Community-Clinical Linkages Supported by the Centers for Disease Control and Prevention: The Hawai‘i Department of Health Perspective

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The Hawai‘i Department of Health (DOH) Chronic Disease Prevention and Health Promotion Division (CDPHPD) is very pleased to share, in this special issue, the results of public and private partnerships that bridge clinical practices and community interventions. Some of the articles presented here reflect work that was funded and evaluated to meet the cooperative agreements between the Centers for Disease Control and Prevention (CDC) and the DOH. Between June 2013 and September 2018, the DOH was awarded both non-competitive and competitive grants that included requirements and resources for achieving certain outcomes. When overlaid, these grants provided Hawai‘i a momentous opportunity to establish statewide community-clinical linkages.

In one example, the “State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health” program, also referred to as the 1305, required the DOH work toward 3 short-term outcomes. The first was, through state, community, worksite, school, and early childcare education (ECE) environments, to promote and reinforce healthful behaviors and practices related to diabetes, cardiovascular health, physical activity, healthful foods and beverages, obesity, and breastfeeding. The second was to improve the quality, effective delivery, and use of clinical and other preventive services to address the prevention and management of hypertension and diabetes. Finally, the third was aimed at increasing community-clinical linkages to support prevention, self-management, and control of diabetes, hypertension, and obesity. The long-term outcomes were to improve the prevention and control of hypertension, diabetes, overweight, and obesity in Hawai‘i.1

Another program, the “Heart Disease and Stroke Prevention Program and Diabetes Prevention — State and Local Public Health Actions to Prevent Obesity, Diabetes, and Heart Disease and Stroke,” is also called the 1422. It was funded solely by the first dedicated funding stream in the United States to be statutorily established to strengthen the national public health system and help reduce the growing cost of private and public health care.2 This funding, called the Prevention and Public Health Fund (PPHP), was established under the Patient Protection and Affordable Care Act of 2010 (ACA). The 1422 had 2 major components. The first focused on prevention through environmental strategies that promote health and support and reinforce healthful behaviors. This included strategies to build support for healthy lifestyles, especially for high-risk populations. The second component required health system interventions to improve the quality of health care delivery for the populations with the most pronounced disparities in hypertension and prediabetes care. This component included implementing community-clinical linkage strategies to support heart disease, stroke, and diabetes prevention efforts. The short- and long-term outcomes of the 1422 closely paralleled those of the 1305, but the 1422 maintained a population focus. It was restricted to adults, and emphasized the populations in Hawai‘i at greatest risk for death and disability due to diabetes, heart disease, stroke, and obesity.3

Both the 1305 and the 1422 reflected the systemic change initiated at the federal level through the ACA. Under the leadership of Thomas Frieden MD, MPH, the CDC’s approach to both grants implemented a public health framework, and held that 6 key areas should be prioritized by organizations and coalitions to successfully implement and sustain interventions: innovation, evidence-based technical package, management, partnerships, effective communication, and political commitment.4 With this in mind, the DOH identified and recruited new partners that were key stakeholders in the community-clinical linkage strategies, such as Mountain-Pacific Quality Health, Queen’s Clinically Integrated Physician Network, and Straub – Hawai‘i Pacific Health. Although these partners were already engaged in the clinical aspects of health care, new conversations were needed to build a focus on public health, including building trust, finding a shared vocabulary, and establishing mutually concordant goals.

From a public health perspective, the DOH had experience working on population-based approaches, such as advocating for tobacco prevention legislation, and with capacity-building and system changes, such as promoting Hawai‘i’s bikeshare program. However, applying a population-based approach to clinical practice on this scale was a new endeavor. The DOH found alignment between the system-change strategies of the 1305 and the 1422 and the new performance and reporting requirements imposed on the clinical partners by the Centers for Medicare and Medicaid Services (CMS) Merit-based Incentive Payment System (MIPS) and Advanced Alternative Payment Models (APMs). The delays in the procurement processes to fund partner engagement under the CDC cooperative agreements posed challenges in meeting milestones related to shared goals.

But through the 1305 and 1422, the DOH was able to fund program capacity, training, electronic health records (EHR) enhancements, and evaluation.

The CDC also introduced the collective impact framework, which aimed to support collaborations with the state public health agency as the facilitator and funder. This framework requires that collaborations meet 5 conditions: common agenda, shared measurement, mutually reinforcing activities, continuous
communication, and a backbone organization. Meeting these important goals takes a considerable amount of time, as the various organizations within a collaboration may have different core visions, goals, and perspectives. But through continuous communication, building trust, and establishing the common measures, the DOH and its partners have been able to progress towards mutually reinforcing but differentiated and coordinated activities. Ideally, there would be time for these activities to crystallize through an organic collaborative process, as espoused by the collective impact framework.\(^5\)

There were challenges in our pathway. Milestones for mutual reinforcement strategies and processes were set on an artificially fast pace, which added strain to communication and relationships. Specifically, the grants imposed prescribed strategies, performance measures, and timeframes, and identified the CDC-preferred “mutually reinforcing activities.” But these sometimes ran counter to the strategies identified by partners or the DOH. Moreover, although the grants included a rigorous, pre-selected package of nationally-recognized interventions required for programs focusing on pre-diabetes and diabetes management, they did not include the equivalent for programs on hypertension management. Cultural adaptations, which the DOH and clinical partners viewed as innovations, required that the CDC approve them as fitting within their proposed community-clinical linkage strategy.

Despite these challenges, mutual reinforcements strategies were ultimately achieved. These included enhancing EHR capacity to identify patients with undiagnosed diabetes, pre-diabetes, and high blood pressure, employing community health workers to provide diabetes prevention and hypertension management interventions in community health centers, and implementing Choose Healthy Now, a point-of-decision-making intervention in community convenience stores.

This special issue highlights some of these successes and presents deeper information about the outcomes of collaborations that resulted in synergy and opportunities for innovation to meet the needs of high-risk populations. Particularly relevant to this special issue, we achieved important milestones in creating community-clinical linkages that will help us as we press on toward the goal of ensuring that every child and adult in Hawai‘i has access to funded, evidence-based programs to meet their health needs, and also lives in an environment that promotes health and a high quality of life. We strive toward a future Hawai‘i, in which healthy choices are the default option and are happy to see successes across practice and policy, for example, the September 2018 Hawai‘i Medicaid QUEST Integration Section 1115 demonstration five-year extension waiver request includes possible community-clinical linkage initiatives; and, in 2019, the State Legislature passed House Bill 1453 (HB 1453 CD2) that authorizes the DOH to establish a community paramedicine program and the State Medicaid program to provide coverage.

Important new partnerships have been created and existing relationships were strengthened from this funding over time. We changed systems, policies, and environments to work towards our goals to promote health and support and reinforce healthful behaviors in our state. We believe these changes ultimately brought life-changing benefits to the communities involved. The DOH thus gives thanks to the CDC and other national organizations for having the foresight to integrate public health into the goal of improving the US healthcare system, and for providing the tools, funding, and expectation that we would create the conversations and relationships to make this possible.

In 2018, the DOH CDPHPD applied for and received new state funding, referred to as 1815, that supports the prevention of diabetes, heart disease, and stroke, to address the health needs of adults in our state. This funding will allow partnerships to continue to improve the community-clinical linkages, including improving bi-directional referrals, creating new algorithms and resource lists within the EHR system, recruiting employers as stakeholders in chronic disease management, and continuing the engagement of community health workers in team-based care. Other sections in our division have critical activities, including community environmental change, worksite wellness, school health, and ECE programs, that did not receive new CDC funding, but will continue extending their important mutually reinforcing activities and activities through state resources. We believe this will have important benefits for our state. We hope to leverage our successes to continue to be one of the healthiest states in the nation and achieve equitable health outcomes for all.

**Conflict of Interest**

None of the authors identify a conflict of interest.

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**References**