

## Short Communication

# Important Factors to Consider When Developing Rural Health-care Systems: Suggestions From A Moloka'i Native

Luke Kikukawa\*

University of Hawai'i, Honolulu, USA

\*Corresponding author: Luke Kikukawa, University of Hawai'i John A. Burns School of Medicine AHEC's Pre-Health Career Corps, Honolulu, HI 96822, USA. Email: lkikukawa1@gmail.com

Citation: Kikukawa L (2017) Important Factors to Consider When Developing Rural Healthcare Systems: Suggestions From A Moloka'i Native. J Surg: JSUR-185. DOI: 10.29011/2575-9760.000085

Received Date: 03 November, 2017; Accepted Date: 23 November, 2017; Published Date: 30 November, 2017

## Abstract

In Hawai'i, rural healthcare can be limited and is often fragmented. Many rural areas lack health care providers as well as the resources to meet the needs of the populations in the community. Like many states with large rural populations, developing a healthcare system that is accessible and responsive to the needs of local communities requires change that is directed by the community, not just providers. It requires networks of providers and community leaders collaborating to identify needs, barriers and the resources to create a coordinated healthcare system. While growing up on the rural island of Moloka'i, I witnessed my sister, Gen, wait for seven hours with both her ulna and radius protruding from her arm because the doctor on emergency duty was not confident enough to set her bones. Because my family was in-between insurance providers there was a delay in the medevac approval to send Gen to Queen's Medical Center on O'ahu where she could be treated by a physician with more specialized training. There is not enough funding for a permanent emergency room doctor in Moloka'i, which results in injured people waiting long periods of time before receiving medical attention. Of course, this small island is only one of many places in the world where communities lack immediate, direct access to quality healthcare. Fortunately, in Moloka'i we do have multiple options when choosing a family practitioner. However, the nearby small island of Lana'i is about to lose its only two physicians.

Rural Hawai'i is not the only place where residents struggle to gain access to healthcare. Some countries lack even the most basic health resources such as clean water, doctors, antiseptic techniques, or immunizations. For example, in many rural communities of India, hospitals and clinics are extremely limited, so locals are forced to rely on alternative practices. Thus, introducing and providing quality healthcare in these rural places can vary in countless ways. Whether a community needs a new hospital, a women's health clinic, an ambulance, a quarantine area, more medical supplies, or even an adjustment or re-alignment to community values, there are some key factors to consider when developing an effective healthcare system in rural and underserved locales [1].

## Community Factors

When establishing healthcare in a rural location, the most important factor to consider is the community's uniqueness. A community can be defined by its geography, level of development, culture, population, demographics, economics, and politics. Given the manifold nature and nuances of these attributes, to truly understand a particular society it is important to do two things. First, connect to the people of the community to develop an understanding of their needs. One must seek out knowledgeable locals and local leaders for guidance. Second, do research (eg, a survey, using local community forums) to appraise the community's unique lo-

cation, level of development, view of medicine, traditional healthcare practices, social structure, and political and economic viability. Both of these approaches are needed to ensure that healthcare is designed to best meet the community's needs. In Moloka'i there are many traditions Native Hawaiians take to heart, such as living sustainably and caring for the land, using indigenous plants with medicinal properties, performing meles (songs), chants, hula to tell stories, and practicing lomilomi (traditional Hawaiian massage). An understanding of traditional beliefs and practices can provide insight into how modern medicine might be uniquely integrated into such community practices. Sometimes it is possible for the

integration to be done in a traditional way, other times a region's particular practices and beliefs run counter to established health and human service protocols and increase the potential for conflict. Research continues regarding which practices are complimentary versus contradictory.

The environment that surrounds a community can also vastly affect the delivery of healthcare. On Moloka'i, geographic isolation can be a barrier to healthcare access and delivery. The geographical features of the island include two volcanos and shallow ocean channels that limit transportation options (ie, roads or airports). To overcome such access barriers, one must also consider the costs. For example, on Moloka'i, the cost of medical transport via medevac airplane or helicopter can cost over \$10,000. Other less developed rural areas and even entire countries struggle with the same issue. Medevac can be essential if a patient is to arrive in a safe and timely manner to an appropriate medical facility. Alongside social practices and environmental constraints, the economic and political aspects of a community may come into play with health-care delivery. They also impact what type of healthcare system and services are available and who is serviced. The political and economic situation of a country or region can also have profound effects. For example, if a society is composed of mostly senior citizens, then there will be a demand for more care homes, elder care, and providers. Also, on Moloka'i, most people are strongly against tourist development and infrastructure because they want their island to stay quiet and serene. This makes it difficult to set up specialized health clinics, as the demand is low given the local population numbers. Instead, patients in need of a skin or heart exam have to wait for the travelling dermatologist and cardiologist to make their monthly visit to Moloka'i. One local primary care physician invites these specialists to set up shop in his clinic while they care for some of his patients and others.

## Healthcare Workforce Education

The next set of factors to consider revolves around health providers in the community. The professionals involved in the actual delivery of health care need to be sensitive to a community's particular culture and needs. Often health providers who were raised in the community can lead this effort. Training needs to be ongoing in order to keep everyone up to date on recent advances and technological innovations. Further, there is a need for larger oversight and organization within regions in the event of large-scale contagion or emergencies. The Center for Disease Control is an example of one such organization that can best help a region if an existing framework is established. Personnel needed to run hospitals, clinics, and other services include administrators, doctors (both generalists and specialists), Emergency Medical Technicians (EMTs), nurses, orderlies, and security. Different communities will require different ratios and amounts of these positions. This all depends on that particular community's make-up and situation.

For example, according to the US Census Bureau, there is a significantly higher percentage of senior citizens in Hawaii than the rest of the nation [2]. Hawai'i's health care system is currently trying to respond to this situation by training and incorporating more home care nurses and geriatricians.

## Material Factors

The availability of medical facilities, tools, and supplies can impact the quality of service provided in rural health settings. Tangible things such as hospital beds, operating rooms, and laboratories are needed. Imaging equipment, including X-ray machines, Computerized Axial Tomography (CAT) scans, and Magnetic Resonance Imaging (MRIs), is a basic requirement. Other essential equipment includes vital monitoring machines, respirators, defibrillators, and autoclaves. Medical supplies such as drapes, trays, gloves, scalpels, gauze, bandages, splints, and sutures, are also required. Medicine like antibiotics, opiates, coagulants, anti-inflammatories, vaccinations, IV fluids and blood also need to be in stock. Lastly, autoclaves, chemical products, and cleaning devices are imperative to health care. All of these material goods are an important part of modern medicine and are essential to high recovery rates from illness and injury.

Adequate service is possible if the material goods listed above are available and if the patient arrives to the medical facility in a timely window. Time in emergency situations is critical, hence medical transport vehicles must be added to this list. Ambulances (including ground and air) are needed to transport patients to facilities where safe, clean medical procedures can be undertaken. While we do have resources available on Moloka'i, including imaging machinery, an EKG, a dialysis clinic, and a chemotherapy clinic, patients must travel to O'ahu for specialized care such as colonoscopies, surgeries, or psychiatric needs. Many medical facilities are unified under the Queen's Medical Center, which makes it easy to refer patients off-island and communicate through electronic medical record systems.

## Conclusion

Ultimately, three factors: a community's unique conditions, the availability of trained medical personnel, and tangibles, such as facilities and supplies, impact the delivery of high-quality health care. Each community has special traits. These needs, and constraints influence and determine what type of health care system should be developed. Efficient health care systems must be adaptive and responsive to short and long-term changes. Changes in such things as population demographics, political/economic/ social/environmental events, and disease epidemics are the norm. This responsiveness to change is critical in both developed and nascent societies. Further studies in rural health care can provide a greater understanding of the interplay between these complex factors.

tors on the important issue of rural health care delivery upon which Moloka'i, and other places like it, depend.

1. Strasser R (2003) Rural health around the world: challenges and solutions. *Family Practice* 20: 457-463.
2. "Hawaii's Population". Hawaii Policy Academy State Profile 2012.

## References