Background Paper for Working Group 3
World Health Organization Independent High-level Commission on NCDs

Potential Business Models that Involve Private Sector Support for National Responses in Preventing and Controlling NCDs

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Introduction

According to the WHO, non-communicable diseases (NCDs) kill 41 million people each year. Of that 41 million, fifteen million are considered premature deaths, affecting individuals between 30 and 69 years. 85 percent of premature deaths occur in low- and middle-income countries. *(Non-communicable diseases,* WHO).

NCDs—chronic diseases like diabetes, cardiovascular disease, and cancer—threaten to strain healthcare structures—especially in rapidly-aging countries where demand for healthcare threatens to outpace supply, and in poorer countries, where a large percentage of the population cannot afford to pay the market rate for healthcare services.

Because the costs associated with these diseases are so high, the public sector alone cannot bear the burden. It is evident that private sector engagement will be crucial in preventing and controlling these diseases.

Why Public-Private Partnerships?

From procurement to outsourcing and contracting, there is a broad spectrum of private sector engagement that takes a variety of different forms. Compared to these conventional arrangements, private sector engagement in the form of partnership is a more disciplined way of conceptualizing sustainable, long-term engagement that is needed for responses in preventing and controlling NCDs.

Therefore, we would like to apply public-private partnership (PPP) frameworks to the design of potential business models. We define a PPP as a "collaborative structure in which the public and private sectors share risks, resources and decision-making responsibilities" (Trager, Guan & Rai, 2015). As such, when it comes to PPPs, there are no "one-size-fits-all" answers. However, we believe that successful partnerships will share a common conceptual framework.

PPPs can leverage the strongest elements of the public and private sectors, all while providing value to both parties.

The Framework for PPPs

Many different types of private-sector engagement can be considered a PPP. However, all PPPs adhere to a common conceptual framework, as outlined below:

First, there are two distinct types of PPPs: economic PPPs and social PPPs. Each requires its own skillset and organizational structure.

Economic PPPs

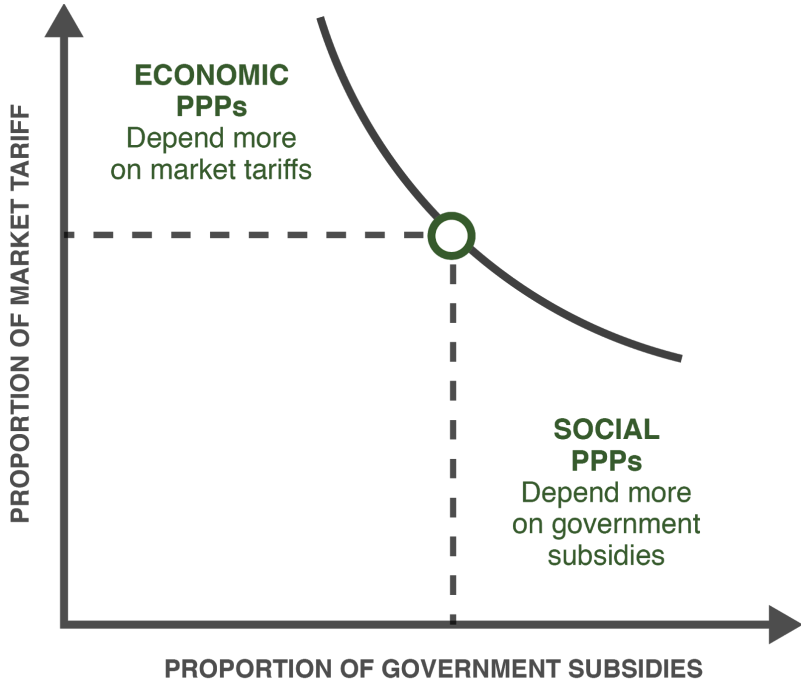
Put simply, economic PPPs are those that offer a viable return for investors, such as properly structured toll roads. The market price for these assets or services exceeds the cost

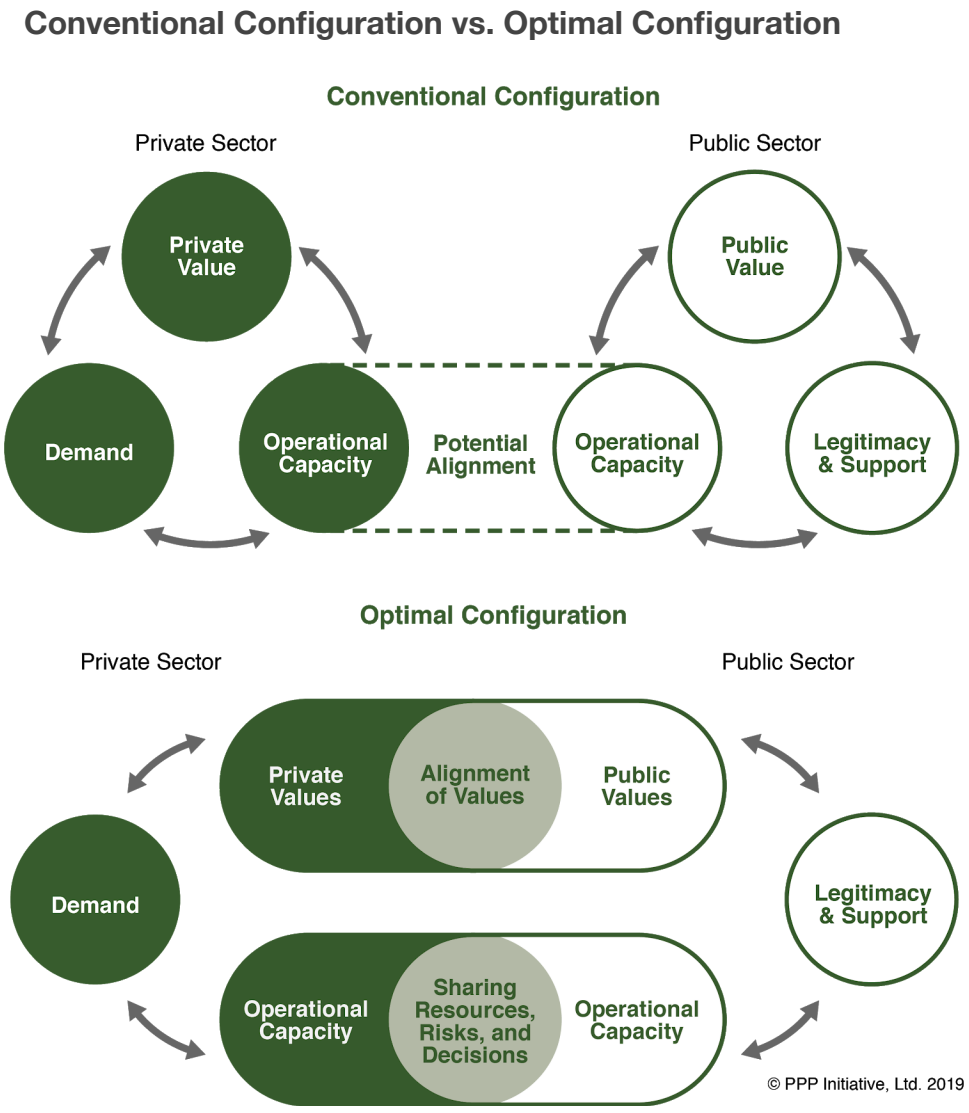
of operating them, leaving adequate returns for private-sector investors, or re-investment in the assets.

Social PPPs

Social PPPs are those that require significant government subsidies, such as healthcare, or water. The financial costs of running these PPPs substantially exceed their viable market prices. In many cases, the poor may be regular users, but cannot afford to pay a market price without government support. Social PPPs, being inherently unprofitable and dependent on political support, are far riskier for investors, requiring greater skill, and more flexible organizational and financial models. However, with proper organizational structures and alignment of interests, they can still return public and private value for all parties.

Relationship Between Economic and Social PPPs





Conventional Configuration

In a conventional configuration, operational capacity is shared between the public and private sectors, but value is not. The private and public sectors have unaligned values. This type of model can work well for economic PPPs, since the private-sector places value on profit, and economic PPPs are those that are inherently profitable.

The example of a toll road can put this in concrete terms. The public sector may value a reduction in traffic, or decreased travel times. The private sector sees value in the profits

collected from tolls. Though their values are divergent, the PPP's structure remains sound. However, applied to a social PPP, the conventional configuration is less desirable.

Optimal Configuration (Alan M. Trager 2005 HKS)

In the optimal configuration, operational capacity is shared between the public and private sectors, but so are values. This type of configuration is far more effective for social PPPs, or situations in which the economic returns may not be as clear or immediate. The upshot for the private sector returns must be aligned with that of the public sector and recognized as legitimate by the public sector. Optimal configurations depend on sustaining an alignment of values over long time periods.

The example of a water system explains this concept. Systems for delivering fresh water to a low income population are expensive to build, and completely self-defeating if water were to be sold at an expensive market rate. (Demand for water is, of course, completely inelastic). However private companies may recognize the public benefit of having a consumer base that is hydrated. They may also fear the political repercussions of privatizing the most elemental human necessity, thereby limiting access to only those who can pay market rate. They may value the public relations marketing value of contributing to increased access to water in low income countries. Finally, the production and distribution of it own products may depend on successful supplies and quality.

Thus, even if immediate profits from the sale of water are not likely to be realized, the private sector's motivations, values and incentives may be aligned with the public sector's.

PPPs designed to combat NCDs are mostly social PPPs, and will require organizational structures that can be governed to maintain an optimal configuration.

Business Models

PPPs can be modeled much like conventional businesses. Though more complex in structure, they still adhere to a model—that is, a set of structures and conditions that define the revenue, financing, operational capacity, and ultimately, the viability of the PPP.

The Development of Effective Business Models

Effective business models serve to capture long-term value for an organization while delivering products and services. However, immediate monetization is not a prerequisite for long-term value. The above-mentioned frameworks emphasizing alignment of values, will be used for outlining potential business models that involve the private sector in order to support national responses in preventing and controlling NCDs.

When structuring a PPP there are three key principles to remember. The better these conditions are met, the lower the risk, and the greater the opportunity a PPP presents. These overarching principles apply to all PPPs, regardless of the model or form they take:

1. Credibility of the Partners, Especially the Public Sector

The changes required of the private sector to make an impact on the mortality of NCDs can be complex, expensive and laborious. For the largest private-sector entities, change may come on a timeline of years, rather than months. This can often run at odds with the short-term political cycles of governments; in the public sector, priorities can quickly shift from one administration to the next. Therefore, it is crucial that governments maintain a consistent commitment to their partnerships with the private sector and build trust and credibility, encouraging private-sector entities to act rather than wait and see.

2. Engaging the Public as a Partner

All healthcare initiatives are, in some way, subject to the enthusiastic participation of the public, as individuals or communities. Compliance —whether to a drug regimen, an exercise routine, or a sugar and salt reduction program—will be an essential element of any effort to curb the effects of NCDs. PPPs that do not effectively engage the public as stakeholders in their own health will not be as successful as those that do.

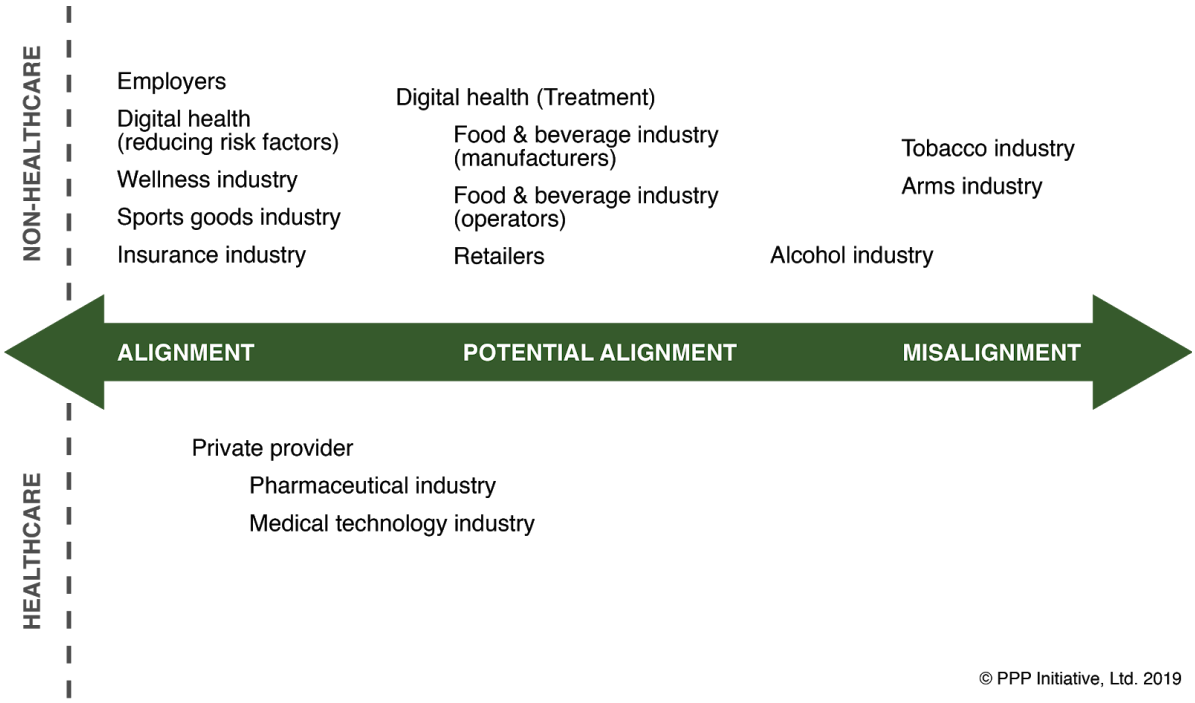
3. Recognizing that Behavior Change is Hard

It is crucial that the governments recognize the intransigence of human behavior, especially when it comes to diminishing risk factors of NCDs. Habits can be difficult to change, and many of the behaviors that increase the risk of contracting NCDs are addictive- consuming tobacco, drinking alcohol and eating sugar and processed foods. It is crucial that successful PPPs contend with this reality by dedicating adequate resources to inducing and incentivizing behavioral changes. Those that underestimate the scale of the problem will be far less successful than those that do not.

Categorizing Industries According to Value Alignment

Within the private sector, there are many industries that directly and indirectly influence the outcomes for SDG target 3.4 which aims to reduce by one third premature mortality from NCDs through prevention and treatment and promote mental health and well being. However, not all of these industries have values that are aligned with the stated *goals* of SDG. We can categorize a wide variety of private sector partners based on the alignment of public and private value—in this case, the relative alignment of shared public health goals and business incentives. A business model should not only capture economic value but also social and cultural values.

Industries According to Value Alignment



Perfect Alignment

Industries whose values are in perfect alignment with the public sector are those for whom an increase in demand for their goods and services leads to an increase in health. (The WHO defines health as "a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity"). Industries that fall into this category include the wellness industry, the sporting goods industry, the insurance industry, and elements of the digital health industry geared towards prevention. In these cases, the profit motive is directly aligned with the social motive. Industries whose values are in perfect alignment with the public sector are, naturally, the most amenable for partnership.

Imperfect Alignment

Industries whose values are in imperfect alignment with the public sector are those for whom an increase in demand for their goods and services leads to an increase in health; however, demand for their goods and services is caused by the presence of disease or infirmity. Examples of industries in imperfect alignment include the pharmaceutical industry, the medical technology industry, informal private healthcare providers, and elements of the digital health industry focused on treatment.

Potential Alignment

Industries whose values are potentially aligned with the public sector are those for whom changes to their goods and services could lead to an increase in health, but profits are not directly contingent on the relative health of the populace. Examples of industries potentially aligned with the public sector include the food and beverage industry, and the alcohol industry. These industries could see value in reformulation of products to meet

healthier standards. They could also be incentivized to be more selective about the provision and advertisement of unhealthy products. However, their goods and services do not inherently make people healthier.

Misalignments

Industries whose values are misaligned with the public sector are those for whom an increase in demand for their goods and services leads to a decrease in health. Examples of misaligned industries include the tobacco industry and the gun industry. These industries are excluded from consideration for PPP, as they have no incentive whatsoever to partner with the public sector.

Business Model Types

With an understanding of how various industries' interests are aligned—or not—with the interests of the public sector, we can begin to explore different business models that might work for developing sustainable, mutually-beneficial PPPs. As in all business models, there are common assumptions that stakeholders have to keep in mind. These assumptions include access to capital, stability of cash flow, customer base and retention rate, human resources, competitive landscape, marketing channel, infrastructure and macroeconomic conditions. In the case of NCDs, there is also an inherent tension between long-term assets that require subsidies and multi-year agreements and short-term political cycles that may result in reducing subsidies.

While the models below have all proven effective in certain cases, there should be a continuous dialogue and forum across sectors to promote innovative thinking around future business models. Certainly, increased partnership between the public and private sectors will spur innovative thinking and competition about new models and techniques.

Type 1: Internalizing Positive Externalities

A model predicated on capturing the benefits (positive externalities) of companies and industries that promote healthy behavior provides direct opportunities for partnership with "perfect alignment" industries. While the prevalence of these types of industries varies widely across country income levels, the perfect alignment of values makes them excellent candidates for PPP.

CASE STUDY 1

Parks and Partnerships: New York City Park Conservancies

Public parks are a public good, that have positive effects on society. The real estate industry can capitalize on increased property values, and employers can capitalize on healthier, happier workers. Citizens benefit from an increased level of physical activity.

Yet the market fails to provide the optimal number of parks, and so governments step in to create and operate parks using tax revenue. However, by creating a model

that internalizes the positive externalities to the private sector, a PPP can yield a better, more vibrant park system.

In New York's Bryant Park, Central Park Conservancy and Riverside Park Conservancy, for example, a model was developed that unlocked the potential for value. Employees worked in or citizens volunteered their time to beautify these parks, increasing community buy-in, and engaging the public as a stakeholder. And by participating in the PPP, private-sector entities around the parks were able to leverage the positive externalities into high real estate values and tourism. Both produced substantial new financial value to the city government (Donahue, 2004). A portion of these financial benefits should be, but is not, reinvested in each park.

By leveraging the park's value to its neighbors, the NYC Parks Department was able to create better parks using PPPs, turning a public liability into a public asset. And a better park—one where people can exercise or relax—will produce a healthier populace.

CASE STUDY 2

Workplace Wellness Programs

To apply the logic of the New York City Parks case study to the efforts to curb NCDs, we must first imagine the health of the population as a public resource. Obviously, in a free society each individual citizen has total autonomy over his or her own body. But, taken in aggregate, the physical well-being of a population can be a powerful public asset. Widespread disease—like NCDs—is a liability, requiring massive government subsidy for treatment and management.

A healthy population can also pay dividends to the private sector. A healthy workforce is more productive. "The benefits of a healthy workforce show up...in increased productivity, lower absenteeism, improvements in talent acquisition and retention, and other areas not directly reflected in health care costs" (Orchard, 2015). And, of course, in countries that rely on an employer-based health insurance model, such as the United States, healthcare costs are borne by employers.

Partnerships with private-sector employers designed to improve NCD outcomes represent an alignment of profit motive with the goals of SGD 3.4. These kinds of partnership can take many forms, including workplace physical activity programs, gym memberships, in-office influenza vaccinations, mental health services, mobile apps to track employee fitness, biometric screenings, smoking cessation programs, and discounted insurance prices for employees.

Type 2: Developing a market for healthy goods and services

Burgeoning markets for healthy goods and services provide opportunities for unlocking long-term value for "potential alignment" industries as consumers become more attracted to healthy products, the profit motive will, naturally, push existing food and beverage companies to reformulate their products to be healthier—less sugar, less fat, etc. Carefully considered public-private partnerships can help encourage reformulation.

CASE STUDY 1

Singapore's Health Promotion Board

One example can be found in Singapore's Health Promotion Board (HPB). Established in 2001 by the Singapore Ministry of Health, the HPB developed a "healthier choice symbol," provided advertising dollars to shift market preferences, and supplied grants to encourage supply-side reformulations—to great success.

The HPB introduced the Healthier Dining Program in 2014 to encourage food and beverage businesses to provide healthier food and drink options. Businesses participating in this program could apply for grants to help them develop and promote healthier menu options. By shifting the cost structure of reformulation, the HPB was able to encourage an accelerated timeline for reformulation efforts (Trager & Lundberg, 2018).

CASE STUDY 2

Buy-One Give-One model

Companies like TOMS or Warby Parker pledge that for each product sold, they will donate the same or similar product to low- and middle-income countries by channeling donations through the company's own nonprofit entity or by partnering with non-profit organizations (Buy-One Give-One model). The model based on consumer-level cross-subsidization was widely adopted in the consumer products industry. Using this model, companies can simultaneously create social value, gain marketing and publicity opportunities and increase customer loyalty (Marquis & Park, 2014). This model could be potentially exported to health-positive goods and services, like wellness products, sporting goods, and digital health products.

Type 3: Leveraging international organizations and the non-profit sector to reach consumers and patients in low income countries

Sometimes, PPPs work best by collaborating with international organizations and the non-profit sector to assist in operational and technical capacity—helping the public and private sectors come together more seamlessly. "Imperfect alignment" industries have relied on the non-profit sector to handle technical assistance for and coordination and distribution of goods and services in low-income countries, which has also enabled them to

secure a market share while reducing transaction costs. These PPPs often rely not only on public subsidy, but also on donor support.

CASE STUDY 1

Eli Lilly MDR-TB Partnership

The Eli Lilly Multidrug-Resistant Tuberculosis (MDR-TB) Partnership (the "Partnership"), created in 2003 to fight a form of tuberculosis caused by incomplete or incorrect treatment of regular TB, is a collaboration of 14 public and private partners coordinated and largely funded by Eli Lilly and Company (Lilly).

The Partnership represents an excellent example of the inclusion of non-profit partners in a PPP model. Though Lilly saw the value in addressing the fight against MDR-TB (public goodwill and corporate responsibility), it faced an interesting dilemma regarding the logistical challenges of administering the treatments. The reality was that by simply providing drugs for MDR-TB without the proper infrastructure to correctly manufacture and use the drugs, Lilly could actually have been inadvertently contributing to the spread of MDR-TB (Trager & Yagan, 2007).

Thus, the Partnership, consisting of fourteen public and private entities, was established to "bridge the gap" and increase operational capacity. The Partnership focused on five main components: 1) the transfer of technology and drug supply 2) treatment, training and surveillance 3) community support 4) patient advocacy and 5) workplace awareness and prevention.

In creating the Partnership, the WHO, CDC and Partners in Health assisted with operational/technical capacity. The WHO helped establish a "Green Light Committee," a group of independent TB experts that reviewed applications from countries that wish to have WHO access to low-cost, high-quality and second-line drugs. The CDC established the first international laboratory training program for new and reemerging infectious diseases. And PIH established a comprehensive TB training and research program.

By using a non-profit entity to increase operational capacity and clear logistical hurdles, the Partnership was able to use a PPP to create a viable philanthropic structure to combat MDR-TB.

CASE STUDY 2

Gavi, the Vaccine Alliance

One important role an independent non-profit entity can play is pooling of demand. Often, by aggregating demand from smaller, poorer countries, a non-profit can create a viable market where there was none formerly.

A potent example can be found in Gavi, the Vaccine Alliance. While funding for vaccines comes from governments and donors, and the vaccines come from the pharmaceutical industry, Gavi, a non-profit, exists to aggregate demand for vaccines among a number of low-income countries as well as ensure the predictability of the introduction of immunization programs. By creating an economy of scale across countries, Gavi is able to create a viable market for immunizations where one did not exist before (*Gavi).*

CASE STUDY 3

Defeat-NCD Marketplace

Another example can be found in the ongoing development of the Defeat-NCD Marketplace, an online marketplace designed to connect buyers of medicines, diagnostics, and equipment—governments—with suppliers—the private sector. By allowing multiple countries to pool their purchasing power, low-income countries get more for less, and suppliers are able to predictably engage consumers (*Defeat-NCD Marketplace*).

Type 4: Traditional PPP models for healthcare infrastructure

More traditional PPPs models can also be effective in providing adequate healthcare infrastructure and delivering health services to combat NCDs. Where some cases call for the elaborate arrangement and coordination of value, others may call for a simple government subsidy. PPPs are distinguished from privatization, private financing initiatives, or the contracting of services. PPPs allow governments to take advantage of the agility and expertise of the private sector, while still maintaining standards for high-quality care.

CASE STUDY 1

Lesotho's National Referral Hospital

Lesotho's efforts to establish a National Referral Hospital through PPP since 2005 provides an illuminating example. A consortium was contracted to design, build, and operate a new 425-bed public hospital and adjacent gateway clinic; renovate three urban filter clinics; and deliver all clinical and non-clinical services in these facilities for 18 years. This kind of long-term shared investment by the public and private sectors was designed to provide health services for a defined population. Private partners were enlisted to co-finance, build and operate the facilities, but the facilities were ultimately owned by the government. Private partners were responsible for meeting service quality benchmarks, with an independent certifier to monitor performance standards, ensuring a level playing field for public and private partners (Coelho & O'Farrell, 2017).

CASE STUDY 2

Gonghe Senior Apartments in Beijing

Beijing District Civil Affairs Bureau from the Welfare Division donated the land and building and the private partner Yuecheng Senior Living equipped and operates Gonghe Senior Apartments, which is a 400-bed non-profit nursing home in Chaoyang District for middle-income seniors who are disabled or suffer from dementia. The term of the contract is 10 years. While the District owns the physical, land and equipment, a winning bidder contributes towards renovation and equipment purchases before opening and manages operations and maintenance annually after year 2. The private partner needs to achieve a four-star or better rating in achieving the occupancy rate of 80 percent or above. Given the government's priority of ensuring equity, Gonghe is required to accept up to 20% of the Three No's group (senior citizens with no children, no income and no ability to work) and the government subsidizes the monthly fee for this group (Trager, 2018).

Technology

PPPs also present unique opportunities to think differently about access to consumers and patients. In all four models mentioned above, the digital technology industry presents unprecedented opportunities for ensuring equity of access and improving operational efficiency.

We can increase access to quality healthcare, particularly in low-income countries, by leveraging the telecom industry's unique access to consumers: Offering health insurance through smartphones, for example, presents a unique opportunity to reach consumers in the informal sector.

Digital technology mHealth has implications that could affect the operational functions of healthcare PPPs. Digital technology could not only help patients connect with doctors—it could create new channels for the distribution of health-promoting goods and services. Using technology, we could increase human resources cost efficiency by effectively organizing limited resources and increasing health outcomes.

Common Themes

As we have seen, different types of PPP models can suit different circumstances. However, it is important to keep the core objectives in mind. For PPPs to be effective tools for combating NCDs, it must address the following issues.

- Expansion of Demand for a Healthy Lifestyle
  Both the public and private sector should encourage healthy lifestyles and consumption of goods and services that promote health.

- Expansion of Supply for Treatment
  An expansion of demand for preventative measures must be met by supply. Given the currently limited capacity and financing for NCD responses, the private sector is well positioned to provide goods and services and add capacity for prevention, screening and treatment of NCDs. Increased competition will not only increase access to preventive and curative services, it will also stabilize the price and increase affordability.

- Reduction in Demand for Treatment
  The rising prevalence of NCDs has led to increased demand for treatment and disease management. While supply should be expanded to meet the demand in the short-term, it is essential that the "funnel" be narrowed by investing in prevention in the long-term.

- Government Credibility
  The development of clear rules of engagement to ensure predictability and stability for both public- and private-sector partners. This lays the foundation for future partnerships and ongoing cooperation.

Performance Measurements of PPPs

Measuring the performance of a PPP can be particularly challenging. Because PPPs are structures that span many different institutions and sectors, with varying timeframes, it can be difficult to understand where successes and failures lie. The effective implementation of NCD PPPs is also dependent on patient compliance. Even the best-designed organizational structures will not be as effective with an unwilling populace. Patient compliance, and enthusiastic participation in the project of health is essential to success. High capacity utilization of human resources and equipment should be needed to maximize the impact of PPPs. In addition, even a well-designed PPP can suffer if the public-sector partner is ill-equipped to negotiate effective structures with the private sector. Developing the skills, especially negotiation, necessary to ensure successful partnerships is essential. Readiness is not only the predictor of performance but should also be included as an indicator of performance.

Outcomes: Return on investment

Long-term investment arrangements should be made to account for payoffs that are going to take place in 5 years, to a decade or more. For the public sector, an alternative arrangement for budget planning may be needed (i.e. 5-year block budget instead of annual budget). The arrangement may vary according to different strategies, product portfolio and revenue streams of an entity.

Impact: SDG 3.4 target

Key performance indicators should include the impact of business models on meeting the SDG 3.4 target to reduce by one-third premature mortality from NCDs through prevention and treatment.

Roles and Responsibilities

Having imagined the possibilities and potential of PPPs to change the landscape on NCDs, we can shift our focus towards the roles and responsibilities that various institutions will play in effecting change.

Regional and Country Level

Establishment of "Regional Initiatives" to increase PPP readiness

Regional Healthcare PPP Readiness Initiatives would be designed to harmonize relevant laws and healthcare regulations across regions. By standardizing regional legal and regulatory environments, the Readiness Initiatives would lower risk for private-sector partners (particularly in low-middle-income countries) and increase competition among companies operating in individual countries. As a result of these initiatives, regions would be more likely to attract private-sector capital, partners and projects.

Readiness Initiatives could leverage the existing network created by the United Nations Regional Groups as well as WHO Regional Offices. Research institutions and universities should also be critical partners of the Initiatives. They will be able to provide third-party evaluations of PPP implementation and operations and host capacity building programs to increase regional healthcare PPP readiness.

Capacity-building programs

Capacity building programs are programs that develop the skills necessary for negotiating effective PPPs. There are a number of skills necessary for creating effective PPPs, but the most important is negotiation. In many countries, ministry of health professionals are not confident in their ability to negotiate with the private sector. Building negotiation skills among these professionals—and providing incentives for them to stay in government after receiving training—would level the playing field and ensure better outcomes for all partners.

Global Level (UN System)

A global shift toward PPP-based models promises massive benefits, but its implementation may not be straightforward. With the stewardship of the UN, however, the process could be greatly facilitated.

PPP Advisory Board

One major liability for the deployment of PPPs in combating NCDs lies in the mistrust and contention between the private and public sectors, and the private and non-profit sectors. A neutral body or an advisory board—referred to henceforth with the arbitrary

name “PPP Advisory Board”—could facilitate the creation of a unified framework for PPPs and provision of continuous technical assistance in private sector engagement, regulation and regulatory issues, such as management of conflicts of interest, and financial- and contract-related issues.

While the PPP Advisory Board should include capacity building for the successful implementation of the existing Framework for Engagement with Non-State Actors (FENSA) as part of its agenda, the scope of the Advisory Board could be broader than that of FENSA to facilitate cross-sector engagement.

The UN Inter-Agency Task Force on Prevention and Control of NCDs would benefit from the addition of private-sector partners to balance development partners like Oxfam and the NCD Alliance. By signaling the UN’s intent to actively engage the private sector, the PPP Advisory Board would reduce the private-sector’s “wait-and-see” approach to large-scale WHO/UN initiatives.

By forming an Advisory Board, the UN would be signaling its intent to actively engage the private sector as a source of innovation, capital and projects. Founding members of the Advisory Board would be expected to set an example with scalable projects and associated resources.

Investment in evidence-based case studies

In order to be truly effective, PPPs need to be tailored to the idiosyncrasies of their respective countries. What works for Singapore will likely not work for Brazil, and vice versa. And while the frameworks outlined in this paper should be universally applicable, country-specific information will be essential to building effective, sustainable models.

In terms of developing context-specific understanding, paradigms and business models, no tool is more effective than the case study. Case studies allow officials to learn from real-world examples, develop the real-world skills required to negotiate effective PPPs and design new PPP business models.

Thus, the creation of a repository of evidence-based PPP case studies is essential, and requires substantial investment from all partners to conduct associated activities such as agreement on inclusion criteria, standardization of information, development and maintenance of a publicly accessible database, regular updates and user engagement. An academic institution or an independent entity could be selected to host and manage the database.

Conclusion

As we have seen, Healthcare PPPs can take many different forms. They are flexible structures that can be molded to suit the needs of each country. Their adaptability is their strength. The simple reality is that no two countries are alike, and no PPP model will ever be able to account for the idiosyncrasies and peculiarities of a specific society. Still, the

structures we have set out here should allow public and private sector partners to find ways to align their interests, negotiate successful structures, and engage with each other in the fight against NCDs.

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