



**Data Modernization
INITIATIVE**
Stories from the field



Public-private
partnerships



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strategies



Funding

PARTNERING FOR SUCCESS IN THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

A public-private collaboration streamlines health data flow and helps protect the community

Commonwealth Healthcare Corporation (CHCC) is an integrated healthcare and public health system and serves as the Department of Health in the Commonwealth of the Northern Mariana Islands (CNMI), a U.S. territory in the western Pacific Ocean.

More than 90% of the population of the CNMI lives in the island capital of Saipan, where there is a single 86-bed hospital with four intensive care beds and a small number of healthcare professionals.¹

While CHCC has an IT team, the organization has experienced challenges working with electronic health records, data retrieval and data reporting. During the COVID-19 response, the needs of CHCC expanded to gathering time-sensitive pandemic data for the entire CNMI population, “which is obviously something much bigger than what our team can do,” according to the CEO of CHCC, Esther Muña.

In 2020, the CNMI Office of the Governor launched a COVID-19 taskforce which included leaders and decision makers from entities such as CCHC, the fire and police departments, utilities, airport, public assistance office and the tourism office.

Through the taskforce, CCHC was connected with TurnKey Solutions LLC (aka TurnKey), a consulting firm specializing in technology solutions and marketing. Muña says TurnKey understood CHCC’s needs well.



The TurnKey team



CNMI is a U.S. territory in the western Pacific Ocean, consisting of 14 tropical islands stretching over 400 nautical miles (740 km).

Technology solutions for collecting and sending data fast

The first need that TurnKey addressed was **COVID-19 community-based testing**. When the pandemic started, community members weren't able to register for online testing or get their results online. CHCC wanted to stop the calls coming into the hospital and automate the process. The TurnKey team designed and coded a registration form, making it dynamic enough so that it could be expanded with new fields and functionality as needed. Additionally, TurnKey **helped facilitate sending test results through automated emails** sent from the CHCC lab directly to community members, who were then able to print a PDF copy of their results for work or travel purposes.

The CNMI had strict border control measures during the pandemic, so TurnKey developed the **Traveler Health Declaration Form**, which tracked the travelers coming into the CNMI from air and sea. It also tracked a person's quarantine movement. If a person was at a government quarantine facility, the team could see what room they were in, how long they had been there, and if they were a confirmed case or not. Through that same system, those who were quarantined were also able to get their test results.



Promising practices

- Get access to decision makers; include them in key discussions.
- Develop dynamic technology solutions that can be adapted for different purposes and expanded with new functionality when needed.
- Continually build networks and relationships with people outside your organization. These connections may help your organization meet goals and use resources efficiently in the future.
- Communicate transparently with partners; be honest about what can and cannot be accomplished.
- Appreciate that external partners may be able to look at an organization holistically and see commonalities across different public health sectors.



COVID-19 testing in Kanoa Resort



Drive-through COVID-19 testing at Pacific Islands Club

TurnKey also developed **vaccination software**, which allowed CHCC to register people, input their vaccination and reschedule the next appointment for 21 or 28 days, depending on the type of vaccine. “The great thing about it is it would send out automatic reminders. And I think at one point we were at about a little bit over 90% show-up rate for the second dose,” says Broc Calvo, Managing Partner at TurnKey.

A **self-reporting portal** was also created. Community members could submit their test results online and get a customized report showing the testing date and quarantine end date. Calvo says “a lot of the places at that time in the CNMI required it for either returning back to work or school.”

The forms that TurnKey developed could be adapted for other purposes. In 2021, TurnKey worked with CHCC’s non-communicable disease program. The program wanted to reduce diseases like hypertension and diabetes by promoting Zumba exercise classes to the community and capturing participants’ progress. TurnKey was able to build on the same technology built for COVID-19, but in this case, tracked attendance and measurements such as blood pressure and glucose levels of class participants.

“COVID-19 did not overwhelm CNMI’s health system as it did in other jurisdictions and countries around the world.”

- World Health Organization (WHO)

High vaccination and a rapid response to COVID-19

TurnKey also offers marketing services and helped work with CCHC on a campaign to boost the COVID-19 vaccination rate in the CNMI. Muña says, “We do have a very sick population in the CNMI, and our biggest concern, of course, was that if their health is fragile, we need to increase the vaccination rate to protect them from COVID-19.”

The vaccination campaign worked. Despite widespread community transmission in CNMI in October 2021, the World Health Organization (WHO) noted “COVID-19 did not overwhelm CNMI’s health system as it did in other jurisdictions and countries around the world.”² Muña comments on that time, saying, “It was all basically an all-hands-on deck approach to make sure that we succeeded. Our vaccination rate was almost 100% and that’s really just unheard of in any other jurisdiction.”

Lee Tenorio, CHCC’s Marketing and Community Relations Coordinator, says the marketing campaign, known as Road to 80, was “a big push” to vaccinate 80% the population against COVID-19. The team created videos and print ads promoting vaccination. Tenorio says it was a challenge breaking through the noise of false information and getting the correct facts out there. “But once we got the campaign going, things became smooth and straightforward.”



Esther Muña

“You can’t do anything without data...we couldn’t have been successful without that collection of data.”

Esther Muña,
CEO of CHCC

Results and impact

According to Muña, the biggest impact from these technical solutions and the vaccination campaign was “saving lives and protecting our people from the harm of COVID-19.” The high number of vaccinations also helped reduce hospitalizations and protect the healthcare workforce.

She says the data collection that TurnKey facilitated was critical. Muña says her team knows the people who live in the CNMI, but data helps them answer a question like “If there is an outbreak, where is it coming from?” She adds, “You can’t do anything without data...we couldn’t have been successful without that collection of data. And that has really been the work between TurnKey and us.”



A 6-year-old proudly shows her vaccination sticker

Challenges of building solutions quickly

The technology solutions and vaccination campaign were created with short turnaround times. Billy Grow, also a Managing Partner at TurnKey, says because of the fast response needed during COVID, there wasn’t really a scope. “So what happened is, when something needed to be recorded or data needed to be tracked, we had to literally build it as vaccines and testing were being implemented.”

Calvo adds that when CHCC needed to change or adapt the software quickly, their team was able to work with CNMI’s COVID-19 taskforce, who could communicate effectively with the people that were working at the different areas and sites. “Luckily, we live on a small island community, so we were able to gather the people quickly. Some changes were made within a timeframe of less than 12 hours.”

Unique strengths each partner brings

TurnKey always looks for ways to meet the needs of CHCC and get things done, according to Muña. She adds that if they can't do it, they are transparent about it. "They are accommodating and flexible," she says. She also **appreciates the integrity of TurnKey**. She explains that they are not a pop-up company, but a partner that can really deliver. "They have shown that they are trustworthy and it's something that we appreciate. As a health official myself, I get very suspicious of companies that show up when funding shows up."

Tenorio agrees and adds, "In this integrated health system, using vendors or partners like Turnkey, we're able **to cross-share some sort of data and information** between our different sectors as well." He sees much value in having a centralized vendor look across projects in different sectors of public health and data, and bring new insights.

In turn, CHCC **has helped TurnKey grow as a company**, according to Calvo and Grow. Grow says, "They skyrocketed us to a different plateau because we had to learn the skills to be able to accommodate the different things that they needed to get done for the community." Other government agencies have now reached out to TurnKey, either to modernize their data systems or for website or marketing help.

Best practices for a collaborative partnership

During the high-pressure time of the pandemic, CHCC and TurnKey engaged in many practices that helped them sustain their partnership and successfully respond to COVID-19.

Access to leadership. The TurnKey team says having access to the people making decisions was key to their success. Calvo defines it as "being able to communicate to the top-level person, where they're the ones making the decisions, where you're just running it right back to them so you're able to get real-time information."

Transparent communication. Grow says being transparent is critical to a partnership, being clear "about what you can do and what you can't do." Along with that, Grow and Calvo emphasize communicating in real-time about different aspects of a project so all partners are aligned.

Building relationships and connections. Muña says, "A best practice is to make sure that as a government entity, you know that you can't do it all and you have to really look at who can. Sometimes we think that only the government can do it. And a lot of times, we find that's not true." She says it's important to continually build relationships and connections, "especially here in the small island, in the CNMI, you need to have those kinds of relationships."



Team members with Road to 80 campaign materials

Continuing the work of data modernization

TurnKey is still working with CHCC on various projects today, and the work of data modernization continues. However, Muña says CHCC is an underfunded agency and the CNMI has a lot of uninsured people in the community. She says the CNMI has many health challenges outside of COVID-19—“cancer, cardiovascular, stroke or heart problems, hypertension, diabetes. We have a lot of patients with comorbidities. It’s not just one thing.”

Muña says **territories often face inequity in funding**. “A lot of times it’s based on population size versus the issues that we’re dealing with. The outcome that we’re trying to achieve for our population is the same outcome that is also expected of states. However, funding is always very small for the territories.” She hopes that future funding opportunities will acknowledge the challenges that territories face and they can be given adequate support in the future.

Muña is on the board of the Association of State and Territorial Health Officials (ASTHO), and with that perspective she sees value in collaboration with other jurisdictions, especially if funding is not equitable. She acknowledges though, the unique situation of being an island and a territory. “It’s always best to have the support on island and working closely with a team like TurnKey, along with some of the states that actually have the robust systems already in place.”

About the Commonwealth of Northern Mariana Islands (CNMI)

The CNMI is a U.S. territory in the western Pacific Ocean, consisting of 14 tropical islands stretching over 400 nautical miles (740 km). More than 90% of the Commonwealth’s 47,329 population lives on the island capital of Saipan where there is a single 86-bed hospital with four intensive care beds, five private clinics, and approximately 200 licensed physicians and advanced practice providers. The CNMI has a shortage of healthcare professionals, with the nurse-to-patient ratio in the hospital sometimes reaching levels of 1:7. The semi-autonomous Commonwealth Healthcare Corporation (CHCC), an integrated health-care and public health system, serves as the Department of Health.³



COVID-19 testing at the airport

Sources

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2. Davis D et al. *How the Commonwealth of the Northern Mariana Islands stalled COVID-19...* (1): 1-10.
3. Davis D et al. *How the Commonwealth of the Northern Mariana Islands stalled COVID-19...* (1): 1-10.