



# The Office of the National Coordinator for Health Information Technology

## Health Information Exchange Strategic and Operational Plan Profile

### Overview

Guam is a US territory located approximately 3,300 miles west of Hawaii. Guam’s healthcare system includes two major hospitals (one civilian and one military), a widespread clinic network, and a broad selection of general and specialist physicians. Guam’s healthcare system is focused on health information exchange (HIE) for the civilian populations, with aspirations of connecting to Department of Defense (DOD) facilities using the Nationwide Health Information Network (NwHIN) Connect Gateway. The Guam eHealth Collaborative (GeHC), assembled in August 2010, is the trusted source of health information and works to improve the quality, safety, and efficiency of healthcare for residents seeking healthcare in Guam. GeHC will also be the governing body overseeing the development and deployment of the Direct infrastructure.

The Guam HIE will serve as a Health Information Service Provider (HISP) to provide services to providers and stakeholders in Guam. In the first phase, Guam’s overall HIE strategy focuses on building upon existing health information technology (HIT) capabilities using the Direct Project. The HIE will include full support of clinical document exchange for use cases such as provider secure messaging, provider referral, and coordination of care (with clinical documents, including HL7 CCD support). Other use cases will include e-prescribing (physician to pharmacy messaging) and structured laboratory results (from laboratories to providers’ EHRs).

Because of the limited medical facilities on the island, many patients seek treatment for more sophisticated procedures in Hawaii, the US mainland, or other medical facilities within the Pacific Region, including Japan, the Philippines, and China.

### Model and Services

The GeHC will provide Direct services via several means, including the Guam HIE Web Portal. This portal, which was developed on a SaaS model, will allow providers to utilize Direct services, including laboratory reporting, clinical summary document exchange, and provider-to-provider referrals. Upon successful completion of the first phase of Direct-based messaging implementation, the GeHC will review other services available within the Direct infrastructure. The NwHIN Connect Gateway installation will be completed after the Direct services are implemented and live.


The GeHC will also implement a Guam-based central certificate authority (CA). Initially, the CA server will be implemented to support Direct exchange and messaging; however, in the long term, the GeHC will consider linking the Guam CA to the Federal Bridge CA to support exchange with federal providers and agencies. The GeHC will leverage the NwHIN Connect gateway to connect to federal agencies on various projects (e.g., CCD clinical data exchange with the Department of Defense, which has a large presence on Guam; exchange of summary patient records for Social Security Administration (SSA) disability determination purposes; etc). The functionality of the CA server will be separate from the provider directory initiative; however, the GeHC intends to work with Guam Medicaid to populate a provider



Office of the National Coordinator for Health Information Technology  
State Health Information Exchange Cooperative Agreement Program

<http://HealthIT.hhs.gov>  
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**State:** Guam



**HIT Coordinator:** Ed C. Cruz

**Statewide HIE:**  
Guam eHealth Collaborative

**Award Amount:** \$ 1,600,000

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**Website:**  
<http://www.dphss.guam.gov>  
<http://www.apenimed.com/?tag=territory-of-guam-hie>

**Other Related ONC funding in Guam:**  
Hawaii-Pacific Regional Extension Center \$ 5,914,221

directory. The GeHC will help Guam Medicaid to identify their needs and integrate the HIE Strategic Plan into the State Medicaid Health Information Technology Plan (SMHP).

The GeHC will also be a primary source of HIT knowledge and information for providers and consumers. The GeHC will implement a comprehensive communication and education plan, in collaboration with other Territorial, State, and Federal programs (including the Regional Extension Center), to educate stakeholders on the value of HIE.



## Highlights

- **Structured laboratory results:** The GeHC has already reached out to both Diagnostic Lab Services (DLS) and LabTech to explore the possibility of connectivity using Direct in coordination with Guam Public Health. Both companies have been receptive to participating.
- **Federal funding/collaborative efforts:** The GeHC will coordinate with the Health Resource and Services Administration (HRSA) and the Broadband Technology Opportunities Program (BTOP) to further enhance broadband connections and improve EHR adoption. In recognition of the need to secure additional funding from HRSA and other federal programs, GeHC will employ a full time grant writer to assist in writing and securing additional grants funds for Guam's HIE efforts.
- **REC alignment:** The GeHC will provide coordination with the Hawaii-Pacific Regional Extension Center (REC) to allow for education and outreach on Direct. The GeHC will also continue to provide training and outreach/education to providers who are not working with the REC to ensure no provider is left behind or missed.
- **Broadband coverage:** Guam has robust broadband coverage, including fiber rings around the island and island-wide wireless coverage. There is good overlap and near ubiquitous coverage on the island.
- **Collaboration with the Pacific Islands:** Overall, Guam, the Commonwealth of the Northern Mariana Islands (CNMI), and American Samoa (AS) are working together to organize trainings and various educational opportunities for respective HIE staff members. Additionally, there is a major effort to collaborate with the major lab provider for the Pacific Islands, Diagnostic Laboratory Services (DLS).



# Meaningful Use

	<u>Landscape</u>	<u>Strategy</u>
<b><u>E-Prescribing</u></b>	<p>All pharmacies (30) are capable of e-prescribing, but only one is actively e-prescribing.</p>	<p>The GeHC will continue to work with the four major payers in Guam to examine possible incentives for e-prescribing as well as contractual requirements to drive the adoption of e-prescribing technologies within the provider community.</p> <p>Collaborate with the REC to develop a plan to provide assistance to providers in Guam who need help with EHR vendor selection. Will also work to create a list of certified EHRs for Guam, with particular focus on e-prescribing needs.</p> <p>Work with Guam Medicaid to integrate standards-based interface language requirements, focusing on e-prescribing capabilities.</p>
<b><u>Structured Lab Results</u></b>	<p>There are seven labs on Guam, however, most blood-related and advanced tests are outsourced to two companies: DLS in Hawaii or LabTech, also in Hawaii.</p> <p>DLS accounts for over 90% of the advanced or blood-related lab tests on Guam and also acts as the Guam Reference Lab. LabTech accounts for the remaining 10% of tests.</p> <p>DLS also acts as the Reference Lab for Commonwealth of the Northern Mariana Islands (CNMI).</p>	<p>The GeHC will continue to work with the laboratories to use Direct as a connectivity methodology to drive structured laboratory results to provider EHRs in 2011.</p> <p>The GeHC will leverage existing information and work with the REC to create a list of certified EHRs for Guam, with particular focus on lab interoperability needs.</p> <p>Work with the state legislature to identify laws and regulations to ensure alignment and compliance with CLIA regulations.</p> <p>Work with Guam Medicaid to integrate standards-based interface language requirements in lab service contracts.</p>



<b><u>Patient Care Summary</u></b>	<b><u>Landscape</u></b>	<b><u>Strategy</u></b>
	<p>Currently, no patient care summaries are being shared electronically outside non-affiliated medical facilities.</p> <p>Generally, most providers do not have electronic health record technology and less than 25% use EHRs to “some extent”.</p> <p>The one civilian hospital–Guam Memorial Hospital–currently has the Keene Health Care Solution, but is upgrading to Cerner modules (anticipated Spring 2011). Once completed, GMH will have the ability to import and export summary care documents in CCD compliant formats.</p> <p>Of the ten specialty and emergency care clinics in Guam, the largest clinic is using the McKesson Practice Partner, but is moving to the Sage EHR product. Other EHR applications in use include NextGen, eClinical Works, and VistA.</p> <p>Three hospitals in the Philippines serve a large portion of the Guam population and are currently unable to exchange clinical care data.</p>	<p>The GeHC will serve as a health information service provider (HISP) for individual and unaffiliated providers who want to use Direct to support exchange of clinical care summaries to meet Stage 1 Meaningful Use requirements.</p> <p>The GeHC will coordinate with the REC to educate providers on Direct capabilities supporting clinical care summaries. The GeHC will continue to provide training, outreach, and education to providers who are not working with the REC.</p> <p>The GeHC will work with the REC to develop a plan to assist providers in Guam who need capability for exchange of clinical care summaries.</p> <p>The GeHC will provide technical assistance to providers who want to exchange clinical care summaries via Direct.</p>



# HIE Inventory

Standards		Quality Improvement	
Nationwide Health Information Network Exchange Specifications	<b>X</b>	Care Coordination	<b>X</b>
Nationwide Health Information Network CONNECT	<b>X</b>	Quality Reporting	<b>X</b>
Nationwide Health Information Network DIRECT	<b>X</b>	Behavioral Health Information Exchange	
Plans to exchange with federal agencies or other states via Nationwide Health Information specifications	<b>X</b>		
Public Health		Lab Strategy	
Electronic lab reporting of notifiable conditions	<b>X</b>	Translation services	
Syndromic surveillance	<b>X</b>	EHR interface	<b>X</b>
Immunization data to an immunization registry	<b>X</b>	Policy strategy	
Patient Engagement		Order Compendium	
Patient Access/PHR	<b>X</b>	Bi-Directional	
Blue Button		Alignment with CLIA	<b>X</b>
Patient Outreach	<b>X</b>	E-Prescribing	
Privacy and Security		Medication History	<b>X</b>
Privacy and Security Framework based on FIPS	<b>X</b>	Incentive or grants to independents	<b>X</b>
Individual choice (Opt In/Opt Out/hybrid)	<b>X</b>	Plan for controlled substance	<b>X</b>
Authentication Services	<b>X</b>	Set goal for 100% participation	<b>X</b>
Audit Log	<b>X</b>	Controlled substance strategy	<b>X</b>
Administrative Simplification		Care Summaries	
Electronic eligibility verification	<b>X</b>	Translation services	
Electronic claims transactions	<b>X</b>	CCD/CCR Repository	
Vendor		Directories	
Planning	<b>ApeniMed Hielix</b>	Provider Directory	<b>X</b>
Core Services		Master Patient Index	<b>X</b>
Plan Model		Record Locator Services	<b>X</b>
Identified model(s)	<b>Elevator</b>	Health Plan Directory	<b>X</b>
	<b>Public Utility</b>	Directory of licensed clinical laboratories	<b>X</b>

*Information for this profile was obtained from the approved Operational and Strategic Plan submitted to the National Coordinator for Health Information Technology as a condition of the Health Information Exchange Cooperative Agreement. The complete plan can be downloaded at: <http://statehieresources.org/>*

