A report on the Health Dispensaries of Chuuk State, FSM
Gregory G. Maskarinec, PhD and Chris Lindshield, MD
23 June 2008

This report summarize a CEED-sponsored trip made by the authors in June 2008 to evaluate the health dispensaries of Chuuk State, Federated States of Micronesia. The main purpose of this trip was to gain a better understanding of the challenges facing the dispensaries, to determine whether there are feasible distance education possibilities and to examine options for promoting health awareness. Additional goals were to encourage cancer prevention and control activities, and to deliver a CME on cervical cancer at Chuuk State Hospital.

Chuuk State not only has the largest population of the four FSM states, it has the most dispersed population, with the majority of its citizens living on islands other than the central one (Weno) on which the government administration and the state's only hospital is located. According to the 2000 census, Chuuk State's population was 54,000, of which approximately only 14,000 live on Weno. For the 40,000 Chuukese on islands other than Weno, the local health dispensaries are the first option for modern, western-based health care. Chuuk officially has 55 dispensaries on the 14 mountainous islands within its 800 square mile lagoon, and 24 dispensaries located outside the lagoon on the other major island groups, although due to land disputes, maintenance problems, and/or lack of community support, not all of these officially recorded dispensaries physically exist. In some cases, disputes prevent the existing facility from being used, and in some cases there appear to be no health assistants (HAs) in attendance.
During the seven days that we were in Chuuk, we were able to visit 18 dispensary sites, 16 dispensaries on seven different islands within the lagoon, and two dispensaries in the upper Mortlocks islands, approximately 60 nautical miles south-east of the lagoon. Efforts to find two other dispensaries were unsuccessful, and one additional visit was thwarted by unforeseen political circumstances, so that a total of 21 sites were evaluated, while on a previous visit one author (GGM) was able to visit two other dispensaries (Tsis and Parem) as well.

Site visits

1) Three dispensaries on Fefan Island, Southern Nomoneas.
Fefan is a large volcanic island in the Chuuk lagoon with several villages whose total population is over 4000. By motorboat in good weather, Fefan can be reached in 15 or 20 minutes from Weno. Previously there was a motorable road on the island but there are few if any vehicles remaining on Fefan and the road has fallen into disrepair, so dirt tracks connect the villages. None of the communities have electricity or public sanitation, and none of the dispensaries have solar power, generators, or radios. Contact with the hospital on Weno can sometimes be achieved by cell phone. In addition to the three dispensaries that we visited, there are reported to be four other dispensary sites on Fefan, in Pwene, Mesa, Inaka, and Sapore, with conflicting reports regarding the degree of their actual existence and staffing.

  a) Ununno. The dispensary building, on private land, is in severe disrepair and has been abandoned; the only health assistant (HA), a male who is nearing retirement, sees patients in his brother-in-law's house, where he keeps his small supply of medicines neatly organized in the living room. Patient privacy is clearly an issue, but the HA nevertheless reports seeing 3-5 patients a day.

  b) Onongoch. A small new dispensary has opened on private land and was one of the best organized sites visited; there are reported to be three HAs, and one was on duty in the afternoon when we showed up unannounced. She was very enthusiastic about her new position, which she began about one year ago. She reports seeing up to 10 patients a day, and also assists as a midwife at local deliveries. Onongoch Dispensary has a refrigerator for the EPI Cold Chain, reportedly the only one on Fefan, but no source of power for it. It was the only dispensary visited that had oral contraceptives in stock, though others did have Depo.

  c) Fanip. Despite an unresolved land issue, a new dispensary is under construction, partly on government land and partly on privately owned land which the owner is willing to sell to the state. The HA meanwhile works out of her own home, with one cardboard box of medical supplies. It was unclear how the plans for the new dispensary, which include four bathrooms in a 24 foot by 20 foot one-story structure, were approved, as they do not appear optimal for a small dispensary.

2) Three dispensaries on Tonoas Island, Southern Nomoneas.
Formerly called Dublon when before and during the Second World War it was home to the largest Japanese community outside of the home islands, Tonoas now has a population of approximately 4000. There is a road around the island, which can be reached in 20 minutes by boat from Weno, but there are few vehicles on the island; the electricity generator has not worked for several years. Of the six official dispensary sites, all on private land or not physically existing, we visited three. None have running water, power, or communications other than the possibility of cell phones.
a) Nechap. Following Typhoon Chataan, in 2004 FEMA constructed a 60 foot x 40 foot seven-room dispensary in Nechap, but it has never been used, due to land payment disputes. The one, male, HA works out of his own home nearby, with his medical supplies displayed neatly on shelves along one wall of an otherwise nearly empty one-room structure. He reports seeing several patients daily.

b) Kuchua. Kuchua dispensary was built privately several years ago on land owned by the Protestant Church and was only added after strong lobbying efforts to the state-managed dispensary system. The large building has been vandalized and is not in use. The HA works out of her own home nearby.

c) Sapuun. The dispensary is located in a private home on private land; it is in poor condition and poorly stocked. The HA, who has had that position for more than 15 years, was more interested in getting some paint for her dispensary, which is where she lives, than in getting additional training, but she does report seeing patients regularly.

3) The only dispensary on Etten Island, Southern Nomoneas
This is a tiny but neat shack on the property of the HA, who left her job as a nurse at the hospital on Weno to replace her mother when her mother retired as HA. The current HA appears well organized and very energetic; she reports assisting as a mid-wife at deliveries on Etten as well as seeing several patients a day. The family would like to sell a parcel of land to the state for a new dispensary.

4) The only dispensary on Eot Island, Inner Faichuuk
This dispensary was closed and the HA, who is married to a man who works on Weno, where they have a home, was not on the island when we visited. Eot is a small island with a population of fewer than 400, and is probably the smallest community of any settled island within the Chuuk Lagoon. The dispensary, next to the school and reported to be on private land, does not appear to be well maintained.

5) Three dispensary sites on Udot Island, Inner Faichuuk.
Udot is a large volcanic island some 30/40 minutes by boat from Weno, with a population scattered in several villages of approximately 2,000. It is reported to have four dispensaries, of which we visited two (and looked for a third). None of the communities have electricity or public sanitation, and none of the dispensaries have solar power, generators, or radios. Catchment is the primary water source with resultant water shortages in dry weather.

a) Fanomo. A new, large, dispensary is under construction at Fanomo, part of an externally-funded community development project which includes a large new high school. The HA was present but apparently is waiting for construction to be completed before seeing patients. Plans include solar panels.

b) Penia or Mwanitiw (?-Benser was unsure of the village name). The female HA had just returned from Weno with a new supply of medications. She works out of her own home, as there is no dispensary.

c) Faninen (?). Villagers reported that there is no longer a dispensary nor a HA at this site, as her husband has been elected to an official position and now lives elsewhere.
6) The only dispensary on Romalum, Inner Faichuuk
This dispensary serves the island's population of approximately 1,000. The dispensary was closed when we visited and the HA was off-island. The building, on private land, appears to have had some recent interior renovations but overall does not appear to be in good shape.

7) Five dispensaries on Tol, Outer Faichuuk
Tol is the largest island within the Chuuk lagoon, home to over 5000 people. The largest mountain of Chuuk, Mt. Winipot, 1,457 feet high, is located on Tol. The island is 18 nautical miles from Weno so that it takes an hour or more to reach Tol by small boat even when the lagoon is calm. Rising gasoline prices make visits to the state center at Weno prohibitively expensive for most villagers.

a) Foup. The dispensary near the dock was closed and the area was deserted; apparently there is a second building also used as a dispensary on top of the hill that separates Foup from Netutu and the HA is more often there. The dispensary near the dock does not appear to be well-maintained.

b) Winifei. We had planned to visit this site but as we approached it there were "kapu" flags flying, announcing that there had been a death and that visitors were not welcome.

c) Fason. There is no building. The HA works out of his own home, five minutes away from Faichuk High School. We interviewed his brother since the HA, who is new and has recently competed the one-year HA training course, had gone to Weno. Area used as a dispensary was neat and there were more books here than at any other dispensary that we visited.

d) Chukienu. The HA had gone to a funeral but her relatives allowed us to look at the part of their home that she uses as a dispensary. Stocks were low but basic medicines were represented. At Chukienu we were able to interview a cancer survivor as well.

e) Netutu. There is no building. The HA has very recently been appointed to replace his brother, who now works with the DOH immunization program, but he had not yet received any supplies or any medications, so had not yet begun to see patients. It was unclear whether the brother of the HA ever actually saw patients in Netutu; the previous HA was reportedly a woman who moved to Guam.

f) Wichuki (on the Tol side of the Tol/Polle bridge). Although the HA appeared at the dock soon after we arrived and said that we wanted to talk to him, we were told that the dispensary was too far away for us to visit. Answers received from him, and from villagers who gathered, regarding health conditions in the area, were so vague that consequently this was the single site at which we felt slightly unwelcome, with the discussion being brought to a quick close by the villagers who had assembled, whose message came down to "We need a new dispensary. There's nothing more to say, now it is time for you to leave."

8) Upper Mortlocks
a) Losap. Losap is one of two inhabited islands of Enwar Atoll, approximately 60 nautical miles outside the Chuuk Lagoon. The population is declining through out-migration and is now less than 400. There are supposed to be two health assistants on Losap, but one has been away on medical leave for over two years. There is no dispensary building, the HA, who is also a minister, operates out of his own home; he tries to send all pregnant women early to Weno, since there is no midwife on the island, though clearly this strategy is dependent on the weather and on the availability of transportation. The public health team delivered a new stock of
medicines during our visit. There is no radio at the dispensary, nor does the island have power or improved sanitation.

b) Piisemwar, the other inhabited island of Enwar. The male HA claims there are 800 people on Piisemwar, and that he sees 20 patients a day. This may be only a small exaggeration, given the excellent turn-out by mothers with small children for the immunization clinic the Chuuk's public health team set up during our visit. The female HA has been away for an unspecified length of time in Guam. The dispensary currently operates in one room of the high school, which is an imposing prefabricated two-story twelve-room building; the ownership of the land on which this building stands is unclear as it is a landfill claimed by both the government and by private individuals. Another site for a dispensary also exists with a concrete floor in place. The public health team delivered a new stock of medicines during our visit. The HA reports that he has a radio but no battery or other power supply for it.

c) Out plan included a visit to Nama as well but circumstances beyond our control prevented our going ashore.

Observations

a) Local health conditions

All diagnoses are done through clinical observation as there are no laboratory services available for any of the dispensaries. At places where there is only a male HA, many women only received their prenatal care by going to Weno. Some women were sent to the hospital in Weno from islands in the lagoon even though they were already in labor.

The conditions that HAs most commonly reported treating flu, cough, fever, included upper respiratory infections, gastroenteritis, arthritis, diarrhea, headache, hypertension, GERD, diabetes, asthma, and minor injuries such as lacerations requiring first aid. Home visits are performed by many of the health assistants, but the severity of such cases could not be ascertained. Female HAs included pregnancy as a commonly seen condition, and several of them assist at local deliveries. In two locations, seizures were mentioned (each time in the context of our question regarding mental illnesses).

In each location we asked about cases of tuberculosis, Hansen's disease, and mental illness. In practically every location, we were told that there were no cases, a response in keeping with the shame associated in Micronesia with these conditions. Asking about suicide in quick visits such as these unsurprisingly generated only uncomfortable uniformative responses. Unlike the situation elsewhere, for example, on the outer islands of Yap State, health assistants in Chuuk apparently are not expected to manage any of these types of cases, expecting that public health is responsible for them. Although we were often introduced to health assistants as being part of the "cancer program," in no case did a health assistant list cancer as among their priorities for additional training or among local health problems.

b) Training possibilities

The most common requests for additional training by health assistants were to learn more pediatrics and obstetrics, and to become more familiar with using medications correctly. These
topics appeared to be entirely realistic, given the large number of children on every island, the problems associated with reaching Weno for childbirth, and the fair number of medications now available at every dispensary we visited. Prenatal care training and perhaps culturally appropriate ways to encourage family planning should be promoted. For adult health, management of diabetes and hypertension could be improved. Health assistants do not appear to be engaged in any type of community education, whether talking to a health class in local schools or holding educational meetings for the community, perhaps additional training could increase their confidence to offer such classes.

Our survey confirmed that there is no infrastructure that could be used for distance education in any electronic format. We therefore recommend that laminated pages or short well-illustrated booklets can be created, in Chuukese, for the most common problems encountered. These booklets would show pictures of different conditions and include basic treatment algorithms based on medications available to the health assistants. Algorithms should include warning signs regarding when to send patients to the hospital.

Booklets, such as the pictorial guide to leprosy that WHO distributes on heavy, glossy cardboard could address the common problems seen by the HAs with color pictures and easy-to-follow guidelines. When the health assistants meet in the future for regular re-training—a health educator is expected to be hired soon by the Chuuk Department of Health—simple post-tests and evaluation of usefulness of the booklets could be collected, and used to improve future editions. As new medications become available, the booklets could be updated with supplementary pages.

c) Medicine

The amount, type, and quality of medications at the dispensary varied widely. Some dispensaries had only a few different types of medication, and often many were expired. The ability to get to the hospital to pick-up medications seems to influence what medicines a health assistant stocks, although individual motivation on the part of the HA clearly plays a key role. This applies mostly to the lagoon dispensaries as the outer islands seemed to have more reliable deliveries of medicines distributed by health teams that visit on the field ship. In both situations, an recorded inventory tracking accurately what medicines are dispensed would greatly improve the efficiency of the supply. However, based on a comparison with the situation reported in 2004 by Fr Hezel and in 2006 by the FSM national team, as well as observations by one author in 2006, the situation is improving with more medicines at all dispensary sites.

Medications that were lacking:
Oral contraceptives (seen in one dispensary only)
H2 blockers
Powdered amoxicillin
Albuterol inhalers (cost likely an issue)
Anti-seizure meds
ACE inhibitors (most common blood pressure medicines was nifedipine)
Prenatal vitamins.
d) Supplies

No dispensary had glucometers available for their diabetic patients. There were also no test strips or lancets. Most but not all dispensaries had working stethoscopes and blood pressure cuffs, but some blood pressure cuffs were non-functional. Working otoscopes were scarce. Many dispensaries had no furniture; some had a desk and chair.

In conclusion, we wish to echo the conclusions of the task force set up two years ago to address some of the concerns and conditions raised by JEMCO on the operation of the medical dispensaries and school facilities in Chuuk: "The paramount recommendation of the Task Force is that all existing health facilities visited from the first day of this project until now require renovation, restocking of basic medical supplies, ongoing supervision of health personnel and ongoing preventive maintenance." That report identified 36 dispensaries within the lagoon as functional and recommended concentrating resources on those sites, a very reasonable suggestion which we endorse as a first step toward improving health care in Chuuk. A rational use of limited resources also suggest that new constructions should all follow a uniform model, moving away from the seemingly uncoordinated size differences of different dispensaries.

If two HAs could be identified (ideally one male, one female) for each of these 36 dispensaries, then training would be facilitated by having one assistant from each site able to be away for workshops while the second HA maintained services at the dispensary. Clearly, some additional training, such as obstetrics, will need to be done at Chuuk State Hospital, but despite the logistical challenges we suggest that workshops be done whenever possible on islands other than Weno, to demonstrate a strong commitment to improving health care in those locations, and so that the health educator can also conduct public education sessions for both children in the schools and adults in their own communities.

Limitations to this study

Clearly, the failure to visit all 83 (or 79?) dispensary sites of Chuuk State that are on record with the resulting sample bias is the most glaring limitation to this study, a consequence of the limited transportation options available and the time that such a comprehensive survey would require, as 24 of these dispensaries are on 24 different outer islands (outside the Chuuk lagoon) located in four different directions. This could be partially corrected with additional future site visits, though the challenge of ever visiting all of Chuuk's dispensary sites would be daunting. A second limitation was that there was no way to announce our visits in advance; this would ordinarily have been done over Chuuk's radio station, but during our visit this was not broadcasting due to an unpaid power bill. Advance notice would have allowed us to interview more HAs, although arriving unannounced did have the advantage of allowing us to see unvarnished conditions. Neither author speaks Chuukese; while HAs were all conversant in English, more in-depth information might have been collected in the interviews were conducted in the local language.
Misc.

In addition to conducting our dispensary evaluation, we met nearly daily with the director of cancer control, Dr. Kino Ruben, and twice with his staff (one administrator and one registry assistant) and we had a series of discussions that included the director of health services, the Hon. Julio Marar; the deputy director Dr. Abram Ichik; CME coordinator Dr. Bosco Buliche; the head of dispensaries Dr. Yoster Yichiro, as well as with the public health physician Dr. Dorina Fred, the tuberculosis coordinator Heldar Heldart, and the head of nursing Ms Irene Nero.

Dr. Lindshield's CME presentation was attended by 27 health professionals (7 doctors and 20 nurses or other hospital staff) and generated considerable discussion, particularly regarding practical and ethical aspects of vaccination without screening and of screening without real treatment options, an issue that requires attention and debate not only in Chuuk State but throughout the FSM.

Acknowledgements

The authors of this report would especially like to offer a special “Killisou Chapur” to Julio Marar, Dr. Kino Ruben, Dr. Bosco Buliche, Dr. Abram Ichik, and Dr. Yoster Yichiro for their extraordinarily kind assistance with our project. All errors of reporting, however, are our own. We were extremely fortunate to have an experienced boat operator, Benser Jacky, who was familiar with the location of nearly every dispensary and who knew many of the health assistants.

This project was supported by a CEED—Center of Excellence for the Elimination of Disparities—grant (CDC-RFA-DP07-707) awarded to the Department of Family Medicine and Community Health, John A. Burns School of Medicine, Honolulu, Hawai‘i, Dr. Neal Palafox, PI.

REFERENCES

1 Unpublished, a. Executive Summary. Dispensary Facilities Consolidation Plan. Chuuk State, Federated States of Micronesia. Prepared by the Dispensary Improvement Task Force. Submitted to the Governor of Chuuk State and to the President of the FSM, October 2006. The 2006 FSM national report [unpublished, b] identifies 24 outer island dispensaries and 55 in the lagoon, for a total of 79 while the task force report states that there are officially recorded 83 dispensary site. Comprehensive Assessment of Primary Care Systems, FSM. Division of Health Services, PO Box PS 70, Palikir, Pohnpei, FM 96941, undated, probably 2006.
4 [unpublished, b]
5 [unpublished, a]
Appendix 1: Photos of Sites visited

1a. Abandoned dispensary, Ununno, Fefan; 1b. Medical supplies at Onongoch, Fefan

1a. Ununno Health Assistant with medical supplies in his brother-in-law's living room
1b. One of the new health assistants, Onongoch. Refrigerator and supplies, Onongoch.
1c. Dr. Kino Ruben with HA and box of supplies, Fanip, Fefan

Vandalized dispensary, Kuchua, Tonaos;

3c. Sapuun, Tonaos dispensary (private home)

2a. Health assistant with medical supplies, Nechap, Tonoas

HA at Kuchua, in the one usable room.

Sapuun HA.
2c. Sapuun medicines

3a. Etten HA in dispensary

3a. Etten dispensary

4a. Eot Dispensary

5a. Fanomo, Udot dispensary under construction

Fanomo HA
5b. Penia HA with dispensary (private home).

5c. Faninen? No dispensary any more

6a. Romalum Dispensary

7a. Foup, Tol dispensary

7c. Fason, Tol, private home used as dispensary
7c. Fason, Tol dispensary (room in private home)  
7d. Chukienu, Tol, medical supplies

7d. Chukienu, private home, one room is the dispensary  
7e. Netutu canal and bridge

7e. Netutu children on edge of canal  
7f. Wichukino, Tol
8a. Losap Atoll

8a. HA in his home, used as dispensary

8b. Piisemwar, shell of dispensary

8b. Piiesemwar, HA in room in school used as dispensary

8c. Sun rising over Nama