

EARLY EVALUATION FINDINGS OF HEALTH CARE SYSTEM INTERVENTIONS TO ADDRESS HYPERTENSION

This is a summary of three articles in Preventing Chronic Disease 2018 Special Collection¹ submitted by states funded by the Centers for Disease Control and Prevention's (CDC's) State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity, and Associated Risk Factors and Promote School Health (DP13-1305) and State and Local Public Health Actions to Prevent Obesity, Diabetes, and Heart Disease and Stroke (DP14-1422) cooperative agreements.^{1,2}

What is already known on this topic?

Heart disease is the leading cause of death in the United States.^{2,3} One in every three American adults has hypertension,⁴ a key risk factor for heart disease. Two programs funded by CDC's Division for Heart Disease and Stroke Prevention—the State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity, and Associated Risk Factors and Promote School Health (DP13-1305) and State and Local Public Health Actions to Prevent Obesity, Diabetes, and Heart Disease and Stroke (DP14-1422)—focus on addressing heart disease through strategies put into action by state and local health departments. These health departments use evidence-based health care system interventions, such as the use of quality improvement processes and team-based care, to improve the diagnosis and management of hypertension.⁵ This Science-in-Brief Feature is a summary of preliminary evaluation findings described in recent articles published by three health departments implementing health care system interventions.⁶⁻⁸

What is added by these studies?

The selected studies provide examples of health care system interventions implemented by state and local health departments to prevent and manage heart disease and stroke, as well as the barriers and facilitators that affect implementation. These articles summarized early evaluation outcomes of DP13-1305 and DP14-1422.

An article by Smith, Lapinski, Lichty-Hess, and Pier summarized the Maryland Department of Health and Mental Hygiene's three-phased approach to enhancing quality improvement processes in federally qualified health centers (FQHCs) by employing health information technology and using standardized reporting of clinical quality measures.⁶ Phase 1 involved engaging health center leadership and partners to garner support for data aggregation through a data warehouse. Phase 2 established the data warehouse infrastructure with specific clinical quality measures and approval of a data validation process. Phase



3 involved replicating the approach in additional health centers and leveraging lessons learned for continuous quality improvement. The authors discussed challenges encountered and plans for scaling up these efforts. Health departments interested in learning effective ways to harness the potential of using electronic health records and using population health data to drive improvements in quality of care will appreciate this systematic explanation on how to gain health center buy-in and build the operational structure of a data warehouse.

Oser, Fogle, and Bennett described how the Cardiovascular Health Program at the Montana Department of Public Health and Human Resources conducted a 3-year project to evaluate an intervention using community pharmacists to improve hypertension medication adherence among patients in rural areas.⁷ Specifically, community pharmacists initiated consultations (e.g., discussions focused on medication management and lifestyle changes to promote adherence) with patients being treated for hypertension, and disseminated educational materials from the Million Hearts® Initiative's "Team Up. Pressure Down" (TUPD) Program. Following the pilot year, the study team modified the project to include using a standardized definition for medication adherence. Over the course of the project, the study team measured the percentage of patients with hypertension who adhered to their medications and conducted a statewide pharmacy assessment. The study team collected data at the end of each project year and analyzed and presented the data in aggregate. At the conclusion of the project, there was an increase in the number of participating

patients who achieved blood pressure medication adherence (from 73% to 89%). In addition, adherence improved in 15 of the 17 community pharmacies in years 2 and 3. Lastly, the statewide assessment found that TUPD-funded pharmacies were significantly more likely than non-TUPD funded pharmacies to provide prescription synchronization so the patient can pick up all prescriptions at the same time and medication management with feedback to the patient's physician.

Barragan, DeFosset, Torres, and Kuo reported on results from a Los Angeles County Department of Public Health community and stakeholder needs assessment focused on pharmacy-driven strategies for hypertension medication therapy management (MTM) services.⁸ The needs assessment consisted of three components: 1) a policy context scan, 2) a survey of pharmacy leadership symposium participants, and 3) an Internet public opinion survey with a sample size of over 1,000 English and Spanish speaking Los Angeles residents. A synthesis from the three-component assessment produced a list of needs and assets that could be essential in scaling up and spreading a pharmacy-led patient care services in Los Angeles County. Statewide legislation and a willingness among pharmacists to take action in providing MTM/ comprehensive medication management (CMM) services were seen as key assets, while both infrastructure and reimbursement mechanisms were seen as critical needs in successfully expanding the practice of MTM/CMM in Los Angeles County. Lessons learned from the community and stakeholder assessment can help to strengthen the MTM/CMM infrastructure within other jurisdictions.

What are the considerations and implications for public health practice?

- Development of a data aggregation and analytics platform can be a quality improvement tool for health centers to use population health data from electronic health records and standardized quality metrics to inform clinical decision making.
- Community pharmacists equipped with trainings and materials like Million Hearts® Initiative *Team Up. Pressure Down* can improve blood pressure medication adherence, and be more likely to provide prescription synchronization and medication management with physician feedback.
- Multiple factors, such as state-wide legislation, reimbursement mechanisms, and pharmacist readiness to expand services, can strengthen infrastructure to scale up and spread pharmacist-led medication therapy management.

Additional Resources

Association of State and Territorial Health Officials Using Health Information Systems to Identify and Control Hypertension
<http://www.astho.org/Prevention/Chronic-Disease/Using-Health-Information-Systems-to-Identify-and-Control-Hypertension-White-Paper>

Centers for Disease Control and Prevention Creating Community-Clinical Linkages Between Community Pharmacists and Physicians
<https://www.cdc.gov/dhds/pubs/docs/ccl-practitioners-guide.pdf>

Systematic Review: Impact of Pharmacist Interventions in Community Pharmacies on Control of Hypertension
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4256613/pdf/bcp0078-1238.pdf>

Million Hearts® Initiative Team Up. Pressure Down.
https://millionhearts.hhs.gov/files/BP_Journal.pdf

Resources

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6. Smith EA, Lapinski J, Lichty-Hess J, Pier K. Using health information technology and data to improve chronic disease outcomes in Federally Qualified Health Centers in Maryland. *Prev Chronic Dis*. 2016;13:160445.
7. Oser CS, Fogle CC, Bennett JA. A Project to promote adherence to blood pressure medication among people who use community pharmacies in rural Montana, 2014–2016. *Prev Chronic Dis*. 2017;14:160409. DOI: <https://doi.org/10.5888/pcd14.160409>.
8. Barragan NC, DeFosset AR, Torres J, Kuo T. Pharmacist-driven strategies for hypertension management in Los Angeles: a community and stakeholder needs assessment, 2014–2015. *Prev Chronic Dis*. 2017;14:160423.



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