CATALOGUE OF PUBLIC HEALTH CHALLENGES

The **Smarter Crowdsourcing** process allows us to combine the agility and diversity of crowdsourcing with curation to target those with relevant know-how and bring them together in a format designed to produce effective and implementable outcomes. Problem identification and prioritization is the first phase of this process. The response to coronavirus can be broken down into a taxonomy of smaller problems to be tackled. In the following lines, we present an initial catalogue of possible core problems to address with brief descriptions curated by The GovLab. The next step is prioritizing among them to develop a selection of longer, evidence-based problem briefs about those problems of greatest priority and concern. The IADB should choose from this list five top priority problems to tackle. Each selected topic will be the subject of an online conference to identify good practices worldwide and distill significant learnings that can help to better understand how these initiatives can be reproduced in the region.

BUSINESS OF GOVERNMENT

This category considers how certain key functions of Government are poised to develop bottlenecks during a pandemic. These functions include human resources, sourcing and procurement, contracting, inter-agency coordination, and decisionmaking in the bureaucracy.

RESPONSIBLE DATA AND MODELING

This category considers problems that can be addressed through optimizing data collection and use. In addition to how data should be used to guide decisionmaking, this category frames the ethical, privacy and security problems that should inform data collection and use.

INSTITUTIONAL CAPACITY AND RULE OF LAW

In line with IADB's strategic priorities, this category considers problems that inhibit the delivery of public services and health business climates during a pandemic. This includes the impact of corruption, institutional mismanagement, and negligence.

PRODUCTIVITY AND INNOVATION

In line with IADB's strategic priorities, this category considers problem areas that require technological innovation and approaches/expertise outside the normal toolbox of government. These problems span manufacturing, digital technology, public infrastructure, and other sectors of public life and the private sector.

PUBLIC HEALTH INFRASTRUCTURE

This category considers problems that interfere with the delivery of essential public health services during a pandemic. Essential infrastructure of a public health system includes a trained and capable workforce, integrated and functioning information systems, and agencies that can function horizontally and vertically with other public health institutions.

SOCIAL INCLUSION AND WELFARE

This category considers the problems that interfere with improving the terms on which individuals and groups access society. It focuses specifically on problems that exacerbate how these affected individuals and groups are further marginalized, put at risk, or excluded from support due to pandemic conditions.

PROBLEM CATEGORIES

1. BUSINESS OF GOVERNMENT

1.1 Operational awareness and information management
1.2 Operational Effectiveness
1.3 Single Point of Failure
1.4 Procurement and Contracting
1.5 Defining and measuring success
1.6 Surge Staffing

2. RESPONSIBLE DATA AND MODELING

2.1 Predictive and Descriptive Modeling
2.2 Responsible and Ethical Data Use

3. INSTITUTIONAL CAPACITY AND RULE OF LAW

3.1 Continuity of operations and government accountability
3.2 Jurisdictional Coordination
3.3 Corruption

4. PRODUCTIVITY AND INNOVATION

4.1 Infrastructure
4.2 Creative Incentives for Behavior change
4.3 Personal Protective Equipment

5. PUBLIC HEALTH INFRASTRUCTURE

5.1 Epidemiological monitoring and surveillance
5.2 Testing Strategy
5.3 Informing the Public
5.4 Contact Tracing
5.5 Managing health services not related to COVID-19

6. SOCIAL INCLUSION AND WELFARE

6.1 Long Term Care and Vulnerable Populations
6.2 Supporting vulnerable and underserved communities
6.3 Mental health and emotional wellbeing
6.4 Guaranteeing protections for workers

PROBLEM 1.1

OPERATIONAL AWARENESS AND INFORMATION MANAGEMENT

A lack of reliable data about on-the-ground conditions prevents policymakers and public health officials from creating a common operational understanding.

ROOT CAUSES

- **Surveillance Database:** The jurisdiction lacks effective, centralized surveillance data.
- **Federalism:** State/province, local or private entities fail to collect and report data in a timely manner.
- **Political Conflict**: Political divisions between national and local governments on how to handle the pandemic.
- **Intergovernmental Coordination and Cooperation**: Contradictory orders and lacking of mechanisms to scale up solutions from local to national.
- **Lack of Data Standards:** Data is reported in different formats, making it difficult to process.
- **Varying levels of data collection:** Data collection may vary at the local level, depending on capacity.
- **Lack of Visualizations:** Data is not visualized in a format that translates into insights for decision making.
- **Lack of Data:** People lack an understanding of which data sets to collect, and how often.
- **Lack of analytic expertise**: Entities lack the expertise to analyze and synthesize complex data to arrive at simple or straightforward statements
- **Absence of Data Sharing**: Jurisdictions lack technical, legal and cultural mechanisms for sharing data.

WHY DOES THIS MATTER?

- Agencies and key stakeholders fail to share information effectively, leading to duplicated work and uninformed decisions.
- Principals do not have adequate processes that enable them to translate data/information into action quickly and reliably.
- Diffusion of data sources across government agencies and the private sector obscures the operational landscape and areas that need priority action.
- Agencies and other stakeholders produce different information products.

EXAMPLE SOLUTIONS

- **Microsoft Hospital Emergency Response Solution**
- Situational Awareness Dashboards (**New Jersey**)
- **WHO situation reports**
- **Data sharing Executive Orders** (Chicago)
- Crowdsourced data collection models

PROBLEM 1.2

OPERATIONAL EFFECTIVENESS

Policymakers lack the ability to respond rapidly to this crisis.

ROOT CAUSES

- **Legal restrictions on collaboration:** Legal regulations make it difficult to collaborate across agencies and with the private sector.
- **Bureaucracy:** Bureaucratic structures and chains of approval impede quick decision making.
- **Lack of training**: Policymakers are trained in analysis but not in operations.
- **No execution experience**: Too few people in government are trained in end-to-end operational execution.
- **Siloes:** Agencies are siloed -- and social distancing means even less collaboration.
- **No Sharing:** Agencies do not typically share data or talent.

WHY DOES THIS MATTER?

- Responding to the crisis requires the ability to quickly stand up and run effective programs, such as a contact tracing program, or to source personal protective equipment (PPE).
- Solving problems such as expanding testing capacity or feeding vulnerable populations demands collaboration among agencies or between the public and private sectors.
- Government's increasing use of consultants and outsourcing the work of governing decrease accountability, and contextual and institutional knowledge.

EXAMPLE SOLUTIONS

- Office of Emergency Management
- MA COVID-19 Command Center
- **Innovation and problem solving training programs**
- Public sector consultants
- Parliament of Mayors

PROBLEM 1.3

SINGLE POINT OF FAILURE

It is too easy for one person to say no and halt innovative responses. No one has a monopoly on the right answers in a fast-changing environment.

ROOT CAUSES

- **Hierarchy:** The hierarchical nature of bureaucracy makes it easy for one person to act as a blocker
- **Understaffing:** Many jurisdictions have only a handful of people in certain roles that have suddenly become important, unduly powerful, and often are unaccountable.
- **Closed Door Governance**: People in key roles are unaccustomed to soliciting outside input.
- **Cultural Resistance to Change**: Lack of a culture of innovation in public administration leads to governments not having the confidence to experiment and adjust on learning.
- **Overconfidence:** Public officials may not be aware of or honest about their own skills, confidence or expertise.

WHY DOES THIS MATTER?

- Rapid and innovative response is crucial.
- We need to experiment and see what works.
- We need to base decisions on science not politics.

EXAMPLE SOLUTIONS

- UK Evidence Review
- Creating rapid policy SWAT teams
- Requiring an evidence review to accompany proposals
- Establishing a citizen jury to whom key officials must report
- UK “rapid re-engineering of gov structures”.
- States of Change.

PROBLEM 1.4

PROCUREMENT AND CONTRACTING

Traditional systems of procurement and contracting in government are not well suited to a crisis situation. In a crisis, government needs to be able to hire quickly, and to have the flexibility to procure items that carry considerable risk.

ROOT CAUSES

- **Deliberative Culture:** Government bureaucracy is built to be deliberative and slow, in order to ensure transparency and fiscal responsibility.
- **Large Contracts:** Government contracts are comparatively large, increasing the risk associated with procurement decisions.
- **Corruption**: Crises amplify opportunities for corruption, counterfeiters and price gouging that reduce trust in the marketplace.
- **Legal Restrictions**: Give preference to vendors already on the contract.
- **Government Contract Planning:** Government contracts may lack an adequate planning stage, often resulting in contracting not having the desired benefit.
- **Balancing Flexibility with Due Diligence:** Government contracting needs to be flexible for a crisis but at the same time must ensure adequate planning and oversight.

WHY DOES THIS MATTER?

- The novelty and unique nature of most crises mean that to respond optimally, governments must be able to source expertise and supplies from non-traditional vendors.

EXAMPLE SOLUTIONS

- Stafford Act
- CityMart
- MetroLab

PROBLEM 1.5

DEFINING AND MEASURING SUCCESS

Policymakers lack a set of public or internal "SMART" metrics (specific, measurable, achievable, reliable, timebound) that can be tracked over time to ensure adequate progress is achieved. The public needs a set of metrics by which to hold the government and officials to account.

ROOT CAUSES

- **Lack of defined metrics:** A lack of adequate testing means we do not have a good way to measure success at suppressing the virus.
- **Mismanagement:** Incompetence and/or mismanagement inhibit an effective response.

WHY DOES THIS MATTER?

- Under the duress of a crisis, psychological biases and heuristics often cause principals and officials to lose sight of priorities, and reduce staying power on essential issues.
- Without oversight and transparency, the public cannot hold officials to account.

EXAMPLE SOLUTIONS

- **COVID-19 Global Dashboard**
- Situational Awareness Dashboards (**New Jersey**)
- CDC Data Dashboard (**CDC**)
- Public health accountability (**CFR**)

PROBLEM 1.6

SURGE STAFFING

When managing crises, governments and organizations, especially healthcare institutions, need to be able to scale their operations quickly and seamlessly. They need to be able to recruit, hire, onboard, train and deploy staff under tight timelines.

ROOT CAUSES

- **New Roles Needed:** Public health crises require specific skills and expertise that organizations understandably don't maintain during normal operation periods (it would be inefficient to have 1,000 contact tracers on payroll for 10 years).
- **Lack of management:** Organizations lack the ability to manage a distributed workforce.
- **No Remote Work Culture:** Lack of experience with working and managing remotely.
- **Credentialing:** It is difficult to authenticate credentials rapidly.

WHY DOES THIS MATTER?

- Normal staffing capacities and in-house expertise are not enough to adequately meet the challenges of a crisis. Governments and organizations need to increase staffing ratios to respond.

EXAMPLE SOLUTIONS

- Third-party staffing - **(Massachusetts hires thousands of contact tracers)**
- University partnerships (ie. New Jersey to hire 1,000 contract tracers in partnership with Rutgers University)
- Volunteer model of Digital Response

PROBLEM 2.1

PREDICTIVE AND DESCRIPTIVE MODELING

Every day, jurisdictions are involved in a complex, high stakes guessing game based on mathematical models that both conflict and are incomplete, making it difficult to develop evidence-based policy.

ROOT CAUSES

- **Lack of Data Science Expertise:** Governments lack adequate epidemiological staff to do predictive modeling.
- **Hard to Collaborate:** Governments do not have effective means of collaborating with the private sector, where many data scientists are based.
- **Lack of Data:** Governments lack access to open data sources on which to base their predictive modeling.
- **Many Unknowns:** The disease changes and we know too little about it. For example, we don't really know how transmissible it is.
- **Variance or Unreliability of Predictive Models:** Models such as CHIME and IHME have limited utility and offer conflicting predictions. Many models fail to take account of differences on social distancing and other policy measure.
- **Connectivity and broadband access:** Across LAC there are disparities in levels of connectivity, inhibiting ability to report data and collect data.

WHY DOES THIS MATTER?

- Without effective models, it is difficult to predict the spread of the virus, the need for PPE, or the impact on different groups, especially vulnerable populations.

EXAMPLE SOLUTIONS

- University partnerships
- Data collaboratives
- Corporate partnerships - Facebook AI
- **data4covid19.org**

PROBLEM 2.2

RESPONSIBLE AND ETHICAL DATA USE

Many apps are being developed to aid the fight against Coronavirus but they neither give individuals access to their own data nor provide useful data to public health authorities.

ROOT CAUSES

- **Tech and State Don't Talk:** Tech companies are designing tools without the engagement of public health authorities.
- **Lack of Guard Rails:** Apps are being developed without the engagement of privacy or civil liberties experts.
- **Lack of Human-Centered Design:** Apps are being developed without a good understanding of on-the-ground conditions that people close to those conditions can supply.
- **Tech for Tech's Sake:** Building tools that people cannot use.

WHY DOES THIS MATTER?

- To effectively respond to COVID-19, policymakers and principals need large quantities of citizen data, including information about location, health, and social interaction.
- Without transparency and privacy protections, governments and firms can easily abuse or mismanage data collected under the auspices of the COVID response.
- States may use data collected from the pandemic to abuse human rights or civil liberties.
- Authoritarian regimes are already misusing data.

EXAMPLE SOLUTIONS

- Center for American Progress - **Digital Contact Tracing Recommendations**
- Rockefeller/New America - Digital State initiative.

PROBLEM 3.1

CONTINUITY OF OPERATIONS AND GOVERNMENT ACCOUNTABILITY

In the pandemic, governments are failing to respond effectively and to be accountable.

ROOT CAUSES

- **Continuity of Public Agendas:** Public agendas on issues not related to the pandemic (rural reform, labour reform, etc.) have lost momentum or are completely collapsed.
- **Lack of Remote Work Culture:** Public institutions are not accustomed to working remotely, and have not practiced its.
- **Legal Restrictions:** Legal strictures in place prevent remote work.
- **Technological Barriers:** Public institutions do not have the adequate technological infrastructure to make them feel confident to fulfill their functions remotely.
- **Partisanship:** Political infighting leads some groups to try to derail continuity of operations.

WHY DOES THIS MATTER?

- Branches of government must continue operating if they are to ensure checks and balances.
- In a crisis, government agencies need to provide more, not fewer, services.
- Downtimes and disruptions can have considerable impacts on clients, constituents, or customers of government services. It is vital to maintain key government functions, such as public safety, public health, emergency response capabilities, and social safety nets, especially under an increasing economic crisis.
- In the event of another wave of COVID-19 or a similarly crippling disruption, governments, organizations, and firms need to build in redundancies and plan for business continuity. They will need to evaluate and prioritize what are essential services and functions in case of prolonged stresses to normal operations.

EXAMPLE SOLUTIONS

- Brazilian legislature model
- Ukranian government model
- Mock Hearings

PROBLEM 3.2

JURISDICTIONAL COORDINATION

The global pandemic has required multiple levels of government (international, federal, state/regional/provincial, and local) to cooperate and coordinate their activities. To do so, they have needed to clarify jurisdictional authorities and responsibilities under an increasing economic crisis.

ROOT CAUSES

- **Legal, historical and culture preconditions:** Long-enshrined legal rules may localize control when centralized coordination is needed. In specific locations, political culture that evolved to be accustomed to having strong leaders who do not work collaboratively.
- **Partisanship and political infighting between political parties:** Presidents, governors, mayors may come from different political parties or simply vie for the spotlight. Additionally, policymakers pursue intergovernmental competition for political credit only, interfering with aspects of an evidence-based response.
- **Populism:**Political incentives may conflict with desired public health outcomes making it difficult to pursue public health policy (i.e. social isolation, lockdowns, etc.).

WHY DOES THIS MATTER?

- Complex response programs such as contact tracing require local, regional, and federal governments to work together.
- Complex response programs require local and regional governments and organizations to work together.

EXAMPLE SOLUTIONS

- Horizontal: **Travel in the Schengen Area**
- Regional partnerships such as California/Oregon/Washington
- Vertical: Switzerland's approach to COVID-19 is a good example of vertical integration in a country that is highly decentralized

PROBLEM 3.3

CORRUPTION

Crises present opportunities for corruption, counterfeiting and price gouging. These increase the risk to government procurement and reduce public trust in the marketplace.

ROOT CAUSES

- **Price Gouging:** Crises present opportunities for corruption, counterfeiting and price gouging that reduce trust in the marketplace.
- **Lack of Transparency:** With limited options due to supply constraints, consumers (individuals, firms or government) who need goods or services are forced to take purchasing risks without much information.
- **Lack of Data:** the inability to track spending flows increases the risk of corruption.
- **Inability to Vet Counterfeit:** We don't have good tools to detect counterfeits.

WHY DOES THIS MATTER?

- Mission-critical counterfeit goods (personal protective equipment, drugs, etc.) that don't meet quality standards can pose risks to patients, care givers, or the general public.
- Scams that provide low quality or no goods consume considerable financial and investigatory resources.

EXAMPLE SOLUTIONS

- Entrupy technology
- Use of investigative journalism
- Whistleblower protections
- Crowdsourcing to report corruption

PROBLEM 4.1

INFRASTRUCTURE

Public infrastructure is not designed for social distancing.

ROOT CAUSES

- **Social distancing:** Workers and the public will need to maintain social distancing practices for a period of time, and cannot use public and shared spaces as they were previously designed and maintained.
- **Budget:** Infrastructure budgets, limited in good times, are even smaller during the pandemic.
- **Design Considerations:** Spaces are designed to maximize density

WHY DOES THIS MATTER?

- Densely populated and frequently used spaces are vectors for transmission.
- Officials in charge of automotive traffic, public transportation, public parks and walkways, air-travel, and commercial centers will all need to revolutionize the way the public uses spaces and services.

EXAMPLE SOLUTIONS

- Helsinki's collaboratively developed urban plan
- Bologna' next generation city plan
- Melbourne Water VR modeling tools

PROBLEM 4.2

CREATIVE INCENTIVES FOR BEHAVIOR CHANGE

Communities and segments of the population, often for good reasons, behave in ways that increase the risk of infection and community spread.

ROOT CAUSES

- **Lack of Compliance:** The public does not follow social distancing recommendations and other preventative recommendations (masks)
- **Fear:** The public are afraid to seek medical care for non-COVID conditions.
- **Stigma and discrimination:** The public may respond with anger against people with COVID or specific ethinc, racial or religious groups.
- **Political Manipulation:** When scientific guidance conflicts with political ends, political leaders may encourage constituents not to follow guidance.
- **Fake News and Misinformation:** Bad actors have capitalized on fear and confusion to promote fake news and spread misinformation.

WHY DOES THIS MATTER?

- Deep rooted biases, cultural traditions, and/or habits may increase risks of infection and community spread.
- Myths and misinformation are widespread and need to be debunked.

EXAMPLE SOLUTIONS

- Behavioral insights/Nudges
- Public information campaigns (**WHO**) (**Johns Hopkins**)
- **Ask a Scientist**
- **Rumor Control and Misinformation Page**
- Working with community leaders/ culturally-specific organizations

PROBLEM 4.3

PERSONAL PROTECTIVE EQUIPMENT

We do not know how much PPE we are using, how much we will need, or where to get it quickly and cheaply.

ROOT CAUSES

- **Reporting:** Many jurisdictions have no effective reporting systems
- **Increased Demand:** Increased demand in PPE and other non-medical supplies (cleaning supplies, etc.) leads to counterfeiting and price-gouging.
- **Lack of Supply Chain:** There is no clear supply chain.

WHY DOES THIS MATTER?

- Essential workers (grocery stores, public transportation, sanitation, etc.) cannot safely do their jobs, imposing greater stress on the public.
- Clinicians do not have adequate supplies to provide care safely.
- Long term care workers do not have adequate supplies to provide care safely.
- It is essential to locate and connect relevant actors with medical supplies such as masks, PPE, beds, and ventilators, as well as to analyze the state of national emergency stockpiles.

EXAMPLE SOLUTIONS

- **Sourcemap**
- **PPE Donation Portal (New Jersey)**
- **PPE Supplier Registry (New Jersey)**
- **Open PPE Project**
- **Project N95**

PROBLEM 5.1

EPIDEMIOLOGICAL MONITORING AND SURVEILLANCE

Policymakers, healthcare workers and the general public lack effective ways to understand viral incidence and prevalence, thus inhibiting evidence-based decision-making.

ROOT CAUSES

- **Limitations of testing:** Lack of testing material makes it difficult to know who is infected.
- **Data reporting:** A lack of centralized data collection means that results are not comprehensive or timely.
- **Misreporting:** Poor quality tests, false positives and negatives
- **Rules and regulations:** Requirements, such as the need for a prescription, make testing of asymptomatic individuals more difficult

WHY DOES THIS MATTER?

- Policymakers, public health experts and clinicians don't know the prevalence of infection in the population, thus inhibiting evidence-based, population-level decisions.
- Public health experts and clinicians don't know which individuals are infected because of testing constraints and asymptomatic transmission
- Community members don't know who is infected in their community, potentially leading to riskier behaviors.
- Individuals don't know if they are sick unless they are symptomatic, potentially leading to behavior that further transmits the virus.

EXAMPLE SOLUTIONS

- **CDC and Apple's symptom tracker.**
- **Wastewater surveillance for COVID spike**
- **Randomized testing (general) (in New York State)**
- **Pooled testing (Stanford) (Nebraska)**
- **Widespread testing (S. Korea)**
- **Contact tracing (Massachuttes)**
- **British Columbia symptom tracker (Canada)**
- **Pew work on antibiotic resistance (ARP)**

PROBLEM 5.2

TESTING STRATEGY

Authorities have no clear understanding of when and whom to test, and which types of tests to use.

ROOT CAUSES

- **Shortages:** We need to retest those who test positive but lack capacity.
- **Contact Tracing:** All individuals who come in contact with a confirmed COVID-19 positive individual need to be tested to help cut the chain of transmission. Contact tracing allows public health officials to identify these individuals and ensure they receive correct guidance on how to isolate and minimize risks of further transmission.
- **Prevalence Study:** We need to do studies to understand prevalence but are uncertain of how large-scale the study should be.
- **Serology:** There are doubts about the value of serological testing.
- **Vulnerable Populations:** There needs to be retesting in vulnerable populations but we are not sure when.
- **Lack of Agile Expertise:** We cannot get expertise fast enough to help us answer these questions.
- **Lack of Testing:** There is a lack of testing capacity, supply chain, logistics.

WHY DOES THIS MATTER?

- In order to re-open, we need a testing strategy to measure incidence and prevalence.
- We need a plan for efficient testing, given shortages.
- We need strategies that work for different populations, such as the homeless, migrants, those with physical or other disabilities, incarcerated populations, and the elderly.

EXAMPLE SOLUTIONS

- **FAS Rapid Response Task Force**
- **Vulnerable population protocols**
- **Randomized testing**
- **University partnerships**
- **Public-private partnerships**
- **Door to door testing**

PROBLEM 5.3

INFORMING THE PUBLIC

Cutting the chain of transmission requires educating the public and creating incentives for behavior change (such as staying at home or washing hands).

ROOT CAUSES

- **Signal to Noise:** So much information makes it difficult for government sources to cut through the noise.
- **Conflicting Messages:** There are conflicting messages from different public health authorities around the world. Some officials may have been motivated to avoid disproportionate panic, of the kind that gripped the U.S. during the Ebola outbreak of 2014.
- **Lack of Consensus:** The virus is new, there is not always a consensus about scientific information, and that information changes.
- **Access Barriers:** Different segments of the population may have access barriers (langage, broadband access, visual/hearing impairments, etc.)
- **Politics:** Political and ideological perspectives pushed by elites influence the wider public. Sometimes these messages are aligned with science/expertise, other times they spread misinformation.

WHY DOES THIS MATTER?

- It is hard to change behavior if the public does not know how COVID-19 is spread, what the symptoms of COVID-19 are, or what public infrastructure (transportation, grocery stores) is safe to use.
- Unequal access to information widens socioeconomic and racial/demographic disparities.

EXAMPLE SOLUTIONS

- **Public information campaigns (WHO)**
- **Information hubs (New Jersey)**
- **Anti-smoking campaigns (TRUTH)**
- **Mental health campaigns (Man Therapy)**

PROBLEM 5.4

CONTACT TRACING

Public health authorities are not in a position to scale up contract tracing from a few dozen to thousands effectively and efficiently.

ROOT CAUSES

- **Small Staff:** Public health authorities have a small number of contact tracers doing communicable disease work.
- **Lack of Tech:** There is no technology infrastructure to support a contact tracing effort..
- **Privacy:** People, especially in immigrant and underserved communities,Â are reluctant to answer questions about their movements.
- **Socioeconomic Condition:** Inequality and poverty make it almost impossible for much of the population to obey quarantine orders.
- **Decentralization:** Health authorities can be decentralized and fractured.

WHY DOES THIS MATTER?

- Effective contact tracing is key to disease suppression.
- Contact tracers are needed to stop the spread of the disease.
- Contact tracers are needed to enforce targeted policies of quarantining.

EXAMPLE SOLUTIONS

- **World Central Kitchen**
- **Partnering with schools of public health**
- **Building community partnerships**

PROBLEM 5.5

MANAGING HEALTH SERVICES NOT RELATED TO COVID-19

As healthcare providers and public authorities have focused their attention on treating and abating COVID-19, the treatment of other chronic and acute conditions has fallen by the wayside.

ROOT CAUSES

- **Diminished Workforce:** Public health authorities are expending the bulk of their time treating COVID-19, leaving a diminished workforce available for other types of care.
- **Lack of Supplies:** The shortage of PPE, ventilators, swabs, and other medical supplies caused by the pandemic leaves limited supplies available to use in other types of care.
- **Lack of Facilities:** Many emergency care facilities and intensive care units have been converted to COVID-19 wards, leaving fewer spaces available to treat other conditions.
- **Lack of Medication:** The diversion of antiviral medications, sedatives, and painkillers to treat COVID-19 has left a diminished supply available to treat other conditions.
- **Treatment Triage:** Healthcare providers have to prioritize the treatment of high-risk conditions, while postponing or cancelling treatment for those with lower-risk conditions or those seeking elective treatments.
- **Fear of Exposure:** Those who need treatment may not seek it out due to fear of being exposed to Coronavirus.

WHY DOES THIS MATTER?

- Those who do not receive the care they need for acute conditions will suffer severe health consequences in the short-term.
- Those who do receive the care they need for chronic conditions will suffer compounding health consequences in the long-term.

EXAMPLE SOLUTIONS

- **Greater availability of telemedicine to treat certain conditions**
- **Regulations to prioritize the allocation of supplies, facilities, and medication to those most vulnerable**
- **More efficient use of nurse practitioners, physician assistants, and other non-physicians to provide care to more people**
- **Solutions discussed under the "Personal Protective Equipment" problem to more effectively source supplies**

PROBLEM 6.1

LONG TERM CARE AND VULNERABLE POPULATIONS

The spread of COVID-19 has differential impacts across different social, age, ethnic, socioeconomic, and cultural groups. Social determinants of health will impact infection rates and severity of the outbreak in specific populations including among the elderly, indigenous, impoverished, sex workers and other vulnerable or marginalized populatuons. Globally, the elderly living in unique environments housing older adults with multiple illnesses and functional and cognitive impairment, have faced high mortality rates when or if they contract the virus.

ROOT CAUSES

- **No distancing possible:** Physical distancing measures to reduce community spread of COVID-19 are not possible in lifetime care for most residents, because of their impairments and very close quarters.
- **No isolation possible:** It is difficult to quarantine or isolate exposed or symptomatic residents in nursing homes, since most have high care needs.
- **Intimate conditions:** Staff members provide intimate personal care to multiple residents daily, and, in many facilities, do not have access to adequate personal protective equipment or alcohol-based hand sanitizer.
- **Poor work conditions:** The lack of paid time off encourages these staff members to work while symptomatic.

WHY DOES THIS MATTER?

- Well-meaning staff may become vectors of wide transmission within a facility (and some work at multiple facilities)..
- Even when spread slows in the general population, it is growing in Long Term Care facilities and vulnerable communities.
- Death rates at Long Term Care facilities and among vulnerable communities, are dramatically higher.

EXAMPLE SOLUTIONS

- Establishing processes to cohort ill individuals away from uninfected individuals in locations with concentrated populations of vulnerable communities.

PROBLEM 6.2

SUPPORTING VULNERABLE AND UNDERSERVED COMMUNITIES.

These populations often cannot practice many of the strategies integral to fighting COVID-19, such as self-isolation, sanitation and hygiene, and bulk purchasing..

ROOT CAUSES

- **Disparate Impact and greater risk:** COVID-19 poses a greater risk to some populations due to underlying health conditions and social determinants of health.
- **Costs of PPE :** Poverty limits access to material needed for protection.
- **Economic Need:** Poverty increases the risk of needing to do unsafe work.

WHY DOES THIS MATTER?

- Coronavirus is taking a toll on the health and economic well-being of these communities.
- Without effective suppression measures, they risk spreading the virus even faster.
- Housing-insecure populations are at disproportionate risk of infection, transmission and health complications.
- Current data suggest a disproportionate burden of illness and death falls on racial and ethnic minority groups.

EXAMPLE SOLUTIONS

- Quarantine Duty - Paying people to stay home.
- **Housing and Facility Donation Portal**
- **DCAid**

PROBLEM 6.3

MENTAL HEALTH AND EMOTIONAL WELLBEING.

Large-scale disasters are frequently accompanied by spikes in mental health issues such as post-traumatic stress disorder, substance abuse, depression, behavioral disorders, child abuse, and domestic violence

ROOT CAUSES

- **Stress:** Death, quarantine, social isolation, economic recession and loss, as well as general stress from the pandemic, have contributed to an epidemic of anxiety.
- **Tele-Health Shortage:** There is a lack of effective tele-health services for mental health.
- **Unemployment:** Exponential growth in unemployment is causing a spike in anxiety and depression.
- **Underinvestment in Mental Health Services:** Public mental health services are precarious and inaccessible for large parts of the population.

WHY DOES THIS MATTER?

- Mental health creates a significant toll on personal and population health, which blights lives, and produces greater burden on government expenditure and the public health system.

EXAMPLE SOLUTIONS

- Great White Wall
- Greater availability of tele-medicine, delivered through handheld devices.
- Regulators are relaxing rules that impede telehealth, or allowing practitioners to practice in jurisdictions where they may not be licensed.

PROBLEM 6.4

GUARANTEEING PROTECTIONS FOR WORKERS.

Workers are forced to work in unsafe working conditions.

ROOT CAUSES

- **PPE Shortage:** Employers are not providing adequate PPE.
- **Design:** Workplaces are not designed to accommodate social distancing.
- **Self-interested business behavior:** Profits are put above worker protection.
- **Outdated Institutions:** Labor inspectorates are overwhelmed and lack the tools they need.

WHY DOES THIS MATTER?

- We need to minimize the health risks of re-opening the economy.
- Workers should not have to choose between health and work.

EXAMPLE SOLUTIONS

- Total Design Analysis of Built Environment
- Aerosol chemistry studies.
- Predictive analytics/modeling workplace safety
- Virtual reality re-designing workplaces (Melbourne Water)
- Symptom tracker but for workplace safety
- Violation reporting sites
- Crowdsourced safety reporting.

IMPORTANT AREAS NOT COVERED

as agreed upon by the two parties, GovLab's engagement with IADB will not address the below areas. Even so, GovLab is compelled to explicitly list them because considering the problems surrounding these areas is integral for an effective management of the COVID-19 pandemic and building a road to reopening society safely

- Education
- Hospitals
- Vaccine
- Fostering Business and Government Solvency
- Assessing Environmental Impact
- Understanding the Economic Impact


GOVLAB