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The National Academy of Medicine Social Care Framework and COVID-19 Care Innovations

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Despite social care interventions gaining traction in the US healthcare sector in recent years, the scaling of healthcare practices to address social adversity and coordinate care across sectors has been modest. Against this backdrop, the coronavirus pandemic arrived, which re-emphasized the interdependence of the health and social care sectors and motivated health systems to scale tools for identifying and addressing social needs. A framework on integrating social care into health care delivery developed by the National Academies of Science, Engineering, and Medicine provides a useful organizing tool to understand the social care integration innovations spurred by COVID-19, including novel approaches to social risk screening and social care interventions. As the effects of the pandemic are likely to exacerbate socioeconomic barriers to health, it is an appropriate time to apply lessons learned during the recent months to re-evaluate efforts to strengthen, scale, and sustain the health care sector's social care activities.

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In recent years, social care interventions in the US health care sector have gained traction, driven by compelling research, payment reforms, and new technology.[1] Despite this momentum, the scaling of new health care practices to address social adversity has been modest, and examples of sustainable alignment or coordination of care across sectors are scarce.[2] Against that backdrop, the new coronavirus arrived in the USA. In response, numerous academic, trade, and lay press publications highlighted how vulnerable populations disproportionately shoulder the growing pandemic's burdens.[3–9] By re-emphasizing the interdependence of the health and social care sectors, the COVID-19 experience also has led health systems to develop, deploy, and scale tools for identifying and addressing patients' social needs with new urgency.[10]

Yet feasible and effective roles for health care systems in attending to patients' social and economic needs remain elusive. A 2019 framework from the National Academies of Sciences, Engineering, and Medicine (NAM) described five strategies health care organizations can leverage to strengthen social care: awareness, assistance, adjustment, alignment, and advocacy.[11] (See Table 1.) We use the NAM framework to highlight promising social care integration innovations spurred by the COVID-19 pandemic and to recommend opportunities for strengthening and sustaining those efforts in the context of the virus' long-term economic sequelae.

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SOCIAL RISK SCREENING

The pandemic has magnified the health care sector's awareness that social conditions influence health. In turn, it has accelerated demands for information about patients' social circumstances. This has taken shape in both new and expanded social risk screening initiatives—either delivered at the point of care or asynchronously. In the NAM framework, these types of activities are referred to as *awareness* initiatives.

There are numerous examples of new COVID-19-responsive social risk screening programs. In a novel partnership in New York, a non-profit health insurer developed and deployed a chat bot developed by Amazon for outreach to 85,000 beneficiaries to ask about their social needs. Kaiser Permanente has developed and disseminated social risk screening recommendations in a new COVID-19-related social health playbook[12] and is exploring technology-facilitated social risk screening tools. In a third example, Coastal Medical primary care in Rhode Island added outbound patient calls that included social risk–related questions; the social data obtained were then used to alert primary care providers about patients whose social challenges put them at higher risk of COVID-19 complications.[13]

COVID-19 also has led some health systems to expand the types of socioeconomic risks included in assessments. Housing stability screening prior to COVID-19 was relatively uncommon across social risk screening domains.[14, 15] But based on the influence of housing instability on coronavirus disease spread and, in some regions, newly available government-sponsored temporary shelters, clinical systems have overcome earlier reluctance to housing stability assessments. In part, this is because of new policies or encouragement from health care

Table 1 Social Care Categories, Practice Examples from COVID-19 Pandemic, and Opportunities for Scaling

NASEM category*	Definition	COVID-19 pandemic examples	Opportunities for health care sector to strengthen and scale social care
Awareness	Activities related to identifying the social risks and assets of defined patients and populations	Near-universal screening for homelessness at clinical entry points	Establish consensus on standards for documenting both social adversity and related interventions
Adjustment	Activities related to altering clinical care to accommodate identified social barriers	Waived fees for viral testing and home medication delivery	Strengthen evidence on benefits and harms of adjusting care for different at-risk populations
Assistance	Activities related to reducing social risk by connecting patients with social care resources	Expansion of home-delivered meals and provision of temporary housing	Improve EHR integration of community resource referral technology; reimburse community agencies for providing effective assistance programs; increase the scale and training of the workforce providing assistance
Alignment	Activities undertaken by health care systems to understand existing social care assets in the community, organize them to facilitate synergies, and invest in and deploy them to positively affect health outcomes	Data sharing across sectors to mobilize housing for homeless patients	Invest in shared data standards and digital infrastructure across sectors to increase seamless data sharing
Advocacy	Activities in which health care organizations work with partner social care organizations to promote policies that facilitate the creation and redeployment of assets or resources to address health and social needs	Health care advocacy for paid sick leave	Advocate for policies that facilitate and augment social care resources, such as recovery legislation

**National Academies of Sciences, Engineering, and Medicine report on Integrating Social Care into the Delivery of Health Care, 2019*[11]

leaders. As an example, in the spring of 2020, the state of California made state-level recommendations that health care providers screen for homelessness to contain the disease.[16] Health systems also are expanding social risk screening into other domains. At OCHIN, Inc., which supports a large integrated electronic health record platform for over 600 community health centers (CHC) across the USA, for the first time, CHC leaders have asked the technology team to embed internet access questions in the organization's EHR social risk module so that the health centers can assess the ability of patients to leverage newly available telemedicine services.

SOCIAL CARE INTERVENTIONS

The intent of increased awareness about social conditions in the COVID-19 era is to help clinicians and health systems target interventions to a patients' ability to stay healthy under shelter-in-place laws or when facing new social risks such as social isolation or financial security threats. So not surprisingly, the increasing breadth and depth of social risk screening in the COVID-19 context has occurred in tandem with the deployment of new social care interventions. In many cases, these interventions focus on connecting individual patients with available social services or government programs to address acute needs, e.g., food insecurity or housing instability. In the NAM framework, these *assistance* activities are designed to leverage the health care encounter to help reduce social adversity. Rapidly expanding interest in assistance interventions has underscored the need for up-to-date information for community and government programs offering emergency food, eviction and utility shut-off protections, unemployment insurance, and social connections, and for a trusted workforce that can deliver that information to at-risk patients. Health systems that had already incorporated technology-based community referrals resource platforms to facilitate assistance programs have reported relying heavily on them in the COVID-19 period.[17, 18] In other cases, COVID-19 accelerated decisions to adopt these platforms. For example, the insurer AmeriHealth Caritas added a link to Aunt Bertha—a community referrals resource platform—on their organization's welcome webpage.[19] Similarly, Northwell Health, New York state's largest health care provider, accelerated the roll-out of NowRx, a service from the NowPow platform, which enables patients and outreach workers, including social workers and community health workers, to find and share information about available social service agencies.[17]

The National Academy's framework depicts a second category of patient-level interventions. This category includes activities in which health care decision-making, practice, or payment is *adjusted* based on patients' social risks. Adjustment and assistance interventions can be complementary. The tectonic shift to telemedicine, which was not anticipated in the NAM report, is a timely example of a care adjustment. In the COVID-19 context, medical care became virtual to protect both individual patients and their communities from infection. In many cases, however, supporting virtual care delivery has required assisting patients financially, whether by expanding health care benefits to ensure coverage for telehealth visits,[20] or by ensuring access to telehealth services paying for internet-enabled devices or broadband access. As an example, the transition to telemedicine in safety-net systems like Boston Medical Center has involved expanding smartphone loaner programs or otherwise supporting remote home monitoring by paying for patients' phone or internet access.

The pandemic also has presented new impetus to health care systems to engage at the community level to act on social adversity as a strategy to improve individual and population health. The NAM refers to these community-focused actions in two final categories of their framework: *alignment* and *advocacy*. As an example, as the pandemic took hold in New York City, a group of health care systems, social service agencies, technology companies, and other businesses assembled a new collaborative, the COVID-19 Rapid Response Coalition. The purpose of the coalition was not only to identify high-risk community members (increase awareness) and connect them to services (provide assistance) but also to identify and close gaps in service capacity (ensure alignment). Four months later, the coalition has grown to more than 60 organizations, which together have adopted a longer-term goal of supporting ongoing alignment among health care, social service providers, and businesses in the region. In an example of an advocacy action by the health care sector, in mid-March, multiple health professional organizations called on the federal government to support family, medical, and sick leave to contain disease spread.[21]

COVID-19 interventions related to housing instability and homelessness help illustrate how the NAM framework's individual and community-focused social care engagement strategies can be complementary. For instance, as many urban health systems began screening for homelessness, they also started referring patients experiencing homelessness and at high risk of infection to emergent housing assistance programs. In San Francisco, the effectiveness of these assistance programs at housing the highest risk patients is dependent on cross-sectoral alignment between health care, public health, and housing partners. In parallel, some health care systems have deepened their commitments to investing in housing at the community level, which has contributed to more effective assistance programs. For instance, COVID-19 spurred Kaiser Permanente to invest additional dollars in rental and mortgage assistance for low-income populations, not only their own beneficiaries.[22]

BARRIERS AND OPPORTUNITIES TO SCALE SOCIAL CARE PRACTICES IN THE HEALTH CARE SECTOR

Like the pandemic itself, the rapid acceleration of social care practices within the US health care system in response to COVID-19 has been unexpected. Increasingly aware of patients' urgent needs, some health care systems broke down both real and perceived barriers to identifying and intervening in social adversity. Clinical teams acted on social risks that had previously seemed unactionable. As the growing economic crisis is likely to exacerbate socioeconomic barriers to health, it is an appropriate time to apply these lessons to re-evaluate strategies to strengthen, scale, and sustain the health care sector's social care activities. The NAM report focused its recommendations on the workforce, data and technology infrastructure, and financing needed to advance this work. COVID-19 has offered an important—and tragic—use case to ground those high-level recommendations.

First, the health care sector's rapidly scaled social care responses to COVID-19 have surfaced the need to establish consensus on standards for documenting both social adversity and related interventions. Even when housing interventions were made available, as an example, patients experiencing housing instability in one hospital would not necessarily be considered housing unstable in another. Shared measures can facilitate accurate identification of adversity and improve data aggregation opportunities across institutions and sectors. Common risk measures also may help payers to define and incentivize responsive interventions.

Second, it has become increasingly clear that a rate-limiting factor for health sector activities around both assistance and alignment is the lack of cross-sector data infrastructure and governance.[10] Supporting the seamless and bidirectional exchange of data and referrals between social and health care entities should become paramount.[23] In addition to ensuring efficient flow of data, such systems can enable real-time surveillance of capacity and provide valuable information to planners and policymakers about where additional investments are needed.

Third, COVID-19 should fuel our commitment to the NAM recommendation about ensuring both the workforce and the workforce training necessary to increase the health care sector's capacity to identify and assist patients facing social adversity. The time for investing in and adequately training community health workers, social workers, and other social outreach workers has come.[24] Health systems are exploring a range of strategies to make social needs screening and social services referrals more efficient—including through the Centers for Medicare and Medicaid Services Accountable Health Communities national demonstration project;[25] COVID-19 has highlighted how a workforce that can engender trust and ongoing communication with vulnerable patients could maximize the effectiveness of these types of programs.[26]

Finally, as health care innovation pushes the boundaries of social and medical care integration, ethical guardrails should be clearly established to ensure that these new innovations at the intersection of medical and social care weigh both patient autonomy and health benefits. As one example, temporarily housing homeless patients in vacant hotel rooms across a community, critical from a community disease mitigation perspective, may simultaneously sacrifice an individual's social networks, mental health, and autonomy.[27]

CONCLUSION

The COVID-19 pandemic has accelerated health care sector innovations to identify and intervene on patients' social circumstances as a strategy to improve health outcomes. As the immediate viral pandemic abates and the long-term poverty

epidemic worsens, the NAM framework on integrating social care into health care delivery offers a useful organizing tool to highlight the wide range of often complementary health care sector activities that can be mobilized to protect vulnerable populations.

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Compliance with Ethical Standards:

Conflict of Interest: *Dr. Gottlieb reported serving as a volunteer member of the 2018-2019 National Academies of Science, Engineering, and Medicine (NASEM) ad hoc consensus committee Integrating Social Care into the Delivery of Health Care. Her travel to committee meetings was paid for by the NASEM. No other disclosures were reported.*

REFERENCES

1. Solomon LS, Kanter MH. Health care steps up to social determinants of health: Current context. *Perm J*. 2018;22. doi:https://doi.org/10.7812/TPP/18-139
2. Fichtenberg C, Devla J, Minyard K, LM G. Health and human services integration: Generating sustained health and equity improvements. *Health Aff*. 2020;39(4):567-573. doi:https://doi.org/10.1377/hlthaff.2019.01594
3. Dorn A van, Cooney RE, Sabin ML. COVID-19 exacerbating inequalities in the US. *Lancet*. 2020;395(10232):1243-1244. doi:https://doi.org/10.1016/s0140-6736(20)30893-x
4. Tsai J, Wilson M. COVID-19: a potential public health problem for homeless populations. *Lancet Public Heal*. 2020;5(4):e186-e187. doi:https://doi.org/10.1016/S2468-2667(20)30053-0
5. Chomilo N, Heard-Garris N, DeSilva M, Blackstock U. The harm of a colorblind allocation of scarce resources. *Heal Aff Blog*. doi:https://doi.org/10.1377/hblog20200428.904804
6. Abrams EM, Szefler SJ. COVID-19 and the impact of social determinants of health. *Lancet Respir*. 2020;2019(20):2019-2020. doi:https://doi.org/10.1016/S2213-2600(20)30234-4
7. Azar KMJ, Shen Z, Romanelli RJ, et al. Disparities in outcomes among COVID-19 patients in a large health care system In California. *Health Aff (Millwood)*. May 2020;39(7):1253–1262. doi:https://doi.org/10.1377/hlthaff.2020.00598
8. Velasquez D, Ashworth H, Stewart A. Protecting the hidden homeless during COVID-19 and beyond. *Heal Aff Blog*. 2020. doi:https://doi.org/10.1377/hblog20200518.668890
9. Bowleg L. We're Not All in This Together: On COVID-19, Intersectionality, and Structural Inequality. *Am J Public Health*. May 2020:e1. doi:https://doi.org/10.2105/AJPH.2020.305766
10. Cartier Y, Fichtenberg C, Gottlieb LM. Can community resource referral technologies support local COVID-19 response? *Heal Aff Blog*. 2020. doi:https://doi.org/10.1377/hblog20200421.369465
11. *Integrating Social Care into the Delivery of Health Care*. National Academies Press; 2019. doi:https://doi.org/10.17226/25467
12. Modern Healthcare. Social Determinants of Health Symposium. 2020. https://register.gotowebinar.com/recording/4383842327697954306.
13. Klein S, Hostetter M. *Primary Care as a Bulwark against COVID-19.*; 2020. doi:https://doi.org/10.26099/kxb8-j267
14. Cartier Y, Gottlieb L. The prevalence of social care in US health care settings depends on how and whom you ask. *BMC Health Serv Res*. 2020;20(1):481. doi:https://doi.org/10.1186/s12913-020-05338-8
15. Fraze TK, Brewster AL, Lewis VA, Beidler LB, Murray GF, Colla CH. Prevalence of screening for food insecurity, housing instability, utility needs, transportation needs, and interpersonal violence by US physician practices and hospitals. *JAMA Netw open*. 2019;2(9):e1911514. doi:https://doi.org/10.1001/jamanetworkopen.2019.11514
16. Kushel M, State of California. *Recommended Strategic Approaches for COVID-19 Response for Individuals Experiencing Homelessness*. San Francisco, CA; 2020. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH Document Library/COVID-19/Protocols-Homeless-Pop.pdf.
17. Raths D. Deployments of social service referral platforms pay off during COVID emergency. Healthcare Innovation. https://www.hcinnovationgroup.com/population-health-management/social-determinants-of-health/article/21139848/deployments-of-social-service-referral-platforms-pay-off-during-covid-emergency. Published 2020.
18. Landi H. COVID-19 is widening gaps in health equity. Here are some ways organizations are trying to address it. Fierce Healthcare. https://www.fiercehealthcare.com/tech/how-organizations-are-addressing-social-determinants-amid-covid. Published 2020.
19. The Community Resource Hub. Social Services for 10002 (New York, NY). https://acdc.auntbertha.com/search_results/10002?widget = acdc&ref = acdc. Published 2020. .
20. Centers for Medicare & Medicaid Services. Medicare telemedicine health care provider fact sheet. https://www.cms.gov/newsroom/fact-sheets/medicare-telemedicine-health-care-provider-fact-sheet. Published 2020.
21. Frontline physicians recommend further actions to address COVID-19. AAFP, AAP, ACOG, ACP, AOA, APA ; 2020. Available at: https://www.acponline.org/acp_policy/statements/joint_covid_19_policy_recommendations_2020.pdf.
22. American Hospital Association. Kaiser Permanente Earmarks $1 M for Homeless COVID-19 Response. https://www.aha.org/other-resources/2020-03-19-kaiser-permanente-earmarks-1-m-homeless-covid-19-response. Published 2020.
23. Cartier Y, Fichtenberg C, Gottlieb LM. Implementing community resource referral technology: Facilitators and barriers described by early adopters. *Health Aff*. 2020;39(4):662-669. doi:https://doi.org/10.1377/hlthaff.2019.01588
24. Garfield C, Kangovi S. Integrating community health workers into health care teams without coopting them. *Heal Aff Blog*. 2019. doi:https://doi.org/10.1377/hblog20190507.746358
25. Alley DE, Asomugha CN, Conway PH, Sanghavi DM. Accountable health communities - Addressing social needs through medicare and medicaid. *N Engl J Med*. 2016;374(1):8-11. doi:https://doi.org/10.1056/NEJMp1512532
26. Manchanda R. Three workforce strategies to help COVID affected communities. *Heal Aff Blog*. 2020. doi:https://doi.org/10.1377/hblog20200507.525599
27. Institute of Medicine (US) Forum on Microbial Threats. *Ethical and Legal Considerations in Mitigating Pandemic Disease: Workshop Summary*. 2007.