

INSIGHTS IN PUBLIC HEALTH

Kaua'i Rural and Public Health Selective: A Family Medicine Residency First

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<https://www.doi.org/10.62547/DLPS7224>

Insights in Public Health is a recurring column from the public health community and is coordinated by HJH&SW Contributing Editor Mapuana Antonio DrPH from the Office of Public Health Studies in the Thompson School of Social Work & Public Health at the University of Hawai'i at Mānoa and Contributing Editor Nichole J. Fukuda MS from the Hawai'i Department of Health.

Abstract

Governmental public health professionals and community physicians often have limited understanding of each other's roles and responsibilities. To increase the connection between public health and primary care as well as to incorporate rural health care in graduate medical education training, a new "Kaua'i Rural and Public Health Selective" brings Family Medicine resident physicians (Residents) into the local health department on Kaua'i. This first-time collaboration between the Kaua'i District Health Office (KDHO) and University of Hawai'i John A. Burns School of Medicine (JABSOM) Family Medicine Residency Program advances Residents' understanding of public health and has been well-received by Residents and by department of health staff. Future plans include evaluation and continued incorporation of public health experiences into the core curriculum of a rural Family Medicine residency training program based on Kaua'i.

Acronyms

ACGME = Accreditation Council for Graduate Medical Education
CASPER = Community Assessment for Public Health Emergency Response
CDC = Centers for Disease Control and Prevention
CHW = community health worker
DHO = district health officer
FQHC = federally qualified health center
HLH = Ho'ola Lahui Hawai'i
JABSOM = John A. Burns School of Medicine
KDHO = Kaua'i District Health Office
PGY 3 = post graduate year 3
UH = University of Hawai'i

Problem Statement

The COVID-19 pandemic demonstrated the importance of collaboration between public health professionals and health care providers.¹ Yet health care providers and public health professionals frequently have little practical understanding of each other's intersecting roles and responsibilities. In rural communities, this interdependence is arguably more pronounced. With limited local resources and significant geographic barriers

to accessing additional resources in Hawai'i, close collaboration is essential to making the most efficient use of clinical and public health capabilities in managing public health issues. Additionally, as of July 2023, Accreditation Council for Graduate Medical Education (ACGME) requirements for Family Medicine place a strong emphasis on training Residents to address community health and incorporate community-oriented primary care, a model of health care that integrates public health and primary care.²

Methods

The University of Hawai'i (UH) John A. Burns School of Medicine (JABSOM) Family Medicine Residency Program Director and the Kaua'i District Health Officer (DHO) developed the 4-week "Kaua'i Rural and Public Health Selective" to be offered to third year (PGY3) Family Medicine Residents. They spend half of their time in the outpatient clinics of Ho'ola Lahui Hawai'i (HLH), which is Kaua'i's federally qualified health center (FQHC) and Native Hawaiian Health clinic, where they work with community Family Medicine physicians to provide primary care to patients. The other half of their time is spent at the Kaua'i District Health Office (KDHO) working alongside and learning from public health frontline staff. Assigned public health readings introduce Residents to Foundational Public Health, Health Equity, Community Health Needs Assessments, the Centers for Disease Control and Prevention's (CDC) Morbidity and Mortality Weekly Report, Health Impacts of Climate Change, and several other related topics.

Goals of the experience are to:

- Enhance Resident understanding of the breadth and depth of local governmental public health practice.
- Broaden Resident understanding of health conditions to include root causes which may be amenable to systems and policy level interventions.

- Deepen Resident understanding of health equity and “social determinants of health” to include consideration of community and structural features that perpetuate systems of inequity.

Objectives include having Residents:

- Participate in a wide variety of public health activities, including activities serving diverse communities of Kaua‘i.
- Identify a public health issue of interest and explore its impacts on health, health equity and potential advocacy, systems, and policy approaches to addressing those impacts.
- Describe at least 3 ways in which primary care and public health intersect.

Residents spend time with the physician DHO attending local, statewide, and national meetings and workgroups. They accompany KDHO staff in a broad range of field activities. Specific activities are driven by program schedules and the vicissitudes of public health events.

Four Residents completed the selective in the first year. On average, each Resident participated in 21 distinct field activities (range 20-22). Activities undertaken by the first cohort are listed in **Table 1**. Those in **boldface** were experienced by all 4 Residents.

Results

This is the first official collaboration between a residency program and a district health office in Hawai‘i and the first time that Residents have been offered a focused experience in governmental public health. Resident feedback has been overwhelmingly positive, citing the rotation as highly valuable for their training as primary care physicians integrated in the community. Residents strongly prefer experiential activities over didactics: “Let us join you while you do your work; don’t just tell us about it.” Staff also prefer this approach.

Specific comments from Residents include:

- “I’ve been a bad doctor. I’ll do better from now on!” (regarding disease reporting)
- “Now when I tell a patient with suspected mosquito-borne disease that the health department will come check for mosquitoes around their house, I’ll be able to tell them exactly what to expect.”
- “Now I can really tell people what ocean water health advisories mean, including their limitations.”
- “I never knew about cesspools!”
- “This is one of the best rotations of my residency.”
- “There’s so much I didn’t know about public health. I wish I’d learned earlier.”

Each participant produced 2 end-of-rotation deliverables:

- (1). Reflective essay on either the relationship between primary care and public health, or the ways in which local public health promotes health equity; and
- (2). Final presentation to KDHO staff and to residency peers, on a public health topic explored during the rotation.

Final papers and presentations reflected Residents’ experiences and provided an opportunity for Residents to synthesize their learning.

Two Residents wrote about health equity, noting that the multi-lingual/multicultural CHW team “meets people where they are” in their language of choice. Seeing the work in action on the field brought home the value of this approach. For example, Play Streets Kaua‘i promotes healthy behaviors and physical activity in an easily accessible, but underutilized neighborhood park, near where people live. It was noted that KDHO staff pays close attention to providing services and promoting health *for all* in the community.

Two Residents wrote about the intersection of primary care and public health. The Maui fire response required both individual health care and population level services. Shared responsibility for serving Hawai‘i’s diverse communities and remaining cognizant of the multi-generational impacts of colonization were cited, as were water rights and rebuilding Lahaina. They noted that clear, consistent public health messaging supports primary care providers, and that coordination between public health and clinicians improves the efficacy of both.

A presentation about ocean-water monitoring described the process from beach-front water sampling, to laboratory testing, and finally to public sharing of water quality data. The Resident highlighted the complexity and limitations of the measures used. A presentation on substance use and abuse explored local community resources. Presentations on food insecurity and on the intersection of climate change, water, and health explored systems and policy opportunities for change.

KDHO staff attending these presentations reported that they were informative and engaging. Attendance by staff increased with each subsequent Resident, indicating that the presentations were considered worthwhile and enjoyable.

Upon returning to O‘ahu, Residents delivered a version of this presentation to their Resident colleagues, faculty, and in one case, to prospective residency applicants. The topics proved to be stimulating and novel, often providing systems-based learning with a broader scope than a clinical case presentation. Presenters demonstrated enthusiasm in sharing their experience, which in turn has generated interest for other junior Residents to participate in this rotation in the future.

Table 1. Public Health Field Activities in Kaua'i Involving Family Medicine Residents Academic year July 2023-June 2024	
Public Health Area	Activities
Communicable disease control	<ul style="list-style-type: none"> • Disease outbreak/reporting response protocols • Hansens' Disease clinic, including newly diagnosed case <ul style="list-style-type: none"> • Subsequent encounter with same patient at HLH • Response to suspected arboviral disease • Review of leptospirosis data, reporting requirements, and surveillance methods • Long term care facility disease outbreak control visit • CDC Clinician Outreach and Communication Activity call reviewing updated respiratory season vaccine guidelines • Infection control training "Escape Room" style
Epidemiology and data use	<ul style="list-style-type: none"> • Introduction to Public Health Epidemiology <ul style="list-style-type: none"> • In-person discussion with epidemiologist and team • Lunch & Learn: Public Health Surveillance • Community Health Needs Assessment—introduction • Policy Map health mapping tool demonstration
Public health nursing	<ul style="list-style-type: none"> • Program overview • Meeting with School Health Assistants • Home visits • Tuberculosis case management
Developmental disabilities case management	<ul style="list-style-type: none"> • Program overview • Children with Special Health Needs program overview
Vital records	<ul style="list-style-type: none"> • Birth and death registration processes • Home birth registration
Public health emergency preparedness and response	<ul style="list-style-type: none"> • Program introduction • Community Assessment for Public Health Emergency Response (CASPER)/Rapid Needs Assessment methodologies and applications • Statewide Maui Fire emergency response coordination call • Medical Reserve Corps quarterly meeting
Community engagement and outreach	<ul style="list-style-type: none"> • Community outreach and home visits with multi-lingual community health worker (CHW) team including Marshallese, Ni'ihau/Hawaiian, and Filipino communities • Play Streets Kaua'i community event • Community outreach at Salvation Army, Malama Kaua'i (local food production organization), Kaua'i Economic Opportunity (homeless serving organization) • Statewide training on community engagement and health education • Community Health Fair
Health promotion	<ul style="list-style-type: none"> • Chronic Disease Prevention/Health Promotion program overview • KDHO "walk with a doc" • Agency on Elderly Affairs annual symposium
Water quality	<ul style="list-style-type: none"> • Clean Water Branch ocean water sampling & testing
Food safety	<ul style="list-style-type: none"> • Restaurant inspections
Vector control	<ul style="list-style-type: none"> • Site visit/program overview • Dengue fever field activities—mosquito surveillance and abatement field activities
Maternal, child, adolescent health	<ul style="list-style-type: none"> • Family Health Services overview • Site visits: WIC, community resource kiosk • Kaua'i Abortion Access Alliance meeting • Maternal Mortality Review • Safe Infant Sleep workgroup meeting
Mental Health/Behavioral Health	<ul style="list-style-type: none"> • Child & Adolescent Mental Health services overview • Meet with substance use treatment physician (in response to Resident interest) • Friendship House site visit (serves individuals with serious mental illness transitioning into workforce)
Equity	<ul style="list-style-type: none"> • Readings and discussion with DHO and KDHO staff • Native Hawaiian Healing workshop (arranged independently) • Office of Health Equity strategic planning meeting
Leadership meetings	<ul style="list-style-type: none"> • Discussion with DHO • DOH Director • National Association of County and City Health Officials Board of Directors • Lihu'e Business Association, Mayor's community resiliency presentation • Kaua'i Wellness Partnership • KDHO Management Team

KDHO staff were encouraged to work with Residents, but doing so was voluntary. Some had workload concerns, and some had concerns about having their work observed by outsiders. As staff gained experience precepting, they expressed increased comfort and confidence in that role, along with recognition that they have a great deal to offer these physicians in training.

The clinical aspect of the rotation took place at HLH. Residents worked with Family Medicine physicians to provide primary care to a diverse patient population in a rural underserved area. The Residents were able to witness the intersection of the KDHO and outpatient care, including an example where KDHO staff accompanied a patient to their clinic visit to assist in care coordination. The Residents also had opportunities to learn about traditional Native Hawaiian healing practices through work with a practitioner from HLH La‘au Lapa‘au and participating in an event with community La‘au Lapa‘au practitioners that included practices such as Lauhala weaving. One Resident was also able to work in the Waimea Clinic to work directly with Native Hawaiian patients from Ni‘ihau. Additionally, the FQHC started a mobile outreach clinic to provide care around the island in underserved communities, particularly those that included the houseless. The mobile outreach clinic team includes a Family Medicine physician, social worker, registered nurse, medical assistant, and receptionist. Given the recent start of the mobile outreach clinic, only 1 Resident was able to participate. However, this is expected to be incorporated into the rotation in the future.

Future Directions

This collaboration has enriched Family Medicine Residents and public health staff. Resident comments, written assignments, and final presentations indicate goals are being well met. One Resident at a time, no more than 6 times per year, is proving to be entirely manageable for this health department of about 70 staff serving a population of 75 000. Training in the preceptor role and sharing of best practices will continue to make this a feasible activity for KDHO staff.

The Kaua‘i Rural and Public Health Selective is being offered again in the coming year. Interest among the next cohort of PGY3 Residents will be a good indication of the success of this first year’s effort.

Additional activities available to Residents will include:

- Participate in a CASPER survey
- School-based influenza vaccination clinics
- National Public Health Week open-house
- Day program for developmentally disabled adults
- Emergency Preparedness trainings
- National Violent Death Reporting System training
- Child and/or Domestic Violence death reviews

- Child Abuse/Neglect and Domestic Violence prevention workgroups
- HIV/AIDS and STD community outreach
- Individual Service/Education Plan meetings
- Suicide Prevention Task Force
- Expanded participation in HLH’s mobile outreach clinics.

UH JABSOM currently has a Health Resources and Services Administration planning grant to implement a Rural Family Medicine Residency Program on Kaua‘i. The residency program is expected to be highly community-based and community-engaged, including core curricular experiences with KDHO. The Rural and Public Health Selective will inform public health components of that curriculum as it is developed and serves to meet the new ACGME program requirements for Family Medicine. If KDHO and HLH capacity and Resident interest continue, the Selective could continue for O‘ahu-based Family Medicine Residents alongside the new Kaua‘i Residency program.

This initiative may be applicable for others working to enhance coordination between public health and health care providers. Experiences with rural health care during training have been shown to increase the likelihood for physicians to pursue rural practice after graduation.³ Therefore this rotation has implications for workforce development for rural areas of Hawai‘i that have an urgent physician shortage. Future directions include replicating aspects of this experience in other local public health offices and further evaluating impacts on knowledge, skills, and behaviors of participating Resident physicians, as well as working to strengthen precepting skills of KDHO staff.

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