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Preparing for and responding to Covid-19’s ‘second hit’

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**ABSTRACT**

While already sobering, Covid-19 mortality projections only account for a portion of morbidity and mortality we should expect from the current outbreak – patients directly affected by Covid-19. Largely missing from current discussions is the indirect impact on a much broader set of patients affected the epidemic – patients who will experience greater morbidity and mortality from a wide range of clinical conditions due to disruptions in the provision of health care and other essential services – what we are describing here as the ‘second hit’ of Covid-19.

Current estimates of the human health toll from the ongoing outbreak of the respiratory disease Coronavirus Disease 2019 (Covid-19) are staggering. As of July 13, 2020, there have been over 13,000,000 cases and 500,000 deaths globally, and most experts agree that the epidemic is just beginning.\(^1\)

While already sobering, these projections only account for a portion of morbidity and mortality we should expect from the current outbreak – patients directly affected by Covid-19. Largely missing from current discussions is the indirect impact on a much broader set of patients affected the epidemic – patients who will experience greater morbidity and mortality from a wide range of clinical conditions due to disruptions in the provision of health care and other essential services – what we are describing here as the ‘second hit’ of Covid-19.

Evidence for the second hit can be found from other recent public health disasters. During the 2014–2016 Ebola epidemic in West Africa, decreased access to care for just three conditions (HIV/AIDS, tuberculosis, and malaria) accounted for nearly the same number of deaths as from Ebola itself.\(^2\) The impact can also be sustained: during Superstorm Sandy, closure of the Manhattan Veterans’ Affairs facility was associated with worse blood pressure control amongst veterans two years after the facility reopened.\(^3\)

The second hit of Covid-19 is already well underway in the U.S. and globally, as efforts on social distancing, mitigating spread, and increasing surge capacity in hospitals are being put in place. Experts predict that health facilities will be overwhelmed for sustained periods of time, and that it is likely that social distancing measures will need to be reintroduced in subsequent epidemic waves.\(^4\) While necessary to mitigate Covid-19, these changes have widespread ramifications on system’s ability to manage acute, chronic, and preventive care. There are a number of major shifts happening now that can help the health system understand which parts of the system and what segments of the population will be most affected (Table 1).

Similar to the current response to mitigate the direct impact of Covid-19, an immediate and coordinated response is urgently needed at multiple levels of the health system to mitigate the second hit. The recent expansion of telemedicine in the U.S. is a promising example of what can done quickly and effectively. Telemedicine increases access to individuals who are sheltering or self-quarantining at home, promotes social distancing for both patients and health care workers, and is more resource-efficient than in-person visits.\(^5\) It also mitigates both the direct and indirect effects of the epidemic, as patients are using telemedicine both for assessment and triage of Covid-19 and as an alternative site of care for preventive and chronic care. In a matter of weeks, the U.S. has seen a dramatic expansion of telemedicine, with some national telemedicine suppliers reporting a 50 increase in utilization compared to pre-epidemic levels.\(^6\)

Telemedicine expansion was enabled by a coordinated response, including policy changes (enacting telemedicine payment reform, relaxing privacy regulations for use of video- and message-based communication, removing barriers to interstate credentialing and practice), system-level changes (re-training physicians in telehealth, redesigning clinic scheduling and workflow), and community-level
changes (public health campaigns, direct-to-consumer messaging).

However, as provider organizations struggle financially and face staff layoffs and closures, it is not safe to assume that they will be in a position to invest in these vital new capabilities. Instead, the second hit may need to be addressed by a growing ecosystem of non-traditional “providers,” which have access to vulnerable people, data and technology capabilities, and the motivation to build a business strategy around it. This includes telemedicine companies that are building new services around their core offerings, health advocacy and population health management organizations, technology-driven service platforms that may already deliver food and can extend into healthcare and social services, and consumer-facing retail operations that see health extensions to their core business. Examples include partnerships with Uber and Lyft to provide transportation services to individuals with transportation barriers; technology-driven efforts by Amazon and start up companies such as Capsule to bring prescription deliveries to home; and new private or public-market backed entities that are investing in bringing traditional services to the home.

As economic and financial stress injects unprecedented volatility into the healthcare sector, it will be important to ask “who will pay for it?” As we suggest a series of solutions to address second hit that should be prioritized and accelerated in a manner similar to telehealth, we also suggest sources of financing.

First, vulnerable individuals should be proactively identified at population scale, including those with ADL/IADL deficits, multiple chronic conditions, recent hospitalization, low-income/economic and food insecure, and undocumented immigrants. This requires unprecedented data sharing between payers and frontline providers, which includes primary care clinics, but also frontline caregiver networks, community-based organizations, and telehealth teams that serve a given geographic region.

The most promising source of financing these information networks are through public-private partnerships between service-driven companies and non-profits with specialized capabilities to address the specific population. Some of these such as partnerships with Lyft and Uber to provide transportation for individuals with transportation barriers have built-in financing mechanisms, as they have modest upfront capital costs and the potential to increase for service revenues if they successfully decrease no show rates, which is not guaranteed and requires appropriate targeting. Others such as a recent partnership between Unite Us, a data platform, and Kaiser Permanente to better coordinate care for Medicaid patients and link them to social service organizations require more upfront capital and have a less direct return-on-investment.

Second, primary care clinics can redeploy doctors and registered nurse practitioners to provide direct care and oversight to frontline health worker teams for high-risk individuals in their home. Frontline health workers include clinician-extenders, social workers, registered dieticians and community health workers, whose roles can be more sharply defined as community-based triage and response protocols are developed. These teams should operate on a geographically defined areas to reduce redundancy and increase systematic identification of vulnerable individuals.

As new investment pours into telehealth, virtual primary care, and population health entities, they will be looking to extend their services as well as enter new markets. The key missing ingredient is a commitment and commensurate investments in achieving health equity that should be understood as the “price of entry” into healthcare partnerships, and the basis of a public-private partnership — something that most traditional healthcare entities understand they must do as a matter of course and mission — but many new private sector entities do not. As an example, in order to expand their services to Medicaid and local public health organizations, these new entities may be required to preferentially hire from target communities, demonstrate language and cultural competency, and integrate with local non-health care provider organizations.

Third, global advances in home and community-based care should be accelerated to enable frontline workers to provide diagnosis, therapeutics, and linkages to remote monitoring and telemedicine options. The latter should include nurse triage lines and telephone-based nurse care management for individuals without smart phones. Furthermore, health workers that must do in-person response should do a rapid assessment for barriers and solutions to enable remote care, including the need for internet connectivity, video capabilities, and remote monitoring tools. There is no shortage of new entrants and investment into new diagnostic and technology-based solutions. Public entities should also consider making these investments with the goal of guaranteeing affordability and coverage requirements, in a similar manner to how public housing authorities provide tax credits for affordable housing in market rate housing developments. This approach reinforces each of those mentioned above by encouraging joint-investment, information sharing and planning strategies by public-private partnerships.

Each of these solution areas requires rapid adjustments to long-standing regulations, payment practices, and licensing requirements as...
well as significant financing. These include the expanded use of equivalent payments for care in home and community-based settings; relaxed restrictions on patient self-collection and nurse collection of certain lab specimens; expansion of telemedicine payments to the critical work of social workers, nurse practitioners, and physician assistants; and the accelerated use of results-based payment models so that frontline workers who are part of the solution can be appropriately compensated.

In addition, mitigation efforts would be greatly benefited by coordinated efforts to quantify the size and scope of the second hit, particularly in high risk populations, to track negative outcomes in non-Covid-19 related conditions, and identify and disseminate best practices on how to mitigate them.

Covid-19’s second hit may be as great a threat to global health as the disease itself. By accelerating and sustaining efforts at delivery system innovation at the frontlines, we can mitigate the impact, especially for our most vulnerable patients and communities.

Disclaimers

The views or opinions in this article are personal to the authors and may not represent the views or opinions of their employers or other professional associations.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Shantanu Nundy, MD, MBA, is an employee at Accolade, Inc, which provides personalized advocacy solutions to employers. Manmeet Kaur, MBA, is the chief executive officer at City Health Works, which provides community-based services to low-income individuals with chronic conditions.

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