

### CommunityRx: A Population Health Improvement Innovation That Connects Clinics to Communities

#### Take Away Points

- The *CommunityRx* system enables clinicians to e-prescribe community resources for basic, wellness, and disease self-management needs.
- Development of *Community Rx* leveraged three components.
  - a youth workforce program (MAPSCorps) that conducted an annual census of community resources using the MapApp smartphone application.
  - community health information specialists who surveyed these community providers to determine their resources, eligibility requirements, and costs; and helped participants navigate the resources.
  - information technology (IT) infrastructure, analogous to the existing e-prescribing IT platform, that interfaced with diverse electronic health record (EHR) systems allowing generation of a personalized list of community resources near a patient's home. This *HealthRx* prescription could be delivered at the point of care (e.g., a clinic).
- This study assessed process measures and found broad dissemination with about 80% of surveyed participants being satisfied with *HealthRx*, half telling others about it, 20% visiting a community resource they learned from their *HealthRx*, and almost all partnering organizations continued its use at the end of the project.

#### The Issue

Healthcare providers and other caregivers recognize the importance of community-based resources for effective disease prevention and management and, yet, knowledge about and access to these resources is limited in health care settings such as clinics. The objective of this study is to evaluate the implementation of the CommunityRx system by examining its process-based outcomes.

#### Study Methods and Design

The Urban Health Initiative of University of Chicago Medicine developed *CommunityRx* with funding through the Health Care Innovation Challenge from the Centers for Medicare & Medicaid Innovation (CMMI) in 2011. This CMMI initiative aimed to “deliver better health and improved care at lower costs,” by funding “technology-based scalable ideas with the potential to affect underserved populations and create jobs.” Thirty-three academic and community sites (i.e., federally qualified health centers) with a diverse set of electronic health record platforms and practice types (i.e., school based clinics, senior centers, and emergency departments) were recruited to join the *CommunityRx* system. Individuals receiving the intervention were insured by Medicare, Medicaid, or both. Implementation eventually included sixteen contiguous ZIP codes (106 square miles; population of 993,812). Individuals were considered participants in this study if they received at least one *HealthRx*.

#### Source

Lindau ST, Makelarski J, Abramsohn E, Beiser DG, Escamilla V, Jerome J, Johnson D, Kho AN, Lee KK, Long T, Miller DC. CommunityRx: A Population Health Improvement Innovation That Connects Clinics to Communities. *Health Affairs*. 53(11):2020-2029.  
<http://content.healthaffairs.org/content/35/11/2020.full.pdf+html>

*CommunityRx* was built through data collection by MAPSCorps and community health information specialists. MAPSCorps employed local high school students during summers and paired them with science-oriented young adults (mostly college students). They walked block to block gathering information through a smart phone app to create a census of available community service providers. The community health information specialists then conducted telephone interviews of these community service providers to determine services provided, eligibility requirements and cost.

*CommunityRx* was linked to electronic health records at each participating site. At the end of the patient's clinical visit, data from his/her record were sent via an automated secure web call to the *CommunityRx* server. Using an algorithm, the system generated a *HealthRx* for the patient. Participant experience was assessed using a cross-sectional phone survey and provider experience was evaluated using an anonymous cross-sectional survey. Providers were also asked a separate question about their attitudes about patients' social needs.

**Key Findings – \*NOTE: This study only assessed process measures and not outcomes.**

- At baseline, 19% of providers indicated that they were “not at all confident” in their ability to meet their patients’ unmet social needs, and this declined to 15% after 12 months
- The *CommunityRx* system generated 253,479 total *HealthRx* prescriptions, or one or more for each of an estimated 113,295 unique individuals
- More than 21% of the population living in 3 of 6 areas received at least 1 *HealthRx*
- Of 458 surveyed respondents, 71% reported learning about new places located in their community from their *HealthRx*, 79% were very satisfied, 83% thought it was very useful, and 1 in 5 visited a community resource they learned about from their *HealthRx*.
- Of 374 surveyed respondents, half reported telling others about the *HealthRx*.
- The most strained resources (referrals divided by availability) were: classes on smoking cessation; pest control; mold assessment, removal or both; warming and cooling centers; help paying mortgage or rent; and weight loss.
- Fewer than 1% of individuals receiving a *HealthRx* contacted a community health information specialist for assistance to access community resources.
- Engagement increased from 0.2% to 14% in participants of sites affiliated with federally qualified health centers who opted to receive text messages from a community information health specialist along with receipt of their *HealthRx*
- 32 of the 33 partnering organizations requested continued use of *CommunityRx*.

**Limitations**

- Electronic health record information was not obtained for all 14 of the federally qualified health centers due to acquisition and cost barriers
- Confidentiality concerns and cost prohibited linking individual-level electronic health record information across sites
- Self-reported youth, participant and provider survey data may be limited by response bias
- Provider survey data was limited by variable responses across sites
- The IT infrastructure was not built to track fulfillment of unmet social needs beyond participants’ self-report

**Final Thoughts**

*CommunityRx* system is an innovative tool that can be used to address unmet social needs of patients in low resourced environments. Integrated with clinic EHRs, it can provide healthcare providers access to listings of patients’ local community resources needed to address social concerns that they previously felt ill-equipped to handle. *CommunityRx* represents a potential population health intervention to actively engage patients and address social determinants of health.