyone who is responsible to review the implementation** of 7-1-7, so as to ensure that the evidence is used."

"In FETP, **we train on the whys? As well as root cause analysis. So we were able to integrate and merge there**. We were able to integrate those tools that people already knew into facilitating the 7-1-7 discussions."

"And then **we have been able to surface the bottlenecks and integrate those in the NAPHS planning process,** together with AAR / IAR. So we use the 7-1-7 insights for planning of long-term activities, such as for instance digitalization. As it stood, we did not have a platform for identifying or triaging priority activities. [...] We are used to plan from whatever is top of mind, **but what makes 7-1-7 good is that we now have an evidence base for the NAPHS planning.** We are also able to use 7-1-7 insights for the Global Fund, Global Health Security Agenda, and Pandemic Fund planning."

"Maybe 7-1-7 is the secret weapon that we don't even realize we have. [...] **This is our secret weapon as we know where to go to improve. We make use of this information to develop our own work plan.** So in next year's plan, we are able to include all sorts of quick fixes which are within our scope. We are armed with the data; we know what to change with minimal investment and know where to hit. [...] We're at home with the data and we know where the challenges are, and can hit with minimal investment, with a good return on investments. Data is king. Whoever has it is king."

"There is the possibility of 7-1-7 fatigue, I could see this happening soon. **People thinking 'okay, you told us we have these gaps. We have these gaps. Nothing has been done about those.** Why are you telling us again about these gaps?' So as we are rolling it out, we also need to be careful, so that we don't overburden the system."

"I like that it is also used as an accountability tool. When you apply it, it exposes the weaknesses you have and then you have to act on those things. **If you don't act on those things, it makes you accountable.** You have the bottlenecks in front of you."

3.1. Challenges in moving from data to action

Partial or distorted implementation leading to suboptimal value In a few countries, 7-1-7 implementation has reportedly been either incomplete to date or has deviated from its original purpose, resulting in reduced effectiveness. For instance, data collection may be conducted retrospectively using information found in outbreak response sitreps, but not done by the government; data collection may be occurring, but the critical subsequent step of bottleneck analysis is missed; or the analysis may be conducted but the process of collectively identifying remedial actions—especially when coordination across multiple government MDAs is required—may be irregular or absent. These missteps impact the tool's potential to drive transformational change. In another case, self-driven implementation led to changes in the definition of 7-1-7 indicators, undermining the integrity of the tool and diminishing its perceived usefulness in the eyes of leadership. In this case, rectifying the issue will take time, as there is currently a flawed understanding of the insights that 7-1-7 can provide and the nature of the remedial actions it can suggest. 7-1-7 is merely viewed as another tool highlighting the need for additional funding or staffing—something leadership is weary of hearing—obfuscating its potential in identifying immediate actions to alleviate short-term bottlenecks and address gaps in real time. Addressing this will involve re-establishing a standardized application of 7-1-7 and realigning leadership's perspective on its purpose and potential (which may require more or different resources than when a country is implementing anew).

Difficulties of moving from data to bottlenecks Over-reliance on surface-level explanations (e.g., teams stopping at the first issue raised, such as a lack of resource and failing to interrogate the issue more thoroughly), can lead to missed insights and remedial actions misaligned with root causes, as was noted in a handful of interviews.

Lack of platforms or regular meetings to review collected data This represents a significant barrier to continuous improvement in countries where such standing platforms are lacking, as it translates into limited opportunity to present data, identify short-term bottlenecks, connect insights with actionable steps and both take timely corrective action and identify pathways to address long-term challenges. There is a risk that 7-1-7 data collection may be neglected if there is no path for data to be effectively processed and utilized.

Failure to implement documented corrective actions Even as issues may be thoroughly identified and recorded, interviewees noted that it was not a guarantee that they would be addressed. At times, corrective actions sit idle on action trackers without follow-up or execution, creating a cycle where problems are repeatedly documented but not resolved. This risks turning the improvement process into a frustrating exercise, undermining the sustained engagement of technical teams.

Lack of mechanisms to address long-term bottlenecks A specific challenge pertaining to long-term bottlenecks is the absence of identified mechanisms to ensure their integration into relevant national plans and agendas. Without structured pathways for technical experts to consistently present data to decision-makers (building their familiarity the 7-1-7 findings and related recommendations) and a solid understanding of the processes and entry points to advocate for and ensure the prioritization of longer-term remedial actions into national plans, long-term bottlenecks may remain orphaned within the system.

3.2. Enablers in moving from data to action

Using action plans and work plans With the support of the 7-1-7 Alliance, most countries develop detailed action plans, work plans, or roadmaps for implementing 7-1-7, often involving numerous steps including stakeholder mapping, assigning roles and responsibilities, and aligning with national processes and timelines. These plans are seen as crucial for guiding the implementation process and preventing partial or flawed execution by ensuring that all aspects of the framework are addressed and that stakeholders remain aligned throughout. Several respondents amongst early adopters acknowledged that they did not have plans, or that initial plans were not well-structured or fully developed, and there was a significant amount of improvisation as implementation progressed. Plans and strategies were adjusted over time based on what was learned during the process, with a focus on continuous improvement.

Leveraging retrospective reviews vs. real time review Retrospective reviews have been used as a proof of concept to demonstrate the achievability of 7-1-7 target and highlight information gaps. These reviews have played a crucial role in gaining leadership buy-in and fostering an enabling environment for the successful proactive implementation of 7-1-7. Opinions diverge on their continued usefulness, with a few people noting that their relevance has diminished as the program has become better known. The difficulty in gathering accurate historical data also make the process challenging, leading some to recommend starting directly with current events rather than looking back. The majority, however, have noted the continued belief that the practice was a valuable starting point.

Training and workshops Interviewees noted that training at all levels (national, subnational, district) was essential for a holistic implementation of 7-1-7, when countrywide implementation was the objective. Work to capacitate jurisdictions to use 7-1-7 by themselves is impacted by the sheer size of certain countries, administrative structures, pre-existing subnational technical capacity or lack thereof (including the existence of subnational level EOCs, seen as a critical lever for extending reach in large countries) and resource constraints. Even when large-scale multi-level training is conducted, issues with follow-up support and monitoring can hinder the effectiveness of the rollout. In some positive examples, designated national focal points have been able to support subnational level focal points in effectively applying 7-1-7 after training had been cascaded down. The significant gaps and challenges associated with expanding 7-1-7 from national to subnational levels raise questions about the most suitable model for scale and sustainability, particularly regarding the level and nature of support required for effective implementation (also see section 6.4. for related considerations).

Leveraging existing capacity building efforts Interview reported that when the introduction and discussions of 7-1-7 were organized to complement planned workshops or discussions on related topics (e.g., IDSR workshop; data collection or software-related meetings; in-service trainings), organically demonstrating complementarity, it could greatly enhance buy-in. The Field Epidemiology Training Program was repeatedly mentioned as playing a crucial role in scaling 7-1-7 implementation at the subnational level as it naturally offers spread and reach across large geographic areas.

Lateral engagement While implementers have reported grappling with how to roll out 7-1-7 within and across relevant ministries, departments and agencies (MDAs) and combining One Health and 7-1-7 approaches, some interviewees have found that integrating other Ministry of Health (MoH) departments/divisions and multiple sectors (e.g., animal health, environment) from the beginning in the planning and training processes proved helpful to create a common language and upstream alignment. The extent to which this can be achieved is determined, at least in part, by the mandate, standing and reach of the unit spearheading the 7-1-7 work, which can range from relatively narrow to highly influential.

Ways to surface bottlenecks

- **Importance of a formalized space** A formalized forum, preferably an existing one (even if that means reviving a dormant one), is essential as it provides a structured environment where stakeholders can collaboratively review data, identify bottlenecks, translate insights into actionable solution and coordinate timely responses. This creates a shared experience and increases accountability for corrective actions. In countries where they exist, various fora are used to conduct 7-1-7 analysis and identify bottlenecks, including for instance National Steering Committees for outbreak responses, Emergency Preparedness and Response Meetings, National Surveillance Outbreak Review Meetings, technical working groups or subnational coordination bodies. Additionally, ad hoc AAR meetings are also used retrospectively to analyze past outbreaks. Regardless of the forum used, interviewees emphasized that leveraging an existing platform was more effective than creating a new one, and that integrating a forum where the right partners were already engaged offered a quicker and more efficient path to collaborative progress.
- **Methods to surface bottlenecks** Root cause analyses are particularly valuable to uncover deeper issues beyond superficial causes, with the quality of the analysis directly impacting the relevance of defined remedial actions. The 5 “whys” technique, which involves asking “why” multiple times to identify the root causes of a problem, was highlighted as especially useful, though interviewees noted that it could benefit from being more consistently disseminated and practiced. When feasible, tapping into or building off aspect of methods technical staff are already familiar with (e.g., SWOT analysis) can accelerate and improve 7-1-7 bottleneck analysis discussions.
- **Accountability** In optimal scenarios, progress is tracked using action trackers that help monitor the implementation of remedial measures across various technical areas. These trackers not only document actions to be taken but also assign responsibility for follow-up actions and set out clear timelines. This approach promotes transparency and reinforces mutual accountability by ensuring that everyone understands roles and commitments, with regular reviews encouraging action.

Addressing bottlenecks

- **Action-oriented meetings** Short-term bottlenecks are addressed through routine meetings that bring together stakeholders from various departments (often including also some external partners) to review data and preliminary analyses presented by technical teams and align on remedial actions. The engagement of different health divisions or departments (e.g., laboratory, surveillance) can help facilitate quicker resolution of short-term bottlenecks across MDAs and in real time during new outbreaks.

- **Nature of corrective action** Countries prioritize corrective actions that can be implemented with minimal resources to resolve short-term bottlenecks. Engagement of communities to address delays in patient care-seeking, or immediate upskilling of health workers and response teams were mentioned as common remedial activities, particularly in areas where specific diseases, standard protocols or case definitions were not well-known (or did not exist and therefore needed to be created). Addressing communication breakdowns, such as improving timely information sharing and cross-sector communication, is also a frequent intervention. Notably, a few countries have reported that as they resolve the initial set of bottlenecks, new layers of challenges emerge, illustrating how bottlenecks unfold progressively as earlier issues are resolved.
- **Utilizing existing resources / engaging partners for immediate support** Short-term bottlenecks are often addressed by leveraging existing resources, such as redeploying personal protective equipemt from national stockpiles to the subnational level, or printing case investigation forms centrally when there are logistical gaps subnationally. In some countries, 7-1-7 has been instrumental in raising partners' awareness of common bottlenecks. This has led to instances when partners have provided rapid funding to cover logistics costs at the onset of an outbreak or to retrain healthcare workers. This approach short-circuits the typical reliance on lengthy formal assessments and bureaucratic processes before countries can access resources, minimizing delays in investigation and response in fast-moving situations where timeliness is critical.
- **Advocacy and leadership engagement** To address pressing short-term bottlenecks, advocacy is at times required towards high-level leaders through fora such as senior management or ministerial meetings. Escalating bottlenecks to the highest decision-making levels is especially needed when urgent action is required but decision-making and accountability lies beyond the scope of those directly overseeing the response to an outbreak (e.g., securing rapid access to and deployment of yellow fever vaccines).
- **Addressing long-term bottlenecks** As noted earlier in the financing section (see 4.2), high-level leadership engagement is crucial for addressing long-term bottlenecks, particularly those requiring significant financial investment (e.g., specimen transportation and laboratory systems; event-based surveillance) or policy decisions beyond the authority of technical stakeholders. One country mentioned maintaining a central repository of long-term bottlenecks to help ensure those are not forgotten and serve as an objective basis to inform both national planning processes with longer-term implementation horizon and external funding applications, especially those aimed at partners supporting infrastructure improvements.

4. From adoption to sustainability

Complementing the importance of global adoption of 7-1-7 by international technical partners and funders which signals its priority status to national governments and provides a framework for sustainability (see discussion in section 2.7.2), this section examines how integrating the 7-1-7 target into national systems can promote sustainability and underscores the importance of evidence generation for sustainability.

"Often it is the partner [...] rather than the country's authorities themselves, that take on 7-1-7 [...] So then the question subsequently becomes: **how do you build the buy-in from the MoH?"**

"Using existing systems has been key. We don't want to create new ones. **We want 7-1-7 to integrate in the existing flows, to be baked into the system:** existing coordination meetings, EOCs, guidelines. We want to bake it in."

"I think the one thing that we continue to need to think through **is how to demonstrate the value of this sort of systems assessment to people who are being tasked with shouldering the heavy lift of it."**

"Having case studies of incidental outbreaks and what happened in a situation is great, right? But I think it's **you gotta move to that next phase of study design beyond case reports to something that's more aggregated."**

"If you could look at all the change that was made in a place over time because of them doing the evaluation within the same system, I think you might get a more powerful story to tell than just you know, being able to talk about a couple of instances."

"it is [sustainable] because for most African countries we adopted IDSR and 7-1-7 for me is the best indicator to measure IDSR. It is somehow complementary to IDSR, and I can say it is the best way to monitor IDSR, so it is sustainable as long as we are utilizing IDSR."

"How are we going to sustain it in all of these countries? The countries are rushing toward it. It is a wonderful initiative that all countries like. What is the sustainable strategy? How can we make sure it lasts long? We don't want it to disappear like other initiatives."

4.1. Integration into existing national systems

Process integration As previously noted, the sustainability of the 7-1-7 target hinges on its integration into national systems, workflows, and platforms. Many countries have embedded, or are in the process of embedding 7-1-7 into existing guiding documents and standard operating procedures, reinforcing the framework's role in supporting public health efforts and allowing 7-1-7 to function seamlessly within standing systems.

Strategic integration At a strategic level, the inclusion of 7-1-7 in sectoral strategy documents and foundational multi-year plans is seen as a cornerstone of long-term sustainability. It can bolster resilience across changes in political leadership, facilitating continuous use of the framework. However, integration efforts can face challenges, especially when the implementing body lacks authority over all necessary national and subnational decision makers (this is especially true in federated states where subnational entities may set their own priorities and control their funding). Of note, interviewees reported minimal need to formalize 7-1-7 in national health laws, as it most often already aligns naturally with the mandates of national public health institutions (in a rare case, a decree was issued to affirm 7-1-7 role within national systems and accelerate its roll out).

4.2. The impact of the adoption pathway on sustainability

Country-driven adoption The approach used to introduce 7-1-7 in a country can impact the level of country ownership and long-term sustainability. When a country adopts the framework out of self-motivation, there tends to be stronger ownership because the initiative is seen as a solution that aligns with the country's priorities. However, this can come with challenges, particularly if the country lacks or does not seek the necessary technical support and expertise to fully implement 7-1-7. The country may also miss opportunities to optimize the framework's potential due to limited exposure to best practices. In the best case, linkages back to the 7-1-7 Alliance can bring valuable support for successful implementation.

Originator introduction When the concept of 7-1-7 is introduced to a country by RTSL or the 7-1-7 Alliance, countries benefit directly from the originators' knowledge, resources, and technical support. This involvement often results in a more coherent and well-supported rollout, with access to training, financial assistance, and global expertise that enhances the framework's success. It remains essential that support is rightsized in anticipation of the country's independent continuation, and that ownership firmly rests with the country itself.

Partner introduction The introduction of 7-1-7 by a third-party that has partnered with the Alliance (or one of its sub-grantees) undoubtedly facilitates the framework's scale up across new geographies. 7-1-7 Alliance partners often have a longstanding presence in multiple countries, and can provide the infrastructure, technical support, relationships, and credibility needed to roll out 7-1-7. However, a potential drawback is that the leadership and ownership of 7-1-7 remains located within these organizations, which can delay country buy-in, reduce the country's autonomy in driving and sustaining the initiative and create challenges for long-term integration into local systems. Having external partners supporting a roll out by a national MDA (as opposed to substituting their efforts) has shown to help lay a stronger foundation for ownership and allow the initiative to be more contextually appropriate, while still benefiting from global best practices and resources.

4.3. Evidence as a foundation for sustainability

Interviewees consider evidence generation as critical to ensure the long-term sustainability of the 7-1-7 target by reinforcing buy-in, facilitating continuous improvement, and securing resources. Demonstrating the target's value through evidence strengthens internal and external support, increasing the likelihood that countries and partners will maintain and invest in 7-1-7 over time. Of note, interviewees shared numerous inspiring examples of success in using the 7-1-7 target for both short-term and longer-term improvements, and process and outcome enhancements. These impact stories are documented in Annex III, which includes extracts from interviews.

- **Demonstrating impact** For the 7-1-7 target to be fully institutionalized, interviewees emphasized that it is was essential to continue demonstrating its effectiveness. They reflected that generating evidence of its impact—such as faster outbreak detection, improved response times, reduced outbreak duration, and ultimately lower morbidity and mortality—would enhance confidence in the value of 7-1-7 for effective outbreak management.
- **Going beyond individual case studies** While individual case studies are valuable, interviewees have indicated that moving towards more aggregated, systematic evidence would strengthen the sustainability case for 7-1-7. The ability to aggregate data across different outbreaks in a given jurisdiction and demonstrate system-wide improvement overtime is seen as important to convince policymakers and funders of its long-term value.
- **Preparedness return on investment** Some interviewees reflected that demonstrating returns on investment and cost saving associated with addressing otherwise recurring bottlenecks could help justify continued technical and financial support. Such data can appeal to domestic policymakers and international donors, as it provides quantifiable evidence that investments in preparedness yield tangible and comparatively significant results.
- **Promoting global uptake** Strong evidence not only sustains 7-1-7 within countries but also promotes its adoption globally. Evidence of 7-1-7's success in one region can serve as a powerful motivator for other countries to adopt the target.

5. Support provided for 7-1-7 implementation and what else may be needed

This section explores the support currently provided for the implementation of the 7-1-7 target, focusing on political backing, financial resources, technical assistance, and practical tools. It also incorporates feedback from interviews as it relates to enablers that could be reinforced and highlights possible areas for additional support in the existing model. By doing so, it outlines both the strengths of the current support mechanisms and identifies what may be needed to further enhance 7-1-7 implementation and sustainability going forward.

"One of the things that helped **was technical support from the 7-1-7 team**. Really, you supported us. During the adoption of the 7-1-7, we were having weekly meetings, and I really recommend this. For those who may not have good knowledge of 7-1-7, they can get lost in the middle. Those technical weekly calls with the team helped a lot."

"Technical support needs to continue. Resolve to Save Lives needs to keep supporting countries. Having experts in 7-1-7, who go from country to country, is very key."

"I would have done way more of the SIMEX, there is a lot of value in doing those. We started doing those with FETP residents and we quickly realized people think they got it but actually they don't. We still had people who did not get the dates right. This was eye-opening for us when we did it for frontline residents, who are the ones who sit at the district. The Advanced was better but it was still an issue. It is simple, but actually, getting that information is not."

"How are the others doing it? **With ensuring there is the community of practice**, and continuous technical support, then it is possible to ensure good sustainability until such time that it is a part of the life of XXX itself. It will require that until such a time that it gets its own life. Until it takes that and begins to grow."

"And then I really think **we need some mini universities**. There is a COP, but this is not enough. Maybe think about **in-country CoP?**"

"We also **need to have more funding for this**. It shouldn't be a project for 6 months. In Africa, it is different from Europe. There are a lot of economic challenges. To have a committed team, you need to be incentivized."

"I will jump immediately to one thing that helped us a lot: **it is the financial support. This was key.** After deciding to adopt the tool, you need to do workshops. You need to do some training. You need to bring teams in one place."

5.1. Support provided for 7-1-7 implementation

Political support and recognition The 7-1-7 Alliance and RTSL teams have facilitated high-level political engagement with senior government officials, including health ministers, to secure their commitment to the 7-1-7 target. The 7-1-7 Alliance and RTSL have also enabled the participation of countries in global health security fora and conferences, providing platforms to showcase countries progress with 7-1-7 and engage with international health leaders on best practices and innovations in outbreak response.

Financial support for implementation has been critical to the ability of countries to implement 7-1-7 (see section 2.4). Many countries have received initial financial support through catalytic 7-1-7 Alliance grants, which help kickstart 7-1-7 adoption. In some countries, RTSL continues to provide financial support even years into the adoption phase, covering such costs as dedicated 7-1-7 coordinators or scaling implementation activities.

Technical support for implementation has come from RTSL, the 7-1-7 Alliance, Vital strategies, U.S. CDC and other technical partners including sub-contracted third parties (e.g., JHPIEGO). The first cohort of pilot countries received intensive, hands-on support from RTSL, which was crucial for both successful implementation in these countries and for RTSL's learning and adaptation of the 7-1-7 target itself. During this phase, RTSL and countries were working hand-in-hand through each step—co-creating solutions, jointly troubleshooting obstacles, and adapting methods to fit specific contexts—to bring 7-1-7 from theory into practice. The intensive hands-on support initially provided became less critical as RTSL developed robust tools and guidance materials, allowing countries to apply the target more autonomously. Alliance countries subsequently received a more streamlined form of support, which, while lighter-touch, remained essential, as noted by interviewees. Technical assistance modalities have included tailored capacity building efforts, interactive workshops, technical support check-ins calls, and country visits for hands-on support, covering a comprehensive range of needs including stakeholder mapping, implementation planning, integrating 7-1-7 into existing data systems, addressing implementation questions, troubleshooting real-world challenges, and assisting with data analysis and reporting. Both interviewees from pilot countries and later adopters expressed gratitude for the support they had received from RTSL and 7-1-7 Alliance technical advisors and consistently emphasized the vital role of this accompaniment in their successful adoption of 7-1-7. They also often expressed the desire for continued support for the foreseeable future, and until they felt more confident that 7-1-7 was sufficiently integrated and irreversible as a core practice. As implementation expands, the Alliance will need to strategically consider how best to adjust the depth and frequency of its support: encouraging countries to take greater initiative in independently integrating 7-1-7 into their systems is essential for scale; periodic, targeted interventions will however likely remain necessary for the foreseeable future to maintain alignment, address complex challenges, and sustain momentum.

Tools and systems Respondents expressed their appreciation for the practical tools and tangible educational resources provided by the Alliance, including step-by-step guidance, templates, interactive training, and communication materials. Many noted the value of these resources, available on the 7-1-7 Alliance website, which they have actively utilized. Some countries reported challenges with their data collection systems but expressed appreciation for the adjustments made to these systems and the targeted training provided to enhance data collection efforts.

Peer exchanges Interviewees expressed deep appreciation for the opportunity to learn from the experiences of others through leadership exchange visits between countries, which have been instrumental in demonstrating real-world applications of 7-1-7 and clarifying implementation steps. Many respondents also expressed a deep appreciation for learning from other countries' experiences, highlighting how the community of practice support them in tackling complex challenges and reducing isolation. One respondent mentioned feeling well-equipped to now provide support to other countries implementing.

5.2. What else may be needed

Although significant support has been provided, interviewees have suggested several areas where additional support or refinements could enhance 7-1-7 implementation.

Support to access more funding While a few implementing countries have a sufficiently sound financial foundation to implement 7-1-7 with their own resources, catalytic financial support has been insufficient for most implementing countries to scale 7-1-7 across all national level stakeholders and to the subnational level. Even in countries with greater access to financial support, like the U.S., staff shortages can limit how often it is used. The 7-1-7 Alliance and its partners also have finite resources to provide support at scale. Most global health initiatives are launched with catalytic support meant to eventually be supplanted by domestic or other resources, but this vision is often not achieved, and while there is an aspiration for countries to take financial ownership of 7-1-7, interviewees noted that sustained implementation would be difficult or not as robust without continued external support.

Consequently, interviewees suggested that the Alliance could more systematically support countries in identifying and securing additional funding. To address this request head-on, the Alliance may consider strengthening direct technical assistance to countries for developing and supporting submission of high-quality funding proposals to international donors and partners which have adopted 7-1-7 or see the value of 7-1-7. This requires a nuanced understanding of each donor's priorities and how they envision 7-1-7 advancing their health security objectives. Funding sought in these proposals could include a couple of different dimensions, such as financing for remedial actions identified through 7-1-7 and support for countries to scale 7-1-7 at subnational levels. Additionally, sensitizing international organizations and donors to the need for flexible, rapid-response funding, such as Rapid Outbreak Investigation Funds, could help ensure that EOCs have timely access to resources essential for responding effectively to emerging health threats.

In countries with decentralized systems, the 7-1-7 Alliance / RTSL could explore funding mechanisms available at the subnational level and whether they may support 7-1-7 implementation. Subnational entities—whether state, province, or district—have their own budgeting and funding structures, which may include discretionary funds, emergency response budgets, or health grants that could be tapped into to support 7-1-7 activities. Building a nuanced understanding of these mechanisms and how to access them could help in effectively leveraging these resources. Finally, in countries where decision-makers are responsive to civil society pressure, the 7-1-7 Alliance could explore collaboration modalities with local advocates. 7-1-7 leaders could be encouraged and supported, as a complement

to their own internal efforts, to engage existing CSO health platforms and share bottleneck analyses, clearly outlining the resources needed for unfunded remedial actions. Working with civil society organizations to build related demand could further motivate governments to allocate resources toward sustained implementation.

Tools which further ease the burden / make the process even easier There were several requests for additional tools to be made available on the website. These requests reflect a desire for greater speed and automation to reduce the workload on staff and make the process even more efficient and include: a tool for creating automatic summary reports; standardized and easily modifiable communication materials to better engage local stakeholders and communities in the 7-1-7 process; expanded FAQs that place 7-1-7 in the context of other related initiatives, tools and guidance; job aids for all aspects of 7-1-7 and in varied formats; guidance on the articulation and use of the 7-1-7 in a One Health framework.

Additional suggestions included developing or supporting the creation of materials such as films, posters, and booklets to serve as consistent reference points for public health workers, even when technical support may not be immediately available. Such resources were seen as necessary to allow staff to revisit key concepts and practices in the 7-1-7 approach, helping them to retain essential information long after initial training sessions. Visual aids tailored to different learning styles and quick-reference tools, such as posters or job aids that can be displayed in workplaces or health facilities, were suggested to reinforce the application of 7-1-7 during public health events. Importantly, stakeholders suggested tailoring these materials to local cultural and linguistic contexts, to increase the likelihood of effective recall and implementation, especially at the subnational level.

Enhanced capacity building approaches Many respondents noted the hope for more varied capacity building modalities increased hands-on training, especially simulation exercises, and greater integration of 7-1-7 into in-service programs.

When it comes to tabletop exercises, interviewees emphasized that such exercises provide an immersive, real-world experience that allows health professionals to apply the 7-1-7 target in a controlled yet dynamic setting, fostering a deep and practical understanding of its application. They call for more of those, to not only enhance the retention of key concepts but also build staff confidence and agility in effectively implementing the 7-1-7 target in the field.

Regarding existing capacity-building programs, interviewees suggested that the Alliance and its partners more systematically identify and seek to embed the 7-1-7 target into ongoing initiatives with broad geographical reach across multiple jurisdictions, as such programs can serve as effective channels for 7-1-7 implementation at scale. Interviewees especially recommended exploring collaboration with the U.S. CDC and in partner countries that have localized Field Epidemiology Training Programs (FETP) to systematically integrate 7-1-7 into FETP curricula (an approach already tried in several countries based on its effectiveness as a scaling lever). Additionally, interviewees suggested that the 7-1-7 Alliance could more systematically seek to identify other relevant training programs for national and subnational level NPHI staff, EOC staff and RRTs in which 7-1-7 could be incorporated. This approach could help establish a standardized knowledge base and act as a scaling mechanism across

health system levels, as graduates return to their districts or as RRTs deploy at subnational levels. It may also have the potential to enhance shared accountability, as training entities typically play a significant role in ensuring that what is taught is consistently applied.

Finally, respondents also emphasized the need for regularly updated training materials across countries, as well as training, communication tools and approaches (e.g., low-bandwidth mobile training) developed specifically to reach local health workers and community leaders.

Strengthening peer-to-peer exchange Regular Community of Practice meetings and peer learning events are seen as useful to impart technical knowledge but could also help strengthen leadership skills, including by deliberately placing on the agenda change management and system improvement challenges, offering an opportunity to implementers to discuss practical ways to navigate complex political and operational landscapes more effectively.

Increasing opportunities for peer-to-peer exchanges within countries (e.g., country-wide communities of practice or "mini-universities") has been suggested as a valuable way to enhance learning, allowing health professionals to share practical experiences, best practices, and challenges, further solidifying the application of 7-1-7 at the national and subnational levels. Subnational public health workers, who are often at the forefront of outbreak detection and response, appreciate learning from peers in similar positions to inform context-specific strategies that may not be fully addressed in more formal, top-down training.

Another approach mentioned could involve pairing experienced 7-1-7 implementers with new adopters to provide mentorship, guidance, and on-the-ground support during the initial phases of implementation. This hands-on accompaniment could accelerate the learning curve while also providing peer supporters with the satisfaction of seeing their expertise drive successful implementation in new settings.

Improved data collection systems Many respondents noted the shortcomings of their current data collection systems, including Excel and Google spreadsheets, which at times hinder their ability to collect data in line with the 7-1-7 target. They aspire for more user-friendly and accessible data collection tools to improve the quality and timeliness of outbreak reporting. Some have stated the need for computers to collect data.

Other Some noted that, given the wide variety of contexts in which 7-1-7 is implemented, there is a need for more contextualized implementation. This involves distinguishing which aspects of 7-1-7 can and should be adapted to fit specific local conditions versus which core elements must remain standardized to maintain effectiveness and comparability across regions (also see section 6).

6. Wicked problems and some suggestions

This section highlights some of the "wicked" problems surrounding the scaling and sustainability of the 7-1-7 target, as identified through the analysis of interviews. Paradoxically, it is the framework's rapid and successful adoption, along with the enthusiasm it has generated, that has brought these complex challenges to the fore. As the initial pilots and early rollout phases have been successfully carried out, the 7-1-7 Alliance and its partners will increasingly confront complexities which include ensuring 7-1-7 is used as a transformative tool rather than merely a metric; strengthening leadership ability to drive change; identifying effective models for scaling; and maintaining the framework's integrity and fostering continuous learning as it expands through diverse partnership modalities.

6.1. How can 7-1-7 be leveraged for transformative strengthening of outbreak response systems, rather than just as a timeliness target?

When the motivations to adopt 7-1-7 are weak, when political and/or technical leadership is lacking, when understanding of the transformative potential of 7-1-7 is poor, or when the systems are not readily in place for insights to be translated into remedial actions, countries can easily fall into a pattern of treating 7-1-7 as a tick-the-box exercise, reducing 7-1-7 to a quantitative data-collection task. To counter this, the 7-1-7 Alliance and its partner may consider a few pathways, informed by interviews:

- **Refining approach to identifying champions** by more deliberately targeting individuals who not only possess the necessary technical competencies and hold key functions within the system but also have a record of driving change or innovation, political acumen to navigate complex organizational dynamics, and an ability to collaborate effectively across sectors and with multiple stakeholders. There may be several routes to identifying such champions including observing those actively engaged in programs like PMEP or FETP, individuals who proactively seek out training or knowledge related to 7-1-7, those who take initiative or propose solutions during workshops, and through recommendations from trusted partners.
- **Enlarging leadership support** Ensuring that the support and resources provided to champions go beyond the technical aspects of 7-1-7 and incorporate in-depth guidance on the approach and the change management considerations and steps that may be needed for full adoption and cascading. This may include practical reflections on managing stakeholder dynamics, overcoming resistance at various levels, and leading organizational change (also see 6.2).
- **Partnering with international organizations (IOs) for full 7-1-7 use** Engaging with IOs that have adopted 7-1-7 as a key performance indicator or in their monitoring and evaluation framework so that the guidance they provide to countries and their reporting requirements go beyond quantitative metrics alone, emphasizing the need for comprehensive implementation (by mandating, for instance, reporting on short- and long-term bottlenecks identified through 7-1-7 analysis as well as remedial actions planned or taken) to create external measures of accountability, and drive effective implementation and sustained impact.

6.2. What strategies can be implemented to strengthen leadership at all levels for optimal use of 7-1-7 as a system improvement tool?

Strengthening leadership at both national and subnational levels is crucial to fully implement and leverage the 7-1-7 target as a catalyst for improvements. The 7-1-7 Alliance, which has long recognized the pivotal role of leadership in driving 7-1-7's success, could explore avenues to further enhance and support leaders:

- **Identifying multilevel champions** Consider, in supporting in-country planning, a deeper focus on identifying and associating champions across levels and MDAs from the outset (not only at national level and in health security), taking into consideration the country's governance and the 7-1-7 goal in the country. This could help lay the ground early on amongst stakeholders whose buy-in will eventually be needed.
- **Building champions change management skills** Explore approaches to further equip identified champions with change management skills, including stakeholder influence, policy advocacy, strategic communication, resistance management, and organizational change leadership skills. This could include specific attention being given to strategies to address staff anxieties head on as they relate to 7-1-7 being used as a punitive device (e.g., modeling the use of the metrics and related story-telling to show champions behaviors underpinning continuous improvement); training in communication skills for champions to articulate the goals and benefits of 7-1-7 to diverse stakeholders at national and subnational levels; strategies to foster alignment and buy-in, especially when they lack direct authority over other stakeholders. Strengthening champions abilities in these areas could help them navigate complex dynamics, foster broad support, overcome barriers and better position them to lead the full implementation of 7-1-7. This could be done by tapping into existing programs if they exist and/or explore grafting tailored modules onto existing programs such as PMEP.
- **Further leveraging peer-to-peer models** Consider further leveraging the Community of Practice and deepening peer-to-peer exchanges for leadership support (see section 5.2 for more on this).

6.3. What may be the most effective model to scale 7-1-7 subnationally?

The contexts within which 7-1-7 is being implemented are extremely varied in terms of the size of the country; the government structure and the number of political subdivisions; the organization of public health; the resources available and who controls those resources; and the level of power of the implementing entity. In larger, federated countries, the number of implementing entities at the subnational level can be in the hundreds, each of which often has its own ability to set policy and direct funds.

The current model, which relies on intensive and hands-on assistance and close follow-up, while highly impactful, is ill-suited for all-encompassing expansions. As one interviewee put it: "Is it possible to implement the metrics without this big, huge effort that we are doing to meet? The formula we choose for success is that we meet every week with each team, we work very closely with them to discuss the cases. I have doubts, if we are trying to think about solutions to universalize 7-1-7 in the country, regarding how it can be done without us being so close... Are there other ways to do it, which are cheaper, involve less effort, and less support?" Even in more unitary governments, implementing

7-1-7 at the subnational level can be challenging due to resource constraints and a lower level of technical ability, traits shared with federated states.

To address this challenge, several key variables in capacity-building approaches and resource mobilization could be considered, which are outlined in detail in sections 4.1 and 5.2 above. These include enriching training materials for subnational level dissemination and retention; increasing the use of hands-on learning opportunities for a deeper understanding of 7-1-7 at the onset; embedding 7-1-7 into existing capacity-building programs for scale; or strengthening in-country peer-to-peer exchanges; and enhancing support to secure the necessary resources for expansion. Adjusting these strategies could contribute to building a more robust foundation for 7-1-7 implementation at scale; however, they may still fall short, necessitating deeper reflection and additional approaches to address scaling challenges (see next question).

6.4. Is there an "MVP" to scale and sustain 7-1-7 at country level?

While universal application of 7-1-7 to all infectious disease outbreaks across all subdivisions of a country may seem ideal for continuously identifying and addressing bottlenecks, achieving this vision will be challenging due to the physical, political, technical, and financial constraints described above. As one interviewee put it: "How do we expand the work and universalize it without having to work so heavily, closely with the teams. Are there ways to do this?" This is especially true in large federal states, where the lack of centralized authority to mandate implementation further complicates broad adoption.

This raises several critical questions: Should 7-1-7 be used for every outbreak, or only select ones, and why? Is national-level implementation alone sufficient to drive meaningful system improvements across an entire country (and are important types of disease outbreaks missed as a result)? Conversely, can limited subnational implementation generate broader systemic impact? How many aggregated events are necessary to identify recurring bottlenecks effectively? Would a periodic review of a subset of outbreaks in key regions suffice when full implementation is not feasible? In highly federated states, where resources and capacities vary widely, should the Alliance consider phased or selective rollouts, prioritizing regions based on risk and capacity?

These questions suggest that the 7-1-7 Alliance may derive value in further exploring how extensively implemented 7-1-7 must be in order to have an impact on outbreak response and system improvement, or using lean startup methodology jargon, whether a "minimum viable product" (MVP) could be outlined, which identifies the minimal deployment of 7-1-7 needed to still achieve system impact. This would involve determining the minimal application of 7-1-7—types of outbreaks, geographic scope, frequency of application, and methodology—needed to drive meaningful system improvements. The value of 7-1-7 comes from its ability to:

1. act as a simple yet powerful metric for evaluating a complex system;
2. provide a structured opportunity to assess the system during each outbreak it is used for;
3. pinpoint enablers and bottlenecks, making clear where corrective actions or sustained efforts are needed; and
4. inform decision-making, resource allocation, and system improvements over time.

The Alliance may wish to consider which of these are most critical and which may be adapted; Item 2 is one of the most difficult to carry out and may be the most able to be fudged while maintaining 7-1-7's value. Such exploratory efforts may help chart a path for 7-1-7 to be leveraged for meaningful system enhancements, even if full nationwide implementation isn't feasible.

6.5. As 7-1-7 is scaled through different partners, how can the integrity of the approach be preserved and the learning not lost?

While entering into partnerships with technical partners for the implementation of 7-1-7 and encouraging countries to independently explore and adopt the target is essential for achieving scale, it also presents potential trade-offs in maintaining fidelity and quality. To preserve the integrity of 7-1-7 as it is scaled across countries and implemented with various partners, while ensuring learnings are not lost, several strategies could be explored:

- **Reinforce standards, identify context-adjustable elements** Consider workshopping and regularly revisiting with implementation partners the set of core elements that underpin the full and sound implementation of 7-1-7 to provide a unified foundation for all stakeholders, ensuring consistency across contexts while promoting shared ownership. These are elements that should not be deviated from, as doing so could undermine the integrity of the 7-1-7 framework (e.g., altering the core definitions of 7-1-7). In parallel, work with partners to identify which elements of 7-1-7 can benefit from being adapted to specific context and how. Embed adaptive learning processes so partners can make necessary adjustments to fit local realities without compromising the overall integrity of the framework.
- **Quality assurance** Consider testing the introduction of quality assurance processes, such as monitoring for deviations from core framework elements, focusing on identifying areas where additional guidance and support may be needed to keep implementation on track, or supportive implementation audits or peer-led reviews, to identify opportunities for strengthening 7-1-7 implementation and tailored support.
- **Knowledge management** Consider whether a centralized knowledge management system, where technical advisors, partners, and countries can share lessons learned, challenges, and success stories could prevent valuable knowledge from being lost as the framework scales. If regional knowledge hubs are developed, work to ensure that countries in the same ecosystem and/or facing similar challenges can exchange resources and collaborate on region-specific solutions. These hubs can serve as decentralized points of knowledge, so that learning is captured and disseminated across regions, and between regions. Regional hubs can help customize learning to local needs while keeping aligned with global 7-1-7 standards.

6.6. How to different government structures impact 7-1-7 implementation and related strategies?

Different government structures bring distinct advantages and challenges to the implementation of the 7-1-7 target (see table in Annex II). In unitary systems, where decision-making is centralized, a key advantage is that a central authority can provides clear leadership and consistent direction, and mandate and ensure uniform application of 7-1-7. In some unitary countries which have adopted 7-1-7, centralized control has facilitated smoother rollout, though resource and political constraints have occasionally posed barriers. Centralized governance allows for easier coordination between sectors and leaner accountability that typically flow from the top down, with reporting structures driven by senior leadership. While there are benefits to implementing change in unitary systems, there may also be challenges: political interference in health security decisions can further complicate implementation, central health authorities can be overburdened and become a bottleneck, decision-making can be delayed bymultipe layers of approval, local insights and innovations may be overlooked, and regional health officials may feel disempowered or disengaged, reducing their motivation to fully implement initiatives like 7-1-7.

In contrast, in federated systems, where power is shared between national and subnational governments, subnational authorities have significant autonomy, which can foster stronger local ownership and enable resource mobilization without national intervention. However, national authorities often struggle to persuade subnational governments to adopt and fund 7-1-7, leading to inconsistent implementation across regions due to varying capacities and commitments. In some federated countries, only a few jurisdictions have adopted 7-1-7, and the absence of a national-level mandate poses challenges for widespread adoption across jurisdictions. Coordinating between national and subnational levels can be difficult, impacting data flow and overall effectiveness. Decentralized systems promote different drivers of transparency and accountability, with more distributed decision-making and lateral communication between sectors and levels of governance. In these settings, regional health departments play a key role in decision-making, and transparency is often enhanced through community-level reporting. This allows for local knowledge and context-specific solutions to be tested and adapted more easily, providing greater flexibility and responsiveness. However, this decentralized approach can also result in uneven implementation, as jurisdictions may apply frameworks inconsistently or interpret guidelines differently.

Given these distinct challenges, the alliance may consider more deliberately accounting for a country's governance structure in its 7-1-7 implementation strategies, and further tailoring guidance to each governance model for maximum effectiveness. In federated systems, the Alliance and its partners may for instance prioritize fostering subnational ownership, understanding local planning and funding levers and how they interface with national processes, encouraging cross-jurisdictional exchanges, and designing accountability mechanisms that can empower regions to assess their progress while sharing lessons and aligning with national health goals. In unitary systems, the 7-1-7 target could work to leverage strong national leadership to drive implementation, streamlining reporting mechanisms and supporting quick, top-down decision-making to ensure consistency and responsiveness across regions.

6.7. Should 7-1-7 be expanded / adapted to incorporate a One Health approach?

Many respondents noted the desire to incorporate 7-1-7 as a part of a One Health approach in light of national priorities and global initiatives. “I want to go to other sectors: the Ministry of Agriculture has heard about this, but we need them to roll it out. We now need to go to other sectors who are relevant to health security, because there are many. We need to socialize the tool in other sectors. For us here, we are still in the Ministry of Health. So, we’ll go to the Ministry of Agriculture, so they’ll roll out 7-1-7 because as you know most of our diseases are zoonotic, so we can detect and respond earlier and know the bottlenecks if we engage them,” as an interviewee explained.

A few have taken on One Health as a part of the initial roll out of 7-1-7 and report on findings to a One Health platform and in at least one country, the One Health coordinator is a 7-1-7 trainer. Incorporating a One Health approach with 7-1-7 poses many similar difficulties as simply rolling 7-1-7 out as a separate initiative: it involves many stakeholders beyond the health sphere, at the national and subnational level, who often exist in siloes and that have not historically had to work together. 7-1-7 implementation already faces resource constraints, and a number of respondents noted their wish to bring in One Health collaborators if only they had more resources. In other cases, the animal health sector in the country is already weak and under-resourced, making collaboration difficult even if funding for it were available.

Nonetheless, considering the increase in zoonotic outbreaks and major global push on One Health, it could behoove the Alliance to consider how tools, resources, and trainings could be adapted to more seamlessly fit interface with the One Health approach. This could help further entrench 7-1-7 by bringing in a much wider set of government stakeholders, though ensuring fidelity to the concept with this wider group would present new challenges.

6.8. Should 7-1-7 be applied to other types of diseases and catastrophic events beyond infectious disease outbreaks?

Implementers of 7-1-7 address a wide variety of public health emergencies and endemic diseases beyond infectious disease outbreaks. Many respondents noted an interest in 7-1-7 as a potent way to measure the effectiveness of their response to infectious disease outbreaks and wished it could be more broadly applicable. The unique ability of 7-1-7 to simplify evaluation of complex systems and surface bottlenecks is seen as a powerful force that could assist in improving other public health responsibilities. As one respondent also noted, if there were a way to apply 7-1-7 to sexually transmitted infections. it would provide not only a useful tool to measure their response, but it would also further entrench 7-1-7 by creating another constituency dedicated to its use. Expansion of the 7-1-7 use case could create a broader constituency of support while meeting public health partners in the realities in which they exist. Evidence would need to be generated to support applicability, and care would need to be taken to not water down the initial goals of the target.

6.9. How can 7-1-7 be a global took and not just one for LMICS?

While a focus on LMIC's, particularly in the early stages of roll-out has been a reasonable approach, greater buy-in and use amongst high-income countries could further entrench the tool amongst global funders and show its universal applicability. Some strategies could be explored, including highlighting how the framework can enhance outbreak detection and response in high-income settings, where complex health systems can also benefit from streamlined, data-driven tools like 7-1-7; leveraging endorsements from key global health organizations and other influential bodies that span both LMICs and HICs; creating an evidence-base which shows the value and potential impact of 7-1-7 in varied high-income settings.

Annex I – Terms of reference

7-1-7 – Capturing and learning from implementers' experience

Purpose

The purpose of this proposed review is to take stock of the enablers and barriers to successful adoption, implementation, and use of the 7-1-7 target from the perspective of implementers in the 29 countries where it has been rolled out.

Objectives

The report will describe and analyze 7-1-7 rollout to date from the perspective of implementers, capturing the barriers they face in introducing, establishing and sustaining 7-1-7 as a workflow enhancer and improvement tool, and conversely, enablers of successful adoption, implementation, and sustained use. The findings intend to:

1. Crystallize parameters / conditions for successful 7-1-7 adoption, implementation, and use by countries, above and beyond the purely technical implementation requirements, to inform further roll outs.
2. Understand necessary conditions for 7-1-7 to be best be leveraged as a tool for improvement of outbreak response.
3. Provide insights into possible 7-1-7-tailored leadership training that the alliance could provide to its members to optimize 7-1-7 deployments.

Background and assumptions

The 7-1-7 Alliance aims to accelerate the achievement of the 7-1-7 target for outbreak detection, reporting, and response to support control efforts worldwide and strengthen global health security. The Alliance provides resources, guidance and direct technical assistance for adopting and using 7-1-7.

With rapidly growing interest for 7-1-7, the Global Community of Practice already counts 29 countries at different stages of adoption, implementation, and use. Many institutions (e.g., World Bank, USAID, WHO) have also adopted 7-1-7 as a target for their own work in the pandemic preparedness and response space. As momentum continues to grow, review of implementers' early experience with the tool as it relates to adoption, implementation, and use, could bolster the 7-1-7 Alliance's efforts to support optimized adoption of 7-1-7. A review of real-world experiences can enhance the Alliance's understanding of the type of leadership support and guidance the 7-1-7 Alliance could provide, best harnessing, above and beyond its technical relevance, 7-1-7 transformational potential as a continuous improvement tool.

Our assumption is that in addition to the technical competencies and engagement of technical experts, the successful adoption and use of 7-1-7 hinges on additional factors—e.g., leadership, ownership, adopters and their motivations, change management, collaboration, intended and unintended side effects—which would be valuable to understand to enhance the support and guidance the Alliance could provide to those who chose to embark on the 7-1-7 adventure.

Methodology

- Rapid review of existing implementation science identifying standard barriers that impair / support the use of evidence-based practices.
- Based on implementation science review and knowledge of 7-1-7 to date, development of a questionnaire for interviews.
- 1:1 interviews with no less than 20 and up to 29 implementers from 7-1-7 countries to elicit perspectives on 7-1-7 adoption, implementation, and sustained use.

Timeline

The report is to be completed by late September 2024, in time for circulation ahead of the meeting it will contribute to inform.

Resources

- 7-1-7 Alliance to provide contacts and/or introduction to contact person in implementing countries
- Marine and Ethan's time to conduct rapid lit review and interviews

ANNEX II - Comparative advantage and challenges of unitary vs. federated systems for 7-1-7 rollout

Structure	Advantages	Unique challenges	Common structural challenges
Unitary government: • Central decision-making power with administrative divisions deriving their authority from the center. • Laws and policies are generally uniform across the country. • Limited budgetary control for subnational level.	• Implementation of 7-1-7 across all levels can be decided by a central authority. • A central authority can ensure consistency of application of the 7-1-7 across the country. • A central authority can ease coordination between sectors for the purpose of 7-1-7. • Centralized oversight can allow for stronger accountability framework for 7-1-7 implementation. • Greater involvement in managing of healthcare system reduces number of independent players that exist outside the government system.	• Difficult for limitations in funding at national level to be supplemented by subnational funds. • Centralized governance may dilute the sense of 7-1-7 ownership and accountability at the local level. • A unitary system may place excessive demands on overburdened central health security authorities, and lead to delays in the implementation of 7-1-7. • Health security-related decisions in unitary systems can be more susceptible to political interference.	• The breadth of mandate for the NPHI has an important impact on how far it can mandate 7-1-7, even within the health sector. With a narrow mandate, must persuade other national-level players, even with the in MoH (e.g. other vertical disease programs). • Less technical ability at subnational level creates implementation challenges even with training. • Both federated and unitary systems can face difficulties in maintaining long-term political and financial commitment to 7-1-7 implementation. Competing priorities, changes in government leadership, or shifts in public attention can reduce focus on health security. • Accountability for the success or failure of 7-1-7 implementation can be diffuse in both models. In federated systems, responsibility may shift between national and subnational governments, while in unitary systems, responsibility may be spread across different ministries or agencies. • Champions are needed to drive adoption at both the central and subnational level given their unique contexts.
Federal government: • Power is shared between national and subnational governments. Each level has sovereignty over certain issues. • Subnational governments have a significant degree of autonomy and the ability to legislate on matters within their jurisdiction. • Subnational government have a significant degree of autonomy when it comes to policy and financial decision.	• If central government is not keen to implement, subnational-level players can do so. • Independent budgetary authority can unlock resources without national intervention • Subnational authorities typically have greater responsibility for public health within their jurisdictions, and greater interest to see progress for their constituents. This can lead to stronger ownership of the 7-1-7 target at the local level.	• National government must persuade subnational level to participate for both policy and funding. • Federated states tend to be larger and have many provinces/states and potentially hundreds of districts, making cascading of 7-1-7 even more daunting and resource-intensive. • Subnational authorities may have varying capacities, priorities, commitment levels and resources, leading to inconsistent application of the 7-1-7 target. • Federated systems can suffer from poor coordination between national and subnational governments, impacting implementation. Convoluted reporting mechanisms can impact data flow between different levels.	

ANNEX III - Impact stories

The following are extracts from interviews illustrating the transformative impact of the 7-1-7 target.

I can say with 7-1-7 **we improved our objective planning.** And also, the monitoring of performance of the surveillance system in general. For performance, we used to utilize some indicators proposed in IDSR such as timeliness, completeness, but with 7-1-7 we realized that these indicators are not sufficient to evaluate the efficiency of the system. It requires more. We need more indicators to evaluate the inputs, the process, the outputs... the entire process. And 7-1-7 is capturing the entire process of surveillance and response. I can say it is a nice indicator to evaluate the entire framework.
Yeah, I think I don't see negative things; I see positive things, especially because I remember the beginning when we were conducting our analysis, we were having 7% of our events meeting the target for detection. But now, at this time, we conducted this assessment in June, and we found that **we improved detection by 10%, which is a very good move for us.** This was due to identification of our bottlenecks, and we are trying to connect it and our detection has been improved. We still have bottlenecks and as we conduct our analysis, we find some, but compared to the beginning, we have improved based on the findings for 7-1-7.
We have seen this clearly with the Ebola outbreak [...]. The initial challenges were many: there was no contact tracing, no payment of frontline workers, etc. The things which happen at the very beginning and are hurdles tend to get lost, they don't get captured. So, [...] we waited for the formal process, and XXX from XXX presented the initial issue which happened in the first seven days of the intervention, and **this is how the idea that we needed to address the issue of training of private providers came along.** And the value of 7-1-7 in real time was demonstrated in the process.
Partners know there is no response feasible within seven days without money for transportation for instance. There is an **awareness amongst partners about what the bottlenecks are going to be, which helps in giving them the flexibility to start contributing early.** It is a way of breaking the standard rule of waiting for the plan. This is placing anticipatory thinking front and center—and worked well for XXX.
Yes, it is used to monitor the response. When cholera happened around June, the first team which went to XXX used 7-1-7. The director general convened a multisectoral meeting and the data was presented there. **This informed additional deployment to XXX.** So the Intra Action Review with 7-1-7 helped make. The necessary adjustments to the response.
Currently when outbreaks happen, the way it is structured is that when team come back, bottlenecks are presented at XXX; and then the director can elevate it to the senior management team meeting where bottlenecks can be addressed by the right departments (e.g., lab, surveillance etc.). But because of the issues of resources I mentioned earlier, partners sometime step in. For instance, **XXX stepped in to support training pertaining to Lab testing for diphtheria during the outbreak.** This was very positive, but it is not systematic.

For the longer term, we have been using 7-1-7 to feed into the 2023-24 planning processes. Initially it was lifted by RTSL. Now there are lot of simex, IAR, AAR, Star assessments, etc. So, we work with the team to identify bottlenecks by technical areas, and then use it for NAPHS planning. For instance, at the subnational level, and to address the resource question I raised earlier, one recommendation has been to **allow states to tap into the [health care fund] for subnational response.**

Here is the example of yellow fever in XXX, we immediately applied 7-1-7 and presented to the national steering committee for all the people in the EOC. **And they took action immediately and we got the vaccine in only two weeks,** which has not been a usual thing in XXX. Even with COVID we struggled. This particular one was very quick.

For example, there is a parasitic disease. It was confirmed in a state, and we applied 7-1-7. The bottleneck identified that the disease had to go into the IDSR technical guidelines. It took a lot of time to detect. **There was no standard case definition**, and it took three months to detect. So, we had to put it into IDSR technical guidelines, have a standard case definition, and report it. **7-1-7 improves guidelines and adds more value to the system.**

We were having a yellow fever outbreak in one of the states, samples were delayed because they needed to be transported from the lower level to the national level public health laboratory. And then we send them on further to XXX for confirmation. Their reason was that the staff person there didn't know the protocol for packaging infectious disease samples. You have to have triple packaging, and they are not shipped commercially. The guy who was there didn't know the protocol. So, **we had to go there to quickly do a quick orientation on the shipment and transportation of samples.** So, that was another example.

Some teams were not able to collect samples due to a lack of PPE. We had stock at national level and got it to them. That is another quick example. Sometimes the bottlenecks don't require money. Some of them can be easily addressed.

In one instance, the case investigation forms were not printed in some states, so they were not capturing information. **We printed them at the national level and shipped them and they started using them.**

And I remember we put some of these long-term bottlenecks in the NAPHS operational plan that we developed last year. **Some of them have been acted upon. One of them was to have a mobile lab. We now have a mobile lab to reduce issues of sample shipment and referral system.** It is very complicated in the country sometime due to weather issues and flight issues, which make us unable to go to certain states. We now have the mobile lab which is almost functional.

Yes, we had an influenza situation quite recently where there was the group returning from Mecca—our Muslim brothers who visited Mecca. They had to return back to XXX and upon their return we identified on a national call that people leaving from Mecca were coming down with COVID. So, the team quickly settled on deploying a team for screening. With screening, we identified a case for influenza. The short-term plan was to see how we can **get community engagement activities started immediately and how gasoline can be provided for the surveillance officer.** Those things were not 100% provided but we started to have the conversation on bottlenecks. We want to see how to engage on these short-term processes and want to work more on how to support these efforts.
XXX team is using this in real time. This is the process we usually do. Begin with the retrospective analysis, and then we do an action plan, and then we implement in real time basis. XXX is already using in real time for over one year and some months, using the system that we implemented there. **And now they have increases in the percentage of timely response there and great improvement in addressing the risks,** and we can monitor this in real time. Every two weeks a meeting is organized with the SG to show the metrics and how things are going.
We have had some different nature of insights. **They understood that, for example, they need to have better lab results.** They discussed this with the secretary at the municipal level, i.e., how to bring more lab capacity to the municipal level, because this is managed by the state. We want to use this in a broader discussion at the national level.
They see the need to have a better structure to collect samples. There were parts they were able to do by themselves, when it comes to reorganizing. For others, they saw that they needed the approval of the municipal level to approve changes of this scale for the collection of samples. **They changed the workflow to analyze cases coming in and see whether they are rumors or not. This made it much faster to detect.**
We would use the information and speed became really important. When meeting with schools we had to recommend quickly. Do we recommend they close the classroom? Do we recommend they close the school? We don't make those decisions. The school boards make the decision, **so we had to put the data in a way that was easily digestible by non epis and 7-1-7 gave us a tool to do that.**
Communication was a huge thing. Thinking of school outbreaks, the school knows what is happening before we know. One would hope that's not the case, but that's still the case today. So this ability to communicate rapidly with the schools, we focused a lot of time on that now. For the school outbreak issue, there is an epi component, but in retrospect a ton of it is relationship and the ability to work closely with the folks where the outbreak is happening. We identified issues and then shared with the schools. We have our own coms team, so we worked with them a lot. We worked with the XXX too and they are aware of this emphasis on a learning public health system. **But the only way you can do this, the only way you can learn is if you have the data, and the ability to aggregate and see if we are doing better or not.**

Some bottlenecks that happened in the previous events, we can't find them anymore. They don't happen in the next one. For instance, for the February Avian Influenza, we were not able to detect in the time needed to meet the targets, but after that, we made progress. But some bottlenecks are still there or moving, for instance delays were initially in physician reporting but after we introduced 7-1-7, we saw that it could be about patients failing to report to health care facilities about exposure. So there are still issues at the level of the physician to identify cases early.
One was the hotline. We noticed that the call center was down for several months. And **from our 7-1-7 analyses, we had noticed that there was a communication gap** between the community and the government. The hotline used to be the medium that helped address this gap. So if it continued to be down, the gap would persist, and the government would not get info about disease early. So we came in. We fixed that. We made it functional.
Initially, there was no One Health event-based surveillance technical working group, **so as part of our immediate remedial action, we established one, of which we are the convener. 7-1-7 put us in a strong position** because now we are the convener as a result. Now the government reaches out to us to ask that we convene a technical working group.
So, we realized that coordination mechanism at subnational level, when there is an outbreak, is very weak. At the national level, they know how to activate the Emergency Operations Center (EOC), etc. **But at the subnational level, it is very weak. We saw that from our 7-1-7 analysis.** We did not think we could address the issue for all districts, but we included in our workplan two priority districts, where we support their coordination mechanisms. We have XX districts, so we don't have the resources to go around XX districts. But now we are on the verge of revising the concept of subnational EOC there. We try as much as possible to act on the remedial actions we see, including some which fall under JEE categories. We go for it, and it is improving health security, thanks to 7-1-7.
During outbreaks, we see bottlenecks. And yes, we will address immediately the things we can. For example, for **our community where they have less knowledge, we plan immediately to provide engagement, or we offer health education. Sometimes health workers are missing information. We provide it.** In XXX, we have rapid response teams so we can provide a public health officer or doctor to provide immediate action on what to do. For example, strengthening the surveillance system. We keep an eye on what is happening in the provinces. And if we have a lack of supply, we can find it immediately or reprogram it from somewhere else. We can have this kind of immediate action.
What we do is we discuss with the teams and then send it to the specific team for the specific issue. We've already discussed at the interdepartmental meeting and given action points to the responsible department. **If there is no index of suspicion, then we know the health care workers need to be trained in identifying anthrax, for example**, and pass onto the workforce development director and train people. For another issue, for example, **there was a delay in responding to bloody diarrhea and they didn't realize risk of cholera. We give that to the surveillance team, and they need to provide training on signals.** If it's an active one, then we give it to the respective pillars as you are responding and ask them to improve. And at the end, we have a report and that is shared with what we did for cholera.

For long-term ones, we take the report, because it's under my department, and make a summary and take it to the senior management and say these are the issues we have to face. And we discuss what are the areas we need to address. What is the plan? Some of them have a plan—for cholera we already have cholera elimination plan. There is this aspect that is long-term, so we ensure that it is funded if it is already in the plan. I personally take it to senior management and take it to the executive committee and say these are the long-term issues that need to be addressed and then taken to the policy level and up to MoH or board depending. **Most can be managed within the executive team to engage partners and external funders to strengthen those long-term bottlenecks.**
From the previous assessment for enablers and bottlenecks we conducted, **one of the bottlenecks we identified was weak coordination between the RRTs. That was one of the bottlenecks and they addressed it by developing plans and procedures for the RRTs on how they can collaborate or coordinate for event management effectively.** That was one of the bottlenecks we identified last time, and it was effective for us because we managed to train and establish a well-coordinated rapid response at the level of districts. For now, we have an RRT in each district, which has been established and we give them roles and responsibilities. For now, the coordination of the RRTs has been efficient since.
Another bottleneck was mainly an issue of laboratory confirmation, especially for samples that required advanced testing, which was taking time and sometimes response was delayed due to lab confirmations. So from here, we presented this to our leadership, and our division manager and national reference lab sat together to **find a way of harmonizing the way testing and sample confirmation** should be conducted as quick as possible.
There is one that I remember vividly. We took a long time to detect Ebola. The patients were circulating in the private clinics and those private clinics didn't have any knowledge on viral hemorrhagic fevers or Ebola and hadn't been trained on how to diagnose Ebola. They didn't have a case definition. That was a big thing, so it caused delay, and we only saw them when they joined the public sector. We wouldn't know if it was in the private sector. **So, immediately we trained private, for-profit doctors on how to detect, how to refer, and let them know that they shouldn't put them on a bus, and that we have an ambulance**. The good thing is they have now participated in the response. The bottleneck was identified in real time, and we solved it and they participated in the response.
Another example is that the districts **didn't have money to quickly go to the field to address or investigate signals or alerts. That one, because it needs more policy-level decision, we put it in the plan** because it needed authority to have more money to investigate; money that is readily accessible.