

Improving the Accessibility and Quality of Perinatal Health Services in Rural Hawaii



The Hawaii Collaborative Health Initiative (HI-CHI)

Introduction to HI-CHI

- HI-CHI is a project of Friends of the Future, a 501(c) 3 nonprofit corporation that houses 11 community-based health and wellness related programs in Hawaii County.
- The Hawaii Collaborative Health Initiative (HI-CHI) was created by a group of health care providers who came together in 2009 to develop strategies for improving essential maternal child health care services in Hawaii County.
- Through the HRSA Rural Health Network Development Planning Grant, HI-CHI has worked to develop organizational infrastructure during 2013 to carry out network activities for Neonatal Response Teams (NRTs) and perinatal quality improvement throughout the rural areas of the state.

HI-CHI Vision

Accessible, high quality maternal and infant healthcare for rural areas of Hawaii.

HI-CHI Mission

To improve the accessibility and quality of health services for mothers and infants in rural areas of Hawaii through education and facilitating collaboration between health facilities, healthcare providers, and the community.

HI-CHI Goals & Objectives

Goal 1: To encourage rural birthing hospitals in the state of Hawaii to work collaboratively to enhance patient safety, meet national guidelines, and share new ideas to improve healthcare.

Objective:

1. Develop in-house neonatal rapid response or resuscitation teams to resuscitate and stabilize sick newborns until the pediatrician arrives. This will improve patient safety and allow hospitals to meet national Neonatal Resuscitation Program guidelines.

Goal 2: On-going healthcare quality improvement for mothers and infants

Objectives:

1. Support state-wide quality improvement initiatives that address gaps in rural health outcomes for mothers and infants through coordinated training and educational activities that build capacity of healthcare providers in rural areas.
2. Promote system changes by provider organizations to increase use of evidence-based clinical practices for mothers and infants.
3. Support other efforts that maximize available financial and human resources to improve maternal and infant health in rural areas.

HI-CHI's Current Focus

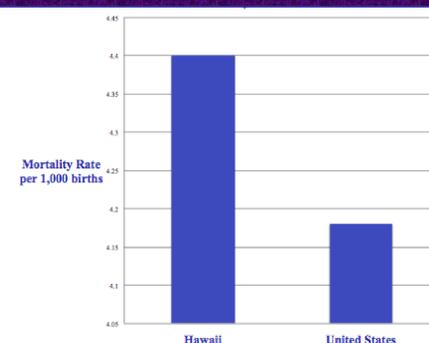
- A main focus for HI-CHI is Neonatal Resuscitation Team (NRT) Training for rural hospitals. HI-CHI has developed an NRT training protocol based on National Standards and facilitates NRT Training statewide.
- In 2012, HI-CHI's scope expanded by taking a leadership role in the creation of a perinatal quality collaborative for the rural areas of the state. Quality improvement for perinatal care is currently based on data collected and analyzed for NRT measures.



Neonatal Response Teams: A HI-CHI Success Story

Problem: 10% of all babies born need some resuscitation assistance at birth (Kattwinkel, Bloom, AAP, & AHA, 2011). Delays in providing this assistance can lead to lifelong deficits or even neonatal death. Infants cared for in rural hospitals are at even greater risk due to limited resources to prepare for intrapartum complications. In Hawaii this is compounded with the geographical challenge of being an island state. In 2009, (when HI-CHI was established), the additional challenges in perinatal care in Hawaii was evident in Hawaii's neonatal mortality rate (death up to 28 days of age) which was 4.4 per 1,000 births compared to the nation rate of 4.18 (MacDorman, et al. 2013; March of Dimes, 2013). From 2001-2010 the overall infant mortality rate (death up to 1 year of age) was also higher in Hawaii, 6.4 per 1,000 births, when compared to the national rate of 6.0. The numbers are even more concerning on the neighbor islands of Hawaii where the infant mortality rate ranged from 6.7 to 12.4 per 1,000 births (State of Hawaii Primary Care Needs Assessment Data Book, 2012 & Healthy People 2020).

Neonatal Mortality Rates 2009



Purpose: To improve the accessibility and quality of perinatal health services in rural hospitals of Hawaii through the creation of NRTs, education and facilitating collaboration between health facilities, healthcare providers, and the community.

Background: According to the World Health Organization one of the best means to decrease infant mortality is through the presence of highly trained healthcare personnel during the intrapartum and the postnatal periods (2012). One method of increasing the number of skilled personnel available during this critical period is through the creation of NRTs. NRTs or Neonatal Response Teams are interdisciplinary teams which typically consist of nurses, respiratory therapists, neonatologists, pediatricians, and/or Advanced Practice Registered Nurses. These teams receive advanced training in Neonatal Resuscitation and stabilization.

Creating NRTs in Rural Hawaii

- HI-CHI has partnered up with Kapi`olani Medical Center for Women and Children, the only specialty hospital in Hawaii for women and children, to provide neonatal resuscitation and stabilization training for outer island healthcare teams. This collaboration has resulted in the creation of Neonatal Response Teams (NRTs) in seven of Hawaii's outer island hospitals:
- *Hawaii Island:* Kona Community Hospital, Hilo Medical Center, North Hawaii Community Hospital
- *Maui:* Maui Memorial Medical Center
- *Kauai:* Wilcox Memorial Hospital & Kauai Veterans Memorial Hospital
- *Molokai:* Molokai General Hospital
- NRTs in these hospitals are interdisciplinary teams consisting of pediatricians, nurses, and respiratory therapists (depending on the preferences of the hospitals).
- The NRTs provide in-house personnel available 24 hours a day, 7 days a week to manage resuscitations requiring advanced techniques including maintaining an airway, intubation, and placement of an umbilical vein catheter. This is especially important with the provider shortage in rural areas of Hawaii, where NRTs stabilize newborns until the pediatrician arrives. Additionally, NRTs enhance each hospital's capacity for addressing the needs of at-risk newborns and for better stabilizing them before transport to the tertiary care centers on Oahu.

HI-CHI NRT Program Findings

- Data collection and evaluation of the NRT program is still ongoing.
- One study conducted by some members of HI-CHI (Nanjundachar, Pomeroy, Robertson, Sood, & Kabbur, 2013) has found:
- After NRT training, NRT members report a "substantial" increase in confidence regarding preparation and ability to manage the procedural and pharmacological care of sick babies.

HI-CHI's Future Focuses

- Beginning in 2014, data for selected Clinical Quality Measures (CQM) from birthing hospitals statewide will be aggregated in a database that is accessible to HI-CHI members who share data.
- Addressing Hawaii House Bill 909 – Focusing on infant mortality in Hawaii.
- Rural Residency Program – Working to increasing the number of primary care providers in rural areas of Hawaii.
- HI-CHI has a process for adopting new projects that fall within the organization's scope of activities. This process includes networking and conducting formal needs assessments of Hawaii's rural hospitals and communities in order to guide future activities.

Become a Member of HI-CHI

Are you interested in the quality of perinatal health service in rural Hawaii? Do you want to become a General Member of HI-CHI?

Visit us at our website: <http://rweb.jabsom.hawaii.edu/hi-chi/>

References

References are available on request.