WHAT IS MAINTAINING ACCESS TO ROUTINE AND ESSENTIAL SERVICES?

During the COVID-19 pandemic, maintaining continuity of service delivery for routine and essential care is necessary for minimizing excess morbidity and mortality and maintaining population trust in the health system. As a patient's first point of contact for care and cornerstone of a sustainable health system, PHC has a critical role to play in this effort. (2,4) Drawing from **PHCPI's Improvement Strategies** we identified three core strategies for optimizing service delivery settings and platforms, as shown to the right. This document focuses specifically on the role of telehealth in maintaining access to routine and essential services.

CORE STRATEGIES

TELEHEALTH SERVICES

SAFETY & FACILITY OPERATIONS

COMMUNITY-BASED SERVICES

WHAT IS TELEHEALTH?

Telehealth refers to the use of information and communications technologies (ICT) to support the delivery and management of remote health care services. Telehealth activities may include long-distance health care, patient and provider health-related education, public health, and health care management. (1–3) Two common forms of telehealth are **telemedicine**--the delivery of remote clinical services--and **remote patient monitoring**--the use of electronic devices to report, collect, transmit, and evaluate patient health data outside of traditional healthcare settings. (2–4) Telehealth can be delivered through a variety of different technologies, including mobile phones, smartphone apps, landlines, videoconferencing, the internet, wearable technology, and store-and-forward imaging. (3,4)

During the COVID-19 pandemic, shifting services that can be provided remotely without compromising safety and quality to telehealth services can help reduce the burden on facilities and community-based providers and minimize exposure for patients.

COVID-19 PROMISING PRACTICES
TELEHEALTH SERVICES

ADOPTION OF TELEHEALTH SERVICES IN SRI LANKA
To prevent disruption in access to services, health care facilities in Sri Lanka adopted telehealth innovations using basic mobile telephone functionality. **Learn more about Sri Lanka's experience**

LEVERAGING PRIVATE SECTOR TELEHEALTH INITIATIVES IN BANGLADESH
The adoption of telehealth initiatives has allowed Praava Health to continue providing medical care to its patients and help mitigate the broad impact of the pandemic. **Learn more about Praava Health's experience**

UTILIZING DIGITAL TECHNOLOGY FOR COVID-19 IN RAJASTHAN, INDIA
Rajasthan s in the process of strengthening its PHC system through digital enablement of the health workforce during the COVID-19 pandemic. **Learn more about Rajasthan's experience**

phcpi PRIMARY HEALTH CARE PERFORMANCE INITIATIVE

CHALLENGES & OPPORTUNITIES

Making a rapid shift to telehealth service provision during the COVID-19 pandemic will be challenging no matter the context, however making this pivot may offer several opportunities for health systems strengthening beyond the COVID-19 time period. These challenges and opportunities may include:

TELEHEALTH SERVICES

KEY OPPORTUNITIES:

HIGH-QUALITY PHC

When supported by strong policies, investments, and regulatory structures, telehealth can offer an effective means for countries to ensure that PHC remains the **first point of contact** with the health system and that care is continuous over time and place. (2,4,13) Telehealth programs that enable the exchange of health information via interoperable ICT allow for stronger data management and use, helping to improve **coordination** of care between patients and their care teams. (2) This is particularly true when strong health management information systems and/or electronic health records are present; while countries without such systems can implement telehealth services, careful attention must be paid to avoid care fragmentation. Similarly, the remote nature of telehealth often presents challenges to the delivery of **comprehensive** services and, without careful planning and implementation, can increase care fragmentation. (14) However, telehealth services that allow for clinical decision support, interprofessional education and collaboration, and continuing professional development opportunities that are adaptable to the local context can offer providers with access to otherwise inaccessible knowledge and resources. This knowledge sharing has been shown to improve the skills and services providers have to offer, and positively impact clinical management and delivery of health care services.(2) Finally, evidence shows socioeconomic benefits for patients, providers, and the broader health system, including improved **person-centeredness** via enhanced **patient-provider communication** and educational opportunities for patients such as disease self-management, patient education, and health promotion. (2,5–7,10)

EFFICIENCY AND COST-EFFECTIVENESS

Although start-up costs for implementing telehealth can be high, there is potential for efficiency gains later on. (2,6) Remote care and diagnosis via telehealth benefits both patients and the health care system in the long-term by reducing wait times and indirect costs associated with seeking and providing care, including travel and missed work/childcare. Additionally, connecting multiple remote sites via telehealth (such as geographic or municipal boundaries) can be a cost-effective way of delivering care and managing resources. (2,10)

ACCESS AND EQUITY

Telehealth has the potential to widen pre-existing disparities in access and health outcomes, and so particular attention must be paid to ensure that telehealth services are designed with low-income, elderly, and/or marginalized populations in mind. (5–8) This is of particular relevance for countries with a nascent ICT infrastructure and enabling environment (i.e. standards and interoperability, legislation, regulations, and capable workforce). (6) On the other hand, with appropriate planning and attention, telehealth may actually offer an opportunity to increase patients timely access to healthcare, **particularly for rural and remote populations.** (2,9)

SURVEILLANCE, RESPONSE, & CASE MANAGEMENT

Digital technologies also offer countries an opportunity to more effectively organize and collect patient data. Use of these technologies via telehealth can enable robust surveillance and tracking efforts by providing countries with a means to identify and track public health issues and trends. This can lead to added benefits, including strengthening disease monitoring and risk communication and planning for COVID and non-COVID related issues among care teams and communities. (2,11) Given the urgency and threat of COVID-19 (particularly for pre-symptomatic and asymptomatic cases), remote case management is an important strategy for preventing its spread and protecting the safety and well-being of providers and patients. (12) Additional COVID-19 Improvement Strategies related to surveillance and tracking are forthcoming.

HOW CAN PHC BE LEVERAGED?

Countries around the world are rapidly shifting to new and/or expanded roles for telehealth services during the COVID-19 pandemic. (15,16) Transitioning to telehealth while maintaining quality and safety of service delivery requires commitment and change at all levels of the health system. Various elements of PHC systems are well positioned to help ease this transition and ensure sustainability in the long term. Potential pathways for leveraging PHC **will depend on local context**, (17) but may include:

TELEHEALTH SERVICES

POTENTIAL PATHWAYS:

PHC POLICIES, FINANCING, & QUALITY MANAGEMENT INFRASTRUCTURE

Delivery of telehealth services requires policies and regulations that allow for virtual service delivery, provide legal frameworks and protections for providers and patients, and ensure patient privacy and confidentiality. (2,18–20) Countries that have built effective mechanisms for PHC policy development may be able to leverage these mechanisms to accelerate telehealth policy development and implementation. (13,19,21) The same **principles that underlie effective PHC policymaking**--including ensuring data-based decision-making and participatory processes as well as designating clear structures, roles, and accountabilities--will support effective telehealth policy formation. (6,22) Although telehealth services may not be limited to PHC, ensuring that telehealth policies and regulations are embedded in PHC policies supports implementation and sustainability. (22) Countries that have built effective mechanisms for PHC policy development may be able to leverage these mechanisms to accelerate telehealth policy development and implementation.

Crucially, telehealth services must be regulated to ensure quality and safety. (13,19,21) Embedding telehealth within a strong **quality management infrastructure**--including regulatory statutes, quality policy strategies, accreditation, community engagement, and ongoing performance evaluation--will be essential to maintaining quality and safety. In particular, key decisions about which services can be safely provided via telehealth, and by which type of healthcare providers, should take into consideration local workforce capacity and access to referral when needed and be codified in regulations to ensure safety.

Finally, reimbursement challenges and implementation costs are common barriers to telehealth provision and adoption. (23) **Supportive payment systems** that appropriately reimburse providers or facilities for telehealth services are essential for the adoption of telehealth initiatives. Health financing initiatives should also focus on removing financial barriers, particularly for low-income or vulnerable populations, to ensure everyone can benefit from telehealth. Learn more about priorities for the health financing response to COVID-19 **here**.

POPULATION HEALTH MANAGEMENT

To be effective and accessible, telehealth service delivery must be designed with the end-user in mind. This includes understanding the information and communication technologies available to the local population, as well as anticipating their needs and concerns with a pivot to telehealth and proactively designing services to mitigate these concerns. To this end, **community engagement** during telehealth service design--though time consuming--will be essential.(2,6,13,18,20.22-23) Beyond design considerations, aspects of population health management such as **empanelment** and **proactive population outreach** can serve as mechanisms for tracking both individual and population health needs and help ensure that telehealth services are targeted at those most in need. (39) Countries or regions with empanelment in place before COVID-19 can utilize these systems to identify, track, and target specific services to those in need; for example, identifying all patients with cardiovascular disease and ensuring they receive appropriate services. In countries or regions where empanelment is not yet in place, other data sources--such as disease registries or census data--can also be effectively used to achieve similar ends. Additionally, proactive population outreach activities can support the identification of populations whose health needs may be met by telehealth. Outreach can also help understand how to meet these needs, as well as identify patients who might need additional support. In addition, proactive population outreach and empanelment help enable the tracking of patients and linkage of patients needing testing or referrals to testing centers, hospital intensive care units, or other facilities that can provide more specialized COVID-19 care. (40)

WORKFORCE & TEAM-BASED CARE

INFORMATION SYSTEMS & USE

TELEHEALTH SERVICES

The PHC workforce will be at the center of a pivot to telehealth services (35) and early and sustained efforts--including re-assignment, task shifting, and in-service training--must be made to both redistribute and capacitate the workforce to deliver services remotely as well as build demand and motivation to use new technologies. (16) This transition is made easier in health systems with existing strategies and infrastructure in place to develop and sustain a skilled workforce competent in the delivery of comprehensive PHC. Additionally, shifting to telehealth service delivery can be greatly facilitated by the presence or initiation of team-based care. During COVID-19, health systems and facilities can help to facilitate this transition to team-based care by defining team structures, roles and responsibilities grounded in team members' competencies, and communication structures. Although team cultures take time to build and develop they are essential for strong team functioning; during the rapid transitions COVID-19 is driving, taking time to align on a common vision and purpose for teams and demonstrating organizational support and leadership commitment can go a long way. (7,35-38)

Robust, interoperable information systems and the use of these systems are essential at all times for ensuring access to high-quality, real-time data for setting priorities, making clinical decisions, measuring and managing performance, and identifying and tracking empaneled populations. (24-28) This is particularly true during a shift to telehealth service provision during the COVID-19 pandemic, when service providers are likely to be working from multiple locations in difficult conditions. In particular, the existence of interoperable and interconnected ICT infrastructure will greatly support transitions to telehealth service delivery; (2,5,6,22-23) in the absence of such systems, protocols and procedures supporting provider communication and coordination will be critical to critical to ensure closed feedback loops for effective surveillance and referrals. (29–34)

RELEVANT RESOURCES

GLOBAL LEARNING PLATFORMS

- OpenWHO
- PHCPI Community of Practice - online forum for resilient PHC
- Exemplars in Global Health

GLOBAL TOOLS & RESOURCES

- WHO, 2009 Telemedicine: Opportunities and Developments in Member States
- WHO - WHO eHealth Site
- WHO - Digital Health Site and Draft Global Summary on Digital Health 2020-2024
- WHO, 2015 - Third global survey on eHealth
- WHO, 2016 - Global diffusion of eHealth: making UHC achievable
- WHO, 2020 - Country & Technical Guidance - COVID-19
- WHO, 2020 - Maintaining essential health services: operational guidance for the COVID-19 context
- WHO, World Bank, and OECD - Delivering quality health services: a global imperative for UHC
- NEJM Catalyst - What is Telehealth?
- Knowledge Action Portal, 2020 - COVID-19 and NCDs and Digital Health Topics
- PATH, 2020 - Resources to support COVID-19 response in LMICs
- PATH, 2020 Three urgent actions to protect essential health services during COVID-19

1. WHO | Third Global Survey on eHealth - 2015 [Internet]. [cited 2020 May 28]. Available from: https://www.who.int/goe/survey/2015survey/en/
2. Ryu S. Telemedicine: Opportunities and Developments in Member States: Report on the Second Global Survey on eHealth 2009 (Global Observatory for eHealth Series, Volume 2). Healthc Inform Res. 2012;18(2):153.
3. Health IT. What is telehealth? How is telehealth different from telemedicine? | HealthIT.gov [Internet]. HealthIT.gov. 2019 [cited 2020 May 28]. Available from: https://www.healthit.gov/faq/what-telehealth-how-telehealth-different-telemedicine
4. NEJM Catalyst. What Is Telehealth? NEJM Catalyst. 2018 Feb 1;
5. Alghamdi M, Gashgari H, Househ M. A systematic review of mobile health technology use in developing countries. Stud Health Technol Inform. 2015;213:223–6.
6. Bali S. Barriers to development of telemedicine in developing countries. In: F. Heston T, editor. Telehealth. IntechOpen; 2019.
7. Alghatani KM. Telemedicine implementation: barriers and recommendations. Journal of Scientific Research and Studies. 2016 Jul;3(7):140–5.
8. Doarn CR. The last challenges and barriers to the development of telemedicine programs. Stud Health Technol Inform. 2008;131:45–54.
9. RHIHub. Telehealth Use in Rural Healthcare Introduction - Rural Health Information Hub [Internet]. 2019 [cited 2020 May 29]. Available from: https://www.ruralhealthinfo.org/topics/telehealth
10. Jennett PA, Affleck Hall L, Hailey D, Ohinmaa A, Anderson C, Thomas R, et al. The socio-economic impact of telehealth: a systematic review. J Telemed Telecare. 2003;9(6):311–20.
11. WHO. Strengthening Preparedness for COVID-19 in Cities and Urban Settings [Internet]. 2020 [cited 2020 May 29]. Available from: https://www.who.int/publications-detail/strengthening-preparedness-for-covid-19-in-cities-and-urban-settings
12. Greenhalgh T, Koh GCH, Car J. Covid-19: a remote assessment in primary care. BMJ. 2020 Mar 25;368:m1182.
13. WHO. Global Diffusion of eHealth: making universal health coverage achievable . World Health Organization; 2016.
14. Kulkarni R. Use of telehealth in the delivery of comprehensive care for patients with haemophilia and other inherited bleeding disorders. Haemophilia. 2018 Jan;24(1):33–42.
15. Bill & Melinda Gates Foundation. Primary health care is exactly that - Bill & Melinda Gates Foundation [Internet]. 2020 [cited 2020 May 8]. Available from: https://www.gatesfoundation.org/TheOptimist/Articles/coronavirus%20jean%20kagubare%20phc?fbclid=IwAR1roPBiTupJFfJtpG2iaxS8FoBoe5_p6BsERsCW28i7yfM1wbzMzbIoMy0
16. WHO. COVID-19: Operational guidance for maintaining essential health services during an outbreak [Internet]. 2020 [cited 2020 May 6]. Available from: https://www.who.int/publications-detail/covid-19-operational-guidance-for-maintaining-essential-health-services-during-an-outbreak
17. Hirschhorn L, Smith JD, Frisch MF, Binagwaho A. Integrating implementation science into covid-19 response and recovery. BMJ. 2020 May 14;m1888.18. Tomasi E, Facchini LA, Maia M de FS. Health information technology in primary health care in developing countries: a literature review. Bull World Health Organ. 2004 Nov;82(11):867–74.
19. Marcoux RM, Vogenberg FR. Telehealth: applications from a legal and regulatory perspective. P T. 2016 Sep;41(9):567–70.
20. Combi C, Pozzani G, Pozzi G. Telemedicine for developing countries. A survey and some design issues. Appl Clin Inform. 2016 Nov 2;7(4):1025–50.
21. Clifford GD. E-health in low to middle income countries. J Med Eng Technol. 2016;40(7–8):336–41.
22. Bali S. Enhancing the reach of health care through telemedicine: status and new possibilities in developing countries. In: Management Association IR, editor. Health care delivery and clinical science: concepts, methodologies, tools, and applications. IGI Global; 2018. p. 1382–97.
23. Scott Kruse C, Karem P, Shifflett K, Vegi L, Ravi K, Brooks M. Evaluating barriers to adopting telemedicine worldwide: A systematic review. J Telemed Telecare. 2018 Jan;24(1):4–12.
24. World Health Organization. Monitoring the building blocks of health systems: health information systems. World Health Organization; 2010.
25. Haggerty JL, Reid RJ, Freeman GK, Starfield BH, Adair CE, McKendry R. Continuity of care: a multidisciplinary review. BMJ. 2003 Nov 22;327(7425):1219–21.
26. HIMSS. What is Interoperability? | HIMSS [Internet]. [cited 2019 Mar 15]. Available from: https://www.himss.org/library/interoperability-standards/what-is-interoperability
27. WHO. Global Strategy on Digital Health 2020-2024 (Draft). WHO; 2019 Mar.
28. MEASURE Evaluation. What are the characteristics of a strong HIS? — MEASURE Evaluation [Internet]. [cited 2019 Jul 8]. Available from: https://www.measureevaluation.org/his-strengthening-resource-center/characteristics-of-strong-his
29. Thomas-Hemak L. Closing the loop with referral management. Group Health Research Institute; 2013.
30. Institute for Healthcare Improvement. Closing the Loop: A Guide to Safer Ambulatory Referrals in the EHR Era [Internet]. [cited 2019 Feb 4]. Available from: http://www.ihi.org/resources/Pages/Publications/Closing-the-Loop-A-Guide-to-Safer-Ambulatory-Referrals.aspx
31. Esquivel A, Sittig DF, Murphy DR, Singh H. Improving the effectiveness of electronic health record-based referral processes. BMC Med Inform Decis Mak. 2012 Sep 13;12:107.
32. American Telemedicine Association. Telemedicine, Telehealth, and Health Information Technology. American Telemedicine Association; 2006 May.
33. WHO. Continuity and coordination of care. WHO; 2018.
34. CDC. Standards to Facilitate Data Sharing and Use of Surveillance Data for Public Health Action | CDC [Internet]. 2015 [cited 2020 May 29]. Available from: https://www.cdc.gov/nchhstp/programintegration/sc-standards.htm
35. World Health Organization. Global strategy on human resources for health: Workforce 2030. 2016;
36. Dixon B, Hook J, McGowan J. Using Telehealth to Improve Quality and Safety: Findings from the AHRQ Health IT Portfolio. AHRQ; 2008.
37. The American College of Obstetricians and Gynecologists,. Collaboration in Practice: Implementing Team-Based Care . The American College of Obstetricians and Gynecologists,; 2016.
38. Schottenfeld, Petersen, Peikes, Ricciardi, Burak, McNellis, et al. Creating Patient-Centered Team-Based Primary Care. AHRQ; 2016;
39. Bearden T, Ratcliffe HL, Sugarman JR, Bitton A, Ananman LA, Buckle G, et al. Empanelment: A foundational component of primary health care [version 1; peer review: 2 approved]. Gates Open Res. 2019 Oct 31;3:1654.
40. Freeman P, Perry HB, Gupta SK, Rassekh B. Accelerating progress in achieving the millennium development goal for children through community-based approaches. Glob Public Health. 2012;7(4):400–19.