

A Cross-Sectional Evaluation of the Health Dispensaries, Community Health, and Current Techniques for Improving Health Assistant Education on the Outer Islands of Yap State, Federated States of Micronesia

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Introduction

Yap is the westernmost state of the Federated States of Micronesia. The state of Yap covers approximately 500,000 square miles of ocean, though it consists of only 45.8 square miles of land area^b with a total population of approximately 11,200.^c Stretching eastward over 600 miles of ocean from the cluster of islands known as Yap proper (Wa'ab) are 78 outer islands, of which 22 are inhabited. Forty-five percent of Yap's population live on the outer islands and speak languages (Ulithian, Wolleaian and Satawalese) distinct from that spoken on Yap Proper.^d Most outer islanders, except for older women, speak English.

This project had four main objectives:

- 1) To set a baseline to determine how successful distance education methods have been in improving health care in Yap's outer islands.
- 2) To examine the prevalence of disease among the residents of Ulithi Atoll - FATHERAI, FALALOP, AZOR, MOGMOG ISLANDS and FAIS ISLAND, Yap, Federated States of Micronesia.
- 3) To determine the ability of local health dispensaries to meet the perceived health care needs of the community and the level of satisfaction with available services.
- 4) To elicit any perceived barriers to health care access for women on these islands.^e

After obtaining official approval from Yap's Council of Tamol (the Outer Island Chief Council) and from Yap's Department of Health, we visited one "super dispensary" and four ordinary outer island health dispensaries, on Fais Island and four islands of Ulithi Atoll - Falalop, FATHERAI, MOGMOG and AZOR.

Ulithi Atoll is located 100 miles northeast of Yap Proper, approximately 400 miles southwest of Guam. The atoll is composed of more than 30 islets, of which four are presently inhabited. The total lagoon surface is 183 square miles while the total land area is only 1.8 square miles. Yap and Ulithi belonged to the most extensive traditional exchange system in Micronesia.^f

Fais Island is geologically distinct in Yap as a raised-coral atoll.^g Fais is located 50 miles east of Ulithi. A relatively level central plateau 65 feet above sea level accounts for most of the island's 1.083 square miles.^h Fais has a subsistence economy with a strong reliance on local food, including fish, lobster, turtle, taro, coconuts, breadfruit, and bananas. Fais has an extensive network of gardens growing not only taro and potatoes, but also tobacco, pumpkins, and a variety of vegetables.

Methods

On each of these five islands we interviewed medical staff and members of the communities in both individual and gender-segregated group settings. Health care workers in the dispensaries served as key informants, as did selected members of each community. Volunteer interpreters were used as needed, most often drawn from the local healthcare workforce. Additional interviews were conducted with healthcare professionals at Yap

Memorial Hospital and recent health department reports on outer island health were reviewed.ⁱ

Results

Overall, the health dispensaries are competent to treat or refer to the Yap State Hospital,^j common non-communicable diseases such as diabetes and gout, as well as infectious diseases such as Hansen's disease and tuberculosis. The dispensaries vary in condition; Fais, Mogmog, and Falalop dispensaries have good structural integrity and are well organized and sanitary; however, Azor's dispensary was in poor condition and Fatherai's was destroyed by super-typhoon Sudal in 2004.^k

There has been an increase in drinking alcohol (including home-made yeast fermentation as well as imported beer and hard liquor), smoking, adding tobacco and alcohol-soaked tobacco to betel nut, and consumption of salty, high fat imported foods. Marijuana use is slowly becoming a problem, but gasoline sniffing is reported to have become much less common, and teenage suicide (increasingly alarmingly elsewhere in Micronesia),^l remains exceedingly rare. On both Fais and Fatherai, alcohol consumption has been prohibited by the chiefs, resulting in covert consumption. However, local foods are still commonly consumed.

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Regarding the general health of the outer island population:

- 1) Incidence of gout for both men and women is reported to be increasing; Informants note immediate gout attack after eating turtle, a local delicacy, for which traditional cultural norms regulating consumption are weakening.
- 2) Rates of diabetes and hypertension are reported to be increasing.
- 3) A recent outbreak of syphilis has swept through Yap, including the islands visited.
- 4) Chlamydia remains common.
- 5) For 2006, Yap reported three active cases of TB, one on the outer islands.
- 6) For 2006, 10 cases of Hansen's disease were reported on Fais, two on Ulithi, and one on Yap proper.
- 7) Four schizophrenics remain under treatment on Fais, one of them female.
- 8) On Fais, there was nearly universal prevalence of tinea corpora.
- 9) A recent health survey on Fais noted widespread filariasis (of 96 persons tested, 50 were positive);^m

for which islanders are eagerly awaiting treatment.

- 10) Local perception is that both men and women are dying at an earlier age than in the past.ⁿ
- 11) Informants insisted that there was no single word for "depression" expressing it in terms of "homesickness," "loneliness," "grief," or a very general "sickness in the head."
- 12) Traditional massage and the use of traditional medicines is widespread.

Key findings regarding women's health issues included:

- 1) Pap smears are not routine, there is no wet mount and no microscope.
- 2) Self breast exams are not performed.
- 3) Even in Yap proper, there is no mammogram, suspicious lesions are biopsied and surgically removed.
- 4) There were no pregnancy test kits at any of the clinics visited.
- 5) Most women apparently become sexually active as teenagers and are increasingly aware of the danger of STDs and the need for safe practices, but the use of condoms remains rare. Family planning is discussed but the use of birth control is limited by religious (nearly all the outer islanders of Yap are Catholic) teachings. One informant noted that she "just asks God" to limit the size of her family.
- 6) Women did not regard menopause as a particularly difficult time, regarding it as a normal part of life.
- 7) While it was difficult to gauge the amount of domestic violence that may occur, it was concerning that one teenager reported that it is "normal" for boyfriends to hit their girlfriends.

Outer Island Health Assistant Education

Yap clearly has the best health assistant education program within the Federated States, a project supported by the Yap Area Health Education Centers (AHEC) through Oceania Community Health. Dr. Arthur Yolwa, who lives on Mogmog, not only conducts a daily morning report by radio with the outer island dispensaries, he has also delivered a combination of radio and face-to-face sessions to deliver six College of Micronesia dispensary manager program courses since August 2004. The next face-to-face session was scheduled for the end of January 2007 (a week after our site visit), when the field ship would bring half of the health assistants back to Falalop to complete another course. As noted in a report accompanying this one,^o to date nine Community Health Sciences (CHS) courses have been taught: CHS

220- Review of Health Sciences; CHS 231- Maternal and Child Health I; CHS 233a- Behavioral Health; CHS 242a- Environmental Health; CHS 235a- Dental Health; CHS 241- First Aid Care; CHS 240- Maternal and Child Health II; CHS 224a- Health Problems in Adults; and CHS 251a- Health Problems in Children. A total of 29 students have enrolled in the courses, 21 are already working as outer island health assistants and 8 women newly recruited to be trained to work as Birthing Attendant Trainees (BATs) on outer islands that had no female health workers. One of these women had just begun to work on Fais at the time of our visit.

There is a need for an internet link for Ulithi's super dispensary and for the Mogmog dispensary (both of which have reliable electricity) to enable reliable e-mail and internet access, which would facilitate additional opportunities for distance education.

Site-specific findings

Falalop

Falalop is the site of one of Yap's two designated outer island "super dispensaries." Staff includes a MedEx, a health assistant, a dental nurse and a birth attendant. The super dispensary is well constructed and well stocked with supplies. It can admit patients and has a room for deliveries and basic surgical procedures.

Recently Falalop staff started a health education class where every Monday, Wednesday, and Friday people meet at the airstrip to walk. Both men and women participate, however those with diabetes don't often come, instead it is the "younger people" who are participating.

One concern mentioned in Falalop is the perception that people are dying younger. In the past people would live to be over 100 years of age, but now are dying in their 50s from heart attacks and strokes. This is attributed to changes in diet and increase of alcohol consumption. People, including women, drink yeast and *tuba* (palm wine made from coconut flowers), and come to the dispensaries with dehydration. Teenagers are also smoking marijuana which they get from Yap Proper via the field ship.

Fatherai

1) Fatherai has no dispensary building since super-typhoon Sudal destroyed the previous one in 2004; the Oceania Community Health Organization has plans to rebuild the dispensary this year (2006) and

has shipped construction materials to Fatherai for this purpose.

- 2) The health assistant works out of her home, has a stethoscope, otoscope, blood pressure cuff, glucometer, and a hemometer with no batteries.
- 3) All charts and records were destroyed by the typhoon.
- 4) There is no traditional birth attendant.

On Fatherai, women would like to deliver their children on their island, but currently need to go to Falalop or to Yap. The women of Fatherai also identified an urgent need for more syphilis treatment. The health assistant listed specific needs that included a new dispensary, batteries, one touch lancets and test strips, proton pump inhibitors or other antacids, and a new otoscope. She agrees with the community that a second health assistant is needed.

The Mogmog dispensary is well-stocked and the library includes up-to-date text books, including a World Health Organization blue trunk collection

Mogmog

In Mogmog, the dispensary design has been functionally improved to fit local conditions and the local culture. Locally appropriate modifications carried out by the Medex include replacing metal louvers with wooden ones; replacing metal bed frames with wood; having a door to the maternity ward that opens facing the women's house; and burying local electricity lines underground

(Mogmog has a functioning 240 volt generator donated by a German aid organization). The Mogmog dispensary is well-stocked and the library includes up-to-date text books, including a World Health Organization blue trunk collection. Mogmog dispensary runs separate diabetes and hypertension clinics.

On Mogmog, women noted that there remain problems with worms, amoebae and scabies. They noted increasing alcohol consumption and associated hepatitis, as well as increased violence. Increasing marijuana use was noted, and one arrest has been made for drug dealing. Cigarette smoking and chewing tobacco with betel nut is less of a concern, although they are aware of the health hazards. Women of Mogmog noted that they experience a lot of back pain and shoulder ache due to heavy work such as carrying baskets and buckets of water and gardening. They joke, however, that this work is not as bad for their health as is Western/American food. Men expressed a concern with the effects of climate change on local practices, including its weakening the ability to predict the weather with serious consequences for success in fishing and farming.

Azor

Currently the population of Azor is around 50 with approximately 11 women, six men, and the rest children. Azor's health assistant had been off island for three weeks to take care of his son on Yap. However, the dispensary looked as though it had been neglected for a much longer time. The women of Azor were frustrated and sad, almost hopeless. With few men left on the island, the women must bear the brunt of all daily living requirements. Most of the women on Azor are related to the health assistant, and so are embarrassed to come to him for gynecological issues.

On Azor there is a heavy reliance on local medicine, herbs, and massage. However, one woman noted that now that the family 'unit' is lost, knowledge is not getting passed down and is being forgotten. Women would like to see a female health assistant appointed to Azor, and noted a need for improved sanitation including toilets, soap and insect control. A need to carry out STD screening was noted.

Fais

The local community infrastructure was impressive with an exceptionally well-organized dispensary managed by an active community board. In the dispensary, notes on patients were detailed, tallies were kept of types of illnesses seen and of medicines used. The small library was well organized, as were the stocks of medicine. The building itself, however, had damaged screens, termite damage to the ceiling, a non-functional toilet, and no water catchments. There is an active effort to preserve cultural practices, including a distinctive weaving tradition, shark fishing and various forms of local medicine.

The health assistant conducts a very active campaign of community education, rotating through the three villages to deliver lectures on selected health topics each Sunday after church. The level of health awareness in the community was impressive, and the community is quite cosmopolitan: one woman explained that her first child was born in Hawaii, her second in Pohnpei, her third on Guam, and her fourth on Fais.

Predominate illnesses noted on Fais included hypertension, gout, diabetes, schizophrenia,⁹ and Hansen's disease (six patients currently being treated, several others have completed treatment), abdominal pain, back pain and various skin infections.

On Fais, although many women are still embarrassed to

see a male health assistant for women's health issues, they are nevertheless comfortable seeking care at the dispensary for many other general health concerns. For the most part, all persons have access to basic healthcare services in terms of antibiotics, analgesics, diabetic medicines and anti-hypertensives.

Community needs particularly among the women of Fais, include a need for a female health assistant. Women noted the difficulty and expense of seeking health care in Yap Proper, as transportation is free only for patients in very critical condition. Covert drinking and marijuana use are an increasing concern. Women noted that having a "big," heavy body was a sign of good health. "When you are in the obese section of the chart, that's when you're beautiful," noted one woman and others agreed.

Conclusions

A recurring theme on each island is the female residents' perceived need for appropriate medications, ultrasound machines to assist in safe deliveries and trained female medical personnel. Except on Fatherai, all the health assistants were male, which made it too "embarrassing" for many women to seek female preventative or curative healthcare. In the past, knowledge of local medicines was passed down from mother to daughter, alleviating this barrier of awkwardness due to male medical staff.

However, younger generations are not educated in local medicines. All women who were interviewed acknowledged using both local and Western medicine and think the practice of both types of medicines is important. We suggest that more incentives should be introduced to expand the recruitment and retention efforts to facilitate more outer island female health assistants and birth attendants expanding the recent effort to train six BATs. As one public health nurse remarked, referring to educated outer island women, "All the good ones go to Yap."

There are a number of areas in which Yap State clearly leads the Federated States of Micronesia and could provide a model for the other states. These include:

- 1) Daily morning report via radio with supervising doctor.
- 2) Careful charting and documentation, including inoculation records and illness tallies (though not uniform throughout the health posts visited).
- 3) An active program of continuing education for health using both distance education techniques as well as classroom teaching.

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- 4) Yap's outer islands retain a strong sense of community and pride in their cultural traditions.
- 5) The hospital has regular, well-conducted quality assurance projects.
- 6) Women were aware that breast milk is best for infants and that formula is only an option in exceptional circumstances.
- 7) Community education has already been effective in promoting basic ideas of diet and exercise. All were aware that too much imported food was dangerous to their health, knew the importance of exercise, and acknowledged the health hazards of alcohol and tobacco. On several islands visited, members of the community attributed the recent trend of decreasing life span and increase in incidence of diabetes, gout, hypertension, and heart attacks to lifestyle changes of too much imported food and too little exercise.

Overall we conclude that Yap's health dispensaries can provide competent general health care. However, there is much that could be done to improve women's healthcare. During the course of each group discussion, one or two women stood out who were comfortable speaking on behalf of the group and were knowledgeable about their community's health situation. These natural leaders should be recruited to help disseminate health information to the women in their communities. If it is not currently possible to train women as health attendants, these women should at least be taught how to educate their peers in preventative health measures for themselves and their children. More efforts must be made to explore culturally appropriate healthy lifestyle options to prevent the incidence of common non-communicable diseases.

Acknowledgments

The authors gratefully thank the following groups and individuals for their considerable assistance in preparing this report, all of whom have tried their best to provide accurate information. Dr. Maskarinec alone is responsible for any errors that remain. We thank: Yap's Council of Tamol; Dr. Victor Ngaden, Chief of Staff of Yap Hospital; Dr. Arthur Yolwa, Outer Island Supervisor, Ulithi; Dr. Thane Hancock, Staff Physician; Leetun Leona Tamag, AHEC Director; Denitha Palemar, Public Health Nurse; Alphonso Hadogbe, Health Assistant, Fais; Hosey Sogruy, Medex, Mogmog; Cloditha Legthar, Health Assistant, Falalop; Barbara Yaromfelmathau, BAT, Fais; Mark, Health Assistant, Falalop; and special thanks to Dr. Seiji Yamada of the Univ. of Hawai'i Pacific

Basin Bioterrorism Curriculum Development Project, who provided funding for this project.

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