From Promise to Delivery: Organizing the Government of Peru to Improve Public Health Outcomes

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From promise to delivery: Organizing the government of Peru to improve public health outcomes

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Abstract

Knowledge and good intentions in public health often do not translate into concrete impact. While politicians and health system officials struggle to fulfill promises and achieve results, populations bear an increasing burden of avoidable death and suffering. Pioneered in the UK and later disseminated globally, the "delivery approach" is a management system which aims to improve government performance and citizen outcomes. Despite success stories, there is limited documentation about what makes translation of the "delivery approach" to different contexts successful. Given the prominent role often played by government organizations in health systems, translational knowledge about what works in implementation of public policies and programs is key to strengthening public health and other essential services.

This thesis critically examines the government of Peru's efforts to deliver on its health targets by 2021. Childhood anemia, chronic childhood malnutrition and waiting times for medical appointments were the three government focus areas. Government's interventions were divided into four work streams: setting up the Delivery Unit, reviewing current system capacity, forming guiding coalitions and planning for delivery. A framework for analysis was developed combining components of the "delivery approach" framework and pillars of public policy. I adopt an adaptive, qualitative approach to data collection and analysis. Primary research included interviews, focus group discussions, participant and non-participant observations, whereas secondary research involved documentation and literature reviews.

This project illuminated tactics and behaviors which helped accelerate and optimize government's organization for delivery in Peru. Aspects potentially associated with success

included forming a highly capable implementation team, establishing strong guiding coalitions across government, understanding service frontlines, using data for decision making, and prioritizing targets and interventions. The project also allowed examination of public health interconnections with other areas. Findings underscore the value of systemic thinking and the importance of technical, political and ethical dimensions of delivery work.

Understanding which characteristics support and which undermine government delivery efforts may inform political leaders, policymakers, public officials and practitioners on how best to increase the effectiveness and accountability of health systems. Cross-cutting lessons from experience provide practical recommendations for public health professionals to achieve better outcomes and thrive in the process.

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Introduction

Governments all over the world struggle to deliver public services valued by citizens. With its multiple dimensions, disciplines, determinants and actors, public health is a particularly challenging arena for government action. Despite wide recognition of health as a fundamental right, which commonly results in obligations on the part of States, governments at all levels still find it hard to realize the aspiration of protecting, promoting and restoring population health in practice (Toebes, 2001). Good ideas on how to improve public health abound. Yet, the discrepancy between good ideas, effective policy and impact on the ground persist, leading to avoidable deaths and human suffering.

Public discontent with health systems performance has been commensurate with governments' poor ability to deliver health services. A survey conducted in five developed countries showed that in no nation is a majority satisfied with the healthcare system (Donelan, Blendon, Schoen, Davis, & Binns, 1999). In countries with universal health coverage (e.g. UK, Canada), dissatisfaction is primarily with the level of funding and administration, including waiting times. In the United States, a country that adopts a largely privatized health system model, the public demonstrates concern with financial access.

Reforming health systems to meet evolving population needs and expectations has never been more important. With accelerated demographic and epidemiological transitions taking place in all parts of the world, and unprecedented transfers of public health risks and opportunities as a result of globalization, governments now face an increasingly complex health landscape (Szlezák et al., 2010). In parallel, health system authorities have to deal with increasingly strained budgets and limited state capacity (Karanikolos et al., 2013; Organization & others, 2007). Adapting health systems to confront today's challenges requires renewed appetite for performance. Now more than ever before, governments need to ensure that the policies developed at central levels effectively reach and impact people on the ground.

To bridge the gap between policy design and effective implementation, governments around the world have incorporated a range of tools and techniques, which collectively aim to improve institution's ability to organize, plan and control public policies and programs. Originated in the UK during Tony Blair's second term as Prime Minister, the "delivery approach" is a system for maximizing the chances of achieving demonstrable results in priority policy areas. After successful deployment in the UK's national government during the Blair administration, the approach has spread globally to governments at different levels (from municipal to national), geographies (from Latin America to Africa and Asia) and stages of development (from developing to developed countries). Those experiences have achieved varying degrees of success, which begs the question of what determines variability in results.

The main goal of this DELTA project is to shed light into what determines results of dissemination of the "delivery approach", herein understood as a complex organizational innovation and applied in the public health context. Using a single qualitative case study of the government of Peru, this work investigates what factors are associated with effective translation of the approach to a setting where agents, relationships, institutions and context are dramatically different from the original implementation landscape. My analysis of early stages of the Peruvian government's efforts to improve public health outcomes aims to illuminate the behaviors, organizational arrangements and tactics that contribute to better results in service delivery.

The magnitude of the discrepancy between political intentions and effective action has been widely documented both in the scientific literature and professional community (Durlak & DuPre, 2008). From the failure to adopt life-saving, cost-effective public health interventions at a systems level to the lack of adherence to proven clinical guidelines and treatment discontinuities due to drug stock-outs at the organizational level, poor implementation in government negatively impacts many people across all life stages

(Freemantle et al., 2002; Jones et al., 2003; Pasquet et al., 2010). Studies in the US and the Netherlands, for instance, demonstrate that about 30 to 40% of patients do not receive care consistent with available scientific evidence; about 20 to 25% of healthcare provided is either unnecessary or potentially harmful (Grol, 2001; Schuster, McGlynn, & Brook, 1998).

The social, economic and political consequences of poor implementation of government health policies and programs are far-reaching. From a social perspective, delivery gaps magnify the global burden of disease and deepen health inequities. Whether by preventing people from accessing the care they need, debilitating the quality of care received over the life course, stifling public health efforts or deteriorating environmental and social determinants of health, government failure in the provision of public goods and essential services directly contributes to death and disability. Economic repercussions are commensurate with social losses. Implementation problems negatively impact the effectiveness and efficiency of health policies and programs, threatening the sustainability of investments, causing avoidable waste of increasingly strained public resources, and slowing down economic growth (D. E. Bloom, Canning, & Sevilla, 2004; Organization & others, 2001; Ruger, Jamison, Bloom, & Canning, 2011).

Subpar provision of health services by the government can also be a source of political instability. In African countries, maternal mortality rates are positively associated with political instability scores (Andoh, Umezaki, Nakamura, Kizuki, & Takano, 2006). In Uganda in the mid 1990's, the Defense Minister alleged that one of the most likely potential triggers for the coup was poor government performance dealing with HIV/AIDS (Elbe, 2003). Similarly, deteriorating public services in Brazil were identified as a main driving force behind protests against the federal government in 2013. Manifestations were more likely to occur in municipalities with poorer service delivery scores in health and education (DE CURSO, 2013). Governments' ability to deliver services is directly associated with levels of public confidence; where governments fail to deliver, democratic processes can be adversely

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affected as a result (Sims, 2001).

Implementation matters, and governments matter to implementation. Globally, public sector health spending accounts for around 60% of total health expenditures (World Bank Data, n.d.). Such prominent control over resources means that, regardless of specific institutional arrangements and levels of devolution of service delivery to the private sector, governments hold great potential and responsibility in determining health system outcomes. National health systems performance varies widely across countries. Some countries are able to promote population health, financial protection and responsiveness to expectations with relatively limited resources in constrained settings; others are highly inefficient (Tandon, Murray, Lauer, & Evans, 2001). While a range of structural and contextual factors may explain such variation, governments' ability to deliver plays a central role. In countries with good governance scores, for instance, public health spending lowers child mortality rates more compared to countries where public governance is poor (Rajkumar & Swaroop, 2002).

Improving performance has become increasingly a central goal of public administration. In recent decades, widely adopted government reforms, such as pay-for-performance, total quality management, strategic planning, performance measurement, benchmarking and decentralization have consistently claimed improved public sector performance and effectiveness as their ultimate goal (Moynihan & Pandey, 2005). In health systems, many countries have shifted toward a model of structured pluralism in service delivery, with increased reliance on the private sector to improve population health outcomes and equity (G. Bloom & Standing, 2001; Londoño & Frenk, 1997). Many of the recent results-oriented approaches in government fall under the rubric of New Public Management (NPM), a movement originated in the 1970s and early 1980s, predominantly in countries that suffered heavily from economic recession and tax revolts, in response to the shortcomings of classical and neoclassical public administration (Gruening, 2001; Pfiffner,

1999). More recently, the "reinventing government" movement has corroborated many of the principles espoused by NPM advocates, recognizing the need for governments to increase focus on innovation, customer empowerment, and outcomes valued by citizens (Frederickson, 1996).

The "delivery approach" is a system for improving results in government policy priorities (Barber, 2015). Originated in the UK following Tony Blair's election for a second term as Prime Minister, the method evolved into a combination of tools, processes and practices that aim to generate concrete impact to citizens. In June 2001, after winning the general elections, Tony Blair implemented the Prime Minister's Delivery Unit (PMDU) to support the delivery of concrete results to citizens in key policy areas (Barber, 2007). The PMDU was a small, dedicated performance management structure, positioned at the heart of government administration and in parallel to the bureaucracy, charged with driving improvements of a few, well-specified service delivery outcomes. In this function, the PMDU team worked closely with several stakeholders – from the Prime Minister to the Chancellor, Cabinet ministers and top civil servants – to ensure sustained focus on priorities as well as help line ministries solve problems and continuously build capacity (Barber, 2015). Four years after PMDU's inception, tangible improvements were achieved in all priority areas: health, education, crime and transportation. By 2005, most of the targets had been met, with significant progress made on others (Barber, 2007).

Following the UK experience, the "delivery approach" has disseminated to several countries, both developed and developing, with varying degrees of success. Delivery tools and processes were refined by Sir Michael Barber (former Head of the PMDU and founder of Delivery Associates) and his team, and consolidated into a delivery framework, which has served as a basis to inform public sector reforms (Barber, Rodriguez, & Artis, 2015). In parallel, impetus to improve government's ability to deliver also grew in organizations and development agencies worldwide (McKinsey & Co Voices on Society, 2013; Wagstaff, 2013).

The "delivery approach" highlights the importance of technical, political and moral aspects for successful implementation of public policies. From a technical perspective, the approach entails a management cycle that starts from prioritization and setting a clear definition of success, then lays out key steps in planning for delivery, encourages regular routines for progress monitoring and problem-solving, and promotes rapid learning cycles for continuous improvement. From a political standpoint, the approach places strong emphasis on influencing without authority, building and nurturing mutually beneficial relationships with key stakeholders to expand leadership circles, and constantly communicating the delivery message (Barber, 2015; Barber et al., 2015). Finally, bringing to bear the moral purpose of improving people's quality of life underlies all actions. The "delivery approach" encourages stakeholders to persist in the face of adversities and challenges to ensure governments fulfill their obligations to citizens and taxpayers (Barber, 2007).

Although delivery methods, tools and practices have been successfully applied to increase government effectiveness and accountability globally, there is limited knowledge about the intricacies of what makes delivery work. While the macro-processes of the "delivery approach" have been documented and successfully applied to various social areas in widely variable contexts, little has been systematically examined about the procedural, behavioral, institutional and contextual nuances that can make or break the impact of delivery efforts. Ultimately, the potential for the "delivery approach" to gain scale depends on knowledge about what factors determine the outcomes of its translation to different contexts. Similarly, the potential for governments to strengthen delivery of essential services, in public health and beyond, hinges on translational knowledge about public sector performance management systems.

Delivery Associates (DA) is a leading management consulting firm specializing in government strategy and implementation. DA partners with local and national governments

globally to help them improve effectiveness and accountability using the "delivery approach" as platform for systematic performance management. The moral purpose of helping governments deliver on their priorities is central to the organization's vision. DA recognizes that where government fails, development is impeded. By contrast, where government is effective and accountable, social and economic growth are enhanced, and people can lead more fulfilled lives. The organization focuses heavily on changing facts on the ground rather than simply providing recommendations.

The main services offered by DA include strategic advisory (designing roadmaps to achieve government goals), implementation support (setting up teams and routines to ensure delivery of improvements) and capacity building (strengthening and training government officials to deliver their goals). Additionally, DA is committed to advancing the knowledge and practice of delivery through thought leadership publications and convening of relevant stakeholders in the field. While many consulting engagements have a public health component, client priorities commonly involve other areas, like education, housing, crime and infrastructure. Founded by Sir Michael Barber, former Head of the Prime Minister Delivery Unit in the UK from 2001 to 2005, the organization has ambitious growth plans. Although DA remains selective in client engagement – working only with governments in which top officials are totally committed and willing to help unblock obstacles to change – the goal is to significantly expand the firm's global footprint in next five years.

In July 2016, after winning the presidential election in Peru by a tight margin, Pedro Pablo Kuczynski and Prime Minister Fernando Zavala called for the creation of a Delivery Unit at the center of government. Modeled after the UK's original PMDU, the *Unidad de Cumplimiento del Gobierno* (UCG) was tasked with a core mandate of ensuring that government's ambitious goals in key priority areas are achieved. The seven priority areas emphasized by the President during his campaign and in his inaugural speech are: Public health, education, security, water and sanitation, infrastructure, formalization and

corruption. In each of these areas, the Government of Peru has historically struggled to generate improvements that citizens can feel. For public health, specifically, three focus areas were defined: anemia (which affected 43.5% of children under 3 years old in 2015), chronic child malnutrition (prevalence of 14.4% in 2015) and medical appointment waiting times (average of 17 days in 2015).[1] In these areas, the country's results either compare negatively with regional and global benchmarks or have deteriorated over time.

With the support of the British Embassy in Peru, DA was brought in to support the establishment of the UCG, advise on delivery planning for each priority area, set up routines for progress monitoring and build capacity to promote sustainability of the endeavor. DA's involvement in this project began in October 2016, two days after the Head of the UCG was appointed. The UCG was officially announced by the Prime Minister in November 2016, and formally started its operations in January 2017.[2]

This DELTA project aimed at helping organize the Government of Peru to improve public health outcomes. It focused on the initial stages of incorporation of the "delivery approach" in the national Government. The main goal was to identify elements that may support or undermine government's ability to improve public health outcomes at design stages, drawing lessons from field experience. A priori, these elements were categorized according to components of the implementation cycle and pillars of public policy identified in the literature. The analysis compared actual findings to expected patterns from the analytical framework. Conclusions were drawn from linking data from various sources to the study questions.

The first part of the thesis is the Analytical Platform. It provides background on the nature of the implementation problem in government, reviews the literature on the root

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[1] Source: https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1211/pdf/Libro.pdf. Retrieved January 23, 2017.

[2] Source: http://gestion.pe/politica/zavala-anuncio-que-unidad-cumplimiento-gobierno-operara-desde-1-enero-2017-2176074. Retrieved January 23, 2017.

causes of policy implementation failures, critically analyzes current evidence on results-based approaches in government (with emphasis to the "delivery approach"), and discusses the determinants of organizational innovation spread. The conceptual and scientific foundations in this section stem from institutional theory, political economy, diffusion of innovations theory and implementation research. While public health outcomes are the main area of interest, this review adopts a broader government performance lens. A key underlying assumption is that principles, evidence and lessons on policy implementation and service delivery in other social areas are applicable to public health analysis. The section then turns to a description of the Peruvian public health and broader government context as a backdrop for the UCG's design and operationalization. It lays out the main purposes of the project, highlighting both the primary goal of creating enabling conditions for public health improvements in Peru and the secondary goal of illuminating what makes for an effective translation of the "delivery approach". Finally, it concludes by describing the approaches used to achieve goals.

The Results section discusses the degree to which empirical evidence validates or disproves the hypotheses laid out in the theory of change, and critically analyzes those results. This section is structured according to four key components of organizing government to deliver, consistent with the activities performed by DA on the ground (Barber, 2015): setting up the DU, reviewing current state capacity, forming guiding coalitions, and planning for delivery. For each of these domains, the section includes an interpretation and synthesis of qualitative evidence, with a focus on key lessons that can be applied to health system strengthening and government performance more broadly. A discussion about the interconnections between public health and other priority areas is also included, as well as project limitations. While the timeframe of the project does not allow for a retrospective assessment of concrete outcomes associated with quantitative targets, useful insights can emerge from the process of organizing government to deliver better public

health outcomes.

Finally, the Conclusions section articulates ten cross-cutting lessons from experience. It also consolidates relevant implications of this work, and suggests a way forward to those involved with knowledge translation in the fields of public health policy development and public sector performance.

Each section of this thesis seeks to advance translational knowledge about how governments can ensure that good intentions and ideas generate public health impact. Illuminating the tactics, behaviors and institutional characteristics associated with success of delivery work will enable governments to better align structures, people and processes towards improving public health outcomes. Applied knowledge on public health policy implementation may also enhance public sector performance more generally, regardless of programmatic areas. To individuals and social groups, better government services translate into higher quality of life in many levels, from disease prevention to increased access to high-quality care and health-enabling living conditions.

<center>**Analytical platform**</center>

Translation and implementation gaps in health system reforms

Definitions

Governments are the primary provider of essential services in many parts of the world. Yet, our understanding of what determines success in public policy and service delivery is limited. Well-intentioned public policies and programs commonly fall short of generating concrete impact to citizens in several social areas. In health, specifically, the disconnect between policy ideas, implementation and outcomes on the ground are well-documented and highly detrimental, spanning multiple government levels and health conditions. In a review of over 500 quantitative studies, strong empirical evidence was found to support the conclusion that implementation gaps may negatively affect program outcomes in several public health areas, from health promotion to mental health and HIV/AIDS control (Durlak & DuPre, 2008).

The terms "translation gap" and "implementation gap" have been used to generally describe the disconnect between what we know and what we do in practice (Frenk, 2009; Haines, Kuruvilla, & Borchert, 2004). Such disconnect can be conceptualized in the health context as a break-down in a cycle of knowledge, illustrated in figure 1 (Frenk & Chen, 2011). The first step in this cycle is knowledge production, expressed through research that creates new insight on health conditions and responses to those conditions. Next in the cycle is knowledge reproduction, which may take the form of education, training and/or communications. Finally, knowledge is translated into actions that improve health through three distinct mechanisms: first, in the development of new technologies (e.g. vaccines, drugs, diagnostic methods); second, in individuals who internalize knowledge and incorporate it into their everyday behaviors; and third, in the development of policy and program innovations (Frenk & Chen, 2011).

<center>11</center>

Figure 1 - The cycle of knowledge
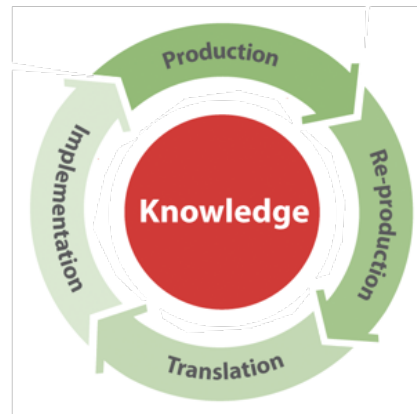
Source: Adapted from Frenk, J., & Chen, L. (2011). Overcoming gaps to advance global health equity: a symposium on new directions for research. *Health Research Policy and Systems*, *9*(1), 1.

An important distinction exists between the concepts of translation and implementation gaps. Although the two terms are often vaguely defined, and used interchangeably in common parlance, it is useful to differentiate between them based on stages of the policy development cycle. Translation gaps can be framed more narrowly to represent the commonly observed divide between knowledge creation and policy/program development, which occurs early in the policy development process. This viewpoint recognizes that sound, evidence-based policies and programs do not get automatically adopted in systems. Instead, applying scientific evidence to practice requires deliberate actions to ensure knowledge is adequately translated. Numerous examples demonstrate this problem in the public health domain. In mental health, for instance, research suggests that Assertive Community Treatment (ACT) is an effective approach for people with severe mental illness (Bond, Drake, Mueser, & Latimer, 2001; Latimer, 1999). Yet, few governments currently incorporate ACT into their health systems (Proctor et al., 2009). Similar examples can be found in virtually all healthcare and public health areas.

Ensuring that new technologies, practices, policies and programs actually reach and impact people on the ground is just as important as designing products and services on the basis of the best available scientific evidence (Haines et al., 2004). In addition to the gap between what knowledge gets translated into programs and policies, an implementation gap

can be identified with regards to how those policies and programs actually generate their anticipated impact in the lives of target populations (Cooksey, 2006). While the translation gap means that research findings are not incorporated into policy and programs during design stages, equally critical implementation gaps prevent evidence-based strategies from being executed, embedded into routine practices and therefore poised to generate impact. Translation gaps deal with what gets adopted in systems; implementation gaps deal with how those innovations are operationalized to achieve anticipated goals. Translation gaps reflect a deficit in the adoption of knowingly effective policies and programs. In turn, implementation gaps reflect problems in getting those policies and programs used in practice. The former gap is about the inability to do the "right thing"; the latter gap is about the inability to do the "thing right".

This project adopts a comprehensive view of the knowledge translation and implementation problem. As discussed in a later section, the "delivery approach" seeks to both design strategies based on the best available evidence and ensure that those strategies (i.e. policies, programs or interventions) are applied effectively in practice and embedded into the way systems work. Figure 2 provides a schematic view of how translation and implementation gaps impair concrete impact to citizens throughout the policy development life cycle.

Figure 2 - Knowledge translation and implementation gaps
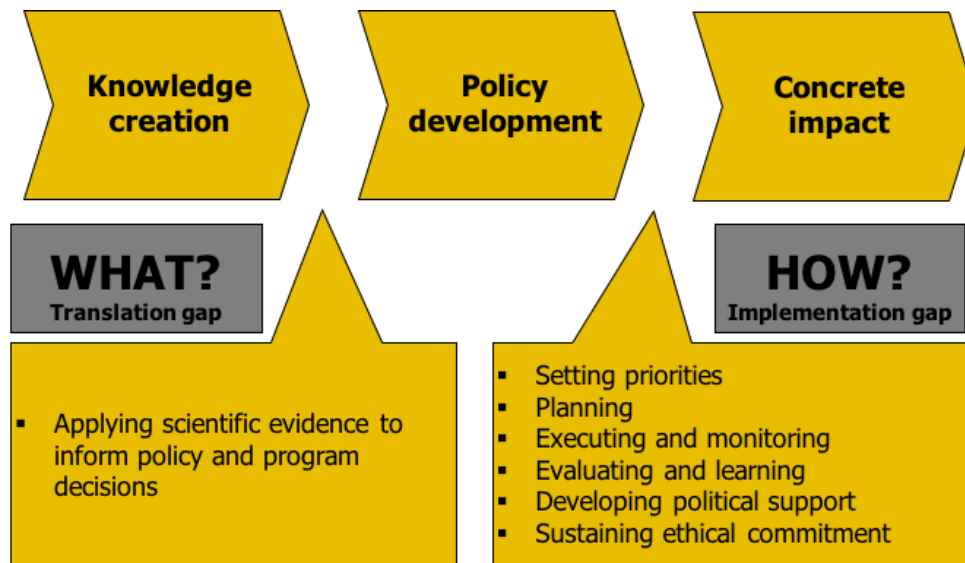
Evidence and repercussions

Health system reforms are defined as "changes produced out of explicit intention on the part of government or political groups to transform, for the better, the health sector" (Frenk, 1992). In essence, health reforms aim to create "sustained, purposeful change to improve the efficiency, equity and effectiveness of the health sector" (Berman, 1995). From the highest to lowest level of hierarchy, health system reforms can be sorted into four distinct categories: systemic, programmatic, organizational and instrumental (Frenk, 1994). Restructuring at the systemic level generally aims to improve equity through changes in institutional arrangements (e.g. number and distribution of public sector agencies, public/private mix in service delivery); programmatic reorientation primarily aims to improve allocation efficiency through changes in priority-setting mechanisms; organizational level changes aim to assure technical efficiency by looking at issues of productivity and quality; finally, instrumental changes intend to generate institutional intelligence for performance enhancement, and take form in information systems, scientific research, technological and

human resources development (Frenk, 1994).

The four levels of health policy are intimately interconnected, such that changes in one level may facilitate or constrain performance in others. The identification of distinct policy levels is important to the extent that reform efforts are not all or nothing. Instead, if there is political resistance to change at one level, progress can still be made at other levels – and actually create space for deeper transformations (Andrews, Pritchett, & Woolcock, 2013). It is key, however, to differentiate between full-fledged reforms, which cut across all policy levels, and targeted changes at specific policy levels. The former is more comprehensive, and thus better positioned to accelerate health systems transitions; the latter, while usually a valuable step forward, can usually promote marginal changes in system performance. In this thesis, the term health reform is deliberately used to denote implementation efforts that contemplate all four levels of policy change comprehensively. Figure 3 illustrates the levels of policy change and their relationship with the concept of health reform.

Figure 3 - Change in health systems

Policy level	Type of change	
Systemic	Restructuring or redesign	
Programmatic	Reorientation or reprogramming	Reform
Organizational	Reorganization	
Instrumental	Reinforcement	

Source: Frenk, J. (1994). Dimensions of health system reform. *Health Policy*, *27*(1), 19-34.

Translation and implementation problems in government health sector reforms span multiple system levels, from systemic to instrumental, and multiple types of health services, from personal to non-personal (i.e. public health interventions) (WHO, 2000). At the systemic level, two redesign examples that often fall short of their intended results are public-private partnerships (PPPs) and governance decentralization. PPPs have been

heralded as an innovative policy tool to remediate common failures in government service delivery. In its many forms, PPPs have the potential to leverage complementary strengths and produce positive public health consequences when neither the public or private sectors are capable of resolving problems on their own (Reich, 2002). However, PPPs can also collapse due to implementation challenges. In hospital construction and community settings, difficulties resolving stakeholder conflicts, promoting clear accountability rules and ensuring growth have led to consequential failures (McKee, Edwards, & Atun, 2006; Weiner & Alexander, 1998). In London, a private financing initiative approach to consolidate teaching hospitals on a single site collapsed after the budget rose from £300 to £894 million and completion estimates were postponed by seven years, from 2006 to 2013. Failure by the central government to clarify whether it actually supported the PPP was pointed in an official report as a key reason for this project's fallout ("Department of Health - The Paddington Health Campus scheme - National Audit Office (NAO)," n.d.).

Decentralization of health systems governance gained traction in many regions as a response to poor service outcomes in settings where power, resources and responsibilities were concentrated at the top of rigid hierarchical structures (Jimenez, Smith, & others, 2005). Although several benefits of decentralization have been reported (e.g. increased accountability to citizens, faster decision-making and better population health outcomes), implementation challenges may hinder policy results (Guanais & Macinko, 2009; Jimenez et al., 2005). In Tanzania, for instance, untimely disbursement of funds from the central government, insufficient capacity among personnel and weak mechanisms for public participation have challenged effective health sector decentralization (Frumence, Nyamhanga, Mwangu, & Hurtig, 2013).

Translation and implementation shortfalls also hamper health policy results at the programmatic level. A hallmark example of global, supra-national prioritization was the establishment of Millennium Development Goals (MDGs). From 2000 to 2015, the MDGs

were a set of goals and targets prioritized by 198 nations which guided policies and programs aimed at improving quality of life globally ("WHO | Millennium Development Goals (MDGs)," n.d.). Despite numerous achievements, research points to an "unfinished agenda" in many countries and areas where results have been insufficient (Bryce, Victora, & Black, 2013; Cleland et al., 2006). In 2012, the United Nations Millennium Development Goals Gap Task Force highlighted that only 51.8% of essential health products were available in a sample of health facilities from 17 low and middle-income countries from 2007 to 2011 (*MDG Gap Task Force Report 2012*, 2012).

Ultimately, translation and implementation problems manifest at the organizational level. Surgical safety checklists, for example, are knowingly effective in reducing patient mortality and post-operative complications (Haynes et al., 2009). The real world impact of this innovation, however, hinges on the effectiveness of hospitals' implementation. In hospitals where leaders persuasively explain why and adaptively show how to use the checklist, impact on patient outcomes is greater. When implementation leaders don't explain why or how the checklist should be used, the innovation is eventually abandoned despite an organization-wide mandate for its use (Conley, Singer, Edmondson, Berry, & Gawande, 2011).

In some developing countries, health workers are absent in health facilities on average 35% of the time, with rates generally higher in poorer regions (Chaudhury, Hammer, Kremer, Muralidharan, & Rogers, 2006). In smaller sub-centers of rural Bangladesh, doctor absenteeism rates are as high as 74% (Chaudhury & Hammer, 2004). Drug stock-outs have been reported in up to 75% of healthcare facilities in Malawi, despite the government's formal policy commitment to outlay free essential medicines; only 9% of local health facilities in the country had the full Essential Health Package upon inspection (Wild & Cammack, 2013). In South Africa, stock-outs of essential HIV and tuberculosis medications now threaten progress of disease control programs in which billions of dollars

were invested. Currently, around 18.5% of adults in the country live with HIV and close to three million people are on antiretroviral (ARV) treatment. Nevertheless, stock-outs affect one in four health clinics, and are caused mainly by local problems between depots and facilities ("South Africa," n.d.).

Health system changes at the instrumental level may also be subject to translation and implementation problems. Overall, more than half of e-government projects result in total or partial failures (Dada, 2006; Heeks & others, 2003). In the United States, after a lengthy reform process which culminated in a tight approval of the Patient Protection and Affordable Care Act (PPACA) in Congress, the health insurance exchange website (Healthcare.gov) operated by the federal government crashed during its launch in October 2013 (Anthopoulos, Reddick, Giannakidou, & Mavridis, 2016). Of the 9.47 million users that attempted to register during the first week of the launch, only 271,000 succeeded (Cleland-Huang, 2014). According to report by the Government Accountability Office (GAO), the series of management failures that led to the crash has cost the federal government over $150 million (Baker, 2014). Similarly, Brazil has tried without success to implement a national health identification card system at scale to integrate care, enable monitoring of service delivery and support policy formulation based on point-of-care data (Cunha, 2002). Since its inception in 1997, the project has experienced several operational setbacks, including a mismatch between the envisioned solution and the actual infrastructure of health facilities, disruption in workflows, lacking capacity among health workers and unrealistic timelines. After more than 15 years of development and more than $150 million spent, the federal government has been unable to fulfill its original expectations ("Folha de S.Paulo 07/07/2010," n.d.).

This review does not do justice to the breadth and complexity of translation and implementation gaps in the health sector. It also does not consider the equally broad and profound effects of translation and implementation shortfalls in other government sectors,

extensively discussed elsewhere (Pressman & Wildavsky, 1984; Schuck, 2014). Through its many manifestations, translation and implementation problems impair effective and efficient resource allocation in health systems and organizations. In turn, the inability to allocate health systems resources appropriately has direct negative implications to population health (Figure 4). Rather than an exhaustive account, this section aimed at providing a window into the various ways and levels in which translation and implementation gaps in government may weaken health systems performance, and the enormous human, economic and political costs that usually follow.

Figure 4 - Repercussions of translation and implementation problems
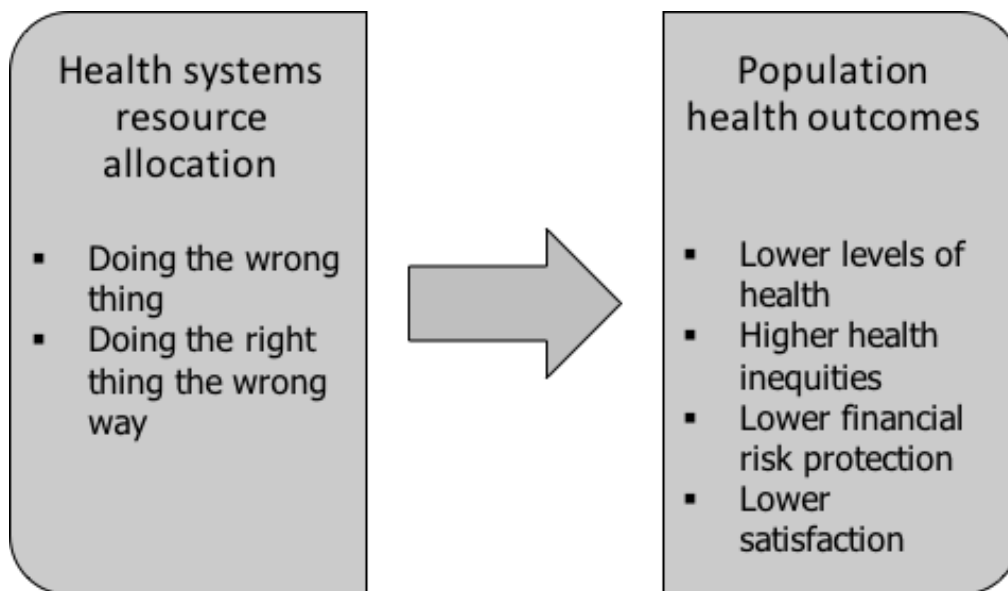
Source: Author

Causes of health policy translation and implementation failures

Public sector context, policy content and agency

Public policy implementation is a complex endeavor determined by multiple factors (Durlak & DuPre, 2008). Health policies and programs, in particular, tend to be especially intricate due to the frequent need to manage multiple elements across multiple episodes of service delivery, at multiple system levels, with the involvement of multiple stakeholders and high reliance on behavioral change (R. Atun, de Jongh, Secci, Ohiri, & Adeyi, 2010). Health

policies do not get designed and implemented in a vacuum. Instead, they are embedded in multifaceted government institutions, characterized by multiple – and often competing – agendas, interests and incentives (Mazmanian & Sabatier, 2000; Montjoy & O'Toole, 1979). Additionally, the agents involved in policy formulation and implementation (e.g. policy-makers, public officials, front line workers) have widely variable levels of knowledge, skills, beliefs and attitudes towards their work and new ideas (Spillane, Reiser, & Reimer, 2002). Service beneficiaries, as co-producers of health, are also key stakeholders in any health policy implementation process (Dunston, Lee, Boud, Brodie, & Chiarella, 2009). Individuals' perceptions of risks and benefits associated with government interventions affect compliance decisions, and therefore the ultimate impact of policies and programs (R. A. Atun, Baeza, Drobniewski, Levicheva, & Coker, 2005). Institutional contexts, policy content and agents, in isolation or in combination, can cause failures in policy implementation (Andrews, 2013).

Research in the fields of international development, political economy, public administration and organizational behavior all recognize the nature of public sector institutions as a common cause of policy implementation failures. The challenge is that governments are not simple machines in which problems can be easily diagnosed and parts easily replaced. Instead, governments are driven by a diverse set of social and political forces, including public opinion, interest and advocacy groups, industry and self-interest of public appointed officials (Blendon & Brodie, 1997). As any living organism, government institutions constantly adapt to the environment to achieve purposes that may be altruistic or narcissistic, liberating or coercive, depending on how power is negotiated and distributed (Morgan, Gregory, & Roach, 1997). The result is public policy and programs that do not necessarily reflect the most evidence-informed, cost-effective or equitable, but rather emerge from clashes and compromises among competing interests and ideologies (Mebane & Blendon, 2001).

The contrast between the public and private sector's ability to deliver on desired goals is often used as a platform for inquiry on what characteristics of the public sector may hinder effective implementation (Boyne, 2002; Dixit, 1997). In Africa, for instance, while governments struggle to deliver essential public services to many, private sector firms like Unilever are able to consistently deliver consumer goods even to the remotest villages (Mahajan, 2011). The following structural characteristics of the public sector may hamper public institutions' ability to deliver outcomes compared to the private sector (Dixit, 2002):

- <u>Multiple principals:</u> many government services are public goods, for which there are significant externalities. There is often no clear separation between ends and means; input and processes sometimes matter for stakeholders just as much as outcomes.

- <u>Multiple tasks and vague, ambiguous goals:</u> most government agencies perform multiple tasks and lack clarity on their mandate. Some public organizations are procedural rather than performance-oriented due to the vagueness and intangibility of their ultimate goals.

- <u>Lack of competition:</u> public or quasi-public organizations are often monopolistic, lacking the powerful external incentives from competition with other firms. While privatization may offset this characteristic, it also may lead to excessive emphasis on marketable dimensions of services to the detriment of other aspects such as safety and quality. Private firms may be unresponsive to multiple principals.

- <u>Weak incentives to perform:</u> the existence of multiple objectives and tasks affecting multiple principals in the public sector often weakens the incentive to perform, especially when demands are competing. Rather than focusing on goals, public officials tend to prioritize immediate (and frequently disjointed) tasks. Because outcomes in government are often weakly specified, micromanagement arises as senior officials strive to constrain efforts of subordinates to ensure enough time is devoted to their concerns. Due to weaker performance incentives compared to the

private sector (e.g. lack of profit motive) and the imperative to avoid waste of public resources, workers in public institutions tend to more averse to risk compared to the private sector, choosing safety over creativity or venture.

In addition to structural factors, cultural characteristics of government institutions may significantly shape policy implementation outcomes. Pritchett, Woolcock & Andrews point to a pervasive "Big Stuck" in many historically developing countries, with low (and often deteriorating) state capability for policy implementation combined with slow growth rates (Andrews, Pritchett, & Woolcock, n.d.). These authors draw analogies from apparently disparate fields, such as evolutionary theory and sports injuries, to explain why governments fail to implement their policy ideas so often.

In evolutionary theory, the term "isomorphic mimicry" is used to describe animals' deception mechanisms to look more dangerous than they actually are to enhance survival. Pritchett argues that, analogously, governments often create organizations that appear to be functional just to convey a sense of legitimacy that helps them maintain and expand power (Pritchett, Woolcock, & Andrews, 2013). From this viewpoint, public sector organizations that survive are not necessarily highly functional organizations that serve citizens well; those that adopt a good enough camouflage without the drive for performance may equally survive without the much harder tasks needed to generate social impact (Pritchett & de Weijer, 2010). Health Ministries, for instance, could build an appearance of a functional health system by creating *de jure* organizational forms (e.g. building infrastructure, purchasing medicines, designing programs) without *de facto* improving population health outcomes. This logic is particularly applicable to the development context. Governments receiving aid arguably have a strong incentive to create an illusion of effectiveness to please donors and justify continuity of funding flows. All the while, the much more arduous tasks of building state capacity and autonomy in the long term, and actually changing the lives of the most vulnerable populations often remain on the sidelines

(Knack, 2001).

In the field of musculoskeletal rehabilitation, loading soft tissues beyond their capacity to absorb mechanical forces is a common injury mechanism (Shrawan Kumar, 2001). When an athlete is injured, for instance, initial phases of rehabilitation involve preventing excessive stress onto the injury site. Prematurely loading the area may worsen the original injury, causing further pain and disability. Similarly, asking low capacity governments to move forward too quickly, even with desirable measures, risks creating pressures that collapse in the absence of resilient structures. From this perspective, a common cause of policy implementation failures, including but not exclusive to health, may be "asking too much of too little too soon too often" (Pritchett et al., 2013). In the health context, planning without consideration to the system's capability (e.g. infrastructure, skills) can set policies and programs for failure. In primary care, for instance, research identifies poor institutional capacity in government as a key "weak link in the chain" preventing public services from benefiting target populations. When government's institutional capacity is insufficient, health spending, even on knowingly beneficial services, may lead to limited actual provision of services due to poor staff productivity and lacking drugs or working equipment (Filmer, Hammer, & Pritchett, 2000).

The political economy lens: ignorance, private influence and leadership quality

The term "government failure" is commonly used in the fields of political economy and health economics to describe systematic reasons why governments fall short of delivering public services that contribute to collective well-being (Besley, 2006; Folland, Goodman, Stano, & others, 2007). This concept mirrors that of "market failure", an analogous private sector nomenclature that is used to explain reasons why market-based economies are unable to reach certain desired outcomes in the utilization of scarce resources (Datta-Chaudhuri, 1990). Although the concept of government failure refers broadly to problems that arise when the state monopolizes the legitimate use of power, the

ideas are useful to understand policy implementation issues in a narrower sense.

From a political economy lens, government failure can be divided into three main categories: ignorance, private influence and quality of leadership (Besley, 2006). Ignorance refers to the notion that governments tend to achieve less efficient results when decisions are made in the absence of full information. While imperfect information is knowingly pervasive in markets and governments alike, an interesting question is how different individuals are differentially informed about policies in government, and how knowledge is incorporated to improve decision-making processes. The underuse of performance data has been widely recognized as a common (and avoidable) source of government failure (Schuck, 2014). Despite the frequent availability of data on various policy resources, processes and outcomes, not everyone in government is aware of such information, and few decisions are made based on the best available evidence. While ignorance may manifest at the program level, it may also affect the policy process at a systemic level, with institutional failure to use data to prioritize, change, improve or, when warranted, shutter government programs (Schuck, 2014). Examples of ignorance in the field of health policy implementation abound. One case in point is the WHO's package of essential non-communicable disease (NCD) intervention for primary health care in low-resource settings (Organization & others, 2010). Despite the enormous potential (grounded on widely available information) of this prioritized set of cost-effective interventions to alleviate the global burden of NCDs, uptake and effective implementation in countries remains challenging (Beaglehole et al., 2011; Mendis et al., 2012).

Policy-makers and public administrators rarely, if ever, enjoy full information on which to base their decisions. Theoretical and scientific knowledge are often not precise enough to allow a comprehensive, rational comparison among a large number of policy alternatives, or to project their effects in specific contexts (O'malley, 2012). The existence of a certain level of uncertainty in public administration decisions prompted an alternate, more

optimistic view of ignorance. According to Hirschman, ignorance often serves as a "hiding hand" that ultimately favors entrepreneurship, creativity and progress (Hirschman, 1967). The hiding hand principle generally states that every endeavor is accompanied both by a set of unsuspected threats (due to ignorance and miscalculation of risks) and a set of unsuspected remedial actions which can be taken whenever threats materialize. Thus, what may look like failure at first may turn out to become a success when administrators tap into resources which had not been originally in the horizon of planners. From this perspective, ignorance may systematically open new possibilities for success in the long haul.

Private influence is another widespread source of government failure, with direct parallels with health policy. Regardless of political regimes, governments are subject to influence from organized groups at various levels. When private groups interfere with the policy process, the result is usually policy skewed to benefit such groups (Besley, 2006). While this is not necessarily bad by definition, as differentially favoring some groups may enhance equity, in practice private influence normally leads to distributional imbalances in resource allocation, concentration of power, and marginalization of the most vulnerable segments of society.

Corruption is a hallmark manifestation of private influence. Defined in simple terms as the abuse of entrusted power for private gain, corruption is often a major hindrance to government, governance, and health policy implementation (Vian, 2008). Although difficult to quantify due to its multiple forms and covert nature, the negative impact of corruption is unquestionably extensive. Financially, corruption takes an enormous toll in a variety of direct and indirect ways, from rigged procurement processes to resource diversion in public hospitals, treatment failures and intoxications due to substandard drugs and informal payments for supposedly free services (Sanjay Kumar, 2003; Lewis, 2007; Rose-Ackerman & Palifka, 2016; Shakoor, Taylor, & Behrens, 1997). The social implications are also substantial: in India alone, 39 million people are thrown to poverty every year due to health

expenditures, and many others die or live in pain and disability due to lack of access to and quality of healthcare (Balarajan, Selvaraj, & Subramanian, 2011).

Finally, the quality of leaders that hold policy authority can be an important source of government failure. While classical administration theories argue that people do not exert much influence in organizational processes provided the right incentives are in place (Wren & Bedeian, 1994), growing evidence indicates that individuals do matter. There are broadly two reasons why characteristics of policy-makers and public officials influence the policy development and implementation process (Besley, 2006). First, the extent to which agents (i.e. public servants acting on behalf of citizens) care about the collective good as opposed to private interests (which highlights the importance of political selection processes, not discussed in this project). Second, the competence of individuals working in government, which eventually reflects on how well policies fit context and how well implementation processes are handled.

It is helpful to clarify the meaning of quality and competence in the context of public sector work. In general terms, limitations both in management and leadership skills may impair government's ability to deliver. Kotter distinguishes between management and leadership functions based on the nature of the work: while management is about coping with complexity, leadership is about coping with change (Kotter, 2001). The management function therefore involves activities like planning, budgeting, organizing, monitoring and problem-solving. Leadership, on the other hand, involves creating a sense of urgency, and mobilizing people to face difficult challenges (Kotter, 2001). Both management and leadership are important enablers of government service delivery (Osborne, 1993; Rainey & Steinbauer, 1999). While management competencies help civil servants navigate the technical aspects of policy development and implementation, leadership supports politically-oriented tasks, such as engaging and mobilizing stakeholders, reconciling conflicting interests, developing meaningful relationships and building momentum for change

(Andrews, McConnell, & Wescott, 2010). As discussed in a later section, the "delivery approach" aims to strengthen both the managerial capacity in government (by providing systematic processes and tools to plan, implement, monitor and improve service delivery) and the leadership function (by laying out key tactics to continuously engage people, expand the guiding coalition and embed change).

By appreciating the causes of government and health policy implementation failures, and the forms that such failures may take, it may be possible to understand what kinds of performance improvement efforts are likely to work in the way that their architects intend. The next section discusses results-based approaches in government, which are meant to minimize challenges inherent to public sector work, and maximize results that citizens care about.

Results-based approaches in government

Increasing government effectiveness can be approached in multiple ways. Overall, government functioning can be conceptualized as a set of principal-agent relationships that involve, on one hand, politicians as agents for constituents, and on the other hand bureaucrats as agents for politicians (Besley, 2006). In both cases, the question of how to increase government performance fundamentally involves addressing two challenges: how to select and monitor agents so as to ensure that 1) the most competent people and those whose motivations are most aligned with public interest are chosen to public positions, and 2) once they are in office, their opportunities and incentives to achieve outcomes are maximized (Besley, 2007).

Although the selection of politicians and bureaucrats can have profound effects on policy processes and outcomes, such topic is beyond the purposes of this review. Taking political regimes as givens, the question then becomes how to ensure that appointed politicians and bureaucrats will work to achieve outcomes valued by citizens. While contextual factors (e.g. attitudes of the public and the media) influence service delivery

performance by governments, management and leadership aspects play a central role. For example, health and human service organizations with clear goals, decentralized decision authority and a developmental culture (which values entrepreneurship and risk-taking) tend to perform better than peer agencies that lack those characteristics (Moynihan & Pandey, 2005).

The already extensive portfolio of results-based approaches in governments has grown in parallel with an increasing global push for efficiency and accountability in the public sector. Widely adopted ideas at all government levels borrow from diverse lines of thought, stemming from both public and private sector management theories and practices. In the field of public administration, two paradigms closely associated with heightened focus on outcomes and performance are the New Public Management (NPM) and Reinventing Government. From the private sector, the Total Quality Management, "lean thinking" and Six Sigma systems are examples that have contributed to a shift in governments' mindset towards delivery of better outcomes for citizens rather than mere control of input and processes.

The origins of managerial thinking can be traced back to the development of scientific management and classical bureaucratic theories (Wren & Bedeian, 1994). In the early 1900s, accelerated growth in industrial mass production created a need for strong managerial practices. As organizations searched for ways to maximize productivity, reduce costs and increase profits, theorists developed a range of methods for achieving those purposes. Frederick Taylor, the founder of scientific management, proposed a focus on designing tasks and promoting employee motivation in order to get things done (Taylor, 1914). Inspired by Taylor's ideas, Henry Fayol proposed an administrative approach, highlighting five key functions needed for successful task completion: planning, organizing, commanding, coordinating and controlling (Wren, Bedeian, & Breeze, 2002). In parallel to Fayol's work, Max Weber developed the bureaucratic theory of management, which focused

on hierarchical structures, clear designations of authority, standardization of procedures, clear rules and extrinsic rewards based on fair evaluation (Weber, 2009). Together, the early schools of management thought profoundly shaped public sector organizations. Several governance tools and strategies currently adopted by public institutions, like organizational charts, rules and regulations, job stability and certifications, to name a few, are grounded on the ideas developed in early management theories.

The limitations of scientific management and classical bureaucratic theories in helping governments perform has prompted intense criticism. Some have argued that overreliance on (often conflicting) rules and regulations makes it difficult to get anything done and undermines internal cohesiveness, especially across bureaucracies (Chibber, 2002; Gingrich, 2005). Others contend that bureaucracies keep citizens out and lead to unaccountable behavior (Barzelay, 1992). The bureaucratic theory's focus on processes rather than people and context has been another source of controversy. Some authors defend that the way in which politicians and bureaucrats engage within the system matters a lot, and that success in not merely about technicalities (Dasandi, 2014; Hydén, Mease, & others, 2004). Bureaucratic tools and approaches are built on the premise that clear, rational goals can be shared, impartial, rules-based human resource management can be established, and merit-based hiring and promotion are possible. However, power relations, divergence of goals, unwritten rules, patrimonialism and chaos all exist in systems, and may contribute to rule-breaking behaviors and the undermining of bureaucratic structures (Hodson, Martin, Lopez, & Roscigno, 2012).

Results-based approaches in public administration emerged in response to the shortfalls of early management theories and to evolving contextual and institutional realities. One of the first reactions to classical theories was the emergence of public choice, defined as "the application of the methodology of economics to the study of politics". Public Choice drew attention to the importance of customer empowerment and decision-making

mechanisms of politicians and bureaucrats (Mueller, 2004). These ideas emerged in the post-World War II period, at a time when most countries allocated a significant amounts of their total product through public institutions rather than through markets, and yet little attention was given to political, collective decisions were made (Buchanan, 2003).

Later on, during the late 1970s and early 1980s, the NPM movement took shape in the UK and the US amid heavy economic recession and tax revolts hit several countries (Gruening, 2001). Although the ideas and tools of NPM were initially developed disjointedly by theorists and practitioners from multiple backgrounds, several characteristics were eventually combined under the NPM rubric to differentiate them from traditional approaches of public accountability and performance (Hood, 1995). A core feature of NPM is the higher emphasis placed on results. Overall, NPM proposes the following shifts (Pfiffner, 1999):

- From top-down policy control with a procedural focus to delegated production with a focus on results;
- From merit-based, neutral, tenured public hires to non-public hires contracted from the market;
- From a focus on accounting for resources to a focus on accomplishing goals.

NPM ideas were accompanied by a new set of practical tools and strategies aimed at helping governments achieve results. Some of the results-based approaches recognized as part of the NPM paradigm are the use of market forces (e.g. vouchers), strategic planning, use of incentives and rewards, decentralization of power, citizen participation, contracting out, increased flexibility in resource allocation, higher use of technology, focus on evaluation and streamlining of organizational structures (Gruening, 2001). Many of the recent public service reforms, both in developing and developed countries, have clear connections with ideas and principles embodied in the NPM paradigm (Pollitt & Bouckaert, 2011).

Similar to NPM, the strongly felt need to change bureaucracy and increase the relevance and responsiveness of the public sector inspired the Reinventing Government

movement starting in the 1990s (Frederickson, 1996). Although both paradigms share a common purpose and promote similar ideas for organizational structure and design, important distinctions can be identified. First, while the NPM movement focused heavily on elevating the role of citizens, Reinventing Government used the customer metaphor, borrowing from utilitarianism and the public choice model (Osborne, 1993). In this logic, the empowered customer can make choices in a competitive market, thus breaking the bureaucratic service monopoly. Downsizing and privatization are practical approaches that flow from this viewpoint. Second, while NPM is committed to effective professional public service and equitable policy implementation, Reinventing Government essentially proposes bashing the bureaucracy as a means to achieving efficiency (Osborne & Plastrik, 1997). Finally, in connection to both previous points, the changes proposed by NPM advocates tend to be incremental, as opposed to more radical transformations espoused by Reinventing Government supporters.

Just like contemporary public administration ideas, management theories originated in the private sector have instilled greater government focus on results. While governments progressively adopted results-based approaches, the private sector shied away from classical to behavioral theories of motivation, which emphasized the complex set of factors affecting work engagement and outcomes, including people's higher-level needs for meaning and self-actualization (Gagné & Deci, 2005, p.). Many of these theories also put a spotlight on collaboration and teamwork (Bowditch, Buono, & Stewart, 2007; George, Jones, & Sharbrough, 1996; Goleman, 2001), which sparked the evolution of quality improvement theories and approaches.

Disseminated in the 1980s in response to performance challenges in the industrial sector, The Total Quality Management (TQM) system has been since translated to increase public sector effectiveness (Swiss, 1992). Despite significant differences between the private and public sector contexts (e.g. organizational culture, population served, economic

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incentives), fundamental principles of TQM have been applied to several social areas, including public health and healthcare (McLaughlin & Kaluzny, 1990; Rago, 1994; Shortell et al., 2000). Fundamental TQM principles include statistical quality control, benchmarking, customer orientation and continuous improvement cycles (Hackman & Wageman, 1995). On a review of the empirical evidence for the potential of TQM to generate competitive advantage, Powell concludes that tacit, behavioral features of the approach, such as an open culture, executive commitment and people empowerment drive success more than the technical elements of the TQM ideology (Powell, 1995).

Lean thinking and Six Sigma are other examples of quality improvement methodologies that have made an important impact in government. Lean production, or lean manufacturing techniques were originally developed in Toyota, a Japanese auto manufacturer, and documented in the 1990s (Womack, Jones, & Roos, 1990). Key principles of lean include specification of the value desired by customers, identification of the value stream for each product, elimination of and waste in the process, creation of a continuous production flow, letting customers pull value from the system, and managing toward perfection (Womack & Jones, 2010). The promise of lean thinking to help improve quality, eliminate waste, reduce costs and improve client satisfaction and performance has sparked its dissemination to other industries, including healthcare and government (Joosten, Bongers, & Janssen, 2009; Leseure, Hudson-Smith, & Radnor, 2010). Common tools and approaches associated with lean thinking include value mapping, rapid process improvement (Kaizen), selection and monitoring of clear metrics, and process design (Womack & Jones, 2010).

Similar to lean, Six Sigma is a continuous improvement methodology that aims to improve processes by reducing variability and removing defects through quality management and statistical analysis (P. S. Pande, Neuman, & Cavanagh, 2000). Introduced by an engineer working with Motorola during the 1980s, the Six Sigma methodology asserts

continuous efforts to achieve stable processes (i.e. reduce undesirable variation) and optimize results. Distinctive features of this approach include a clear focus on achieving measurable, quantifiable results (through definition and control of key metrics), emphasis on strong management and leadership support, and commitment to making decisions on the basis of verifiable data (Harry & Schroeder, 2005). Like TQM and lean, Six Sigma tools have increasingly permeated government and healthcare (Maleyeff & Campus, 2007; Sehwail & DeYong, 2003; Tolga Taner, Sezen, & Antony, 2007). Approaches characteristic of Six Sigma include problem definition, root cause analysis diagrams, statistical analysis to measure and improve performance, and process redesign (P. Pande, Neuman, & Cavanagh, 2001).

Management practices and processes are essential to enable any large-scale undertaking, in government or otherwise. This section covered the evolution of some of the contemporary ideas that have shaped the way governments organize and function. It reviewed key management theories and paradigms associated with a focus on results. Rather than an exhaustive account of the extensive catalog of results-based approaches in government, this section aimed to provide background on some of the most influential ideas and practices that have shaped the way performance is managed in the public sector. Knowledge on results-based approaches in governments, presented here in summary and with superficial historical context, is helpful to situate the emergence of the delivery approach and how it fits into a broader stream of efforts to improve public sector outcomes worldwide.

The "delivery approach": definitions, origins and results

Definitions

The "delivery approach" is defined as a system for maximizing the chances of achieving results in government services (Barber et al., 2015). Leveraging existing institutions as an entry point for change, the "delivery approach" provides a set of processes, tools and disciplines to help governments at any level become more effective and

accountable to citizens. While the approach was originally designed to drive performance improvements from the center of federal government, the same principles have been applied at regional and local levels (Freeguard & Gold, 2015; T. Harrison, 2016).

The backbone of the "delivery approach" is a set of 15 elements, organized into 5 categories, which together form a guiding framework to understand how delivery occurs in practice (see appendix 1). The point of departure of the approach is the establishment of delivery foundations, which involves defining aspirations, reviewing the current state of delivery, building a Delivery Unit and creating a guiding coalition. The next steps are to understand the delivery challenge (through performance assessment and root cause analysis), plan for delivery (by determining strategies, targets, trajectories and delivery chains) and driving delivery (through routines, problem-solving and momentum building). Finally, the creation of an irreversible delivery culture cuts across all stages of the process. The "delivery approach" emphasizes continuous capacity building, communication and stakeholder engagement as key requirements for performance improvement (Barber et al., 2015).

At the heart of the "delivery approach" are five questions (see figure 5), that collectively aim to get at how ideas from public servants can be translated into concrete results for citizens (Barber, 2007). The first question, "What are you trying to do?", helps set clear priorities and establish specific, measurable goals. The second question, "How are you trying to do it?", compels the development of clear practical plans which are regularly used and updated. The third question, "How, at any given point, will you know whether you are on track?", requires the development of valid, reliable, close to real-time data on key indicators, with monitoring routines (such as stock take meetings) with all key stakeholders involved. The fourth question, "If you are not on track, what are you going to do about it?", prompts reflection, action (with constant follow-up and refinement) and correction (never neglecting a problem once identified). Finally, the fifth question, "Can we help?", asked from

the perspective of the Delivery Unit, offers support to ministries and reminds them of key principles underlying effective delivery (ambition, focus, clarity, urgency, irreversibility).

Figure 5 - The five key questions of delivery

1. What are you trying to do?	• Clear priorities • Specific measurable goals
2. How are you trying to do it?	• Clear practical plans which are regularly updated
3. How, at any given moment, will you know whether you are on track?	• Good, steady, close to real-time data • Monitoring routines (such as stock take meetings)
4. If you are not on track, what are you going to do about it?	• Agreed actions followed up and refined if necessary • Never neglect a problem once identified
5. Can we help?	• Constant ambition, refusal to give up • Focus on the goals, no distractions • Maintaining routines • Analysis and problem-solving • Bringing to bear lessons from elsewhere

The establishment of Delivery Units is a distinctive feature of the "delivery approach". Delivery Units are defined as small, dedicated performance management structures charged with driving improvements of a few, well-specified service delivery outcomes. These units are normally positioned at the center of government's administration and in parallel to bureaucracies to ensure more autonomy. Although specific organizational arrangements are variable, Delivery Units typically share the following functions (Barber, Kihn, & Moffit, 2011):

- Setting direction and context, by helping create a clear shared view of what success looks like;

- Establishing clear metrics and accountabilities, by translating goals into concrete performance indicators (and cascading them across management levels where

appropriate) and assigning ownership of targets to specific individuals;

- Creating realistic (and yet ambitious) plans, budgets and targets, by linking resources to government priorities and translating strategy into specific actions on the ground;

- Tracking performance effectively, by reporting on key metrics with the appropriate level of detail and in a timely manner;

- Holding robust performance dialogues, by implementing routines to review progress, solve emerging problems and build momentum in a challenging, yet supportive environment;

- Ensuring continuous learning and innovation, by persistently taking action, providing rewards and consequences to improve performance across implementation areas.

The structure and functions of Delivery Units tend to reflect the purpose of their creation. Although in broad terms improving government performance is a shared goal, different hypothesis can be articulated about the rationale for implementing a dedicated performance management structure at the center of government (Lindquist, 2006):

- Meeting government commitments: Starting in the 1990s, many political leaders embraced specific commitments in various policy areas. Delivery Units are a tool for political leaders and system authorities to ensure government will keep focus on its agenda and messages, so that key commitments are met.

- Asserting political control: Departments and agencies may resist adopting new policies and programs in case they compete or conflict with existing strategies, or do not reflect the personal preference of public service leaders in programmatic areas. One goal of a Delivery Unit may be to affirm the top system authority's priorities, and bring pressure to bear when needed.

- Anticipating design challenges: There is often a need to vet policy proposals from departments and agencies for whether they are feasible to implement and how they interact with instruments wielded by other sectors/government levels. A Delivery Unit

could therefore provide *ex-ante* quality control by preempting and reshaping strategies that are unlikely to work.

- Navigating implementation challenges: Complex policy initiatives will likely require management and coordination capacity across multiple areas in government. Delivery Units may help coordinate implementation downstream in a multi-level governance context by continuously building capacity and nurturing the necessary relationships.

- Promoting cultural change: Changing the way public servants do their work, increasing focus on serving citizens, and improving the measuring and monitoring of results are requirements for successful implementation. By sustaining focus on these aspects, Delivery Units could change organizational values and culture in the long run.

- Addressing political optics: Many governments have low credibility with citizens, who perceive a need for stronger "business orientation". Delivery Units may signal a new image, rebranding government to highlight its focus on getting effective programs in place, on time, and within budget. By continuously communicating the delivery message, Delivery Units could help governments not only to deliver but to be seen to deliver.

These hypotheses are neither mutually exclusive nor collectively exhaustive. Many goals may coexist in government, and other reasons not described here may be underlie the genesis of Delivery Units. It is also possible that the goals driving the inception of Delivery Units evolve over time. Depending on the purpose that they are meant to fulfill, Delivery Units may adopt certain positioning in the government organizational structure, engage with certain processes and be staffed with different kinds of talent and expertise (Lindquist, 2006).

Delivery Unit staff can be organized either by function or thematic areas (Barber et al., 2015). Organizing staff by function means creating working groups based on key tasks performed by the Unit. These include, but are not exclusive to, managing accounts, solving problems, analyzing data, building capacity and providing administrative support. While this

structure usually maximizes flexibility, since resources float more easily across priority areas, it may come at the expense of familiarity and expertise. Alternatively, organizing the Delivery Unit by thematic areas means creating dedicated teams to perform most or all functions in each priority goal. A health team, for instance, provides strategy design, monitoring and problem solving support to facilitate achievement of the department's goal(s). This arrangement promotes strong relationships and deep expertise, but at the expense of flexibility. A hybrid solution is also possible, with some functions being organized by theme areas (e.g. planning, implementation, relationship building and problem-solving) and others, like data analysis and administrative support, serving multiple areas simultaneously.

Initiatives aimed at enhancing public policy implementation are not new. As discussed previously, several performance management tactics and tools have been adopted in government particularly since the second half of the 20th century. The emergence of dedicated policy implementation units, however, is a more recent phenomenon. Arguably, impulse for the establishment of governance structures specializing in policy implementation grew after the publication of two seminal books: Wildavsky's book entitled *Implementation: How great expectations in Washington are dashed in Oakland (Pressman & Wildavsky, 1984),* and Bardach's book entitled *The Implementation Game* (Bardach, 1977). Both publications put the spotlight on the plethora of ways in which public policy could be diverted, distorted, deflected, dissipated or delayed, prompting a surge of scholarly and professional interest on how to fix the system. Against this backdrop, and in parallel with the rise of NPM ideas, policy implementation units gained traction as one of several adhocracies – contemporary organizational structures suited for complexity and interdependence – positioned at the center of government (Mintzberg & McHugh, 1985).

In the late 1980s and 1990s, many governments faced the need to rationalize programs due to constrained budgets in challenging economic scenarios. As tough fiscal decisions were made, governments focused more on scrutinizing and changing existing

policies, meeting aggressive expenditure targets and reorganizing timelines than on implementing new policies (Lindquist, 2006). In this context, policy implementation received relatively limited attention. One of the few documented efforts to strengthen the delivery function came from Canada, where administrative units were designed to allow policy innovations in the areas of AIDS, energy and environment (Desveaux, Lindquist, & Toner, 1994).

At the turn of the 21st century, as governments stabilized deficits and increasingly recognized the complexity and interconnectedness of social issues, the need for new governance instruments became apparent. Policy implementation and delivery units emerged in parallel with growing interest about how new policy initiatives were designed, how new practices aligned with existing ones, and how quickly new ideas could be put in place. The first government-wide implementation unit was created in the UK in the early 2000s, during Tony Blair's mandate as Prime Minister.

The original PMDU experience

After winning the 2001 general elections, which gave him a second term, Blair established the Prime Minister's Delivery Unit (PMDU) to accelerate progress in key domestic policy areas. During his first mandate, from 1997 to 2001, Blair had become keenly aware of the chasm between policy ideas and outcomes on the ground. Despite pressing the system hard, results in several areas remained lackluster ("Transcript," n.d.). A few days after Blair's reelection, Michael Barber was invited to establish and lead the PMDU. From 1997 to 2001, Barber had helped the Education Department set targets on literacy standards and drive concrete improvements in literacy and General Certificate for Secondary Education (GCSE) results. Progress in primary school performance was one of the few demonstrable successes in reforming public services in Blair's first term. The success of education reforms led by Barber provided momentum to Blair's successful campaign in 2001.

In a design brief that laid the ground on how a Delivery Unit could work, Barber

articulated two ideas that proved central to the whole delivery endeavor: (1) it suggested a rigorous and relentless focus on a relatively small number of the PM's key priorities; and (2) it proposed tying the PM's time to these priorities by organizing a series of stock-take meetings to review progress, remove barriers to success and move the delivery agenda forward. At early stages of inception, there was intense deliberation on whether and why a Delivery Unit parallel to the government bureaucracy was necessary. According to Barber, a dedicated unit charged with driving the delivery agenda was vital for the following reasons (Barber, 2007):

- To ensure that the PM and public officials' time was systematically and routinely dedicated to identified priorities;

- To ensure relevant departments and agencies contributed to a shared goal;

- To sharpen focus on the implementation function, rather than politics, strategy and policy;

- To serve as a center of expertise on delivery which consolidated the lessons which may apply to other parts of the government machine.

With the rationale for a Delivery Unit well-established, the work shifted towards structuring and implementing the PMDU. While initially the proposal was to have four teams organized by functions (account managers, problem-solvers, data analysts and capacity-builders), Barber and his team progressively felt that such organization led to fragmentation of work and excessive management burden on the Head of the PMDU (Barber, 2007). The updated arrangement organized the PMDU by government priority. In each priority, Departmental teams (with subject matter expertise, analytical capabilities and relationship building skills) assumed a critical role in advancing delivery. The account management and problem-solving functions were combined, whereas data analysis remained independent and capacity building was dropped as a separate function. The resulting model, therefore, was a hybrid with most staff positions organized by theme area, and some functions serving all

areas concurrently. Figure 6 illustrates the organizational structure of the original PMDU.

Figure 6 - The UK's Prime Minister's Delivery Unit organizational structure

- Report to Prime Minister and manage relations with leadership
- Manage relationships with departments at the leadership level

Head of Delivery Unit — **Support Staff**

Data Analysts | **Delivery Team Crime** | **Delivery Team Education** | **Delivery Team Health** | **Delivery Team Transport**

- Gather, analyze and provide data for entire delivery unit on all priorities
- Five data analysis

- Assist in managing leadership-level relationships
- Lead problem-solving for assigned priorities
- Provide internal challenge to delivery teams
- Lead teams that work directly with owners of delivery activities to provide problem-solving support and training to civil servants
- Five people per team

Source: Adapted from Barber, M. (2007). *Instruction to deliver*. Politico's Publ.

The starting point of PMDU's work was priority setting. After a series of meetings among top policy officials in late June and early July 2001, 14 delivery priorities emerged in four areas (see figure 7). For the Department of Health, the priorities were heart disease mortality, cancer mortality, waiting lists, waiting times, and accident and emergency. For the Department of Education, the priorities consisted of literacy and numeracy at age 11, Math and English at 14, $5 + A - C$ in GCSEs, and truancy. The Home Office had three priorities related to overall crime and breakdowns by type; likelihood of being a victim, and offenders brought to justice. For the Department of Transport, the two priorities were road congestion and rail punctuality. For each of these priorities, aspirations were translated into measurable commitments and broken down into sub-targets where necessary to fully capture the idea of what success meant. On hospital waiting times, for instance, a maximum wait of six months was set for non-emergency surgery, and a maximum of four-hour wait was agreed for people in the Accident and Emergency Departments to be seen, treated and appropriately referred. Figure 7 summarizes the PMDU's priorities from 2001 to 2005.

Figure 7 - PMDU's priorities by Department

Priority			
Health	Education	Home Office	Transport
Heart disease mortality	11-year-old literacy	Overall crime	Road congestion
Cancer mortality	11-year-old numeracy	Street crime	Rail punctuality
Waiting list	14-year-old English	Burglary	
Maximum waiting time for non-emergency surgery	14-year-old Math	Car crime	
A&E waiting time	5 or more A – C grades at GCSE	Likelihood of being a victim of crime	
Maximum waiting time for GP appointments	Attendance	Asylum applications	
Nurse numbers	Teacher numbers	Offenses brought to justice	
Doctor numbers		Drug related crime	
		Police numbers	

Source: Adapted from Barber, M. (2007). *Instruction to deliver*. Politico's Publ.

With well-defined priorities, the DU and Departments jointly embarked on the work of planning for delivery. Each team was encouraged to develop operational plans that laid out key actions and accountabilities, the delivery chain connecting the plan at the top of government hierarchy to service delivery on the frontlines, and data systems and estimated trajectories for pre-determined targets (Barber, 2007). Progressively, the PMDU team supported the establishment of robust data systems, capable of capturing and making sense of relevant information, to inform decision making and drive the delivery agenda forward.

Central to all delivery efforts in the original PMDU was a process for managing performance in which those responsible for delivery were held to account. This was done through regular stock-takes: structured meetings designed to discuss progress against goals and make practical decisions to overcome barriers. What set the stock-takes apart from other meetings in the UK federal government was the content of the conversation. While traditionally the main subjects in meetings revolved around politics, legislation, media and

public opinion, Delivery Unit stock-takes focused on dialogues about performance based on evidence. Common to all the routines was a fundamental shift towards a data-driven mentality. Rather than making decisions based on political preferences or intuitions, government started to operate based on concrete, defensible facts.

In the years that followed, the PMDU sought to combine the elements of delivery into a steady, relentless routine. Keeping momentum and protecting the function of delivery was no easy feat; Barber often described this work as a *"long, grinding haul"* (Barber, 2007). In December 2001, the PMDU reported significant improvements in some areas, whereas other intractable problems persisted. A&E waiting times, for instance, was an unsettling challenge and a highly complex issue. The promise was that, by the end of 2004, none of the more than 12 million people who relied on this service each year would wait more than four hours to be seen, treated or, if necessary, admitted to hospital. Up until the summer of 2002, however, monthly data revealed that while 80 percent of patients were dealt with within four hours, 20 percent were waiting longer – sometimes much longer (Barber, 2007).

In response to stagnant results, the Health team applied the methods of rapid priority review (originally designed to help reduce street crime) and intense mobilization for action. In a series of field visits, the PMDU collected evidence about the root causes of the waiting time problem and quickly developed an idea of what needed to be done. The recommendations emerging from this problem-solving process included scaling up the "see and treat" practice, which demonstrably removed bottlenecks in the care process, providing tailored support to low-performing facilities, including A&E waiting times in hospital star ratings and introducing an economic incentive scheme to reward hospitals that were on track to meet targets. By the end of 2004, the average proportion of A&E patients being seen in four hours or less had risen to over 95% (Barber, 2007).

Four years after its inception, in 2005, the PMDU had transformed the British

government's culture in relation to policy implementation. Barber summarized the delivery culture in five key words: ambition, focus, clarity, sense of urgency and irreversibility (Barber, 2007). The disciplined processes of delivery introduced at the heart of public administration became an important ingredient for effectiveness and accountability in Prime Minister Blair's second term. The emphasis on data-driven performance management and relentless implementation yielded tangible impact in several social areas: most targets in priority areas had either been met or were on track (Barber, 2007). The PMDU had not addressed all of the British government's challenges, but nonetheless many important milestones had been met (see figure 8 for key PMDU results).

Figure 8 - Results against key PMDU targets by 2005

Priority	Better than 2001?	Heading in the right direction?	Target hit or on target to be hit?
Health			
Heart disease mortality	YES	YES	ON TRACK
Cancer mortality	YES	YES	ON TRACK
Waiting list	YES	YES	NO TARGET
Maximum waiting time for non-emergency surgery	YES	YES	ON TRACK
A&E waiting time	YES	YES	HIT
Maximum waiting time for GP appointments	YES	YES	HIT
Nurse numbers	YES	YES	NO TARGET
Doctor numbers	YES	YES	NO TARGET
Education			
11-year-old literacy	YES	YES	MISSED
11-year-old numeracy	YES	YES	MISSED
14-year-old English	YES	YES	MISSED
14-year-old Math	YES	YES	MISSED
5 or more A – C grades at GCSE	YES	YES	NOT CLEAR
Attendance	NO CHANGE	JUST BEGINNING	NOT CLEAR
Teacher numbers	YES	YES	NO TARGET
Home Office / criminal justice system			
Overall crime	YES	YES	NOT CLEAR
Street crime	YES	YES	MISSED
Burglary	YES	YES	ON TRACK
Car crime	YES	YES	ON TRACK
Likelihood of being a victim of crime	YES	YES	NO TARGET
Asylum applications	YES	YES	BLAIR ASPIRATION HIT
Offenses brought to justice	YES	YES	LIKELY TO BE HIT

Drug-related crime	YES	YES	NO TARGET
Police numbers	YES	YES	NO TARGET
Transport			
Road congestion	NO	BETTER MANAGED BUT NO	NO TARGET
Rail punctuality	YES	YES	HIT

Legend:

RED	Highly problematic – requires urgent and decisive action
AMBER-RED	Problematic – requires substantial attention, some aspects need urgent attention
AMBER-GREEN	Mixed – some aspects require substantial attention, some good
GREEN	Good – requires refinement and systematic implementation

Source: Adapted from Barber, M. (2007). *Instruction to deliver*. Politico's Publ.

Independent evaluations of the PMDU experience in the UK indicated significant improvements between 2001 and 2005. The proportion of patients in Accidents and Emergency (A&E) departments seen within four hours, for instance, improved from 80% to around 97%. Despite concerns about gaming behaviors associated with target-setting (e.g. hospitals distorting clinical priorities or manipulating the data to give the idea of compliance), data comparisons with Wales, Scotland and Northern Ireland during the same period indicated that changes were likely attributable to actual progress in health service delivery (Bevan & Hood, 2006; Kelman & Friedman, 2009).

The challenge of translation

Following the original PMDU experience, the "delivery approach" has been refined and adopted by governments worldwide to strengthen policy implementation and achieve demonstrable results in various areas. The approach has been translated to other developed countries (e.g. Canada, Australia), developing countries in Latin America, Africa and Asia (e.g. Chile, Uganda, Pakistan), as well as to other government levels, such as states, provinces and municipalities (e.g. Maryland, Gauteng and Haringey). In most cases, demonstrable impact has been shown; in some, the "delivery approach" did not get past planning stages.

Empirical evidence on the effectiveness of the "delivery approach" is limited, deriving mostly from pre-experimental evaluations. A report on the results of an educational reform

implemented in Punjab, Pakistan since 2010 described striking improvements in children enrollment, school infrastructure and teacher attendance (Barber, 2013). However, it can be argued that assessing the degree to which results can be attributed to adoption of the "delivery approach" is challenging due to the lack of counterfactuals and the absence of data reporting on time trends of education indicators prior the initiative (Das, 2013).

In a review of case studies on "policy implementation" units, Lindquist alludes to the shortage of scientific investigations about implementation in the literature (Lindquist, 2006). While lessons are often drawn from each country's experience implementing delivery units, at this point there is no conclusive evidence to suggest whether, to what extent and under which conditions these innovations helped drive the outcomes they were designed to achieve. Even less is known about the relative success and reasons for variability in outcomes across countries implementing the "delivery approach". For instance, the cultural changes promoted during the original PMDU experience are likely a success factor; however, little is known as to whether such changes can be reliably replicated and to which extent they depend on personal characteristics of implementing agents. To my knowledge, no studies to date analyzed delivery experiences comparatively. Ultimately, the potential for the "delivery approach" to become institutionalized at scale, rather than exist at the whim of certain politicians, hinges on knowledge about what determines success and how the approach can be best adapted to other settings.

Translating and spreading a complex organizational innovation such as the "delivery approach" to widely variable contexts is filled with challenges stemming from differences in institutions, practices and socio-cultural norms. Although there is arguably no single formula to ensure success in adaptation to different contexts, this project assumes that some common enabling elements can be identified. Those elements are the topic of the next section, in which the knowledge base on determinants of innovation spread is discussed.

Determinants of organizational innovation spread

The purpose, concept and typology of innovation

Innovation is generally considered to be one of the key drivers of organizational success (Zaltman, Duncan, & Holbek, 1973). Although the benefits of innovation are commonly analyzed from the private sector perspective, in terms of its contributions to customer satisfaction and profit maximization, the concept has become increasingly prominent in the context of public sector performance management (Kiel, 1994). Rather than provide competitive advantage, the role of innovation in this case is to help governments improve internal processes and achieve the mission of better serving citizens (Kaplan & Norton, 1999).

Despite the wide popularity of the term, there is no consensus on what innovation means or how it manifests in practice. Innovation is often loosely employed as a substitute for creativity, knowledge or change (Crossan & Apaydin, 2010). Sometimes the term is narrowly defined as the process of introducing new ideas to firms which result in increased firm performance (M. Rogers, 1998). Traditionally, the term has been applied in economics, business and management, technology, science and engineering (Baregheh, Rowley, & Sambrook, 2009). Recognition about the importance of government for innovation, and innovation in government, is a recent phenomenon, which coincides with the rise of NPM and growing awareness of systems dynamics (Etzkowitz & Leydesdorff, 2000).

Some authors have proposed integrative definitions of innovation, to capture its many potential applications. In a systematic review of the literature, Crossan & Apaydin conceptualize innovation as the "production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services and markets; development of new methods of production; and establishment of new management systems. It is both a process and an outcome" (Crossan & Apaydin, 2010). Similarly, in one of the most widely accepted definitions among researchers in the

field, West postulates innovation as "the intentional introduction and application within a role, group or organization, of ideas, products, processes or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group or wider society" (West, 1990).

These comprehensive definitions share in common the identification of three key pillars of innovation: novelty, application and impact (Länsisalmi, Kivimäki, Aalto, & Ruoranen, 2006). First, the novelty aspect of innovations is approached in relative, rather than absolute terms. This means a common practice in one organization may still be considered as an innovation if it is new to the unit being analyzed. Second, innovation is more than merely a creative process. By including the language "exploitation" and "application", these definitions stress the notion that new ideas must be put into practice to qualify as innovation. Finally, both definitions emphasize the intended benefits (value-added) of innovations at one or more levels of analysis (individuals, organizations and/or society). Figure 9 summarizes the three key innovation pillars.

Figure 9 - Innovation pillars
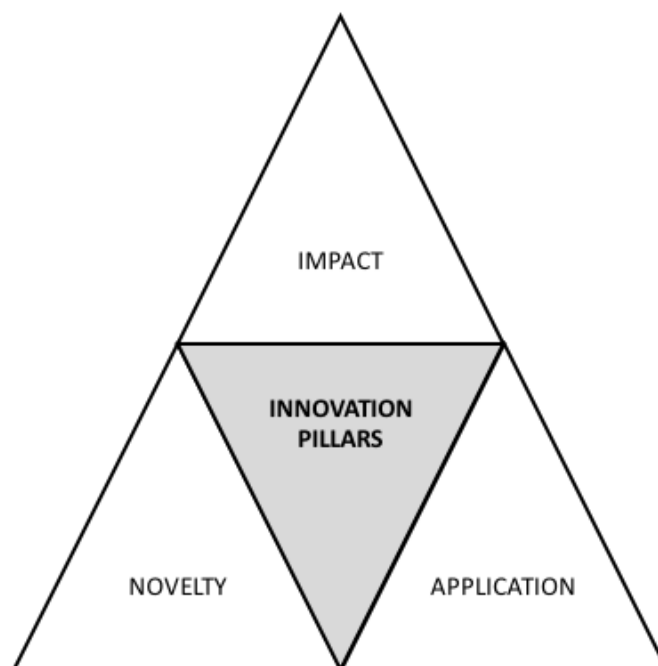
Source: adapted from Länsisalmi, H., Kivimäki, M., Aalto, P., & Ruoranen, R. (2006). Innovation in healthcare: a systematic review of recent research. *Nursing Science Quarterly*, *19*(1), 66-72.

There have been several attempts to categorize innovations. According to the type of change, UNESCO defines four types of innovation: product innovation (introduction of new goods and/or services); process innovation (changes to production or delivery methods); marketing innovation (changes in packaging, promotion, placement and pricing; and organizational innovation (development of new business practices and workplace organization) (OECD 2005). Similarly, Varkey and colleagues classify innovations in the health context into three categories: product, process or structure (Varkey, Horne, & Bennet, 2008). In this framework, structural organizations are defined as new organizational arrangements that affect internal and external infrastructure, often creating new business models. Although both categorizations adopt the vantage point of private sector organizations, parallels can be established with the public sector. From this lens, the "delivery approach" is a combination of process and structural (organizational) innovation, as it changes both the way in which public services are produced and governments' structure and arrangements for achieving its goals. Such characterization is consistent with the concept of architectural innovation: improvements in the ways elements of a system are put together, regardless of whether these components are themselves innovative if taken in isolation (Henderson & Clark, 1990).

Discussions about innovation spread are frequently framed from the perspective of individual consumers. Much of the knowledge base on this theme focuses on what it takes to enable people's uptake of technological innovations. However, organizations rather than individuals can be the unit of adoption. In this expansive view, the "delivery approach" can be classified as an organizational innovation, as governments (rather than individuals) are the main targets of the dissemination process. Many organizational innovations (including the "delivery approach") are complex, requiring coordinated actions by multiple members and elements that interact in dynamic, interdependent, and sometimes unpredictable ways.

According to its impact on stakeholders, innovations can be categorized as disruptive

or non-disruptive (Christensen, 2013). Disruptive innovations, also called radical, revolutionary and transformational, are those that disorder old systems, typically creating new players and markets while marginalizing old ones (Hamel, 2002). On the other end of the spectrum, non-disruptive innovations, also referred to as incremental or evolutionary, generates improvement on something that already exists but in a way that allows problems to be solved, or opportunities to be met (Luecke & Katz, 2003). Quality and performance improvement methods, including the "delivery approach", are examples that fit into this category.

To have an impact on organizations, new processes must be developed locally and then spread more broadly (Kellogg, Gainer, Allen, O'Sullivan, & Singer, 2016). The development of new processes refers to the methods and practices by which teams identify suboptimal processes and propose ways to redesign them (M. I. Harrison et al., 2016). An example in the context of this project is what the PMDU team originally did in the UK to improve government performance (although it can be argued that the approach per se draws heavily from managerial practices originally developed elsewhere). On the other hand, spread refers to the process of facilitating the incorporation of an innovation into new settings (Parry, Carson-Stevens, Luff, McPherson, & Goldmann, 2013). The incorporation of the "delivery approach" by the Government of Peru, the focus of this project, is an example of organizational innovation spread. To further clarify the mechanisms of innovation spread, a useful distinction can be made between diffusion and dissemination (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). While diffusion refers to passive spread, dissemination implies active and planned efforts to mainstream an innovation within an organization. From this angle, the endeavor to spread the "delivery approach" to Peru and across Latin America is a dissemination effort.

The classic innovation model postulated by Rogers can provide useful reference for the distinction between new process development and innovation spread (E. M. Rogers,

2010). The model identifies five steps in the process of wide-scale diffusion of innovations:

1) dissemination (communicating the existence of an innovation to potentially interested

parties), 2) adoption (explicit decision by organization to try the innovation), 3)

implementation (executing the innovation effectively), 4) evaluation (assessing how well the

innovation achieved its goals), and 5) institutionalization (the unit of adoption incorporates

the innovation into its continuing practices). These five steps refer specifically to local

implementation – rather than broad spread – of innovations. Presumably, the development

of new processes precedes the implementation stage. Other process frameworks cover the

innovation life cycle more comprehensively. The AIDED model, originally conceived in the

context of family health, codifies five steps in the innovation development, implementation

and spread process (Curry et al., 2013). This framework suggests that scaling up

innovations requires being "AIDED" through assessing the landscape, innovating to fit user

characteristics, developing support, engaging user groups and devolving efforts for

innovation spread (see figure 10). The first two steps in the sequence arguably relate to the

development of innovations; the third and fourth steps refer to the initial implementation of

the innovation; the last step focuses on the spread of innovations to new groups (the focus

of this thesis). Although implicit in this model, it can be argued that the last stage of

devolution refers in fact to diffusion (i.e. passive spread) of innovations to reach scale.

Figure 10 - The AIDED model of innovation development and spread
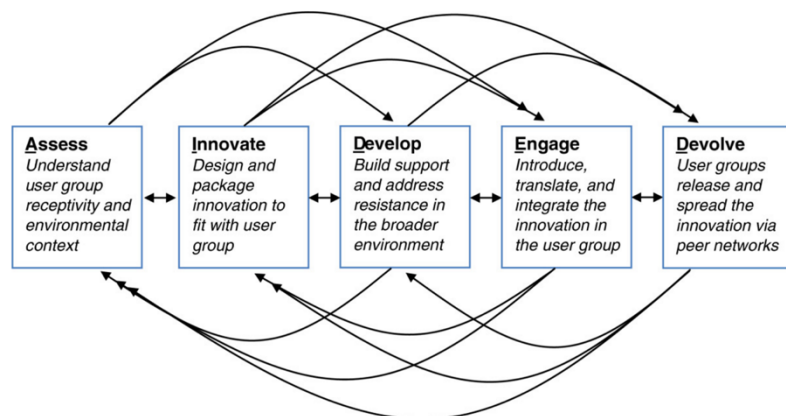
Source: Curry, L., et al (2013). Scaling up depot medroxyprogesterone acetate (DMPA): a systematic literature review illustrating the AIDED model. *Reproductive health*, *10*(1), 1.

Conceptual frameworks

The spread of organizational innovations depends on a variety of factors, and can be approached from multiple angles. Knowledge on determinants of innovation spread stems from various fields, including but not limited to institutional theory, marketing, management, sociology, engineering and strategy. This section reviews conceptual frameworks that can help address the question of how a complex organizational innovation such as the "delivery approach" can be disseminated and sustained in adaptive systems. It examines key factors that may determine outcomes of organizational innovation spread. Understanding these factors is critical to inform the activities of this project and facilitate the achievement of its goals.

While historically public policy research has focused on what gets implemented, numerous recent empirical and conceptual studies have turned attention into how the spread of innovations occur. Drawing on perspectives from organizational behavior, strategy and innovation studies, Atun and colleagues developed a conceptual framework for analysis of how complex innovations get incorporated into systems (R. Atun et al., 2010). In this framework, shown in figure 11, the extent, pattern and rate of incorporation of innovations into a system is conceptualized as a function of five key elements: the nature of the problem being addressed, the nature and complexity of the innovation, characteristics of the adoption system, the system's characteristics and the broad context. While the framework was originally conceived to illuminate how novel health interventions get introduced into health systems, its conceptual tenets can be extrapolated for analysis of other types of complex innovations.

The nature of the problem deals with the social narrative that shapes the perceived necessity to address different issues. For instance, impetus for the establishment of a Delivery Unit in a country may depend on how the public's perception of government ineffectiveness, which in turn is heavily influenced by the media and interest groups.

Attributes of the intervention (i.e. innovation) also heavily determine the outcomes of spread. Less complex interventions (e.g. those that involve few stakeholders, few elements and levels of implementation) are generally more readily scalable than interventions of greater complexity (e.g. "delivery approach") – which will require customization to fit the needs of specific client groups. The adoption system relates to the varying positions and attitudes towards the innovation as well as roles played by key actors in the adoption process. It is likely that each will have different perceptions of risks and benefits, and therefore stand for or against the innovation. Outcomes of innovation spread (including the "delivery approach") will depend on how the receptivity of the adoption system is collectively negotiated. Finally, system characteristics and broad context impose boundaries on what can be achieved. Often, the adoption process involves changes in regulatory, organizational and financial arrangements that depend on institutional characteristics and the broader economic, political and cultural context in which change occurs. The feasibility of establishing a Delivery Unit, for instance, may vary according to how public sector institutions are structured and the context in which they are immersed.

Figure 11 - Conceptual framework for integration of health interventions
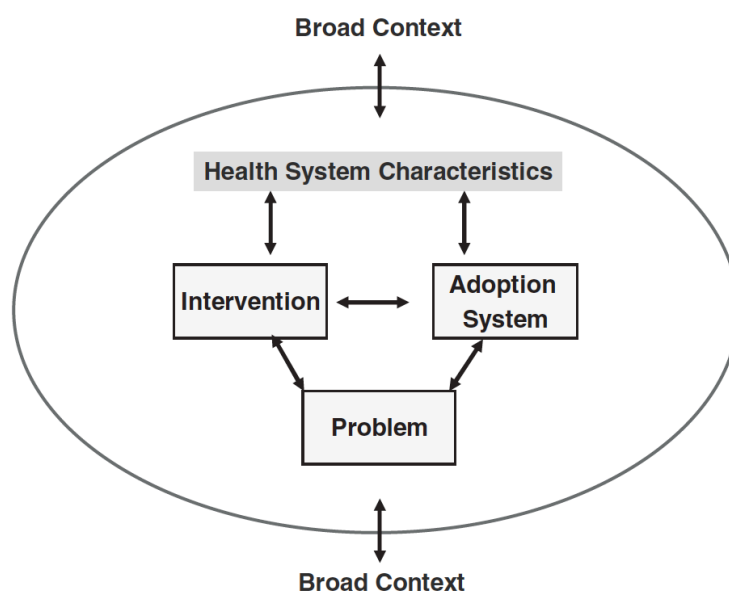
Source: Atun, R., de Jongh, T., Secci, F., Ohiri, K., & Adeyi, O. (2009). Integration of targeted health interventions into health systems: a conceptual framework for analysis. *Health policy and planning*, czp055.

Atun's framework for incorporation of complex innovations into health systems has parallels with Damschroder's consolidated framework for implementation research (CFIR), which has been widely applied to understand and address gaps in translation of research findings into practice (Damschroder et al., 2009). Both models identify five major domains of determinants of implementation results, of which at least three are congruent: intervention characteristics, outer setting (broad context, in Atun's model) and inner setting (adoption system in Atun's model). The CFIR, however, highlights two distinctive aspects: characteristics of the individuals involved and the process of implementation, both of which may importantly dictate outcomes of implementation efforts.

In a systematic review of service innovations, Greenhalgh and colleagues proposed a unifying, evidence-based model for considering what determines outcomes of spread efforts. The resulting framework, shown in figure 12, identifies five main components: the innovation, adoption by individuals, assimilation by the user system, outer context and implementation process. Rather than existing in isolation, there are important linkages across each component. For instance, evidence suggests that when the innovation developers and potential end users are connected from design stages, it is more likely that the innovation will be successfully adopted. Similarly, change agents play a critical role influencing the likelihood of adoption (degree and speed of dissemination) and success of implementation. Using the "delivery approach" as an example, incorporation will likely be facilitated when public entrepreneurs help influence authorities to adopt the method.

Figure 12 - Determinants of innovation spread

SYSTEM ANTECEDENTS FOR INNOVATION

THE INNOVATION
Relative advantage
Compatibility
Low complexity
Trialability
Observability
Potential for reinvention
Fuzzy boundaries
Risk
Task issues
Nature of knowledge
   required (tacit/explicit)
Technical support

Structure
   Size/maturity
   Formalization
   Differentiation
   Decentralization
   Slack resources

Absorptive capacity for new knowledge
   Preexisting knowledge/skills base
   Ability to find, interpret, recodify,
   and integrate new knowledge
   Enablement of knowledge sharing
   via internal and external networks

Receptive context for change
   Leadership and vision
   Good managerial relations
   Risk-taking climate
   Clear goals and priorities
   High-quality data capture

SYSTEM READINESS
FOR INNOVATION
Tension for change
Innovation-system fit
Power balances
   (supporters v. opponents)
Assessment of implications
Dedicated time/resources
Monitoring and feedback

COMMUNICATION
AND INFLUENCE
DIFFUSION
(informal, unplanned)

Social networks
Homophily
Peer opinion
Marketing
Expert opinion
Champions
Boundary spanners
Change agents

DISSEMINATION
(formal, planned)

Resource system
Knowledge purveyors
Change agency
The innovation
Diffusion
Dissemination
Outer context

User system
System antecedents
System readiness
Adoption/assimilation
Implementation
Consequences

LINKAGE

ADOPTER
Needs
Motivation
Values and goals
Skills
Learning style
Social networks

ASSIMILATION
Complex, nonlinear
   process
"Soft periphery" elements

IMPLEMENTATION
PROCESS
Decision making devolved
   to frontline teams
Hands-on approach by
   leaders and managers
Human resource issues,
   especially training
Dedicated resources
Internal communication
External collaboration
Reinvention/development
Feedback on progress

OUTER CONTEXT
Sociopolitical climate
Incentives and mandates
Interorganizational
   norm-setting and
   networks
Environmental stability

LINKAGE
Design stage
   Shared meanings and mission
   Effective knowledge transfer
   User involvement in specification
   Capture of user-led innovation

Implementation stage
   Communication and information
   User orientation
   Product augmentation, e.g. technical help
   Project management support

Source: Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: systematic review and recommendations. *Milbank Quarterly*, *82*(4), 581-629.

The first four components in this model (innovation, individuals, system and context) have clear parallels with the framework previously described. Some nuances of this model include the identification of system antecedents (e.g. absorptive capacity, preexisting knowledge, previous experiences) and inter-organization networks and collaboration as drivers of innovation spread. Again, tying back to the "delivery approach", an important influence on a government's decision to adopt may be whether other similar systems have successfully done so.

Implementation is a distinctive element of this framework. In organizations, the transition from deciding to adopt an innovation to successfully routinizing it is generally a non-linear process, characterized by shocks, setbacks and unanticipated events (Van de Ven,

Polley, Garud, & Venkataraman, 1999). Some key implementation characteristics recognized in this framework include the level of top management support, competence of the workforce, effectiveness of communication across structural boundaries and regular feedback on progress. These features are in close alignment with elements of the delivery framework. Feedback on progress, for instance, captures the idea of delivery routines, in which accurate and timely information about the implementation process is collected and used to inform continuous improvement and problem solving.

Innovation is just as important to government effectiveness as it is to private sector competitiveness. Citizens depend on public sector innovation just like executives depend on profits. The "delivery approach" can be understood as a complex organizational innovation because of the unit of adoption (organizations rather than individuals) and the dynamic, non-linear, interdependent nature of its multiple elements. Drawing from multiple social sciences, this section reviewed frameworks that aim to explain what factors determine the magnitude, patterns and pace in which complex innovations get adopted by organizations. Several attempts have been made in scholarly work to capture those factors. To my knowledge, none of them focus specifically on public sector processes and structure at a systems level. The two frameworks described here were selected based on their relevance and applicability to the substance of this project. Rather than striving for a single best way to describe how organizational innovations spread, this section aimed at appreciating the multiple elements and analytical angles that can be considered in approaching such complex phenomenon.

Public Health in Peru

This section provides an overview of the Peruvian public health landscape, using the analytical framework developed by Atun and colleagues as a reference (R. Atun et al., 2013). It is divided in three parts. The first describes the economic, demographic, epidemiological, socio-political and environmental context of the country. It includes trends and comparative data where possible to allow insights on recent performance. The second depicts key features

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of the national health system organization, highlighting important actors and their roles in the production of healthcare and public health services. Finally, the third part discusses health system outcomes, with a focus on anemia, chronic child malnutrition and waiting times for medical appointment, as these are priority areas in the government's health agenda.

Context

Peru is an upper-middle-income country with 31 million citizens and a gross domestic product (GDP) per capita of around $11,000.[3] The Andes Mountains divide the country into three main geographic regions: coast, mountains and jungle. The Amazon rainforest and highland Andes cover almost 60% of the country's area, concentrating the most isolated and poorest communities. Around 30% of the population lives in Lima, the political capital and economic engine of the country. In 2015, 21.8% of the population still lived in poverty, although this percentage has markedly declined in the last decade (from 58.7% in 2004) in parallel with economic growth.[4] Employment is largely informal: only 26.7% the workforce has social security coverage (e.g. pension plans, health insurance).[5]

While income inequality has reduced in the country (the Gini coefficient dropped from 56.34 in 1999 to 44.14 in 2014), it remains high. Likewise, there are high inequalities in human development indicators, such as access to education, electricity, internet, water and sanitation.[6] Wide disparities in development indicators are present both across socioeconomic strata and geographic regions. Citizens residing in urban conglomerates in the coast generally enjoy much higher living standards than those in the mountains and jungle. Discrimination against women and exclusion of indigenous populations are deeply

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[3] WHO country data. Retrieved from http://www.who.int/countries/per/en/ on Jan 17, 2017.

[4] World Bank country data. Retrieved from http://data.worldbank.org/indicator/SI.POV.NAHC?locations=PE on Jan 17, 2017.

[5] National Institute of Statistics and Informatics (INEI). Retrieved from https://www.inei.gob.pe/prensa/noticias/el-empleo-informal-en-el-peru-disminuyo-en-39-puntos-porcentuales-9142/ on January 17, 2017.

[6] World Bank 2016 Human Opportunity Index for Latin America and the Caribbean. Retrieved from http://documents.worldbank.org/curated/pt/590591476441924441/pdf/109075-BRI-HumanOpportunityIndex-Brief-oct2016FINAL-PUBLIC.pdf on January 17, 2017.

entrenched problems.

Politically, Peru is a presidential representative democratic republic. The president is elected through universal elections (compulsory voting) for five years, and can only seek reelection after standing down for at least one full term. As the head of State, the president appoints the Prime Minister and, with his/her advice, the Council of Ministers. Congress is unicameral, with 130 members elected for a 5-year term. Both the legislative and executive branches may propose bills, which become law after being passed by Congress and promulgated by the President. Project execution and spending are the responsibility of central, regional and local governments. After decades of political unrest and dictatorship, Peru has gone through a progressive process of democratization, which is still under consolidation. The most recent decentralization effort, initiated in the early 2000s, has empowered and increased the autonomy of regional and local governments. However, many challenges remain, including high dependency of sub-national governments on central transfers, weak controls over debt accumulation and limited capacity to handle budget execution and service delivery responsibilities (República, 2014).

Over the last few decades, Peru has made substantial progress in public health indicators. Life expectancy at birth rose by 5 years (from 72 to 77 years) over the period of 2000-2012. In the same period, the WHO region average increased by 2 years.[7] Overall, Peru was highly successful improving health-related outcomes articulated in the Millennium Development Goals (MDGs). Under-five mortality rate (per 1000 live births) dropped substantially from 80 in 1990 to 17 in 2013 – the second best performance among 75 low and middle-income countries (Huicho et al., 2016). Similarly, maternal mortality ratio (per 100,000 live births) decreased from 250 in 1990 to 89 in 2013. The prevalence of stunting

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[7] WHO country profile – Peru. Retrieved from http://www.who.int/gho/countries/per.pdf?ua=1 on January 17, 2017.

among children aged under five was cut in half, from 40% in 1990 to 20% 2013. [8]

While the determinants of the country's progress in health are hard to disentangle, it is likely that achievements were made possible through a combination of improvements in social determinants of health (e.g. decline in poverty rates, better sanitary conditions) and successful health system reforms. In a case study on child health and nutrition in Peru, Huicho and colleagues conclude that a period of exceptionally high economic growth in the 2000's combined with a transition from authoritarianism to democracy – which meant higher emphasis in anti-poverty programs – provided fertile grounds for improvement of health outcomes (Huicho et al., 2016). In parallel, the enactment of health system reforms that significantly expanded coverage (especially for the poor) and integrated narrow programs into a broader primary care platform also played an important role driving population health improvements (Francke, 2013).

Despite recent achievements, however, intractable challenges persist. Lower respiratory infections (among which tuberculosis is a key culprit) remain the leading cause of death, having killed 17,800 people in 2012. [9] Although overall incidence has declined and treatment success rates have increased,[10] Peru is among the countries with highest incident cases per 100,000 population, only ahead of Haiti, Suriname, Bolivia and Guyana in the Latin America region.[11] Peru is an endemic country for malaria, with 34% of the population living in high risk areas for contamination.[12] In 2014, there were over 800,000 suspect

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[8] WHO country profile – Peru. Retrieved from http://www.who.int/gho/countries/per.pdf?ua=1 on January 17, 2017.

[9] WHO country profile – Peru. Retrieved from http://www.who.int/gho/countries/per.pdf?ua=1 on January 17, 2017.

[10] WHO Tuberculosis country profile. Retrieved from https://extranet.who.int/sree/Reports?op=Replet&name=/WHO_HQ_Reports/G2/PROD/EXT/TBCountryProfile&ISO2=PE&outtype=html on January 17, 2017.

[11] PAHO Regional Report 2011. Retrieved from http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=19510&Itemid=999999 on January 17, 2017.

[12] WHO Human Resources for Health – Peru case study. Retrieved from http://www.who.int/workforcealliance/knowledge/resources/MLHWCountryCaseStudies_annex12_Peru.pdf?ua=1 on January 17, 2017.

cases, placing the country ahead of only Mexico and Brazil in the Latin America Region.[13]

Like many developing countries, Peru has gone through an accelerated epidemiologic transition towards non-communicable diseases (NCDs). To date, NCDs are responsible for around 66% of total deaths.[14] Among the top 10 causes of disability, 9 are categorized as NCDs – the only exception being iron-deficiency anemia.[15] Neuro-psychiatric conditions, cardiovascular diseases, diabetes and cancers are leading causes of disability-adjusted life years (DALYs), a measure that captures the sum of years of life lost due to premature death (YLL) and years of health life lost due to disability (YLD).[16] Among the risk factors driving mortality and morbidity, dietary habits are prominent: it is estimated that dietary risks and child and maternal malnutrition together cause around 10% of total DALYs.[17] The distribution of risk factors is highly uneven. While the poor, rural population bear most of the burden of nutritional deficiencies, maternal and perinatal death and communicable diseases, the relatively affluent urban population suffers from dramatic increases in obesity and chronic illnesses.

The population health make-up of a country is determined both by the distribution of health conditions and the organized social response to those conditions. The next section provides an overview of the health system in Peru. Understanding how the system is structured and how its core functions of stewardship, financing, resource generation and service delivery are performed helps situate current efforts to improve public health outcomes.

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[13] WHO World Malaria Report 2015. Retrieved from http://www.who.int/malaria/publications/world-malaria-report-2015/report/en/ on January 17, 2017.

[14] WHO NCD country profile. Retrieved from http://www.who.int/nmh/countries/per_en.pdf?ua=1 on January 17, 2017.

[15] Global Burden of Disease (GBD) data. Retrieved from http://www.healthdata.org/peru on January 17, 2017.

[16] WHO country profile – Peru. Retrieved from http://www.who.int/gho/countries/per.pdf?ua=1 on January 17, 2017.

[17] Institute for Health Metrics and Evaluation (IHME) country data. Retrieved from http://www.healthdata.org/peru on January 17, 2017.

Health system structure and functions

Peru has a fragmented health system, with multiple institutions financing, managing and providing services to different population segments. Overall, four subsystems can be identified based on service eligibility: public sector, employment-based insurance, National Police and Armed Forces, and private sector. For each of these population groups, different financing, stewardship and service delivery arrangements exist, forming a patchwork that often results in important duplications and gaps.

The Ministry of Health (MINSA) is the main governing body that oversees the country's health system. The National Health Superintendence (SUSALUD) serves as an autonomous public entity that monitors and regulates the entire system, including private providers and insurers, to ensure citizens can exercise their right to health as enacted in the Constitution.[18] Although not formally part of the health system, the Ministry of Economy and Finance (MEF) plays an important managerial role. The MEF manages the government's health budget (approved by Congress yearly), transfers monthly installments to public entities and regulates purchasing (e.g. setting designated amounts to salaries which cannot be increased). Regional Health Authorities (DIRESAS) are important players in the provision of healthcare to the general population in regions outside the capital. Although formally autonomous since the enactment of the decentralization policy in 2002, regional health facilities still rely heavily on funding and managerial guidance stemming from central government (MINSA).

The main financing sources include tax revenues, social security and premium contributions in the private sector, and direct out-of-pocket payments by individual users. Funding sources are pooled through various mechanisms. The main pooling organizations include government, the health social security (ESSALUD/EPS) and private insurance companies. Within the Ministry of Health, part of the funds is allocated to health services for

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[18] SUSALUD strategic objectives. Retrieved from http://portales.susalud.gob.pe/web/portal/objetivos-estrategicos on January 17, 2017.

the entire population, and part is dedicated to cover services under the Comprehensive Health Insurance (SIS), a scheme that aims to expand coverage to underserved populations by reducing economic barriers to access (through the elimination of user fees for a package of benefits). The SIS is the country's largest insurer, currently serving 17 million people (mainly poor individuals, women and children).[19] Enrollment to SIS is required and is not automatic. A third poling mechanism within government involves the National Police and Armed Forces. In this case, the Ministry of Defense, the Ministry of Interior and the National Police Force manage resources that cover healthcare services (mostly hospitals and specialized medical centers) to members of the military and police forces and their families.

In the private sector, the formal workforce contributes a mandatory share (9%) of their salaries to the ESSALUD scheme, which provides health insurance coverage to around 23% of the population.[20] Employees have the option to contribute an extra share of their wages to the Health Provider Institutions (EPS) scheme, which complements coverage of ESSALUD offering low complexity services. Finally, private insurance companies pool resources from premium payments by employees and individuals with high ability to pay. While ESSALUD in theory should cover health service needs of the formal workforce, many opt to purchase complementary private insurance to ensure better access to services. As of 2015, around 30% of the population lacked health insurance coverage, with urban dwellers being most affected (32% lacked health insurance coverage versus 23.4% in rural areas).[21]

The health system in Peru has been chronically underfunded. Total health spending has remained stagnant at 4-5% of GDP for decades, below the 6.1% average for upper-middle income countries. Of this total, government spending on health, an important indicator of equity in the system, is relatively low at 56%. A large proportion of funds flow from private

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[19] Seguro Integral de Salud. Retrieved from http://www.sis.gob.pe/nuevoPortal/index.html on Jan 18, 2017.

[20] Portal SUSALUD. Retrieved from http://portales.susalud.gob.pe/web/cdi/cobertura_enaho on January 18, 2017.

[21] Cobertura de seguros de salud según ENAHO. Retrieved from http://portales.susalud.gob.pe/web/cdi/cobertura_enaho on January 18, 2017.

sources. Out-of-pocket expenditures, a key marker of financial protection, accounts for 38% of total health expenditure.[22] The numbers of doctors (and in particular specialists), nurses and hospital beds per capita are also considerably lower than comparable countries (Francke, 2013). Physician density is at 0.9 per 1,000, compared to 1.7 among upper-middle income countries; hospital bed density is 1.5 per 1,000 population, versus 3.7 on average in upper-middle income countries.

Service delivery in the system varies widely according to population groups served under each scheme. Health facilities affiliated to the MINSA are the main means by which the state provides care to the general population. Established in 2003, the Comprehensive Health Insurance (SIS) has been the country's major effort to expand coverage. Access to SIS's services depend on population eligibility criteria. Vulnerable population segments affiliated to SIS receive free services at the point of care. Since 2011, eligibility (mostly based on income criteria) is determined through the National Household Targeting System (SISFOH).[23] Non-affiliated individuals may also access the public system upon payment of insurance or service fees. Although in principle the MINSA is supposed to cover all health services, in practice they are limited. As a result, the population faces significant rationing through waiting times and co-payments (including the common practice of illegal bribes). MINSA directly manages provision of services in Lima. Outside of Lima, health facilities are managed by DIRESAS.

The social security system is composed by two sub-systems: ESSALUD, a traditional scheme that provides services to formal workers and their families in its own settings (independent of MINSA), and private health providing institutions (EPS), a complementary network that complements personal services unavailable in ESSALUD facilities. The police and armed forces members, workers and their families have their own integrated health subsystem

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[22] World Bank health financing profile – Peru. Retrieved from
http://documents.worldbank.org/curated/en/242851468099278957/pdf/883460BRI0P1230ru020140January0201
4.pdf on January 17, 2017.
[23] The SISFOH Institution. Retrieved http://www.sisfoh.gob.pe/el-sisfoh/que-es-el-sisfoh/nuestra-institucion on
January 18, 2017.

with dedicated providers.

The private health sector in Peru is characterized by a mix of non-profit and for-profit actors. For-profit organizations include EPS providers, private insurers, specialized clinics, medical centers, laboratories and diagnostic facilities. Additionally, some large private companies, especially in the mining, sugar and oil sectors, manage their own health facilities that cater to the workforce. The non-profit private sector is represented by diverse set of civil society organizations. Most of these organizations offer primary care services and are funded by external donors or local communities. Figure 13 summarizes the main financial and service delivery arrangements in the Peruvian health system.

Figure 13 - Health system financing and service delivery in Peru
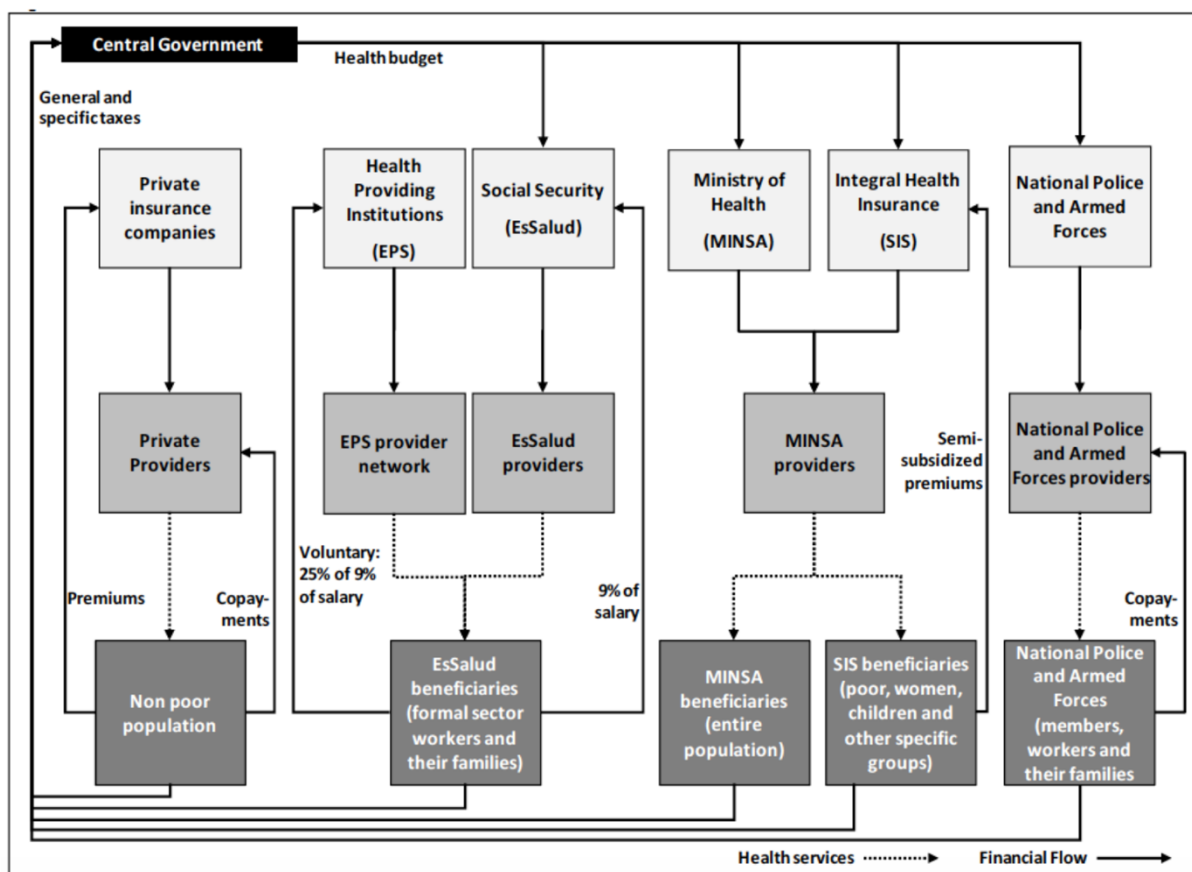
Source: Britán & Asociados. Impact of Health Insurance on Access to Health Services, Health Services USe, and Health Status in the Developoing World. Case Study from Peru. 2009

Health outcomes

Over the last few decades, Peru has experienced marked improvements in population health outcomes. Maternal and infant mortality declined sharply, from 250 to 89 and 80 to 17 between 1990 and 2015, respectively. Life expectancy at birth rose by 5 years between 2000 and 2015, above regional average. [24] While such achievements are in part due to social and economic determinants (e.g. urbanization, reduction in poverty, increased sanitation), expansion of primary care services played an important role. Prenatal service coverage reached 94.7% of pregnant women, and DPT immunization (against diphtheria, pertussis and tetanus) reached 93% of children aged 12-23 months in 2009 (Francke, 2013).

Despite these advancements, the country has struggled with an unresolved agenda of infectious diseases coupled with a growing burden of chronic conditions and high levels of inequality. While lower respiratory infections remain the leading cause of death, with 13.5% of cases, non-communicable diseases are now responsible for 66% of the total burden of disease.[25] Dietary risks are the main risk factor driving health losses in the country, with over 5% of total DALY's.[26]

Health inequalities in Peru have deep ramifications across socio-economic strata, geographic locations and gender. The relatively affluent urban population has been impacted by dramatic increases in prevalence of chronic diseases (e.g. cancer, diabetes, cardiovascular diseases) and associated risks factors. Obesity, for instance, is almost two times as prevalent in women (20.7%) compared to men (10.5%).[27] On the other hand, poor

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[24] Peru: WHO Statistical Profile. Retrieved from http://www.who.int/gho/countries/per.pdf?ua=1 on January 22, 2017.

[25] Peru: WHO Statistical Profile. Retrieved from http://www.who.int/gho/countries/per.pdf?ua=1 on January 22, 2017.

[26] Institute for Health Metrics and Evaluation – Peru country profile. Retrieved from http://www.healthdata.org/peru on January 22, 2017.

[27] World Health Organization Non-communicable diseases country profile – Peru. Retrieved from http://www.who.int/nmh/countries/per_en.pdf?ua=1 on January 22, 2017.

rural populations bear the burden of nutritional deficiencies and communicable diseases. In Loreto (a large region in the Amazon forest), for instance, child mortality rates are three times higher than in Lima, and like that of Bangladesh and Cambodia. Similarly, in Huancavelica (a mountainous region) chronic child malnutrition rates are ten times higher than in Tacna (the southernmost region), and higher than countries like Angola and Congo.[28] Childhood stunting (a condition characterized by poor growth) is ten times more prevalent in children in the lowest wealth quintile compared to the highest, a difference 216% greater than the average among upper and middle income countries.(Francke, 2013)

Anemia is a health condition characterized by decreased quantity of red blood cells, often accompanied by reduced hemoglobin levels and alterations in red blood cell morphology (Kassebaum et al., 2014). Symptoms of this disease result from impaired oxygen delivery to tissues, and may include fatigue, difficulty concentrating and decreased work productivity (McCann & Ames, 2007). Among children, anemia often leads to impaired mental and motor development, with long-lasting impacts over the life course. (Grantham-McGregor & Ani, 2001). For instance, anemia alone is associated with a 2.5% reduction in adulthood wages (Horton & Ross, 2003).

In Peru, 620,000 children under 3 (43.5%) have anemia.[29] While infections and inflammatory conditions may lead to the problem, most of the burden is caused by iron deficiency due to insufficient nutritional intake.[30] Although the prevalence of anemia has decreased since the year 2000, it remains a severe, generalized public health problem (see figure 14). In 2012, 53% of children living in rural areas had anemia, compared to 39.9% in

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[28] Inequality in Peru: reality and risks. Oxfam working paper. Retrieved from https://peru.oxfam.org/sites/peru.oxfam.org/files/file_attachments/Inequality%20in%20Peru.%20Reality%20and%20Risks.pdf on January 22, 2017.

[29] Ministerio de Salud: Estrategia Nacional para la reducción de anemia materno infantil 2016-2021. Retrieved from http://www.minsa.gob.pe/portada/Especiales/2016/anemia/documentos/9_ST-CIAS-Estrategia_Anemia_14dic16.pdf on January 22, 2017.

[30] Instituto Nacional de Salud: Anemia en la población infantil del Perú. Retrieved from http://www.ins.gob.pe/repositorioaps/0/4/jer/evidencias/ANEMIA%20FINAL_v.03mayo2015.pdf on January 22, 2017.

urban areas. The prevalence of anemia was also high across wealth quintiles, with 52.8% prevalence among the poorest and 25.4% among the wealthiest children. Enrollment in health insurance was also correlated with the problem. The prevalence of anemia among children participating in the public health system (SIS) was 48.4%, versus 34.1% among those who enjoyed coverage in the social security system (ESSALUD).[31] Figure 14 shows the evolution in prevalence of childhood anemia in Peru in recent years. Bars represent targets fixed by the current administration; projections consider past behavior and include a confidence interval assuming normal distribution.

Figure 14 - Prevalence of childhood anemia (6-35 months) in Peru over time
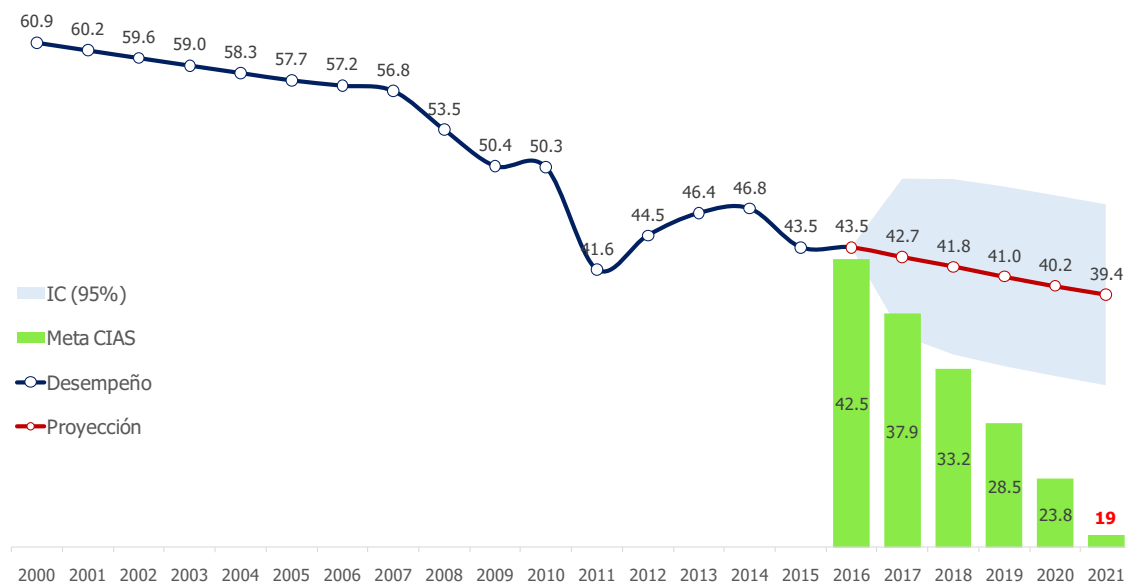
Source: National Demographic and Family Health survey. Peru's Delivery Unit analysis.

Chronic childhood malnutrition is a condition characterized by delayed growth relative to age. While conceptually malnutrition may include conditions related to excessive food intake (e.g. childhood obesity), the term is generally used in the context of insufficient quality and quantity of nutrient intake, absorption or utilization (Mehta et al., 2013).

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[31] Ministerio de Salud: Plan nacional para la reducción de la desnutrición crónica infantil y la prevención de la anemia en el país. Retrieved from http://www.minsa.gob.pe/portada/especiales/2015/nutriwawa/directivas/005_Plan_Reduccion.pdf on January 22, 2017.

Children who are undernourished between conception and age 5 may present impaired physical, intellectual, social and emotional development, with far-reaching consequences in life (Kulin, Bwibo, Mutie, & Santner, 1982). Every year, over 10 million children under the age of 5 die globally; malnutrition is associated with more than half of these deaths. In aggregate, 15.9% of DALY's worldwide are attributable to childhood malnutrition (Murray & Lopez, 1997).

In Peru, the prevalence of chronic child malnutrition has decreased steadily in recent years (from 28.5% in 2007 to 13.7% in 2016), which allowed the country to reach the Millennium Development Goal (MDG) target of under-five mortality rate (Rajaratnam et al., 2010). The largest proportion of cases occur among children living in rural areas. In 2012, the prevalence among rural dwellers was 39.1%, versus 10.5% in urban areas. The distribution of chronic malnutrition also depends on geography. In 2012, 29.3% of children living in the mountains were affected, versus 8.1% in coastal regions. Combining these two parameters, the heterogeneity in distribution of chronic malnutrition is stark. While in the metropolitan region of the capital Lima only 4.1% of children had chronic malnutrition in 2012, the prevalence was 49.8% among children in rural communities by the mountains in the same period. The occurrence of chronic malnutrition is also directly related to levels of wealth. In 2012, the condition affected 38.8% of children in the poorest quintile, and only 3.1% in the wealthiest quintile. Figure 15 shows the recent evolution of chronic malnutrition in Peru. Bars represent targets fixed by the current administration; projections consider past behavior and include a confidence interval assuming normal distribution.

Figure 15 - Prevalence of under-5 chronic childhood malnutrition over time

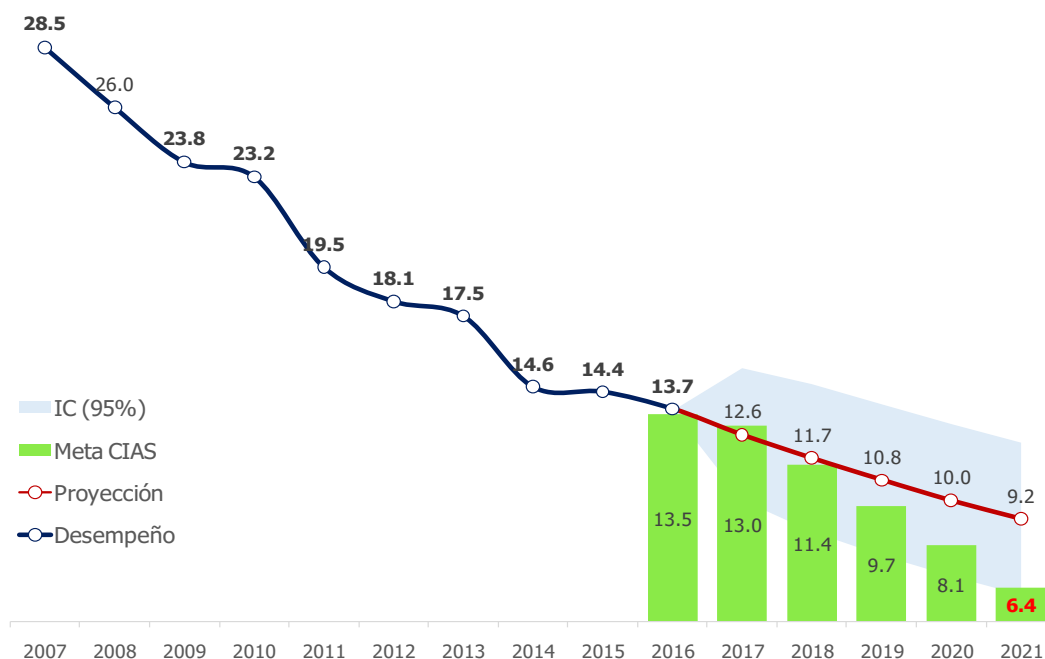Source: National Demographic and Family Health survey. Peru's Delivery Unit analysis.

Waiting times to access services is an important dimension of healthcare quality, as it captures the timeliness of service delivery. Studies show that waiting times are inversely correlated both with patient satisfaction and patient outcomes (Guttmann, Schull, Vermeulen, & Stukel, 2011; Thompson, Yarnold, Williams, & Adams, 1996). In the United States' Veterans Administration (VA) health system, for instance, higher waiting times for outpatient health services are associated with significantly higher odds of mortality (Prentice & Pizer, 2007).

Waiting times can be measured in different system levels, from basic primary care services to high complexity care in hospitals. In Peru, the average waiting time for a physician consultation in the public system was 18 days in 2014 and 17 days in 2015. In the same period, waiting times in private facilities were 7 and 10 days, respectively.[32] The lack of comparable data in neighboring countries limit comparative performance assessments.

Combating anemia and chronic childhood malnutrition and reducing waiting times for

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[32] Instituto Peruano de Acción Empresarial (IPAE). Retrieved from
http://www.ipae.pe/sites/default/files/cade_mide.pdf on January 22, 2017.

medical consultations are priority areas for the current federal administration. During the campaign and on his inaugural address to the nation, president Pedro Pablo Kuczynski reaffirmed his commitment to public health and to achieving tangible results in these three areas. [33] This project was carried out from October 2016 to March 2017, during the first year of the new administration. The next session provides a description of its scope, underlying theory of change and objectives.

Project description

Background

Under new leadership following the July 2016 elections, the Government of Peru has set an ambitious agenda to drive tangible improvements for its citizens. Results-based management is not new in the country. Several Ministries have done high-quality work organizing to achieve better results in public service delivery. This includes efforts to translate goals into concrete performance indicators, build data systems and monitor progress in education, health, agriculture, finance and other programmatic areas. With renewed emphasis on outcomes, President Pedro Pablo Kuczynski (PPK) set a vision for Peru to become "a modern, fairer, more equitable and inclusive country".[34] By 2021, the President also aspires to have fulfilled the necessary requirements to enable Peru's entry into the Organization of Economic Development (OECD) group.[35]

During his presidential campaign and in his inaugural speech, PPK has laid out seven key priority areas for his mandate, which culminates with the country's bicentennial anniversary in 2021:

- Health
- Water and sanitation

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[33] El Comercio: Mensaje inaugural de PPK. Retrieved from http://elcomercio.pe/politica/gobierno/descarga-mensaje-presidencial-ppk-video-texto-y-audio-noticia-1920287 on January 22, 2017.

[34] President's inaugural address to the nation. Retrieved from http://elcomercio.pe/visor/1920287/1447929-descarga-mensaje-presidencial-ppk-video-texto-y-audio-noticia on Jan 23, 2017

[35] PPK Government Plan. Retrieved from http://ppk.pe/plan-de-gobierno/ on February 25, 2017.

- Education

- Formalization

- Infrastructure

- Security

- Anti-corruption

For each of the priority areas, government has articulated specific goals and targets with a view to 2021. A list of key development indicators associated with those goals was prepared in consultation with technical experts, and communicated to the public during the 2016 CADE meeting, the most important gathering of the business community.[36] In addition to defining indicators, understanding baseline figures and setting targets, a benchmarking analysis was conducted to enable insights on comparative performance. Internal benchmarks included assessment of historical trends; external benchmarks included international comparisons with countries in the Pacific Alliance or global standards. The table below summarizes how the Government of Peru has defined success in public health.

Figure 16 - Key performance indicators and targets in health

Goal	Key indicator	Baseline value	2021 target
Reduce anemia among children aged 6-36 months	% children aged 6-36 months with anemia	43.5%	19%
- According to the WHO, anemia is considered a severe public health problem when population prevalence is above 40%; when prevalence is below 20%, public health significance is considered mild. - Average anemia prevalence in Latin America and the Caribbean is 34.6%; Chile has 5% prevalence and Mexico has 23.3% prevalence. - Historical trends in Peru show an irregular trajectory, with marked declines in prevalence between 2007 and 2011 (from 56.8% to 41.6%), increases in subsequent years and stagnation between 2015 and 2016 at 43.5%.			

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[36] Performance indicators until 2021. Retrieved from http://www.ipae.pe/cade-ejecutivos/2016 on February 24, 2017.

Reduce chronic malnutrition among children under 5 years	% children under 5 years with chronic malnutrition	14.4%	6.4%

- The prevalence of chronic childhood malnutrition has decreased consistently in Peru in recent years. From 2014 to 2016, the pace of reduction has gone down though, with less than 1% drop in prevalence each year.
- Average prevalence of chronic malnutrition in Latin America and the Caribbean is 6.9%; Chile has 1.8% prevalence and Colombia has 12.7% prevalence.

Reduce waiting times for medical consultation	Average number of waiting days for outpatient medical appointment	17	7

- This indicator has been selected as a proxy for healthcare quality. The target of 7 days was set because that has been the average performance in private facilities in recent years.
- Performance data in neighboring countries is not available.

Source: CADE MIDE Development Indicators 2016.

To ensure targets in each of the seven priority areas are met, the Government of Peru has embarked on the process of setting up a Delivery Unit (DU) and incorporating delivery methods and tools. Between October 2016 and March 2017, the work focused on establishing delivery foundations. Key challenges in this period included:

- Defining the positioning and organizational structure of the DU

- Ensuring the DU was staffed with an appropriate leader and a strong team

- Clarifying the DU's mandate

- Charting an action plan leading up to the start of DU's operations within 90 days

- Understanding the systems' current capacity to deliver on its priorities

- Crafting coherent, comprehensive strategies to create real change on the ground

- Mobilizing a guiding coalition to support delivery efforts across priorities

- Engaging key stakeholders at various system levels and building their capacity to

  manage and implement change

The UK Embassy in Peru has engaged Delivery Associates to support the Government of Peru in the start-up phase of the DU. Impetus for adopting the "delivery approach" in the country was high for at least two reasons. First, the British Embassy had strong relationships with the President, PM and several newly appointed top Cabinet officials (many of whom were educated in UK academic institutions). Second, and related to the former, the outcomes achieved by the original PMDU served as an inspiration for the bold agenda set forth by the new administration.

Demand for effective public sector performance approaches in Peru was high. At the same time, the UK Embassy was well positioned to facilitate access to such expertise through a partner organization with solid track record in this area. Having worked in the UK public service when Sir Michael Barber was Head of the PMDU, the British Ambassador in Peru was familiar with and supportive of the "delivery approach". These factors combined created favorable conditions for the inception of this project.

Theory of change

The theory of change underpinning this project is grounded in DA's Delivery framework (shown in appendix 1). The Delivery framework, designed and refined over the years based on experience, has been commonly applied in partnerships with governments to guide planning, implementation and evaluation of delivery efforts. Its five core components (build foundations for delivery, understand the delivery challenge, plan for delivery, drive delivery and create an irreversible delivery culture) reflect key macro-processes required for successful delivery, whatever the policy area under analysis. In the original framework, the five components are further disaggregated into 15 delivery elements. While some of these elements can be seen sequentially (e.g. planning precedes implementation routines), some (e.g. those related to culture) are cross-cutting.

In a seminal book on health systems, Roberts and colleagues identify three pillars of public policy: technical, political and ethical (Roberts, Hsiao, Berman, & Reich, 2003). The

authors argue that the three must act in harmony to support the complex task of reform. For instance, political arrangements are guided by values derived from ethics; reform strategies, although often based on technical evidence, are also bounded by political constraints. Teasing out these dimensions may enable a fresh perspective and deeper understanding of behaviors and features that ultimately determine the outcomes of the "delivery approach".

To develop a theory of action for this DELTA project, I combine the macro-processes described in DA's Delivery framework with the pillars of public policy described in the literature. I use Delivery framework elements to articulate key technical, political, and ethical attributes that, if applied effectively by governments, will arguably lead to improved public health impact. The resulting matrix, shown in figure 17, lays out the logic that justifies how the actions taken in this project would yield the expected results.

Figure 17 - Theory of action underlying the DELTA project

	TECHNICAL	**POLITICAL**	**ETHICAL**
DEVELOP A FOUNDATION FOR DELIVERY	▪ Establishing a Delivery Unit ▪ Reviewing system's current capacity to deliver	▪ Ensuring solid commitment from highest system authority ▪ Establishing a guiding coalition in each priority area	▪ Aligning aspirations with what matters to citizens ▪ Setting ambitious goals
UNDERSTAND THE DELIVERY CHALLENGE	▪ Evaluating past and current performance based on data	▪ Going to the field and engaging with the front lines to understand reality	▪ Adopting a citizen's perspective of how public services are experienced
PLAN FOR DELIVERY	▪ Creating a coherent, comprehensive reform strategy ▪ Setting targets and trajectories	▪ Understanding stakeholders across the delivery chain and their relationships	▪ Ensuring that targets are meaningful to citizens and that plans are based on the best available evidence
DRIVE DELIVERY	▪ Establishing routines to monitor performance and solve problems ▪ Identifying problems early and addressing them rigorously	▪ Building on quick wins to create space for larger scale reforms ▪ Celebrating success	▪ Holding honest performance dialogues and not shying away from the hard truth ▪ Persisting through implementation challenges

CREATE AN IRREVERSIBLE DELIVERY CULTURE	▪ Continually building system capacity	▪ Expanding leadership circles ▪ Engaging stakeholders strategically	▪ Communicating the delivery message to ensure accountability to citizens ▪ Promoting transparency in activities and results

IMPROVED PUBLIC HEALTH OUTCOMES:

- Reduced prevalence of anemia and chronic child malnutrition
- Reduced waiting times for medical consultations

This framework postulates that improving public health outcomes is a function of technical, political and ethical requisites which manifest throughout all stages of implementation. It does not include judgements on the relative importance of each element, nor does it take into consideration factors extraneous to government work that may also influence public health outcomes (e.g. changes in social determinants of health). Another important underlying assumption is that the framework applies equally to public health's many areas of action.

Due to timeline restrictions, this project did not span the full spectrum of implementation. Rather, it was restricted to establishing foundations, understanding the delivery challenge, planning for delivery and nurturing an irreversible delivery culture. Together, these four components were labeled "organizing for delivery". Although necessary on the path to results, organizing for delivery alone is not sufficient. Driving delivery relentlessly through routines is also key to enable outcomes.

Goals and approaches

This DELTA project was guided by two key questions. First, what factors determine successful translation of the "delivery approach" into different contexts? Second, and related to the first, what dictates governments' ability to specifically improve public health

outcomes? These questions were examined in the context of the Peruvian government's early efforts to deliver the bold public health targets set by the new administration by 2021 in the areas of childhood anemia, chronic childhood malnutrition and waiting times for medical appointments. This was a forward looking, rather than a retrospective project. While assessing population health outcomes was unfeasible given project timelines, it was possible to critically examine the foundations upon which results could be built. The processes and organizational changes that allowed government to maximize chances of meeting defined targets, hereby referred to as "organizing for delivery", were the main subject of analysis.

This DELTA project utilized a single qualitative case study method to address the questions above. The case method is suitable for analysis of complex social phenomena (Baxter & Jack, 2008). The approach is generally warranted under three circumstances, all of which were met in this work (Yin, 2013):

- The type of research question fundamentally deals with "how" or "why", calling for in-depth exploration of determining factors linked with the subject of analysis

- There is limited possibility to control behavioral events associated with the phenomenon under investigation

- Phenomenon to be studied is contemporary and unfolds in real-life context, which means the boundaries between interventions and context are not evident

The case study of the government of Peru can be classified as a mix of exploratory and descriptive, as there was no explicit evaluation of a set of outcomes and emphasis was placed in describing the real-life context in which interventions occurred. The government's endeavor to improve public health outcomes was considered as the single unit of analysis. To allow a holistic understanding of the Peruvian experience driving public health improvements from the heart of government, I have utilized multiple data sources. Primary data sources included key informant interviews, focus groups, participant observations and direct observations. Key informant interviews involved government officials, managers of

local health facilities and frontline workers in the regions of Arequipa and Loreto. Focus groups were conducted in the national government and involved senior officials in Ministries, political advisors, chief of staff and program directors. Direct observations involved public officials in Ministries as well as frontline workers in health facilities. Finally, participant observations included members of the UCG team and senior government officials as the author engaged as a consultant on the ground. Secondary data sources for this DELTA project included documents and archival records. The main documents reviewed included strategic plans, government plans and program evaluation reports. Archival records included organizational charts, health service records and policy memos. Together, these data sources formed the basis for analysis and inference.

The main analytic technique utilized in this DELTA project was pattern matching. Using the framework described earlier in this section (under theory of action), I compared empirically observed patterns with predicted ones. In each cell of the theory of action matrix, predicted patterns were developed as specific propositions that hypothesize key determining factors for successful translation of the delivery approach. Data from multiple sources were converged in the analytical process rather than handled individually. Findings were then consolidated into lessons and compared to the analytical framework to enable insights and conclusions linked to the guiding questions.

Organizing a large bureaucracy to improve public health outcomes involved a wide range of stakeholders:

- President and Prime Minister

- The Delivery Unit (UCG)

- Accountable leaders in ministries

- National government officials

- Regional and local government officials

- Delivery Associates

- British Embassy in Peru

- Citizens

As a consulting firm specializing in public sector strategy and implementation, Delivery Associates was engaged by the UK Embassy to support accelerated design of the DU and planning across priority areas. I was engaged as a consultant on the ground. In this position, I frequently liaised with senior leadership in the organization to ensure quality and rigor. Senior leadership in the organization helped manage relationships with top political authorities in the country.

The UCG, which at early stages consisted only of a General Manager and an Operations Manager, had grown into a seven-person team by March 2017. Four account managers were hired to provide day-to-day support in specific priority areas, and a research manager was brought in to manage data insights. Empowered by the President and Prime Minister to drive the delivery agenda, the UCG was responsible for working with relevant Ministry counterparts to ensure that necessary actions were followed through and targets were met. Reporting directly to the Prime Minister's Office, and with no formal authority over line Ministries, the UCG played a catalyst and enabling role. The four main functions of the Unit included support to delivery planning, monitoring and reporting to the President and PM, follow-up and evaluation in priority areas, and capacity building in managerial skills.

Responsibility for achieving results lied within Ministries. For each priority, an accountable leader at national government was selected. In public health, responsibility for results in anemia, chronic malnutrition and waiting times lied with the Minister of Health. Although personally responsible for strategy development, progress reports and follow-up on problems, the Minister did not work in isolation. Public officials in relevant programmatic areas within and across sectors were involved in capacity review and planning activities.

Although less prominently than national government, regional and local authorities and service providers were also involved in the project. The capacity review and planning

workshops included consultations with managers at regional and local health departments, as well as providers at points of service. Together, these stakeholders formed the delivery chain through which strategic intent at the center of government could translate into concrete changes on the ground. Due to the political decentralization of the country, regional and local governments enjoyed autonomy to make administrative decisions. Still, a significant share of regional and local governments' funds still stemmed from national government. This gave national government leverage to influence behaviors of those closer to the frontlines.

The British Embassy in Peru played a fundamental role in the project, providing seed funding for Delivery Associates to run the start-up phase and building connections to enable the work. Finally, citizens were essential stakeholders. While most of the work focused on strengthening the supply side (government services), all goals and activities were guided by citizens' legitimate needs and demands. Ultimately, the main measurement of success in this project is the degree of impact that citizens can feel. Figure 18 illustrates key stakeholders and their main relationships in the project.

Figure 18 - Key stakeholders and their relationships
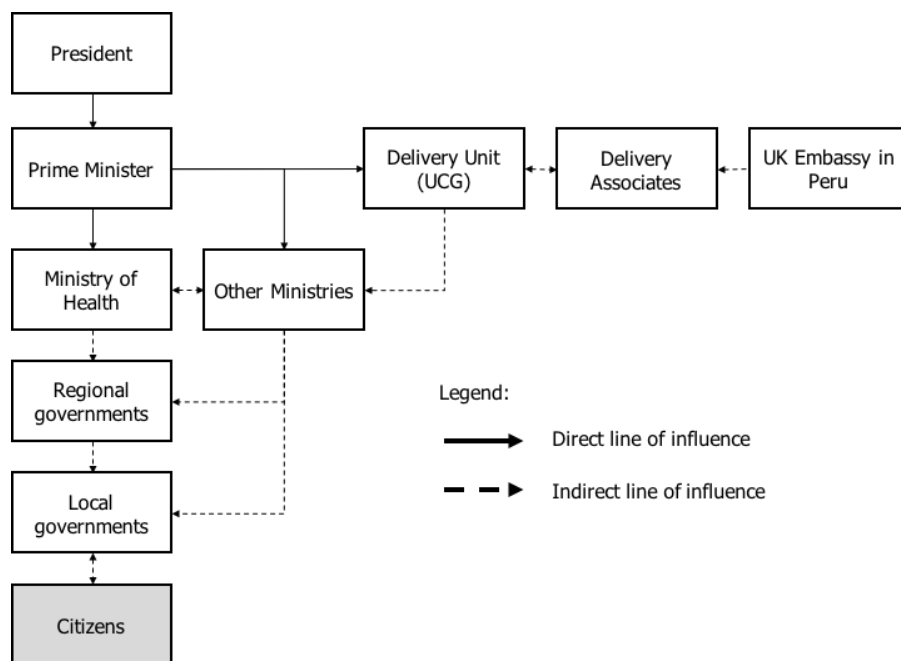
The government's approach adopted in this project was consistent with the theory of action described in the former section. Interventions carried out by the government were divided into four work streams: setting up the DU, reviewing current system capacity, forming guiding coalitions and planning for delivery. The first three work streams are part of the foundational component of the delivery framework. Planning for delivery is a standalone component, which in the context of this project also covered aspects of data analysis ("Understanding the delivery challenge").

Although defined in separate boxes for didactic purposes, these work streams are intimately interwoven in practice. Forming guiding coalitions, for instance, runs parallel to the technical work of reviewing capacity and planning for delivery. Another artificial boundary in this project is its completion in March of 2017. Although necessary to enable timely reporting, this project was in fact ongoing. Its activities are meant to continue at least through April, by which time alternatives for continuity would be discussed. The formation of the Delivery Unit, for instance, is a work in progress. By March 2017, the team had seven members and was actively engaging in four of the seven priority areas: health, water and sanitation, security and formalization. In following months, the plan was to bring in new account managers and data analysts to accelerate work in education, infrastructure and anti-corruption. The project spanned six months, from October 2016 to March 2017. Figure 19 shows the timeline of each work stream.

Figure 19 - Timeline of key project activities

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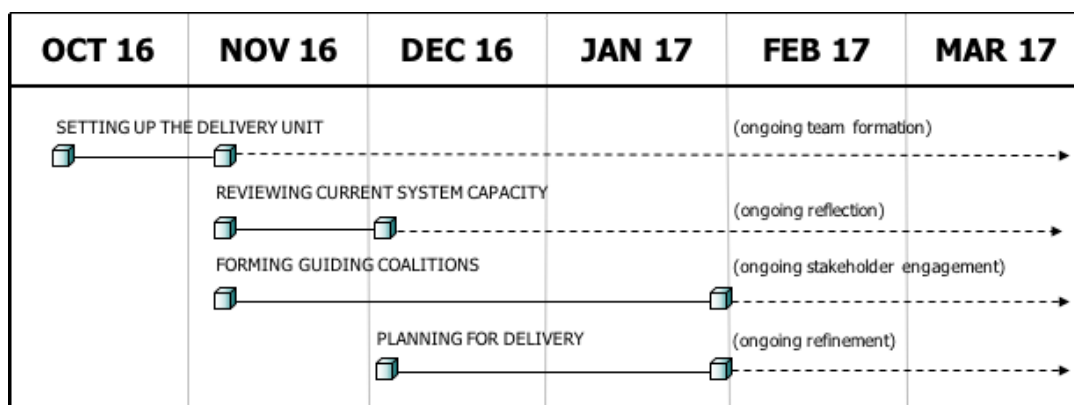
<center>**Results**</center>

Improving public health outcomes at scale requires government to redesign systems, reorient programs, reorganize processes, strengthen instruments and reinvigorate talents. This section describes and critically analyzes project results, highlighting strengths, limitations and lessons from experience. Although activities on the ground were ongoing, analysis was limited to the first six months of implementation, from October 2016 to March 2017.

Results in this section are organized according to the project's four key work streams: setting up the DU, reviewing current system capacity, forming guiding coalitions, and planning for delivery. Each sub-section describes goals, main activities undertaken, results achieved and lessons learned. Finally, this section includes a discussion about how public health work in this project interweaves with goals and activities pursued in other priority areas and what lessons can be drawn at those intersections.

Setting up the Delivery Unit

The Delivery Unit in Peru was conceived by the President and Prime Minister as a mechanism to enable progress towards the country's goals in key policy areas. Managing through a Delivery Unit is a distinctive characteristic of the "delivery approach" compared to other performance management disciplines. Delivery Units are small, dedicated teams that focus on managing performance against priority goals. These units may assume different forms and names depending on organizational structure and context. However, regardless of titles or positioning, one core principle is common to all Delivery Units: they focus heavily on outcomes and implementation, rather than strategy and policy. This means the team is always driving for achievement of the system's aspirations, no matter what.

Setting up the Delivery Unit is a key foundational element in the delivery framework. The theory of action for the establishment of Delivery Units is straightforward: if a system's top authority creates a team whose core mandate is to focus on results, then that team will

help the top authority exercise meaningful influence over activities across the system that drive towards those results.

Four design elements are critical in the establishment of successful Delivery Units. First, the Unit typically sits outside the line management hierarchy of the system, reporting directly to the system's top authority. Positioning the Unit at the edge of the organizational structure is important because it ensures independency and prevents against undesired competition with departments. By definition, Delivery Units exist to partner, not compete, with functional areas towards the achievement of shared goals. Managing performance at the heart of government is a tough endeavor, and challenges inevitably arise. When things get difficult, the system's top authority must be ready to back up the Unit to ensure its important work is pursued autonomously and rigorously. Second, Delivery Units focus sharply on a few priorities that are meaningful to citizens and core to the government's agenda, resisting the temptation of embracing all that deserves change. Achieving results requires close follow up and persistence. Maintaining tight focus ensures that the team's capacity is well deployed and that the necessary level of support and challenge to accountable teams is provided as implementation progresses. Third, as the name suggests, Delivery Units are fully oriented to outcomes. Instead of managing inputs for their own sake, the aim is to ensure every input justifies itself in terms of its impact on outcomes. Finally, Delivery Units are lean by design. Keeping the team small, flexible, independent and highly capable is critical to ensure depth of insight and fast pace.

The first stage of the work with the Government of Peru involved advisory about the Delivery Unit design and team formation. In the first two weeks of engagement, I supported the establishment of the Unit through a series of meetings and working sessions. The initial visit occurred two days after the General Manager of the Delivery Unit and the Operations Manager had been appointed. The early involvement provided ample space for learning about the current context of Peru and how to position the Delivery Unit for success.

Because of this process, I developed three main recommendations with regards to the DU's structure and performance management model. Below are the recommendations and their rationale:

- Organizing the Delivery Unit staff by priority themes, with cross-cutting administrative and data teams: Overall, DU staff can be organized either by function or thematic areas. Given the need to establish credibility with Ministries and the complex governance systems in the Peruvian context, an organizational structure by theme areas appears to be more fitting. Although organizing by priority themes makes it more difficult to reallocate resources as needs arise, this arrangement promotes strong relationships and deep expertise, which are key for the DU's success in Peru. Administrative, research and data analysis functions can serve all priority areas simultaneously for increased efficiency. Figure 20 illustrates the proposed organizational structure.

- Ensuring that the DU team has the right skill mix: Building a strong DU team is critical for success. Core competencies include analytical acumen, communication, relationship building, problem solving, and commitment to "doing government differently". Diversity in knowledge, skills and backgrounds is an essential principle for the hiring process. It is key to strike a balance between public and private sector expertise, policy development and field experience, federal and local government experience, subject matter specialization and systems thinking. The DU needs to have a strong culture of ambition and urgency. The team needs to be rigorous, persistent and optimistic to handle struggles on the way to success. Figure 21 illustrates core competencies for the DU team.

- Focusing on a few priorities and developing a clear definition of success for each of them early on: Focusing on too many goals dilutes accountability and slows down implementation. Maintaining sharp, steady focus on the priorities laid out by the

President ensures the continuity and pace needed to promote lasting change. For each priority area, it is key to engage relevant Ministries early on and develop a shared understanding of what success looks like. This is a key starting point of the delivery work, on which everything else depends. Developing a clear definition of success involves specifying indicators for each priority, and using data to define targets that combine ambition with realism. Indicators of success can be set at all levels, from long-term results to shorter term activities and outputs.

Figure 20 - Recommended organizational structure for the Delivery Unit in Peru
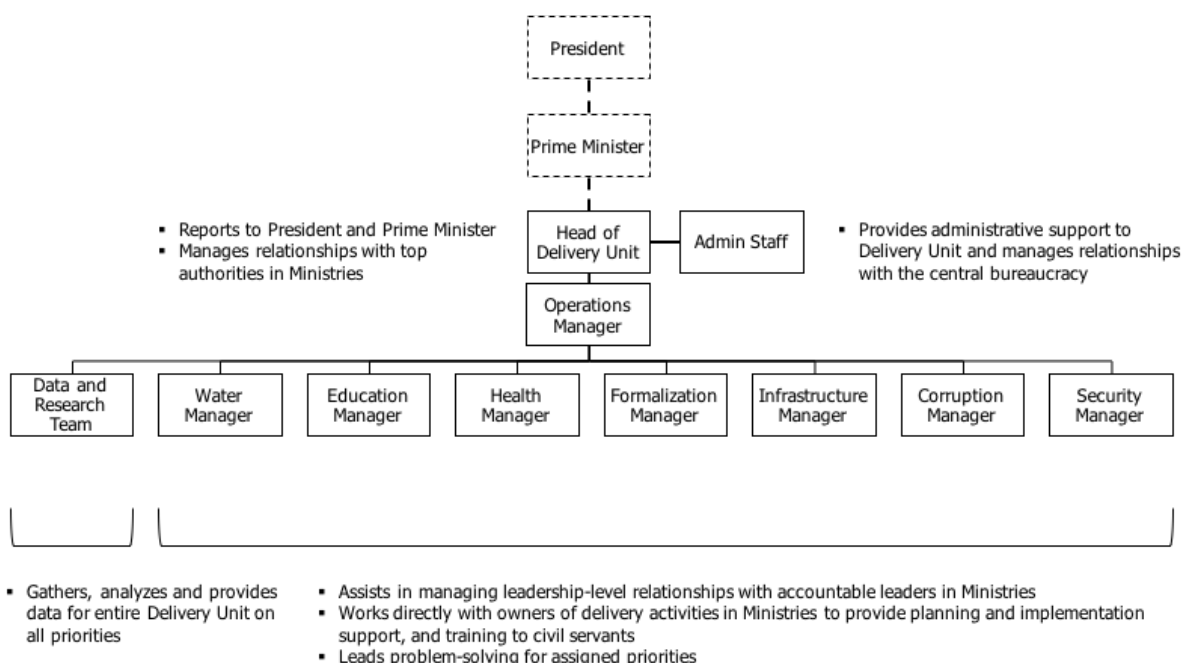

Figure 21 - Core competencies for the DU team

Competencies	Detail
Advanced analytical skills	• Ability to organize, interpret and synthesize complex information
Relationship management	• Ability to create and nurture mutually beneficial relationships; ability to communicate effectively with various audiences

Problem solving skills	▪ Ability to structure problems, formulate hypotheses and propose solutions based on data and evidence
Leadership	▪ Ability to mobilize people to confront difficult challenges; ability to influence without authority
Subject matter expertise in priority areas a plus	▪ Credibility to offer expert advice in technical areas

The Delivery Unit in Peru was officially announced by the PM during the annual meeting of business leaders (CADE) in November 2016. In his announcement, the PM shared indicators and targets for social, economic and institutional development, and reinforced the administration's commitment to meeting those targets by 2021. The Delivery Unit was presented as a vehicle to enable the achievement of results, a key mechanism to help government deliver.[37] The DU was named *Unidad de Cumplimiento del Gobierno* (UCG) and formalized in the national government's organizational structure in January 2017.

Three main lessons emerged from the experience of setting up a Delivery Unit in Peru, one related to structure, one related to function and the other to capacity:

Positioning the DU at the heart of government and in the edge of formal hierarchy

Focusing on tangible outcomes requires profound technical and cultural shifts in government. These changes are difficult to spread all at once, especially when people in authority positions are constantly rotating. In Peru, like in many places around the world, there is high turnover in almost every level of government. The half-life of a Minister is around one year. In the last administration (President Ollanta Humala), there were five different Prime Ministers in the first three years, and a total of seven over the five-year mandate.[38] Careers in public service are loosely structured, with many working under

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[37] Prime Minister's announcement of UCG during CADE meeting. Retrieved from http://gestion.pe/politica/zavala-anuncio-que-unidad-cumplimiento-gobierno-operara-desde-1-enero-2017-2176074 on February 24, 2017.

[38] Retrieved from http://peru21.pe/politica/ana-jara-rene-cornejo-pcm-listas-fotos-2192987/5 on February 24, 2017.

temporary contracts. Ministers can be removed by Congress, which is now in its majority opposition to the President. High turnover rates in authority positions may threaten the quality of delivery efforts and jeopardize continuity of the delivery agenda.

To safeguard against political instability, it is critical to link the DU very tightly to the system's top authority, whose position is at least in principle more stable. The direct relationship to the top of the hierarchy is also critical to empower the Delivery Unit and enable its work. When public service workers know that demands stemming from the DU are in fact made on behalf of the top authority (e.g. President and PM), their incentive to comply is strong. The same principle could apply to different levels of government: if a Delivery Unit was established in a municipality, a direct link to the Mayor would be essential.

Operating in parallel to the formal line of command means the DU does not have formal authority over public officials. Still, the straight connection to the top of the system's hierarchy provides political clout to the DU, which can be leveraged wisely to influence behaviors. When positioned in the edge of formal hierarchy and at the heart of government, the DU has the potential to become an effective catalyst for change, a vehicle for amplification of the top authority's power and fulfillment of his/her agenda.

Focusing on large scale outcomes through systemic reform

In Peru, like many other places, government committees focused on strategy, planning and policy abound. The outcomes of meetings are often decisions to hold further meetings, leading to long cycles of planning and deliberation. Delivery Units assume an opposite logic. Their sole purpose is to enable achievement of priority goals valued by citizens in an effective, accountable way. Focusing sharply on outcomes has several practical implications for day-to-day decision making. It means prioritizing few critical issues rather than diluting efforts; getting rid of input and activities that have limited impact on performance indicators; focusing on data rather than subjective opinions; holding honest conversations to really drive improvements rather than avoiding conflict.

The experience of Peru reinforces the importance of designing the DU for results. Since its inception, the core mandate of the DU has been to enable tangible outcomes. The Head of the DU, a former CEO of a prominent company in the mining sector, brings strong management acumen and ensures every action is justified by its potential impact on key performance indicators. The relentless focus on outcomes is a significant departure from the traditional mindset in government, and a critical success factor for the Delivery Unit. Contrary to monitoring, compliance or auditing units, which tend to focus on whether plans are followed, the Delivery Unit essentially asks what it will take to meet ambitious goals. It synthesizes and interprets data rather than just aggregating information about performance; it takes ownership for delivery rather than just activities.

A key implication of the strong emphasis on outcomes affecting citizens at scale is the need to promote systemic reforms. If delivery becomes about narrow results with a series of fragmented actions, lasting change to many is unlikely. In Peru, priority areas were defined broadly (e.g. public health, education, water and sanitation) and success was defined clearly within each of those areas. Adopting a systemic, outcome-oriented view of the Delivery Unit's functions positions it favorably to bring about real change in citizens' lives. While systemic reforms are pursued at the strategic level, it is useful to also incorporate methods of continuous learning and improvement to test and refine policy/programmatic solutions on the ground. Techniques geared towards process improvement and efficiency gains can enable early wins which then expand the design space for deeper reforms. Combined, systemic reforms and incremental operational gains hold greatest potential for bringing about fundamental change.

The Delivery Unit is as good as the capacity of its people

Above and beyond the structure and positioning of the Delivery Units in government, their ability to bring about change ultimately depends on the team's quality. Talent, knowledge and skills ensure effective day-to-day decisions, which in turn cumulatively lead

to better outcomes. Delivery Units can be compared to "engine rooms" of government, where intelligence is applied to understand complex problems, develop sensible solutions and drive for impact. Without the necessary combination of skill and will in the Unit, the government machinery will operate as usual, no matter the organizational arrangements.

Although many professional characteristics are desirable, four areas proved critical to the success of the DU team in Peru: analytical thinking, project management, problem solving and relationship building. Analytical thinking is crucial to enable accurate understanding of reality. The team must be able to make sense of data, break it down in logical ways and interpret it meaningfully. Insight from analysis can then be translated into coherent actions and course corrections that maximize the potential for impact. In government, policies and programs often result more from a circumstantial collection of ideas than deliberately crafted strategies. The difference between one and the other fundamentally lies in people's capacity.

Equally important for the DU is the ability to manage implementation and remove barriers to success. This means providing the necessary support to the work in Ministries while at the same time challenging everyone involved in the delivery effort to do better. Especially in resource-constrained settings, like Peru, project management and problem solving skills are widely lacking. The Delivery Unit plays a key role helping fill those gaps while at the same time building capacity across government.

Finally, the experience in Peru corroborates that the DU team must excel in building relationships. At the end of the day, organizing government for delivery is about influencing behaviors and mobilizing people to embrace change. Although technical abilities are necessary, they are not sufficient to determine success. The DU needs to master the art of influencing without authority, managing conflict in a principled way and nurturing mutually beneficial relationships. In Peru, as the DU work progressed, the team increasingly gained credibility and informal power. While in the beginning the DU was met with skepticism and

resistance by some, the team became increasingly sought after as Ministry officials realized the DU's ability to influence, make them look good and follow through relentlessly. Without highly capable, ethical people, it would be impossible to build the DU's brand and realize its mission.

Setting up the Delivery Unit is one of the initial steps in organizing governments for delivery. The Delivery Unit ensures steady focus on outcomes, amplifies authority, facilitates systemic reform and promotes the spread of new tools, processes and culture. Once this foundation is in place, it is key to understand current strengths and weaknesses across the system. The capacity review, discussed in the next section, provides a framework for such analysis.

Reviewing current state capacity

The delivery planning process starts with a review of government's capacity to deliver on its priorities. The capacity review is a rapid, yet thorough assessment against the 15 elements of the delivery framework (shown in appendix 1) that enables understanding of how well the system is currently performing in core requirements for successful delivery. Conducting a review of this nature requires an investment of time by the DU and leadership team. However, one of the basic principles of the capacity review is its focus on reaching accurate insights fast. While some conventional assessment processes may take months, or even years, to be concluded, the capacity review is designed to be run and finalized within a few weeks. Rather than pursuing perfection and great detail, the capacity review aims to identify the 80% most relevant issues affecting the system in 20% or less of the time usually required to reach conclusions (Barber et al., 2015). This allows for valuable insights with minimal time commitment by top authorities – usually no more than three hours per senior leader, and no more than two hours from most other stakeholders.

The main purpose of a capacity review is to help system leaders understand what it would take to achieve their goals. It identifies key gaps and strengths that can inform

planning and continuous improvement processes, and provides a useful baseline against which progress can be measured over time. The reviews also serve the purpose of educating political leaders and public officials on the "delivery approach" and operating principles of the Delivery Unit. This (often implicit) purpose is especially relevant when the capacity review is conducted at inception stages, as in the case of Peru. Securing strong political buy-in from influential stakeholders early on is particularly important to ensure quality in subsequent planning and implementation activities.

An effective capacity review is grounded both on an appraisal of existing documentation and fieldwork to understand system strengths and areas of improvement. The review combines quantitative and qualitative evidence, internal and external perspectives to create a full picture of the current state of delivery. The outsider's view provided by the Delivery Unit is instrumental to minimize potential biases of those embedded in the system. In addition, a defining characteristic of capacity reviews – which sets them apart from auditing and compliance processes – is the focus on building a shared understanding of delivery, rather than evaluating performance. This is only possible through open, transparent dialogues between all parties involved in the process: system authorities, staff, Delivery Unit and potential partners. From capacity review set-up to final reporting and follow-up, clear communication about the purpose of the process, expected outcomes and limitations is key to success.

The main output of the capacity review is a report to be presented to the system's top authority. The report typically contains ratings against each Delivery framework element, rationale for judgments and a set of recommended actions that can improve the system's overall capacity to deliver on its goal(s). Ratings are ultimately defined by the Delivery Unit team on an iterative process, which involves reviewing the evidence and building consensus. Although this exercise inevitably involves some degree of subjectivity, DA's capacity review rubric (see sample in appendix 2) helps minimize it by laying out

explicit parameters for what good and bad performance look like in each review element. The rubric uses a four-point scale to encourage participants to take a stand and avoid convergence to the median in self-assessments.

Although judgements and ratings provide a useful anchor for the review, the dialogues that lead to them are just as important. In these conversations, system leaders may engage in a rich self-discovery process, which ideally motivates them to act upon identified areas of attention. Recommendations contain practical actions that system leaders, the Delivery Unit and other stakeholders should take to strengthen delivery. More important than offering a set of recommendations, however, is ensuring commitment from leadership to follow through on those recommendations. A successful capacity review report is a living document, used frequently to inform future steps, and updated regularly to account for the dynamic nature of delivery work.

The capacity review for the health priority in Peru took place in November 2016. In parallel, reviews were also conducted for the education, water and sanitation, formalization and security. The process involved four sequential work streams: preparation, execution, analysis and reporting. The preparation phase involved a series of arrangements to enable and streamline the assessment. This included logistical, political and substantive tasks. Engaging stakeholders was a critical first step. Jointly with the UCG team, I met with leadership in the Ministry of Health to share the purpose of the review, define roles and get their support in blocking time for interviews and focus groups, facilitating connections to frontline workers, and providing access to background information. Next, the review team engaged in the logistical work of building the schedule for data collection, analysis and reporting. Finally, an important substantive activity was to assemble a fact pack with relevant background information about structure of the health system, history of reforms, current activities and performance data. This ensured that the review team was well-equipped with contextual knowledge and ready to make efficient use of time.
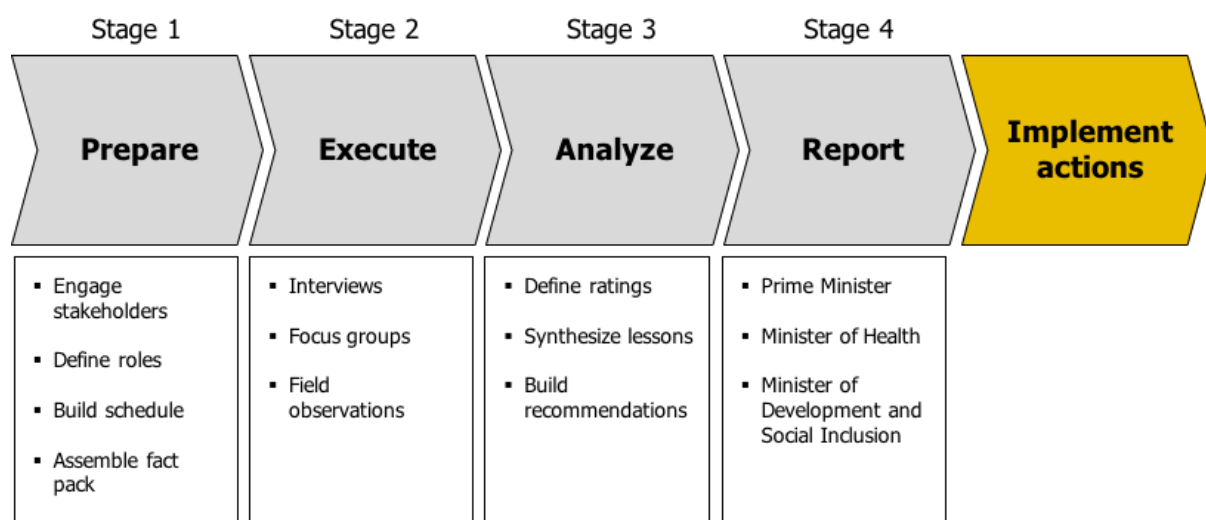
During execution phase, the team engaged in qualitative data collection through interviews, focus groups and observation. Interviews and focus groups (also known as leadership self-assessments in the delivery method) were conducted with system leaders in the Ministry of Health (MINSA) and Ministry of Development and Social Inclusion (MIDIS). In this process, the review team spoke with Vice-ministers, Program Directors, Chiefs of Staff and Senior Advisors. Participants were encouraged to identify strengths and weaknesses in the system's current capacity to deliver on its goals, and justify their positions with concrete evidence. The review process also included site visits to the regions of Arequipa and Loreto, in which the team interviewed Regional Directors, Municipal Managers and Facility Managers, and observed implementing agents at the point of service. Located in the mountains and in the jungle, respectively, these two regions were selected to provide a broader perspective around the challenges and opportunities of delivering healthcare and public health services in the country.

Armed with quantitative data from the fact pack and qualitative data from interviews, focus groups and field observations, the review team then engaged in the analytical phase of the work. This involved working sessions in which the team discussed the whole of evidence and reached consensus on ratings (and their rationale) for each of the 15 delivery elements. The next step was to synthesize lessons learned and develop concrete, executive recommendations. In this process, the team sought to understand the overall story underlying the evidence by identifying themes that emerged consistently and common root causes that cut across individual categories.

The resulting product of the capacity review was a concise presentation deck that described the process, presented its main results and laid out recommendations to address key challenges and improve the health system's capacity to deliver on the government priorities. The last stage of the work was to present this product to the Prime Minister, Minister of Health and Minister of Development and Social Inclusion, and get their

commitment to implementing recommended actions. Reporting to the Ministers was done briefly during the first delivery planning workshop, in the presence of other public officials. Reporting to the Prime Minister was done in a private meeting with the UCG team, in which insights across areas were consolidated and cross-cutting recommendations were presented. Figure 22 illustrates the main stages of the capacity review in Peru and activities in each of those stages.

Figure 22 - Stages of capacity review in the health priority

Stage 1 Prepare	Stage 2 Execute	Stage 3 Analyze	Stage 4 Report	Implement actions
■ Engage stakeholders ■ Define roles ■ Build schedule ■ Assemble fact pack	■ Interviews ■ Focus groups ■ Field observations	■ Define ratings ■ Synthesize lessons ■ Build recommendations	■ Prime Minister ■ Minister of Health ■ Minister of Development and Social Inclusion	

The capacity review of the health priority revealed both strengths and opportunities for improvement. One of the positive highlights was that the ambitious aspiration of improving public health was followed by commitment from regional and local governments to prioritizing progress on anemia and chronic child malnutrition. This is key in a decentralized political system, in each progress depends on concerted decisions across government levels. However, while the broad aspiration was a unifying factor, the review also found that there was no single vision guiding the system. Public officials in the Ministry of Health, regional and local governments diverged in their views of what the system was trying to accomplish.

Like in many governments around the world, the functions of policy development and implementation were mixed in the health system. While project management tools have

been developed in recent years and some regions have strengthened focus on monitoring, there were no dedicated teams whose core mandate was to manage the process of implementation. Delivery activities were specific to each program, which made it hard to understand system performance.

There was a wealth of data available in the system – over 350 IT systems in the Ministry of health alone. Recent improvements in interoperability have expanded analytical possibilities. However, one recurring challenge was that data usually provided isolated snapshots of specific projects rather than a consistent, systemic tracking of key performance and process indicators over time. Data was also fragmented by population groups, as different population segments were eligible to different services in different sub-systems. There was limited understanding at the Ministerial level about segments of society who do not use the public health system and about other sectors that heavily determine health outcomes (e.g. water, income). Gaps in data integration and utilization compromised managers' ability to make informed decisions and promote changes. For instance, health facilities received limited, untimely feedback on data analysis done at central level and therefore could not identify improvements opportunities.

The capacity review identified implementation routines as an important area of attention. Although at programmatic level routines were established, they were focused more on activities and analysis of problems than on outcomes and problem solving. The system also struggled to maintain focus amid a constant flow of new interventions that commonly detracted attention from key priorities. The challenge of continually building momentum was augmented by high turnover rates of health workers, especially at local levels, due to uncompetitive salaries and fragile human capital strategies. Finally, the review surfaced important risks to delivery associated with stakeholder engagement. While progress has been made towards building a coalition within the health system, there was

limited engagement of stakeholders outside system's boundaries who heavily influence outcomes (e.g. education, agriculture).

The assessment results suggested that health system leaders should focus on four key areas of work to strengthen delivery capacity:

- Focusing sharply on key priorities:

  - Developing a shared understanding about what the main goals associated with the broader government agenda are and how progress towards these goals can be measured.

  - Making sure that the criteria for prioritizing actions consider their potential impact on goals and indicators.

- Strengthening the implementation function:

  - Creating a dedicated team at central level whose core responsibility is to manage implementation.

  - Ensuring this team is highly capable and empowered to work across programmatic areas.

  - For each prioritized strategy, making sure that the chain of actors (and the relationships between them) is well mapped and that weak links of implementation are identified and addressed.

  - Establishing routines to monitor progress, and mechanisms for systematically identifying, prioritizing and addressing implementation problems.

- Streamlining data systems:

  - Integrating data systems to enable longitudinal tracking of key indicators while in parallel simplifying operational processes to ensure health workers have more time to provide care and counselling.

- Making sure information collected in the field is used to inform the design of interventions, solve implementation problems and improve overall system capacity.

▪ Engaging people within and outside the system:

- Considering alternatives to motivate employees (e.g. salary structure, career progression) and build their skills (e.g. training opportunities) to deliver on priority goals.

- Identifying and securing strong buy-in from a set of influential stakeholders (some of which are likely from other sectors) who can champion the system's efforts, especially when roadblocks arise.

The capacity review in health enabled three key lessons:

<u>The reflection gap</u>

One of the elements assessed during the capacity review involves a meta-question: how frequently and how well does the system deliberately reviews its capacity to drive progress against aspiration? The main rationale for assessing the system's performance in assessing its own strengths and weaknesses is that such reflection exercise, when conducted regularly and effectively, can inform improvement actions. The review process in health and other priority areas showed that engaging in reflection systematically and systemically is rare. In the health priority, we found that reviews are often done ad hoc, with limited scope and a focus on activities rather than performance. Information collected on the field is frequently used for reporting, rather than informing continuous capacity improvement.

The scarcity of reflection identified in the capacity review can be interpreted as a symptom of a deeper structural problem: government's limited ability to learn, adapt and grow (Senge, 2006). In part, this can be explained by the sheer volume of work that public officials bear. In interviews and site visits, it quickly became clear that many people in the

system are overworked. The urgency of getting through the day and constantly rushing to meet deadlines leaves limited space for stepping back and taking stock. A possible alternative explanation, however, is disorientation and fear of what reflection may unearth. Health system challenges in Peru are numerous and deeply entrenched, and their repercussions severe. Confronting these challenges with an open heart takes courage, especially when each person's ability to influence results is limited.

Whatever the explanation, the limited time and energy devoted to assessing the state of delivery in the system seems detrimental. The experience in Peru validates the premise that it is possible to achieve useful insights to orient improvement actions with minimal time commitment from system leaders. The question of whether to prioritize such kind of assessment on a regular basis then becomes less technical and more political and ethical by nature. It essentially depends on how wiling people are to hold honest dialogues, and to what extent public officials are ready to embrace bad news as opportunities to do better for the citizens they serve.

The capacity review experience in Peru suggests that beyond technical insights that emerge, one of the biggest values of the process is the cultural message it sends. The review encourages people to consider openly and earnestly where the system is and what it needs to do next. To that end, focusing on the system rather than on its people seems like a critical design feature. If people take challenges personally and get defensive, qualitative information can be incomplete or skewed. If, however, people are invited to "go to the balcony" (Heifetz, Grashow, & Linsky, 2009), and appreciate the system with a degree of personal detachment, then an more accurate picture can emerge and effective responses to problems can be identified.

Navigating the unknowns

Capacity reviews have the ambitious goal of generating actionable insights on complex systems in a short period of time. The challenge is compounded by at least two

other constraints. First, those conducting the review can come in with limited knowledge about system's history, activities and performance. This was exactly the case in Peru, where an external consultant joined a newly formed Delivery Unit team to carry out the activities. Second, reviewers invariably have limited access to information. Given the short preparation window (2 weeks, in this project), it is unfeasible to map out all relevant relationships between stakeholders, or understand all activities being undertaken by each of them.

The impracticality of rapidly developing a deep understanding the system means that some degree of ignorance is given. This seems like an obvious statement, but dealing with the anxiety of not knowing enough is very challenging in practice. The experience in Peru demonstrated how easy it is to get trapped into all the unknowns. At times interviews were confusing; in other instances, the team received conflicting perspectives and had a hard time making sense of reality. In a context where information is so imperfect, there is strong tendency to default to the lowest common denominator and avoid difficult issues. The real question at the heart of the capacity review process, however, is how to maximize learning and quality of recommendations amid tight constraints and numerous unknowns.

Maximizing learning and quality involves a clear trade-off between thoroughness and speed. Placing too much emphasis on the former may prolong the process and slow down the pace of delivery; focusing exclusively on the latter creates a risk of missing important information. Balancing the two effectively seems to be a cornerstone of effective capacity reviews.

The experience in Peru showed that navigating unknowns in the assessment process requires reviewers to truly listen, both analytically and musically. Listening analytically means engaging in reflection in real time, seeking common themes, connections and root causes. The search for meaning permeates all capacity review activities, from data collection to consensus building on ratings and reporting to system leaders. The opposite of listening analytically is accumulating facts. One concrete example of the distinction between the two

was the finding that multiple technology systems led to unnecessary administrative burden and compromised quality of care. The raw information gathered from key informants in the Ministry was that there were more than 350 IT systems in the organization, and several professionals dedicated to their maintenance. On the other end of the spectrum, local managers reported that almost 60% of face time with patients was taken up by administrative tasks such as filling out forms. Listening analytically in this case meant combining the two pieces of evidence to probe for root causes and explore potentially effective solutions. One concrete recommendation that emerged from this process was to consider streamlining information systems and simplifying administrative processes to open more space for frontline workers to deliver health services to the population.

Generating insight in the capacity review also requires "listening musically" – deriving meaning from the unspoken, interpreting the subtext, and moving beyond the rational discourse to sense underlying values and stakes that people bring to the conversation (Heifetz et al., 2009). In the context of the capacity review in Peru, sometimes that meant interpreting refusal to engage, or the urge to speak. Being able to listen for "the song underneath the words" (Heifetz et al., 2009) seems critical in running a capacity review, and more generally in mobilizing people to change.

Finally, a key practical lesson to deal with unknowns and maximize the value of a capacity review is to synthesize sharply. A helpful question to guide this process can be: what is the main story being told and what are the implications for action? Thinking deeply about this question can help the team filter relevant information and find common themes. In this project, the team found it useful to combine challenges with having a dedicated implementation team, detailing operational plans and monitoring performance into a single recommendation around strengthening the delivery function.

Capacity reviews are not about perfection. By the time an exhaustive assessment is over, reality will probably have changed. Capacity reviews are about developing compelling

executive recommendations based on high-leverage opportunities. Doing this effectively requires being comfortable amid uncertainty and confusion, and simplifying complexity to identify concrete next steps that can facilitate progress.

<u>From recommendations to action</u>

Reporting to system leaders is often considered the final capacity review milestone. Indeed, sharing recommendations marks the conclusion of the diagnostic process and lays out the road ahead. However, as the capacity review diagram (Figure 22) indicates, unless recommended actions are implemented, the whole process becomes an interesting thought experiment at best. The ultimate measures of success of the review process are the system capacity it helps create, and the impact to citizens that follows.

Despite the simple logic of the argument, bridging recommendations and actions can be challenging in practice. This was the case in Peru, where the team felt limited connection between the knowledge generated in the process and subsequent actions by the Unit and Ministries. The results were clearly positive in terms of establishing a useful baseline which the DU team can come back to in order to benchmark performance. The review also helped expand awareness about the "delivery approach" across government, and secure buy-in from key stakeholders. Whether the buy-in that the review team perceived was superficial or in fact signal deep commitment is an open question to be assessed ex-post.

Several hypotheses can be articulated as to why it was difficult to ensure capacity review recommendations were followed through in this project. First, it is possible that many of the key issues facing the system were in fact addressed in the next steps of the Delivery Unit. Detailing operational plans, for instance, was an integral topic of delivery planning workshops held in December 2016. So was the recommendation of strengthening routines, something the UCG team initiated in late January 2017 in collaboration with the Ministry of Health and Ministry of Development and Social Inclusion. Given that the main bottlenecks at the inception phase were so closely aligned with the DU's next steps, it is conceivable that

the necessary actions have been organically implemented. This hypothesis implies that capacity reviews can be tailored in content and format according to the system's stage of implementation. At early stages, as in case of this project, the assessment can be streamlined to capture major themes and simplify recommendations, while serving the important purposes of orienting the DU team and helping build key relationships. Conversely, in systems where implementation is more advanced, the review can be technically more thorough, as progress may hinge on nuances.

In part, it is also possible that the disconnect between recommendations and actions was rooted in the DU's limited capability during start-up phase. With only four team members by December 2016, it was challenging to balance the need to follow up on review recommendations with the imperative to establish the necessary relationships and make a strong push for implementation. Ensuring that the DU team and accountable leaders have the necessary bandwidth to follow through on recommendation can help derive full value from the capacity review process.

Another potential explanation is that the turbulent context surrounding the capacity review in Peru impaired the ability to follow through on recommendations. While the capacity review was carried out, several corruption allegations were emerging, many of which involving prominent political figures. In this context of instability and civil unrest, system leaders may have found it hard to focus attention on capacity review results. Indeed, reporting to Ministers was done in a short exposition during a delivery planning workshop, and reporting to the Prime Minister involved a quick overview of results and recommendations across priority areas. The main implication of this hypothesis is that it seems important to consider the timing of implementation of a capacity review carefully. Unless there is built-in time for reporting and taking stock of follow-up actions from the outset, it can be hard to realize the review's full potential.

Finally, it is possible that team was reluctant about the accuracy of the insights generated and therefore did not push hard to connect recommendations to actions at that stage. Since ratings and recommendations were to a large extent based on qualitative analysis and reflective of subjective opinions, there was a risk that some ideas were commonplace or superficial (e.g. need to communicate better and engage stakeholders), and therefore not well suited for a full report to system authorities. Regardless of whether this proposition holds, there is an important lesson related to the depth of investigation. To maximize relevance, it seems critical that the review team constantly checks whether the analysis is leading to insight that top authorities will care about.

From inception to reporting, the health system capacity review in Peru took less than 4 weeks to be concluded. Despite its short duration, the process provided a helpful picture of the system's key strengths and weaknesses, as well as useful guidance on practical next steps to improve performance. Beyond technical insights, the review also served to inform key stakeholders about the "delivery approach" and engage them in the work. The main challenge identified was how to ensure recommendations were acted upon. This section discussed some hypothesis to explain this finding and implications for capacity review design and execution. The next section discusses the essential leadership work of building a guiding coalition, without which the task of bridging political promises and outcomes to citizens would be made unfeasible in a democratic context.

Forming a guiding coalition

Improving citizens' lives at scale is a massive undertaking, which necessarily depends on collective action. Change in complex socio-political systems is only possible when a critical mass of people, with the right types of formal and informal authority, come together to work towards a shared goal. Such small group of change stewards can be called a guiding coalition (Kotter, 1995).

Forming a strong guiding coalition is a key foundational step in the "delivery approach" for a least three reasons. First, incorporating new delivery principles and tools in government requires concerted efforts across the system. Using health as a case in point, at the top of government hierarchy it is necessary to build agreement on indicators, targets and strategies. At the same time, it is key to influence behaviors of frontline workers who ultimately interact with service beneficiaries. A guiding coalition helps create the necessary cohesion across the system in terms of what it is trying to achieve and how. Second, a guiding coalition helps mobilize important resources and remove obstacles to advance the work. This can take various forms, from securing budget for activities to supporting legislation or promoting administrative changes. Lastly, the delivery mindset can disrupt traditional ways of working, creating winners and losers. This means the change process is constantly subject to threats of opposition and resistance. A guiding coalition can be instrumental in shielding the work against opposing forces. The coalition must be formed early on though, so that its members are ready to collectively withstand the pressure when problems arise.

Some people are natural coalition-builders, who excel at quickly identifying and tapping into the relational resources they need to make progress in difficult challenges. For many, however, a framework for action can be a useful guide. Rodriguez and Barber identify three sequential steps in forming a guiding coalition: identifying the coalition, engaging its members and relying on them to support the work (Barber et al., 2015).

To identify the guiding coalition, a useful approach is to first consider what the system is trying to accomplish – and then work backwards to recognize who should be brought onboard. According to Kotter, there are four main criteria for selecting who should be part of the guiding coalition (Kotter, 1995). These criteria represent different types of power, that together allow the right combination of clout to enable outcomes.

- Position power: individuals that, if let out of the process, are in authority positions to block the change process.

- Expertise: people with the breadth and depth of knowledge, skills, perspectives and experiences that are relevant to the work.

- Credibility: individuals with high reputation, particularly in relevant circles of influence, that ensure ideas are taken seriously.

- Leadership: people who are adept at mobilizing people to make progress in difficult challenges. Regardless of positions of authority, these people play a key role building a vision, translating ideas into action and embedding change.

Engaging a guiding coalition and relying on them to support the work can be done in a variety of ways, depending on context. Interactions can vary from informal conversations to formal meetings, from one-on-one check-ins to group deliberations. In terms of substance, the exchange among coalition members may also vary depending on need. Sometimes members may need help removing obstacles to implementation. In other instances, they may need access to stakeholders, or advice in tough collective decisions. No matter the form of expression, the important underlying principle is that strong connections are maintained to support the delivery work, particularly in trying times.

In Peru, the establishment of guiding coalitions began from day one in the DU's office. In the context of this project, it is useful to consider two levels in which a guiding coalition was needed: overall government aspirations and specific priority areas. The first refers to the broad campaign promise of social, economic and institutional development, later reinforced in the President and PM's inaugural speeches. The second relates to the commitments made in each of the seven priority areas. The distinction is helpful because nature of tasks – and thus members – are different across the two levels.

The guiding coalition supporting the UCG's mission of advancing the broad national vision essentially consisted of the President, PM and Head of the UCG in its innermost circle.

The President and PM have provided legitimacy and credibility to the delivery work, and facilitated access to counterparts in different sectors. The British Embassy in Peru also played an instrumental role mobilizing resources to enable the work in its initial stages and facilitating meaningful connections. On the other hand, the coalition backing advancement of each priority area initially included relevant Ministers and top public officials in addition to the UCG team. These members removed roadblocks for delivery planning, and provided critical insight on how accelerate the work and maximize chances of success meeting targets. In both cases, coalition development has been an ongoing work. As implementation gets underway and new challenges arise, it is likely that more stakeholders will be engaged.

As an external adviser in the incorporation of the "delivery approach" in Peru, I could analyze the foundational work of forming guiding coalitions with a privileged perspective. After the initial visit in October 2016, I developed two recommendations to inform the establishment of guiding coalitions in Peru:

- <u>Ensuring President and PM's backing of the Delivery Unit from the outset</u>: Given the country's political system, the DU is best understood as a vehicle to leverage the President's authority and ability to deliver on his promises. The DU reports directly to the PM, the primary political sponsor of the Unit. However, having the President's continued support is instrumental, especially to navigate political challenges and transitions over the course of the five-year mandate. The PM plays a central role overseeing implementation, helping remove barriers to success and securing sustained political support from the President and other top government officials. Ensuring that both the President and PM are personally invested in the DU's work is critical to achieve results, especially when roadblocks arise. Having visible commitment from the top empowers the DU team to coordinate across sectors and drive top priorities.

- <u>Building alliances with leaders in Ministries that are willing and able to work with the</u>

<u>DU team on initial projects:</u> Finding champions in Ministries that are willing to work with the DU and have capacity to drive improvements is a good way to build credibility. These early adopters are important members of the DU's guiding coalition. Helping them fix a problem and showing concrete results will generate supporters and help establish DU as a trusted partner across government. When liaising with Ministries, it is key for the DU to play a collaborative role. Resistance can be minimized by readily signaling the intent to partner rather than taking over Ministry roles. Giving credit to coalition partners and celebrating success can help the Unit to continually build momentum.

Three key lessons emerged from the work of forming coalitions for delivery in Peru:

<u>Building trust</u>

Coalition building is a foundation of the "delivery approach", without which change is unlikely. In turn, trust is the foundation of coalition building, without which relationships are unsustainable. In Peru, delivery of health care and public health services depends heavily on concerted efforts by national, regional and local governments. Each has a different, yet complementary role to play. Since decentralization policies took effect in the early 2000's, linkages across government levels are not hierarchical, which means getting things done depends more on the quality of relationships than on vigor of command.

The UCG's plans were met with skepticism and resistance by regional government managers when the Unit first presented in their convening. Regional authorities were frustrated from hearing promises of integration and better approaches which never materialized. They felt constantly ignored, and found it hard to trust national government. Mending broken relationships across government levels, and convincing counterparts that things would be different this time around took effort on the part of the Delivery Unit and guiding coalition. The key in the approach was not to verbally persuade people into believing. Instead, the team communicated their values, goals and commitment through

behaviors. Examples of concrete actions that helped build relational capital included showing up early, making space for interactions, always following through on commitments, and incorporating feedback.

The importance of listening to the work of building trust cannot be overstated. A core characteristic of the UCG's approach in engaging with key stakeholders was to consistently balance advocacy and inquiry. Rather than being prescriptive, the team frequently used questions to push counterparts in ministries to come up with their own solutions to the problems they faced. In addition to opening new, creative ways of seeing issues, thoughtful questions were highly effective in building ownership among public officials. More than a manifestation of curiosity, asking questions was a sign of respect. In an organizational culture where being told what to do can often be the rule, asking "what do you think?" can have transformational power. In brings people together, and helps build trust and loyalty.

While the work of building trust was arduous, ongoing, and largely intangible, progress was visible from early stages. One example in health was a pact from all regional governments to reduce anemia levels, agreed upon thanks to the intervention of the Minister of Development and Social Inclusion. While several inter-governmental consensuses on anemia, chronic malnutrition and other public health areas had been achieved in the past, this was the first time that regional governments committed to changing outcomes (i.e. reducing anemia levels in their jurisdictions) rather than outputs (e.g. building infrastructure, supplying health technologies). While a wide distance separates pact from impact, creating a sense of direction across government levels is a vital starting point.

Building trust among stakeholders that can make or break delivery efforts involves an unescapable dilemma of path dependency. New governments inevitably inherit a legacy of relationships that cannot be reset. While such legacy can sometimes be beneficial, it often means grievance and anger which make the work of enabling change harder. One way to

respond to this reality is to complain about its negative implications and shift blame outwards. An alternative, and arguably more productive response is to embrace those constraints and build from where the system is. The experience in Peru showed that acknowledging opposing perspectives and validating people's concerns can be key to creating space for constructive dialogue and collaboration. When people felt that their opinions were valued, they were more willing to support the delivery work – or at least withdraw opposition to it.

Building political capital though technical work

Building a guiding coalition is fundamentally an exercise of influence. This may lead to the assumption that it takes solid persuasion skills to be successful in this work. Indeed, persuasion is an important tool to raise people's awareness and motivate action. Over the course of this project, there were numerous instances where rational, emotional and ethical reasoning were utilized to garner support. Sometimes this took the form of the team narrating real citizen stories to create a sense of urgency; in other instances, it manifested through robust analysis of data and evidence, or a call for doing what is right for the country.

Words are usually the main currency in the center of government. Making promises and articulating policies is so integral to what national government does that it is easy to get stuck in the exercise of persuasion. Building alliances is often done through numerous meetings and social gatherings in which the main agenda is to navigate ideas and ideology. In this context, technical work often gets underrated, seen as an inconsequential activity. Furthermore, political and technical work become disparate, and are often performed by different people.

In Peru, the process of forming guiding coalitions showed that engaging in technical tasks can be an effective means of building political capital. Meetings had clear, results-oriented objectives which were laid out upfront. The connection between these objectives

and the broader delivery endeavor was emphasized, so that people could see the practical relevance of their contributions. Rather than passive listeners, ministry counterparts were encouraged to actively contribute to the work through hands-on exercises and discussions. This does not mean relational aspects were ignored and interactions became mechanic. It simply means the team focused more on implementation than politics.

The executive approach to coalition building adopted by the UCG benefitted the delivery endeavor in at least three different ways. First, it instilled a strong sense of ownership, which in turn helped build commitment. Key stakeholders decided to join the guiding coalition because they helped build the work – and therefore cared deeply about it. Second, the emphasis on getting things done infused renewed hope among those who held the keys to successful delivery. Because interactions focused on decisions, and those decisions were consistently followed through, people started to believe change was possible. Progressively, such hope can transform individual and collective behavior, leading to a cultural change towards optimism and ambition. Third, and equally important, the focus on functionality helped build the Delivery Unit's credibility. Although still in early stages, it is noticeable across government that the UCG is increasingly seen by the public service as a trusted partner with high integrity and a strong sense of urgency.

The UCG's emphasis on technical dimensions of work comes at a risk. Pushing for results can strain relationships if demands exceed existing capacity or are overbearing. Technical pragmatism can also alienate some stakeholders, creating opposition to delivery efforts. As the experience in Peru shows, these risks can be mitigated by effectively balancing technical and relational aspects of work. This insight is consistent with the theory of change in this project, which postulates technical, political and ethical dimensions are key requirements of successful public health (and more generally public sector) reforms. Politics without implementation can be vacuous. Implementation without politics can be unrealistic. Finally, implementation and politics without ethics can be dangerous.

<u>Staying engaged</u>

Forming guiding coalitions is a challenging undertaking, and a key ingredient in change management processes. However, just as important as establishing the coalition is keeping its cohesion and expanding its footprint over time. While there is no single best answer as to how to maintain people engaged, evidence from this project provides indications on effective behaviors.

A hallmark of the UCG's tactics to staying engaged with key stakeholders was the frequency of communications. The team constantly strived for streamlining office tasks to open space for meetings and interactions with key stakeholders. Touching base with supporters was an integral part of the work, rather than a nice thing to do. Interactions were grounded on one key question of delivery: "how can we help?". This ensured constant focus on results and collaboration.

In practice, the UCG managed to stay engaged with its supporters through small gestures, which added up to great significance. A key principle was to reach out not only with requests, but also to acknowledge people's support and get thought partnership on emerging issues. Sometimes the Head of the Delivery Unit would give a quick phone call to appreciate someone's contribution. Other times, the Operations Manager would seek help understanding a problem or consult with a colleague on important decisions. Whatever the format, communications were consistently anchored on goals and what needed to be done together to get there.

Another key enabler of continued engagement of the guiding coalition was the consistency of communications. Particularly at early stages, it was important to communicate clearly what the Delivery Unit was (and was not), what it did and what it aimed to deliver. This was important to create a common sense of direction and align actions. Two concrete examples illustrate consistent communications in practice. First, the Unit's four core functions (planning delivery, monitoring implementation, problem solving

and capacity building) and focus on seven priority policy areas were highlighted in every presentation to stakeholders. Second, the delivery planning process (discussed in more detail in the next section) was constantly anchored on the illustration of a delivery pyramid, which shows how aspirations are connected to indicators, strategies and actions (Barber, Moffit, & Kihn, 2010). The image was frequently used to educate stakeholders on the method and contextualize conversations. While grounding communications on the diagram involved a risk of oversimplification, it helped the Unit to efficiently create the uniformity needed for a coalition to operate. The figure below illustrates the UCG's adaptation of the delivery pyramid.

Figure 23 - The delivery pyramid
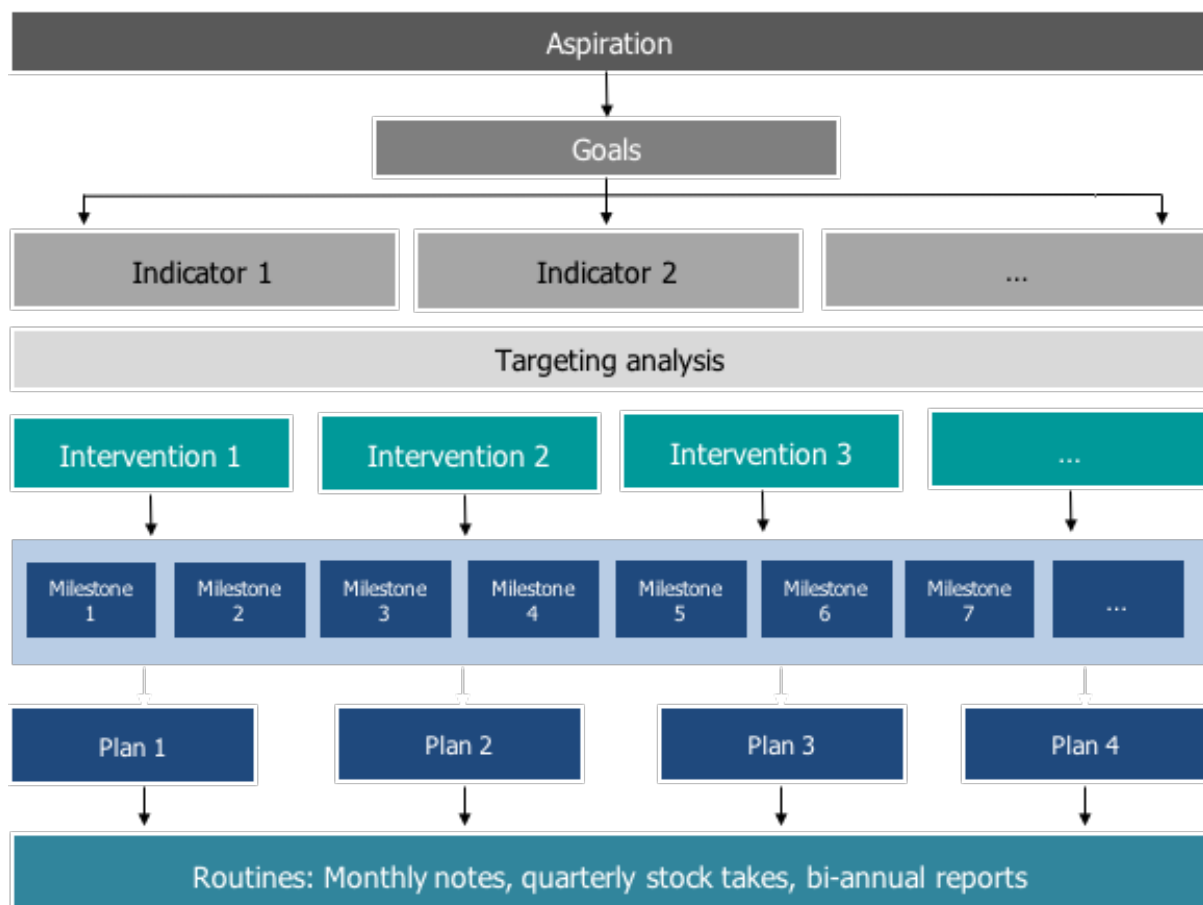
Adapted from: Barber, M., Moffit, A., & Kihn, P. (2010). *Deliverology 101: A field guide for educational leaders*. Corwin Press.

The challenge of keeping the guiding coalition engaged was only beginning by the time this project ended. One important open question is how well the coalition will cope with high turnover rates in government. It may be that interpersonal bonds and relationships of trust are non-transferable, in which case the work must start from scratch once new people take office. It is also possible that some degree of continuity is achieved through referrals, depending on institutional arrangements and the nature of existing relationships between those who come and go. Regardless of how turnover impacts the guiding coalition, the need to constantly nurture key relationships is likely to remain unchanged.

Planning for delivery

Defining the system's aspirations and translating them into concrete, measurable goals and indicators is a critical first step in the delivery framework. A shared definition of success provides an answer to the first question of delivery: "what are you trying to do?". The question that naturally follows is "how are you going to do it?". This is where delivery planning comes into play.

Planning for delivery serves at least three key purposes. First, it enables system leaders to better understand what it will take to achieve success against the goal(s). The planning team is encouraged to consider concrete interventions that enable progress on key performance indicators, the chain of actors that connect strategic intent to service delivery, as well what impact on targets is expected by when. Thinking carefully about operational details, stakeholder relationships and timescales often leads to new insight about the work. Second, the planning process helps create agreement and alignment on key actions needed to drive improvement, and roles that each stakeholder should play. This helps avoid gaps and overlaps in activities due to poor coordination across sectors and government levels. Third, it provides a useful anchor for the Delivery Unit, system authorities and public officials to monitor implementation and evaluate how well the system is progressing. A well-crafted

delivery plan simplifies complexity, makes routines manageable and enables continuous improvement.

Planning for delivery involves three key components: defining the reform strategy, drawing the delivery chain, and setting targets and trajectories. Reform strategies essentially address what can be done that will have the greatest impact on the goal. It lays out the theory of action that explains how and why a given set of actions will lead to concrete improvements to citizens, and details the necessary steps to get there. Delivery chains provide a visual representation of how exactly each strategy or intervention will reach the field at scale. This component includes a map of key stakeholders and their relationships, an assessment of risks and weaknesses along the chain, and opportunities for collecting data to understand day-to-day implementation. Finally, targets and trajectories communicate how ambitious the work is, by when results are expected and how interventions contribute to overall impact.

Planning documents usually abound in government. It is therefore useful to spell out what makes delivery plans distinctive. Two underlying principles set delivery planning apart: focus on outcomes and practicality. Rather than setting overall direction for a broad vision, delivery planning is about sharply demonstrating (based on the best available evidence) how success against concrete goals will be achieved. The reform strategy helps clarify the "how" by describing specific milestones, accountabilities and timelines that collectively form the body of delivery work. Targets and trajectories allow the team to reality-test assumptions about the effectiveness of interventions, and generate short term commitments for performance assessment. In turn, delivery chains show how and through whom changes will happen. Delivery planning is also lean by design. The aim is to create plans that are "detailed enough to be meaningful, yet light enough to drive the work and allow adaptation" (Barber et al., 2015). Rather than striving for perfection, the planning process is meant to

be good enough. This means implementation can start early and the team can learn and improve in rapid cycles.

The approach to delivery planning can vary depending on system capacity and need for coordination. On one end of the spectrum, the Delivery Unit can delegate the planning task to relevant Ministries after providing initial guidance and setting expectations. Once accountable leaders return the draft plan, the Unit can then provide feedback for improvement and ask counterparts to iterate until the product is considered satisfactory. This approach is more likely to work in cases where there is appropriate capacity in sectors to develop high quality plans, and/or there is a need to build ownership and provide ample flexibility. On the opposite end of the spectrum, the Delivery Unit can take on responsibility for writing the plan, working with ministerial counterparts. Arguably, this approach is more likely to work with low-capacity teams, and/or there is a need to role model an example for others to follow. Finally, the middle ground approach is to have the Delivery Unit facilitate the process, providing guidance and supporting to the extent needed. This alternative can be particularly useful in cases where capacity is latent and coordination is important.

Planning for delivery of health priorities in Peru adopted a middle ground approach, with close collaboration between the UCG and ministry counterparts. The process was divided into three stages. First, the UCG team ran a full-day delivery workshop with the presence of key stakeholders in relevant ministries. The purpose of the workshop was twofold: 1) to provide conceptual clarity on key aspects of planning and how they fit into the broader delivery endeavor (i.e. knowing about), and 2) to support the group through the actual planning work (i.e. knowing how). Second, the UCG team followed up with technical teams in the Ministries (mainly Ministry of Health and Ministry of Development and Social Inclusion) in a series of working sessions to refine elements of the plan. Finally, the team worked with top system authorities to get their feedback and validate the plan, which then

became a reference for implementation. The whole process was hands-on and designed to foster an alliance among participants who traditionally worked in isolation.

The delivery planning workshop for the health priority was held in December 2017. Attendees included top officials from the Ministry of Health and Ministry of Development and Social inclusion. The workshop focused on anemia and chronic child malnutrition, as these areas were more advanced in strategy development and therefore ready for fast-track. The overall approach was to maximize participant engagement and exchange by allocating most of the time to interactive exercises. Content wise, the main topics covered in the workshop included defining performance indicators (given the broad aspirations for public health improvement articulated by the President and PM), prioritizing interventions and identifying opportunities for quick wins. Each section had specific outputs and a set of follow-up steps with technical teams. For instance, following the section on portfolio of indicators, ministerial teams were charged with fleshing out their specification, sources and collection methods.

After the workshop, the UCG team worked closely with ministerial counterparts to refine ideas that emerged during sessions. This work involved a series of meetings with subject matter experts who provided feedback and challenge on the appropriateness of decisions made by the group. In this process, indicators were modified, interventions were re-profiled and priorities were revisited based on their potential for impact and difficulty of implementation. A concrete action plan was developed for each intervention, containing milestones, responsible persons and timelines for completion. Action plans included contributions from the two Ministries (MINSA and MIDIS) to the goals, and served as a basis for progress assessment during implementation routines. The final step in the planning process was validation with top authorities. This was done in meetings in which the UCG team and senior officials shared the product of previous stages of work with Ministers and sought their buy-in to the plan.

A portfolio of seven key interventions emerged from the delivery planning process. Most of these interventions were not new – they had been put forth in national strategic plans to prevent and combat anemia and chronic malnutrition.[39,40] The plans did represent a major step forward to the extent that they presented operational details, integrated actions across sectors and laid out a clear model for performance management. While the validation of goals, indicators, targets and actions plans formed the back bone of delivery planning (and represented a milestone for initiating implementation routines), the UCG team also worked to develop delivery chains for interventions and trajectories for key performance indicators. The figure below illustrates the seven prioritized interventions for jointly tackling anemia and chronic child malnutrition.

Figure 24 - Prioritized interventions for anemia and chronic malnutrition

1. **Education and awareness**

2. **Integral child care**

3. **Treatment of children with anemia**

4. **Prenatal care**

5. **Iron supplementation to adolescents**

6. **Pregnancy prevention among adolescents**

7. **Iron-enriched foods**

Source: UCG team.

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[39] Ministerio de Salud: Plan Nacional para la Reducción de la Anemia 2017-2021. Retrieved from http://www.minsa.gob.pe/portada/Especiales/2016/anemia/index.asp on March 6, 2017.

[40] Ministerio de Salud: Plan Nacional para la Reducción de la Desnutrición Crónica Infantil y la Prevención de Anemia en el País. Retrieved from http://www.ins.gob.pe/repositorioaps/0/5/jer/otros_lamejo_cenan/Plan%20DCI%20Anemia%20%20Versi%C3%B3n%20final.pdf on March 6, 2017.

Planning for delivery of better population health outcomes in Peru enabled three key lessons:

The value of the process

One of the core tenets of the "delivery approach" is its emphasis on implementation. Planning for delivery is distilled to essential elements so that the process can be completed relatively fast and the team can learn and adapt from experience on the ground. In Peru, both content and pace of delivery planning were innovative. Existing strategic plans lacked a clear definition of key actions, milestones and accountabilities. Delivery chains, although sometimes implicit, were not used to identify key stakeholders and their relationships in service delivery. And while targets existed for the reduction in prevalence of anemia and chronic child childhood malnutrition, trajectories leading to those targets were absent. With the support of the UCG, technical teams in the Ministry of Health and Ministry of Development and Social Inclusion finalized a delivery plan for combating anemia and chronic childhood malnutrition in a period of 4 weeks using a collaborative, step-wise approach. The adoption of a lean process for delivery planning showed how much efficiency can be gained by focusing sharply on essential elements and maintaining a sense of urgency. The fast pace of planning is consistent with the method's emphasis on implementation. The underlying premise is that no matter how sophisticated the plan, the key to achieving impact lies in more in experimenting, learning and adapting from reality than on exhaustive forecasting.

Part of the goal of delivery planning is to come up with a coherent, comprehensive set of interventions which can collectively move the numbers of key performance indicators. While the experience in Peru reinforces that identifying policy is important (e.g. including actions aimed at adolescents and pregnant women to prevent childhood anemia and chronic malnutrition), arguably the greatest value of the planning process is to increase coordination across stakeholders. Put in a different way, the power of planning seems to lie more on building consensus and defining roles than on developing disruptive ideas on what to do.

The collaborative approach adopted by the UCG in the delivery planning process seemed effective. Facilitated sessions in the workshops provided technical support, which was justified given the limited previous familiarity of public officials with delivery principles and tools. Convening stakeholders for a full day of intensive work also proved effective, as it helped expedite a process that otherwise could have taken much longer. By the end of the workshop, the team had a fairly good idea about who needed to do what to tackle anemia and malnutrition. The group also felt energized to follow through rapidly to finalize details. Many seasoned government officials who participated in the workshop reported that never in their careers they had seen such level of dialogue across sectors. While it was common for people in different areas to engage in joint activities, the strong focus on results and the active participation of top authorities helped set a distinctive tone in the delivery workshop and beyond.

There were risks in the approach to delivery planning adopted in this project. Because the UCG played a protagonist role orchestrating the process, ministerial counterparts who ultimately owned responsibility for results could have disengaged. Asking ministerial teams to come up with their draft plans and then following up as needed could have fostered greater autonomy and ownership. However, given the limited delivery capacity across public service, the choice of hosting a planning workshop seemed adequate. The choice for a one-day event also seemed appropriate, as it allowed the UCG team to provide the right amount of support without overwhelming participants especially at early stages of work. The delivery workshop was arguably one of the first times a planning process among top national government authorities in Peru included shared goals, actions and accountabilities across sectors. The process was a manifestation of the imperative of collaboration, and an important initial step in a cultural shift from a mindset centered on "my sector" to one focused on "our priority".
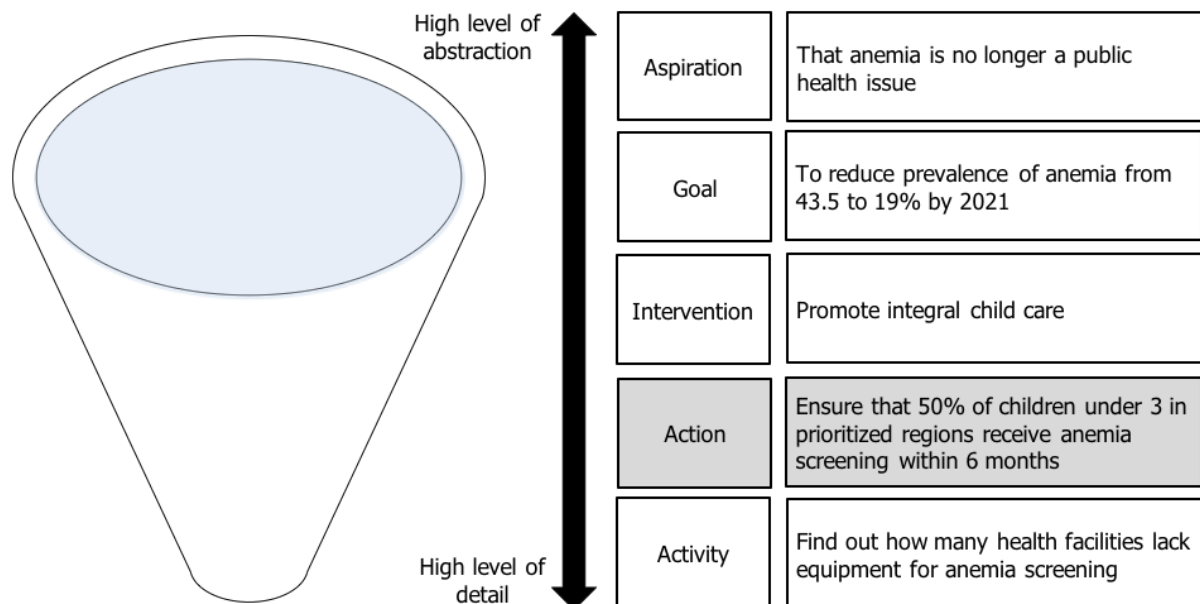
Finding the right grain size

Government goals tend to be wide in scope and scale. As a result, delivery plans tend to involve multiple work strands, each with numerous actions. The sheer size of delivery challenges make it impractical for a small team to manage all that needs to change. In Peru, it quickly became clear that there was only so much the Delivery Unity could cover in the planning process. An important question facing the team was how to strike the right balance between depth and thoroughness. Going too deep into some details could mean adding rigidity and hindering adaptation. On the other end of the spectrum, being too broad could mean overlooking nuances that importantly determine results.

The "delivery pyramid" framework adopted by the UCG to guide the planning process involved an exercise of progressive focusing. Departing from broad government aspirations, the team developed specific goals, indicators and targets at the Ministerial level. From that definition, a portfolio of interventions was prioritized based on potential for impact and degree of implementation difficulty. Next, detailed roadmaps were developed with an emphasis on actions that could lead to quick wins in key performance metrics. Within each action, a vast number of activities could be identified. An important challenge facing the UCG team was to carefully select the optimal level of specification in the planning process. Upon deliberation, the team decided on the following generic parameters: each goal could have a maximum of around 5 key interventions on its portfolio. Under each intervention, there would be no more than 5-8 key milestones of implementation. In practice, that meant the UCG team would monitor no more than 40 milestones (5 interventions X 8 milestones each) in each priority area, which seemed fitting to the size of the team (one full time manager for each priority). As the health priority illustrates, those were not rigid boundaries. In this priority, seven key interventions and 30 milestones were prioritized. In filtering milestones for each intervention, the following guiding question was adopted: "What are the 5-8 things that must happen for the team to feel confident that this intervention is on track?"

Defining planning boundaries and striking the right balance in the level of specification of actions was incredibly valuable for at least two reasons. First, it pushed the team to prioritize the most important elements of the plan – those with highest potential to move the numbers and feasible to implement. Second, and connected to the first, having a manageable set of interventions and milestones helped enable subsequent implementation monitoring. Had the team specified a larger number of actions, it could lose grip over key aspects that determine results. Conversely, had the team stopped at higher levels of abstraction, it could have overlooked actions that importantly drive results. In both cases, the problem is similar: the absence and excess of detail may hamper the effectiveness of implementation routines, and thus the impact of the delivery endeavor. The figure below illustrates this principle with a concrete example from the health priority:

Figure 25 - Levels of delivery planning detail

High level of abstraction	Aspiration	That anemia is no longer a public health issue
	Goal	To reduce prevalence of anemia from 43.5 to 19% by 2021
	Intervention	Promote integral child care
	Action	Ensure that 50% of children under 3 in prioritized regions receive anemia screening within 6 months
High level of detail	Activity	Find out how many health facilities lack equipment for anemia screening

Source: Author.

Doing better within constraints

Public officials are usually all too familiar with planning. In the Ministry of Health in Peru, there are numerous documents describing a range problems and responses to these

problems. While delivery planning certainly shares many commonalities with traditional planning, it is distinctive in many ways. First, it focuses sharply on defining success clearly and ensuring that strategies and actions are tightly connected to that definition. Second, delivery plans are action-oriented, which in practice means they tend to be significantly lighter than traditional documents. Solid delivery plans can be designed in less than 10 pages, whereas traditional planning documents tend to be much lengthier. Finally, the timeframe for delivery planning is shorter than usual. In Peru, implementation started less than two months after the initial planning workshop was held. In contrast, some government agencies traditionally get trapped into cycles of endless planning.

In the delivery workshop, participants from across government sectors were introduced to a new approach to planning. During interactive exercises, the team noted a tendency to default to business as usual. Many of the ideas for intervention that initially emerged were repetitions or slightly repackaged versions of current practices. An important challenge facing ministerial teams was how to do things differently (and better) to achieve substantially improved results. A useful framework to approach this challenge was to have the team consider three action paths: what should be added, what should be improved, and what should be discontinued. By and large, the discussion centered on opportunities to improve on what was already in place, as many felt the tight fiscal space would impede major investments. An important insight related to this observation is that it seemed possible to achieve significant improvement without necessarily investing more resources. A concrete example in the health context was an idea to leverage an existing day care program offered by the Ministry of Development and Social Inclusion to strengthen provision of micronutrients (thus preventing anemia) among disenfranchised children. This could be achieved essentially through better coordination across the Ministries of Health and Development and Social Inclusion.

Another key challenge put forth by the Head of the UCG in the planning process was to define where implementation should start from once a portfolio of interventions was defined. This proved to be a crucial exercise in organizing government for delivery. Given the magnitude of the challenge of reducing anemia in the country, the team could easily get overwhelmed and lose focus had they tried to embrace the whole country at once. During the workshop, teams brainstormed opportunities for quick wins, identifying geographical areas where impact on childhood anemia and chronic malnutrition could be high in a short timeframe. In follow-up working sessions with technical teams, a few health networks within one region were selected as initial targets for action. The rationale for focusing sharply in a few areas was to test the effectiveness of the plan rapidly and create a wider design space once demonstrable results were achieved. Pursuing ways of doing better work and achieving concrete improvements within the existing resource envelope was a key guiding principle in delivery planning in Peru. If successful, this approach could fundamentally shift government's mentality around how to allocate resources. Rather than investing upfront in the hope of getting better results, sectors could start from doing better within constraints, and then justifying the need for investment based on concrete expectations of impact.

Public health links with other priority areas

Public health is a field of study and arena for action in which multiple areas of knowledge and practice converge. From engineering to urban planning, education and economic policy, Public Health spans disciplinary borders. This project provided a unique perspective on the multifaceted nature of Public Health. Although health was the primary focus of this work, the delivery endeavor in Peru involved other six priority areas: water and sanitation, security, formalization, education, infrastructure and anti-corruption. This section explores the interdependency among these areas, and particularly their intersections with public health.

The connection between public health and other areas was sometimes explicit. The

accountability for results was a clear example: The Ministers of Health and Development and Social Inclusion held joint responsibility for results in the health priority. While MIDIS did not directly provide healthcare services, it had a tradition of managing social programs that directly impact poor children and their families. The association between public health and other areas was not limited to formal alliances driving implementation, though. Even in areas where health is not part of the immediate guiding coalition, or does not feature explicitly in action plans, important links exist.

In water and sanitation, there is wide scientific evidence about the association between access to safe water and a range of health conditions, including but not limited to infectious diseases (Prüss-Üstün, Bos, Gore, Bartram, & others, 2008). These conditions directly impact childhood anemia and chronic malnutrition, and therefore may influence key performance indicators. Education is another area in which literature supports a link to health outcomes (Cutler & Lleras-Muney, 2006). Given the strong behavioral component in health-related decisions, education plays a fundamental role shaping what people think, value and do. One concrete example of the association between education and health in this project was the report from key informants on the field that families (especially in remote areas) often resist to adhere to micronutrient supplementation for anemia prevention due to magical beliefs and misinformation regarding use, benefits and possible collateral effects. Health workers stated that a common cause of under diagnosis and treatment of anemia among poorly educated families is their belief that children's quietness (often a symptom of fatigue) is desirable.

Infrastructure may also be an important mediator of health outcomes, and childhood anemia and chronic malnutrition more specifically. Adequate road and pluvial infrastructure may facilitate distribution of critical health resources in Peru (e.g. vaccines, nutritional supplements), thus expanding population access to services and ultimately results. One vivid example of the potential impact of this priority on health was the massive destruction of

rural and urban infrastructure caused by heavy storms that hit Peru in March 2017.[41] One of the many facets of human suffering in this emergency context was the isolation of communities and paralysis of basic health system services.

Formalization and health are also intimately connected. Formal employment in the context of delivery in Peru is defined as coverage of employer-sponsored health insurance. Increasing the proportion of formal workers may immediately generate a negative impact over waiting times for medical consultations due to strains in the social insurance system caused by the higher number of beneficiaries. From an alternative angle, however, bolstering the formal workforce is potentially linked to higher productivity, which may translate into a broader tax base in government. The extra revenue could then be invested towards improving healthcare efficiency (thus reducing wait times) and/or preventing and combating anemia and chronic malnutrition among children.

Citizen security is linked to health in a variety of ways. Domestic violence is a chronic, pervasive problem in Peru, made even more difficult due to underreporting. The problem is so entrenched that, according to key informants, the police workforce often dismisses cases of aggression against women because officers themselves are commonly the perpetrators. The incidence of violence against women may be directly related to pregnancy among adolescents (Garcia-Moreno, Heise, Jansen, Ellsberg, & Watts, 2005), which is integral to the delivery plan in anemia in chronic child malnutrition.

Finally, the fight against corruption may also determine health outcomes through various pathways. At a systems level, grand corruption diverts critical resources that could otherwise be applied to improve population health. In 2014, a study commissioned by an Anti-corruption office found that losses to corruption represent around 2% of the country's

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[41] http://peru.com/actualidad/nacionales/lluvias-peru-impactantes-fotos-que-muestran-magnitud-desastre-noticia-503627 Retrieved on March 11, 2017.

gross domestic product.[42] Diverted resources could be used to build 72 hospitals in the

country, which could supposedly have a direct impact over waiting times for medical

consultations – one of the key performance indicators in the health priority. Petty corruption

may also influence access to health services and therefore waiting times. According to key

informants, bribery at points of care is common practice in Peru. One key informant stated

that bribery has become a "*parallel way to finance the health system*", poor salaries in the

public system and demand levels that by far outstrip service supply.

       The science of systems thinking may provide a useful framework for making sense of

the complex interdependencies between health and other priority areas. One of the core

premises of systems thinking is the inseparable nature of cause and effect relationships

(Meadows & Wright, 2008). While other scientific traditions focus on one-way associations

between variables, systems thinking postulates that if A causes B, then B inevitably

influences A. From this perspective, relationships between phenomena are cyclical rather

linear.

       The notion of cyclical connections between phenomena implies the existence of

feedback loops, which may be reinforcing or balancing depending on the direction of

influence (Senge & Sterman, 1992). A reinforcing feedback loop is one in which the

relationship between two phenomena is mutually reinforcing, so that more of one variable

means more of the other. By contrast, a balancing loop is one in which two phenomena

tend to exert opposing influence on each other, which means more of one variable leads to

less of the other. While the principles of systems thinking can be applied to inform

sophisticated predictive modelling simulations, in the context of this project simple

conceptual visualizations can shed light into the nature of links across priority areas. The

figure below illustrates how some cyclical relationships between health and other

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[42] http://gestion.pe/politica/pcm-informa-que-corrupcion-ocasiona-perdidas-casi-s10000-millones-al-ano-2109443. Retrieved on March 11, 2017.

government priorities may play out in practice.

Figure 26 - Cyclical relationships between health and other priority areas
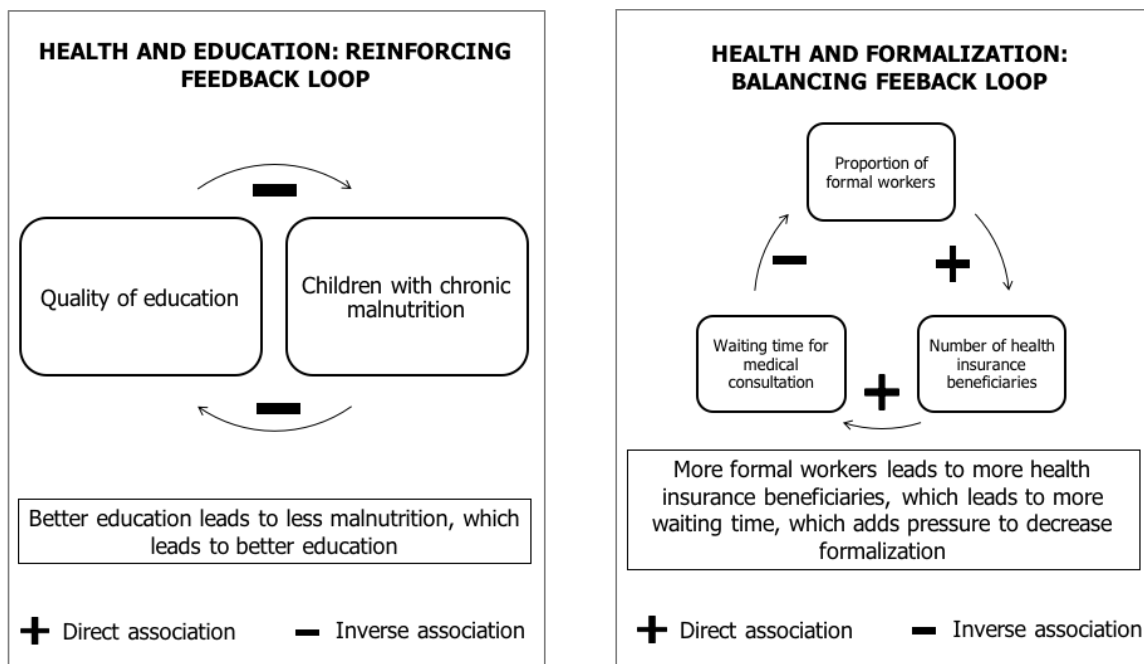
Health and education may form a reinforcing feedback loop. Assuming an inverse association exists between the quality of education and the prevalence of children with chronic malnutrition (and without delving into the underlying mechanism of such association), one can postulate that increases in education quality will lead to reductions in the prevalence of chronic malnutrition. In turn, reductions in prevalence of chronic malnutrition will lead to increased quality of education, thus closing a reinforcing cycle, in this case with beneficial consequences.

An example of balancing loop can be hypothesized in a systemic analysis of health and formalization. First, let's assume a direct association exists between the proportion of formal workers and the number of health insurance beneficiaries. Similarly, let the number of health beneficiaries be directly associated with waiting times for medical consultation. Next, assume wait times exerts downward pressure on proportion of formal workers (which is logical given that access to health services may be a key incentive to formalize, and longer wait means lower access to services). Taken together, these relationships form a

balancing loop, in which increases in the proportion of formal workers tend to be checked by waiting times in the health system.

Systemic analysis may generate useful insights for action. In the case of health and education, a key implication is that investing in education may be an effective entry point for achieving better health outcomes in chronic child malnutrition (and vice-versa). Similarly, making progress in medical waiting times hinges on the way formalization efforts are handled. All else equal, increases in formalization may negatively impact waiting times. If on the other hand the increase in formalization is accompanied by effective investments in health service capacity, waiting times may go down as a result. There is a powerful overarching lesson in these analyses: recognizing relationships and network effects across seemingly disparate areas may enable system leaders to find creative, high-leverage opportunities of improvement, which ultimately translate into concrete results to citizens.

Limitations

This project aimed at understanding which factors determine the Government of Peru's ability to deliver on its promises of public health improvement in the areas of childhood anemia, chronic childhood malnutrition and waiting times for medical consultations. This thesis captures key lessons from experience, and discusses insights for public health leadership and practice. In this section, the main limitations in the project's methodology and findings are examined.

The method adopted in this project for data collection and analysis was largely qualitative and adaptive. Insights were derived from existing documentations, focus groups, interviews with key stakeholders and participant observations. The nature of data sources, collection and analysis may have biased the validity and reliability of findings. From a research methodology lens, this project adopted a pre-experimental design. The lack of a plausible counterfactuals limits the ability to make inferences. As a consultant in the field, the author was unequivocally embedded in the project. This may have biased interpretations

and conclusions of this report. Likewise, the fact that both observers and participants in this project matured with time may have influenced results. It is possible that experiences and lessons along the way shaped people's ideas and behaviors, and thus project outcomes.

Peru was self-selected for this project due to unique political and business circumstances. This may reduce the ability to make valid inferences, as there are no means to verify whether and how the drivers that enabled this project may have influenced its results. The organization of the health priority occurred in parallel with other work streams, which were dictated by a series of circumstances that may have influenced findings of this work. For instance, one can only speculate how health and other priorities interacted, or what would have happened to the pace and quality of health-related activities had work on all other priority areas started simultaneously. Changes in relative priority given to health (e.g. it may have received more attention when work in education stalled) could have shaped results.

The national government of Peru was the only unit of analysis. This means findings from this project may or may not be generalizable to different governments and sectors other than health. Considering that structures, contexts, policies, processes and agents are widely variable across governments and over time, findings of this project may not be transferrable elsewhere. Part of the value of this project lies in the possibility of extrapolating findings to other thematic areas and countries in the Region. This may be problematic, however, because extraneous events over the course of the project may have influenced its dynamics and results. For instance, this project unfolded as Peru went through important political and environmental turmoil. Potential carry-over effects of those events on project findings have not been accounted for. Engagement in the field was limited to a few geographic regions and a small number of participants. It is therefore questionable whether the sample utilized was represented of the national population, let alone the Latin American region.

The methods section laid out a theory of change linking delivery foundations and planning to better public health outcomes. There are several assumptions implicit in that framework. The soundness of project findings hinge on the validity of those assumptions. Below are some key assumptions and potential risks associated with them:

- Central government can influence public health outcomes: the magnitude is questionable, especially considering the decentralized nature of Peru's political system.

- Selected activities are the right ones to organize government: is it possible that some approaches are not optimal, and/or others are missing. For instance, there are known setbacks to target setting, which is integral to the "delivery approach".

- Good organization is a precursor of effective delivery: while this assertion makes logical sense, it is possible that at least some aspects of planning are immaterial, and that implementation routines are the main determinant of results.

Reflections on the theory of change: linking findings to expected patterns

The theory of change underlying this project is grounded on the Delivery framework developed by Sir Michael Barber and team in the original UK experience, and currently adopted by Delivery Associates in many of the company's engagements. The specification of three pillars of public policy (technical, political and moral) throughout the five delivery stages/components introduces a novel analytical angle. The key hypothesis embedded in the theory of change is that by meeting criteria in the framework, the government of Peru will maximize the chances of achieving its ambitious goals of reducing prevalence of childhood anemia, chronic malnutrition and waiting times for medical consultations.

At the intersections between elements of the "delivery approach" framework and pillars of public policy I developed key propositions which represent predicted

patterns associated with positive outcomes. For instance, at the intersection between "develop a foundation for delivery" and the "technical" dimension of public policy (figure 17), the two key propositions are that establishing a Delivery Unit and reviewing the system's current capacity to deliver are directly correlated with improvement of public health outcomes. Even though the project's timeline does not allow an explanatory assessment of results, propositions are explored and contrasted with predicted patterns to illuminate success factors and obstacles to progress. By comparing empirical evidence to elements of the theory of chance, it is possible to shed light into what factors determine successful translation of the delivery approach into different contexts - the guiding question of this DELTA project.

In the first component of the delivery framework (develop a foundation for delivery), the theory of change postulated six propositions. Empirical evidence strongly support their value in government's efforts to improve public health outcomes. Setting up the Delivery Unit seemed critical. Although organizational forms and positioning may vary, the creation of a small, dedicated team whose core mandate was to drive implementation of policy priorities was a fundamental step. The Delivery Unit helped maintain focus on government priorities and coordinate actions across sectors that otherwise would operate in isolation. Most importantly, the managerial capacity and relationship skills of Delivery Unit team members promoted a progressive cultural shift towards greater emphasis on results and meaningful collaboration.

Conducting a review of the system's capacity to deliver also proved beneficial, despite technical limitations. That the review was conducted by people with limited

previous exposure to the system and concluded in a few weeks prevented deep technical insights from emerging. It is possible that at least some of the recommendations simply confirmed authorities' views on strengths and challenges facing the system. Nevertheless, the review played a key role expanding awareness about the new approach being adopted by the government to manage for results, helped the DU team secure buy-in from key stakeholders, and evidenced interpersonal dynamics which needed to be dealt with for the work to progress.

The value of solid commitment from the highest system authorities cannot be underestimated. Having the President and PM's support from the outset was critical to align stakeholders around shared goals and remove roadblocks when needed. Both the pressure from the PM holding leaders in Ministries accountable and the support offered to accountable leaders in meeting milestones were strong incentives to mobilize action across government. Similarly, support from influential people and organizations (at the highest levels of the government hierarchy and at the Ministerial level) was fundamental in the start-up phase of the work. Identifying members of the guiding coalition early on and engaging them on a regular basis to solve problems and expand political clout allowed consensus to be reached and plans to be built more easily. One important limitation observed with regards to forming guiding coalitions was the need to engage more stakeholders closer to frontlines of service delivery as the work progressed towards implementation stage. Both the diversity of actors and the depth of their involvement need to match the degree of ambition and scale of implementation. Finally, from an ethical standpoint, aligning government's aspirations with issues that matter to citizens and being ambitious about goals were prerequisites for building momentum in the endeavor.

Childhood anemia, chronic childhood malnutrition and waiting times for medical consultations were all highly prominent in the public agenda, because of both the number of people affected and the severity of damages caused in their lives. The experience in Peru confirmed that connecting the government's strategies to the public agenda is a key ingredient for enabling concrete improvement in public health outcomes.

The second component of the "delivery approach" framework (understanding the delivery challenge) hypothesized about the importance of incorporating data to evaluate performance, understand realities on the ground, and make informed decisions. Again, empirical evidence in this DELTA project confirms the propositions developed a priori. One of the main insights from experience was that despite the abundance of data in the health system, its limited utilization prevented system authorities from understanding performance patterns and making effective decisions to improve activities. In many instances, it was possible to observe that when the Delivery Unit framed discussions based on concrete data and evidence, conversations shifted from opinions to facts. Grounding conversations on facts helped working groups develop a single version of truth and align actions towards concretely defined goals. The political dimension of understanding the delivery challenge was also highly determining of government's ability to organize for improving results. One distinctive characteristic of the Delivery Unit team was its commitment to engage with the frontlines to understand both the needs of those who directly serve citizens and the interventions that could be more effective to move the numbers on key performance indicators. Incorporating the perspectives of those closer to the frontlines of healthcare and public health into decisions made at

the heart of government will likely increase the chances of success achieving targets.

Finally, empirical evidence supports the ethical proposition that data needs to unveil citizen's perspective (and inequalities across population subgroups) if delivery is to be successful. Analyses conducted by the Delivery Unit commonly surfaced variability in health outcomes across geographies and socio-economic groups. This helped system leaders in at least two ways: by showing them how citizens experienced health conditions and providing a basis on which to build a coherent set of interventions to tackle those conditions.

The third component of the theory of change (plan for delivery) included proposition about the importance of the planning process in determining improvements in public health outcomes. From a technical standpoint, the framework predicted that creating a coherent, comprehensive reform strategy and setting targets and trajectories were associated with successful government organization for delivery. Empirical evidence again corroborated initial propositions. Two features in the development of reform strategies stood out. First, the importance of specifying actions the right level of operational detail. As the review of existing documentation suggested, government plans often laid out strategies and overall goals without sufficient clarity about how exactly strategies will play out in practice. Pushing working teams to prioritize and concretely define milestones, timelines and accountabilities helped create a clear path linking day-to-day activities to the broad aspirations being pursued. The second key factor was filtering strategies and interventions according to their ability to generate impact and feasibility of implementation. Being deliberate about prioritizing strategies and sequencing in a logical way (and doing so in a participatory way through workshops)

helped bring together working teams from across different departments to collaborate on a shared agenda.

The political and ethical dimensions of delivery planning also played an essential role in organizing government for improving public health outcomes. Mapping out key stakeholders across the delivery chain and their relationships of influence enabled understanding of how strategic intent at the center of government would reach citizens at the frontlines of service delivery. Understanding links among stakeholders and risks along the service delivery chain during planning stages helped inform the portfolio of prioritized interventions. It is possible that understanding stakeholders and their relationships will further contribute to improving outcomes as implementation unfolds, as performance bottlenecks can be identified and effective responses can be developed based on that knowledge. From an ethical standpoint, prioritizing indicators and targets that are meaningful to citizens proved essential. Understanding how the hard work of delivery could positively impact the lives of millions of people (and especially children) in the country provided a constant source of motivation to pull public officials forward. Communicating the moral purpose underlying the hard work being done at Ministries and how reaching targets would impact citizens' lives helped mobilize action and continually build momentum as government went through the planning process.

The fourth component of the theory of change (drive delivery) speculated about the value of establishing performance management routines, building momentum, solving problems rigorously and persistently, continually building capacity, engaging stakeholders strategically and communicating transparently. In this area, empirical evidence to confirm or disprove propositions was limited by

implementation timelines in government. By the time this DELTA project ended, government was still preparing to initiate a rhythm of implementation routines. Therefore, there was not enough evidence from primary or secondary sources to compare the experience with expected outcomes expressed in the analytical framework. Future studies encompassing in governments at later stages of implementation could investigate in more depth how valid and important the technical, political and ethical propositions under this domain are in helping governments improve public health outcomes.

Finally, the fifth component of the "delivery approach" framework (creating an irreversible delivery culture) conjectures about the importance of ongoing capacity building, stakeholder engagement and strategic communications to the success of delivery efforts. This component of the framework cuts across other sequential steps in the process, and is often embedded in other work streams. For instance, in the context of this DELTA project, building capacity materialized as I worked to transfer delivery skills to the DU team as the project evolved. Although activities pursued by the government of Peru in early stages of work emphasized less the propositions included in this domain compared to the first three components of the theory of action, it was possible to also demonstrate the relevance of hypotheses. Building capacity within the DU, for instance, was instrumental for the advancement of the work. As discussed in an earlier section, the quality of DU is as good as the capacity of its people. Participant observations conducted while I engaged with the UCG on the ground made it clear that the more the team developed expertise in the method, the greater was the value added in engagements with counterparts. One important outstanding question, which this

project could not address, is the importance of investing in capacity of public officials across the government machinery. It is possible that, especially in the long run, government's ability to improve and sustain public health outcomes will depend heavily on how well a performance-oriented mindset is embedded across government institutions – and not only within the DU.

Evidence from this DELTA project strongly supports the proposition that engaging stakeholders continually and strategically is key to enabling public health outcomes. Above and beyond technical aspects of the work, which can be quite sophisticated given the complexity of health problems, relationships were the main force behind the drive for results. Where relationships of trust and mutual respect were strongly established, the pace and quality of work were much greater compared to situations where relationships were strained. Similarly, the ability to communicate about activities proved to be a key success factor. The Delivery Unit's aptitude to keep stakeholders abreast of activities and involve them in decision making created a strong sense of ownership and motivated concerted work. At early stages of work, communications focused more on government officials than the public. One important outstanding question is how and to which extent transparency about government's activities and outcomes influence the ability to improve public health outcomes.

All in all, empirical evidence from this DELTA project largely corroborates the propositions laid out in the theory of action. Teasing out the technical, political and ethical dimensions of delivery enabled useful insights on how to effectively translate the "delivery approach" into various government contexts. This project reinforced the notion that these three pillars in fact coexist and are intimately interwoven.

Identifying what the pillars meant in terms of actual processes and behaviors was helpful to the extent that it enabled a holistic, integrated view of the "delivery approach", which is often perceived as merely mechanistic. The practice of delivery in Peru demonstrated that intricacies of values, behaviors and relationships are also key to results.

The project's timeline made it difficult to draw conclusions on the accuracy of the framework. By the time this project was concluded, the health priority was just starting a rhythm of implementation routines; other priorities were following in staggered manner. Despite the inability to analyze outcomes in hindsight, the theory of action did provide a useful platform to guide actions on the ground. The delivery framework components are sound from a management perspective; its logical flow allowed the newly established UCG team to sequence activities effectively and progress fast towards implementation.

This project did not come full circle. It focused on building foundations and planning for delivery, and did not examine the experience through to results. An important missing element is the analysis of implementation routines, a hallmark of the "delivery approach" and a key component in the theory of change. This project also did not analyze important cross-cutting aspects such as communications and capacity building, which may heavily influence impact of delivery work. While setting up the Delivery Unit, reviewing current state capacity, forming guiding coalitions and planning for delivery indicated that government was increasingly equipped, it is not clear whether it could be labeled "organized" as the project ended. Labeling government in such manner can be misleading, as building enabling conditions for delivery happens in a continuous spectrum. As the theory of delivery suggests, it is

possible that most of the institutional development takes place as government muddles through the challenges of implementation. Comparing projected results to actual results (thus closing the cycle of implementation) would enable further learning.

Two important open questions in this project have to do with the relative importance of each framework element and the irreversibility of results. On the first point, while the theory of change lays out a series of elements that supposedly lead to better public health outcomes, it does little to explore how their connection patterns. It is possible that some elements, such as the level of commitment of top system authorities, disproportionately impact results. It is also possible that sequencing plays a role. For instance, the order in which teams approach the three key tasks of delivery planning (developing a reform strategy, drawing the delivery chain and setting targets and trajectories) may influence their views on what to do. Delving deeper into the nuances of these relationships may allow refinement of the theory of action moving forward. Lastly, the theory of change in this project postulates what government needed to do to improve public health results to citizens. A key consideration, however, is whether those results would stay changed in the long run. While the elements laid out in the theory of change allegedly address this issue, it is possible that other ingredients are necessary to avoid throwbacks in the change process, ensure successful adaptation to context, and promote lasting results.

Developing a novel analytical framework rather than copying what Delivery Associates already uses was motivated by two ambitious purposes. The first was to provide fresh perspectives into what may determine outcomes of delivery efforts, in public health and beyond. The second was to contribute to identifying complementarities that can be applied to further refine analytical tools, and ultimately benefit populations. Despite inherent limitations of the framework, the experience in Peru supports its value as a tool to contribute to more effective design, implementation and assessment of delivery efforts.

Conclusions

Translating health policy and program ideas into tangible outcomes is a moral imperative for governments, and one of the greatest public health challenges of our time. Shortfalls in health services delivery by the public sector have caused incalculable losses to individuals, communities and nations. Although promising approaches have emerged to increase governments' ability to deliver value to citizens, translation of innovations and implementation in different contexts remain challenging.

The "delivery approach", developed by Sir Michael Barber and his team in the original PMDU, led to concrete outcomes in key policy areas in the UK. Adaptation of this innovation to other countries, however, has resulted in varying degrees of success. By analyzing how the Government of Peru has organized to tackle some of its deeply rooted problems, this project advances translational knowledge on how to improve government performance in public health and healthcare services delivery. Below are ten cross-cutting lessons from experience, which summarize and connect insights from earlier sections, and articulate implications that may be applicable to contexts beyond the scope of this project.

Cross-cutting lessons

Put citizens at the center

It is easy to forget that governments exist to serve citizens. Politicians and parties constantly fight for power and legitimacy, and often do so at the expense of functionality. The experience in Peru underlines the importance of making sure activities are driven by their anticipated impact in citizens' lives. While the "delivery approach" focuses heavily on organizing the supply side of services, its effectiveness largely depends on how well it brings to bear citizens' needs and preferences.

Incorporating citizens' voices can and should be done throughout all stages of the delivery process. Below are concrete examples of how this principle applies in practice:

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- Prioritizing areas and strategies that really matter to citizens

- Setting ambitious targets that instill a sense of urgency

- Analyzing data by population groups to uncover their needs

- Tailoring strategies to local realities

- Keeping close touch with what is happening in the field

- Communicating activities, progress and results transparently
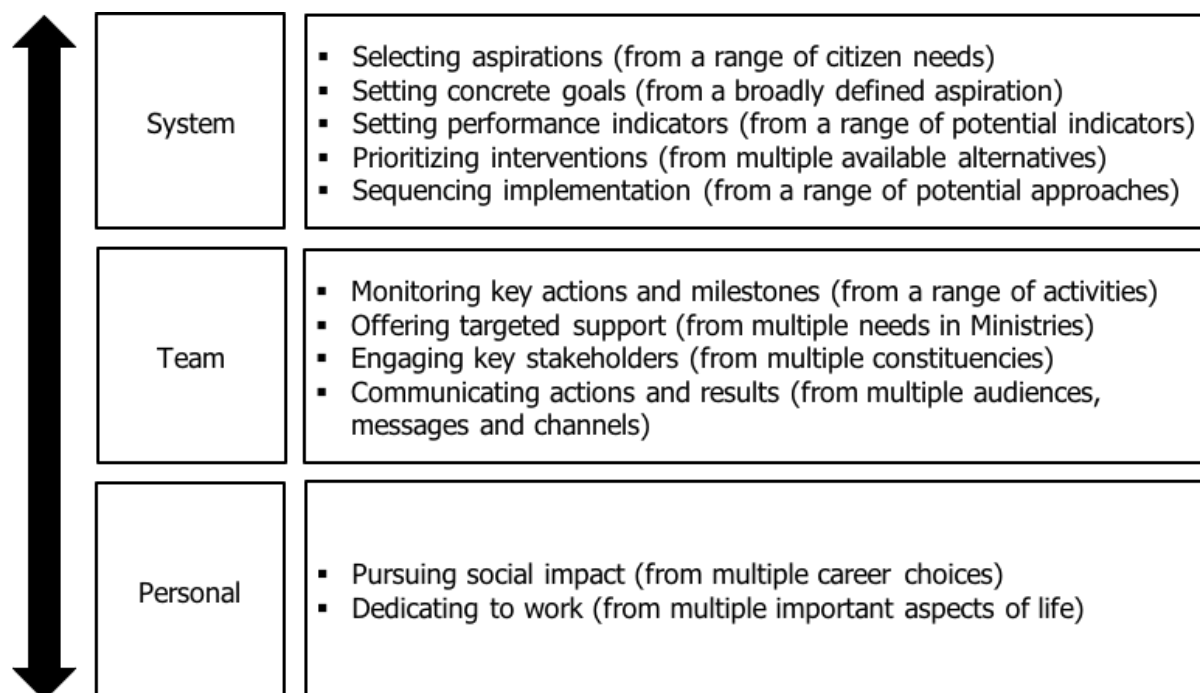
Ensure solid support from the top – and bottom

The experience in Peru reinforces the idea that leadership commitment is a key determinant of effectiveness, over and above institutional structures. Consistent support from the top helps remove obstacles to the delivery work, especially at early stages when the Delivery Unit does not have a solid brand of its own.

Broad-based support within government and among the public is also critical. Within government, mid-level managers and implementers are the engine of service delivery. Pressure from authority may enforce compliance, but it takes distributed leadership to inspire commitment. Citizens are co-producers of health, and therefore instrumental to the success of any delivery effort. While the government machinery determines the quantity and quality of services, outcomes are also significantly shaped by people's knowledge, beliefs, attitudes and behaviors. Impact lies at the convergence of service deliverers and receivers.

Prioritize relentlessly

The breadth and depth of the challenges facing governments make prioritization an absolute necessity. Being deliberate in priority setting helps focus the work, which is key to drive impact especially in resource constrained settings. Prioritization has many faces. It happens constantly at various levels, from the system to the Delivery Unit team and individuals. The figure below illustrates many challenges of prioritization facing those involved in delivery. At the end of the day, outcomes to citizens greatly depend on the way each of these decisions are handled.

Figure 27 - Dimensions of prioritization

System	• Selecting aspirations (from a range of citizen needs) • Setting concrete goals (from a broadly defined aspiration) • Setting performance indicators (from a range of potential indicators) • Prioritizing interventions (from multiple available alternatives) • Sequencing implementation (from a range of potential approaches)
Team	• Monitoring key actions and milestones (from a range of activities) • Offering targeted support (from multiple needs in Ministries) • Engaging key stakeholders (from multiple constituencies) • Communicating actions and results (from multiple audiences, messages and channels)
Personal	• Pursuing social impact (from multiple career choices) • Dedicating to work (from multiple important aspects of life)

See the forest, trees and leaves

Governments often assume that polices developed at the top of the system hierarchy will automatically get implemented and have an impact. Delivery proposes a fundamentally different approach, which emphasizes implementation and learning from experience. From the center of government, dealing with how prepared health workers in primary health centers are to counsel mothers on anemia prevention and treatment may seem like a menial task. While it is true that top authorities need to prioritize systemic issues, it is key that someone maintains a pulse on what is going on in the frontlines of service delivery, as this is where results happen.
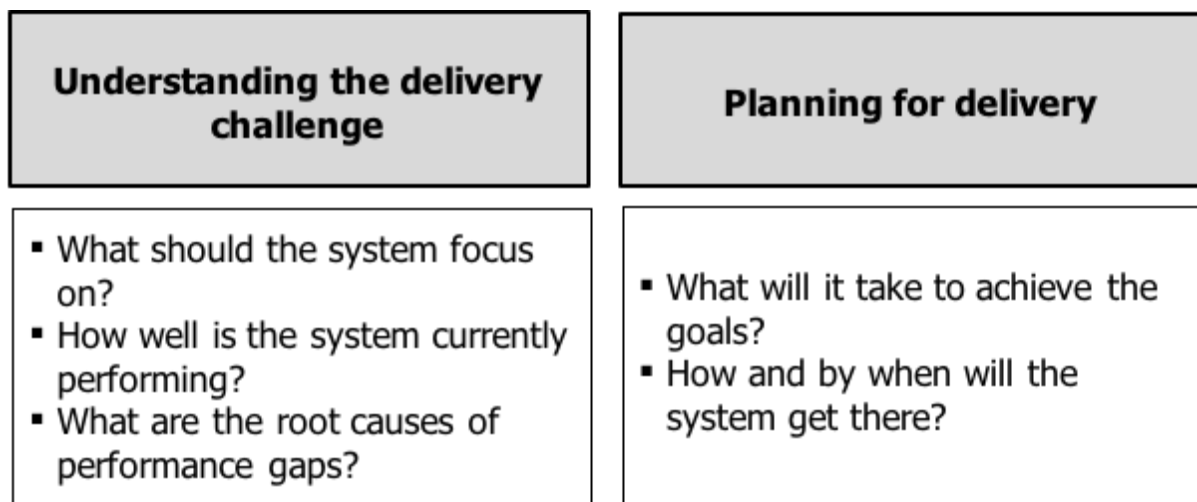
The Delivery Unit is uniquely positioned to link strategy to operations. One of its greatest value adds is to bridge the gap between the government palace and citizens, so that decision makers really understand how policies are working in the real world. As the experience in Peru demonstrates, service delivery often breaks down not on strategic plans, but on the day-to-day tactical details. Integrating strategy (the forest), interventions (the

trees) and actions (the leaves) rather than approaching them in isolation is critical to enable concrete results to citizens.

Think clearly to act effectively

The disconnect between decisions and knowledge is a fundamental problem in government. Despite wide availability of data, intelligence derived from data is sparse. Governments commonly operate on a state of hyperactive paralysis, jumping from problem to problem on a swift, yet dysfunctional way. As a result, often much is done, but little gets accomplished. Delivery emphasizes using data and evidence to guide optimal decisions. This principle permeates all stages of delivery, from building foundations to driving routines and promoting irreversibility. At initial stages, as in the case of this project, data is instrumental to allow understanding of the system's current performance and activities, and inform delivery planning.

Figure 28 - Purposes of data utilization at early stages of delivery

Understanding the delivery challenge	**Planning for delivery**
▪ What should the system focus on? ▪ How well is the system currently performing? ▪ What are the root causes of performance gaps?	▪ What will it take to achieve the goals? ▪ How and by when will the system get there?

Making effective use of data is a core requirement, and a characteristic that often sets Delivery Units apart from other government agencies. While data analysis will invariably involve detail and sophistication, it is important to not lose sight of a simple overarching idea: clear thinking is what guides effective action.

Beware of averages

Dramatically different realities often coexist in a country. In Peru, for instance, the prevalence of chronic childhood malnutrition varies widely depending on income levels and geographic locations. Understanding the nature of divides in a country is key to develop effective responses. If delivery is to be successful, the variability hidden underneath aggregate data must be uncovered. Below are some practical ways in which government (and particularly the Delivery Unit team) can ensure its actions and reflection account for the diversity of citizens' circumstances:

- Setting targets by geographic areas (e.g. regions, districts)
- Incorporating equity as a decision factor in prioritization
- Tailoring strategies and interventions to local context
- Monitoring and reporting by population segments

One common dilemma in delivery efforts is how to balance impact and equity. Targeting population groups where the need is highest may come at a cost of moving the numbers more slowly. Conversely, focusing on potential scale of impact may imply leaving behind those that need most help. Cutting through averages allows decision makers to appreciate the truth that lies in deviations. While consolidated data provides a useful systemic perspective, it is also important to beware of the risk of oversimplification.

Learn, adapt and grow

Many in government adopt the naïve assumption that things tend to get better over time. The experience in Peru provides evidence to the contrary. Anemia prevalence, for instance, has gotten worse and then stagnated in recent years. Overcoming deeply entrenched challenges like this require hard, deliberate work.

Government sectors are complex, adaptive systems in which the only constant feature is change itself. That means inflexible, standardized solutions are unlikely to work. The ability to learn, adapt and grow is arguably the single most important determinant of

success in delivery endeavors. It is very difficult (nor is it necessary) to get everything right the first time. Through cycles of experimentation, learning and adaptation, governments progressively build capacity to drive progress and solve problems.

Learning takes place in at least two levels. Single loop learning involves getting better at solving problems to improve the system as it exists. Double loop learning goes one step further, enabling shifts in mindset, values, beliefs and underlying assumptions that inform actions. Paradigm shifts (second loop learning) are at the heart of what the "delivery approach" postulates. While many principles and tools of the method can be quite revolutionary in some contexts, the real innovation is the change in mental models that the method promotes. The figure below illustrates expressions of double loop learning across system, teams and individuals.

Figure 29 - Single and double loop learning in delivery

	Single loop learning	Double loop learning
System	Coordinate across sectors and levels	Embracing risk
Team	Applying lessons across priority areas	Embracing challenge
Personal	Mastering delivery tools	Embracing purpose

Engage with the system

Social systems are deeply interconnected. Population health outcomes, for instance, are heavily determined by levels of education and built infrastructure. The overlap across policy priority areas implies that delivery interventions are never designed or implemented onto a blank canvas. Instead, these interventions tend to be highly contextual, requiring implementers to deal with a dynamic reality beyond immediate thematic boundaries to plan effectively and achieve progress.

Engaging with the system is not a question of if, but how. The considerations below may help practitioners better understand and navigate the intersections between policy areas at initial stages of delivery:

Figure 30 - Engaging with the system

Context	• How should past events inform future actions? • How can the demographic, economic, political, legal, environmental, social and technological landscape influence activities and results?
Content	• How can policies and programs in one area hinder or benefit others? • How can resources be combined across areas for greater impact?
Agents	• How can existing relationships be nurtured to improve activities and results?
Ideas	• How can lessons from one area be applied to improve activities and results in others?
Overall	• How to unleash the system's full potential?

Irreversibility has many faces

Numerous challenges may get in the way of delivery. The nature of political cycles may lead to shifts in ideological inclination and approaches to performance management. High turnover rates in government may threaten continuity of activities. Events and crises may detract focus from delivery, whereas monotony can make people complacent. With various potentially destabilizing forces, a common concern is how to embed delivery into the government machinery so that the value added by the approach becomes irreversible.

Irreversibility can be approached in at least two dimensions: outcomes and behaviors. The first has to do with ensuring citizens' lives improve to a degree where going back is highly unlikely. The second, which is more applicable to the characteristics of this project, refers to instilling new ways of working, attitudes and behaviors among those in

government so that going back is not acceptable. While there are no simple answers to the challenge of promoting irreversibility, some lessons from this project may shed light into what it takes for delivery outcomes, processes and mindset to become irreversible:

Figure 31 - Practices conducive to irreversibility

Positioning the Delivery Unit powerfully	• Institutionalizing the delivery function so that ideally it becomes a State rather than a Government program
Keeping sharp focus	• Concentrating efforts to maximize impact and build credibility
Demonstrating results	• Creating and disseminating knowledge so that changing course becomes clearly illogical • Focusing dialogues on facts rather than opinions to promote a culture of rational decision-making
Investing in capacity	• Building a strong community of practice across government at grassroots level, so that going back to old ways of doing things is unacceptable

Always connect to purpose

Delivery is hard work. Making progress in difficult problems invariably involves overcoming resistance from those who benefit from the dysfunctions of status quo, and complacency from those who don't care about change. Persisting through these challenges requires solid technical and emotional skills. The experience in Peru shows, however, that these are necessary but not sufficient ingredients. Surviving constant turbulence calls for unwavering connection to purpose.

In addition to new technical tools, the delivery discipline promotes cultural changes towards greater focus, urgency, consistency, collaboration and ambition. Translating these principles and values into day-to-day behaviors requires one to be constantly aware of and committed to the fundamental moral purpose of improving citizens' lives. Whether this can be taught or developed is a question beyond the scope of this project. Still, below is an attempt to articulate some key behaviors characteristic of a delivery culture and the sense of

purpose that may motivate them.

Figure 32 - Links between behaviors and moral purpose

BEHAVIORS	PURPOSE
I set high expectations in all I do…	…because I believe step change is possible
I take full ownership for results…	…because I care deeply about them
I help bring people together	…because I recognize I cannot succeed alone
I praise for quality…	…because I know it drives outcomes
I move fast and take risks responsibly…	…because I know citizens can't wait
I challenge and support my colleagues…	…because that helps us all do better
I adopt a learning mindset…	…because I recognize that leads to development
I never give up…	…because my mission matters more than obstacles along the way
I give credit to others…	…because I recognize the work is about improving lives, not self-promotion
I role model integrity…	…because I know all else depends on it

Implications and recommendations

This project aimed to shed light on what behavioral and institutional factors may effectively help prepare the government of Peru to deliver on its ambitious agenda. While health was the primary object of analysis, activities were embedded in a broader canvas of six other government priorities, and many more population needs. Despite limitations, the lessons gleaned from this experience may be useful to inform similar endeavors in other geographic regions, levels of government and social areas. Knowledge on delivery is still in its infancy. Despite growing interest, there is still much to uncover on what makes delivery work and why. This section explores some implications of this work to public health practice, and recommendations for global health system reforms and public sector performance more broadly.

From inception stages, it became clear that making progress on deeply rooted health problems would require reaching beyond traditional boundaries of health systems. Common

to many lessons described here is the need for integrative thinking and collaboration. While subject matter expertise is critical to navigate technical problems, understanding systems and mobilizing people are key requisites for enabling delivery. Being successful in increasingly dynamic, interconnected environments will require public health practitioners to expand the breadth and depth of their applied knowledge and skills.

The analytical framework adopted in this project encompasses five key components and three pillars of public policy. Although each component and pillar has been examined in depth in isolation, little is known about how they interact with each other in practice. Future studies and experiences may explore whether some elements of the delivery framework disproportionally affect results, and what is the nature of the relationship among them.

There is ample space for further exploration about the nuances of what makes delivery work. While this project attempts to detail some of these nuances, many questions remain unanswered. Future projects may focus more narrowly on specific aspects of delivery to uncover behaviors, processes, tools and structures that are conducive to better outcomes in system reforms. It is important to document both successes and failures from experience. Although methodological limitations may impair the strength of causal inferences, it is possible to be rigorous within constraints. From a public health practice perspective, much can be learned from reports exploring intangible phenomena which may strongly influence end results. Beyond health, the discipline of delivery and public sector performance management will benefit from a larger body of applied projects and studies on how to improve results to citizens.

The lessons and conclusions from this project are limited to the early stages of delivery work, in which the national government of Peru built foundations and organized for delivery. Key elements such as implementation routines, ongoing capacity building and communications were not covered. One can only speculate what results will be achieved and how well these results will be sustained in the long run. Arguably, one of the key frontiers of

delivery is to unearth enabling tactics for irreversibility of outcomes and processes. The pursuit of better results to citizens is a lasting endeavor. Future projects may investigate retrospectively and comparatively the long-term outcomes of delivery efforts.

Managing for results at the heart of government involves a fundamental paradox: The Delivery Unit cannot deliver. Ultimately, Ministries and authorities at other government levels are the ones holding responsibility for results. As much as the Delivery Unit plays an essential role catalyzing change, it does not substitute for activities carried out in the government bureaucracy. In turn, it is plausible to assert that few government agencies have full control over the results of their work. Achieving outcomes often depends on concerted actions across multiple sectors and levels, and favorable alignment of a range of extraneous factors that may throw the work off course at any time.

The implication of high complexity intrinsic to delivery work is that no matter how hard any agent or organization tries, there will always be limits to what can be achieved. This is a humbling insight, which may understandably lead some to become complacent or disengage from the hard work of implementation. The alternative is to embrace ambiguity and sustain high ambitions despite inevitable losses along the way. Doing so humbly and consistently may, after all, allow for progress in the difficult challenges of our times, in public health and beyond.

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Appendices

APPENDIX 1 – The Delivery Framework
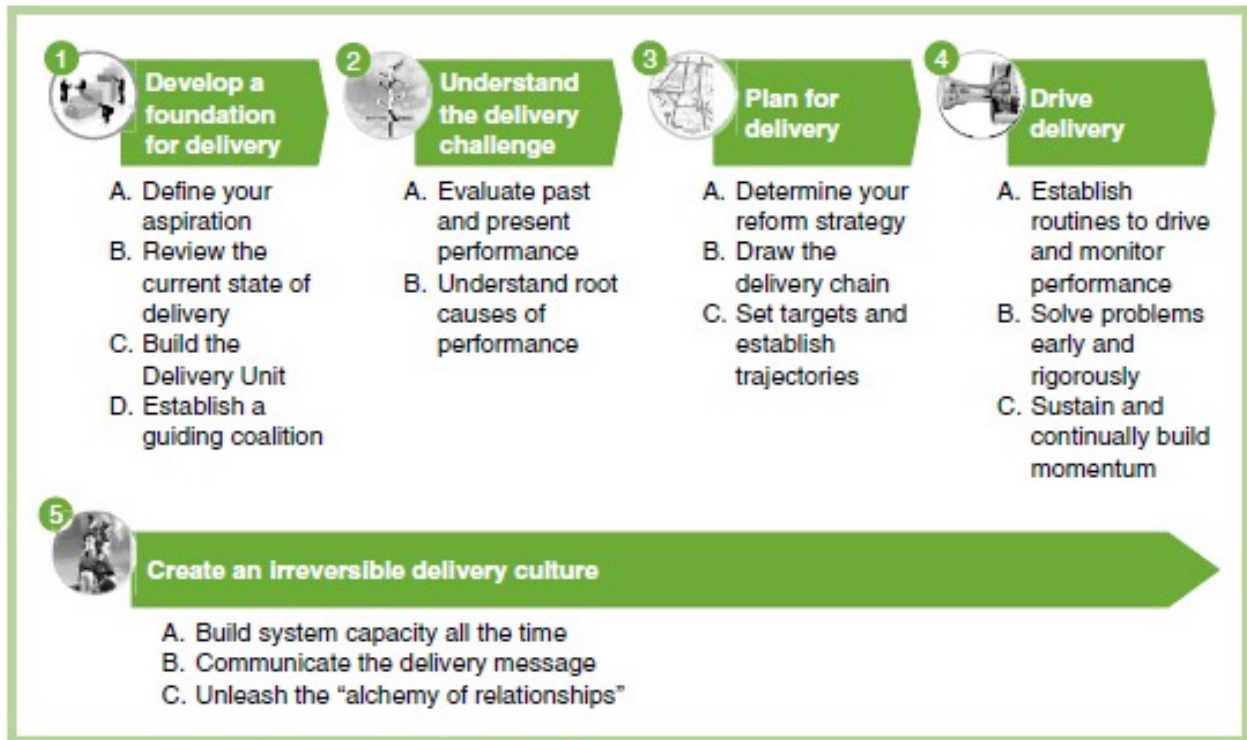
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APPENDIX 2 – Excerpt of the Capacity Review Rubric *

2. Understand the delivery challenge

Element of delivery	Questions to consider	Weak delivery (Red)	Strong delivery (Green)	Current rating and rationale
				R AR AG G
2A. Evaluate past and present performance *Does the system regularly and consistently use data to evaluate performance?*	■ Does the system regularly analyze data **to identify recurring trends**; do system leaders understand *how the system is performing* on major metrics? ■ Do analyses include data on a wide variety of metrics? ■ Are data benchmarked against history, within the system, and against peers? ■ Does the system use an iterative cycle to test hypotheses about performance patterns and identify the need for further analyses?	■ Data are not readily available or are not analyzed regularly; system leaders lack a clear sense of how the system is performing on key metrics. ■ If analyses are conducted, they are focused only on goal metrics. ■ Data are viewed in isolation without benchmarking. ■ Data analyses are seen as a one-off exercise, done for a specific request or discussion.	■ System leaders have a clear sense of how the system is performing; trends and patterns, particularly on metrics related to the aspiration, are regularly identified through rigorous analysis and shared with those involved in implementation. ■ Analyses look beyond goal metrics to include progress metrics and perverse metrics. ■ Data are benchmarked against history, within the system, and against other systems to reveal performance patterns. ■ The process of data analysis is an ongoing, iterative cycle.	

Classification

Good (G) – requires refinement and systematic implementation

Mixed (AG) – some aspects require attention, others are ok

Problematic (AR) – requires attention, in some aspects urgent

Highly problematic (R) – requires urgent and decisive action