# **Electronic Health Information Systems**



# **Digital Technologies**

Digital technology can strengthen health systems and support key functions of mental health service delivery. Over the past decade, digital technologies ranging from mobile applications and online platforms to devices such as cell phones, smartphones, and wearable devices have emerged as highly promising tools for supporting health care delivery and for disseminating psychological treatments. Across PIH care delivery sites, digital platforms support health care workers (HCWs) to deliver mental health services across the continuum of care in four major ways:

### SUPPORTING CLINICAL CARE AND EDUCATING HCWs

E-learning platforms train HCWs on mental health care delivery and create online portals of resources for HCWs to share their experiences in providing care. For example, in the context of COVID, the Rwandan Government adopted an e-learning platform, Moodle, to continue educating providers during the pandemic.



#### **DETECTION AND DIAGNOSIS AT THE COMMUNITY LEVEL**

Digial technologies give real-time support to lay HCWs for following triage and care protocols and delivering mental health interventions. In Malawi, mHealth platforms aid lay HCWs to detect, screen, and refer patients to appropriate mental health services and guide the delivery of low-intensity psychological interventions.



#### TREATMENT ADHERENCE AND SUPPORTING RECOVERY

Text-messaging can reach individuals outside clinical visits, promoting treatment adherence and providing ongoing encouragement and targeted psychosocial support. In Peru, SMS messages encourage perinatal women to adhere to mental health appointments and provide emotional support during and after their pregnancy.



#### IMPROVING DATA COLLECTION TO INFORM DECISIONS

Digital technologies aid feedback loops of monitoring and evaluation (M&E) to enhance the quality of care across sites. In Haiti and Rwanda, mHealth loops collect and record clinical superversion and mentorship visit information. This improves data accuracy and enables teams to review key clinical quality care indicators to inform regular supervision.

# **ELECTRONIC MEDICAL RECORDS SYSTEMS (EMR)**

Establishing an Electronic Medical Records System (EMR) can increase data collection capacity and make data more valuable in applications to patient care, monitoring & evaluation, and research. OpenMRS is a collaborative open-source project to develop software that supports health care delivery in developing countries and is used across PIH care delivery sites.

When establishing EMRs, systems should consider:

# Carefully defining data how to collect it

 Teams should ensure that their data will correspond with key indicators of the broader health care system, that important clinical information can be collected at each patient encounter, and that M&E plans are feasible given time and personnel constraints.

## Making the data collection plan user-friendly

It's important to determine who the end-user will be and who is transcribing data. If
data is being entered into an electronic database, then M&E tools should include easyto-follow directions and prompts. If data is being entered retrospectively, data entry
teams should be trained to reduce transcription errors.

## Protecting data during collection and use

 Create plans to store data securely and ensure privacy, and use appropriate back-up plans to guarantee that no data is lost while collecting and using it.

## Monitoring & Evaluation is only as good as the quality of the data being collected.

 Clinicians and data collection officers need training and supervision in how to use M&E tools. It is also important to establish routine feedback loops where teams can review data to inform program planning and to address data quality issues.

For more information, please contact xsitementalhealth@pih.org

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Raviola G, Smith S, Naslund J, Patel V. Innovative models in mental health delivery systems. Current Psychiatry Reviews. May, 2019