

# Public Health in the Republic of Palau: What We Can Learn From a Small Island Country

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## Abstract

*The Republic of Palau has a well-run public health system despite being a small, relatively isolated island country with limited resources and limited funds. Using interviews with key informants, participant observation in clinics throughout Palau, and a review of available reports, we identified themes locally regarded as central to the success of Palau's public health programs. These include a comprehensive definition of "health," a sense of community-ownership, creative efforts to identify effective behavioral modification techniques, efforts to improve internal training and infrastructure, quality assurance, the importance of leading by example, and a general willingness to collaborate and compromise. We suggest that recognition and application of these concepts would improve not only the public health systems and primary care settings of other Micronesian nations, but also help correct the increasingly dysfunctional healthcare of the United States. (PHD 2007 Vol 14 No 1 Pages 57 - 65)*

## Introduction

The Republic of Palau (Belau), the westernmost archipelago of the Caroline Islands in the Western Pacific, is a chain of more than 340 islands, of which eight are permanently inhabited. In the same time zone as Japan, Palau is 500 miles equidistant from the Philippines to the north and Papua New Guinea to the south, 4,450 miles from Honolulu. Palau's population is approximately 20,000, of whom 70% are ethnically Palauan. Most of the population lives on the three island-complex of Koror, Meyuns, and Malakal, with a combined land area of 7.1 square miles. Palau's literacy rate is 92%.<sup>a,b</sup> Palau is known for having a well-organized, efficient, innovative, and effective public health system despite being a geographically isolated country with a small population and limited resources. Within this setting, this project had three objectives. First, our goal was to understand how public health is locally approached to determine how Palau has developed its innovative public health system apparently capable of addressing the needs of its people. Second, we attempted to identify which if any of Palau's public health projects or underlying principles might be applied or modified to fit

the public health needs of other Micronesian countries. Third, we sought common themes that run throughout Palau's programs that might be taught and applied to very different settings such as that of the United States.

## Methods

Information was collected by interviews with key informants, participant observation in clinics throughout Palau during a four-week long visit in July/August 2006, and a review of available reports and documents. Since it is impossible to critique a nation's entire public health system adequately in a short time, especially in regard to the outcomes of specific programs, the goal was to identify key concepts or "undercurrents" that inform various divisions in the Bureau of Public Health and that were articulated as important by various different key individuals. Interviews were conducted with the Director of Public Health, directors and coordinators of the different programs and divisions, and with physicians and staff of most of the main community health centers throughout Palau, all of whom were extremely cooperative and helpful. This project was reviewed and approved by Palau's Ministry of Health Institutional Review Board, and preliminary findings were reported back to interested physicians, staff, and officials in a semi-formal "grand rounds" session at Belau National Hospital.

## Key concepts

These are a series of concepts or themes that are evident within the Bureau of Public Health (some concepts may be more pronounced in some divisions or programs than in others). These themes may not provide answers

to acute problems, but serve as reminders to determine if programs are properly aligned with the overall public health objectives.

#### Definition of Health (B)

How does one identify “health?” In Palau, the Bureau of Public Health has embraced a comprehensive definition of health, and by doing so it has shown a commitment to understanding the complex factors that affect health. This includes understanding the impact on health of physical, emotional, social, spiritual, cultural and environmental forces. Social and environmental forces are especially relevant for Palau as it experiences rapid economic expansion and associated cultural change, demonstrating that officials in Palau understand the potential ecologic and social consequences of rapid development. Palauans remain very proud of their cultural heritage but as a consequence of modern political-economic forces many traditional patterns, including the extended family structure with its complex values of reciprocity and responsibility, patterns of income distribution, and Palau’s traditional chiefly hierarchy, are all changing. An emphasis on clan wealth is slowly evolving into concentrations of personal wealth. Even traditional funeral practices are changing to accommodate a more western work ethic of wage labor on fixed schedules.

One area of rapid change with clear consequences on health is diet. Palauans traditionally consumed primarily taro, breadfruit, coconut, fresh fish and other seafood but these items are being replaced by imported rice, ramen noodles, and canned meats, fish and beverages. Palau recognizes how diet changes have already severely affected many other island countries in the Pacific<sup>c</sup> and is trying to avert such a rapid shift to these foods within its own borders. A spiritual health division within the Bureau of Health has been created in response to recognizing the potential threats to health from excessively rapid changes in cultural values and practices.<sup>d</sup> The comprehensive definition of health is summarized in the Department’s motto: “A Healthy People in the Healthy Republic of Palau.”

#### Community-Ownership (B)

Another way to think of public health is to consider it primary healthcare for communities. Primary healthcare is commonly associated with concerns of physical health (non-communicable diseases, communicable diseases, cancers, palliative care, and oral care). However, for primary healthcare to be genuine healthcare, it

must address social health, interactions between family members, unhealthy and healthy behaviors by individuals, families and communities, the health of the environment and the impact of each of these on physical, emotional and spiritual health. To tackle such a broad range of issues with limited resources, Palau’s answer is through the key concept of “community-ownership.”<sup>e</sup> When a community feels that they own or take part in an idea or a project, they are more likely to get involved and more willing to make changes. As one interviewee described it “There is a tremendous power in creation and to community-creation.”

Decentralization often goes hand in hand with “community-ownership,” providing a sense of continuity not as part of some large institution but a “home.”

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This is being done in Palau with the community health centers created throughout the nation. For example, in one community health center they have a garden plot of herbal medicines. The community decided that they wish to continue to use herbal medicines and at a community “owned” health center it is easier to embrace this idea and to make it happen than it would be at one that was centrally controlled.

The concept of community-ownership might help explain diverse public health dilemmas: for example, it may help us understand reasons for the poorer screening numbers for pap smears in Koror and more urban areas. In Palau, the total compliance rate for pap smears in eligible women over 18 is 62-63%, but it is much higher in the rural areas. In the rural areas, community health centers are identified as medical “homes” where the healthcare providers are often neighbors, family members and friends. People are more comfortable with coming in, they are reminded by family and friends, and there is closer follow-up if an appointment is missed or simply forgotten.

With community ownership, community leaders clearly secure more of a voice and can be more actively involved with health programs. The community programs then are seen less as an externally imposed system or outreach project, but rather as internally created with participants and leaders along with their families and neighbors who are also part of the intended audience. The ultimate achievement of this community-ownership concept is realized when public health workers can approach a community with a new outreach program and simply listen, applaud, and encourage the community that has internally created their own advocacy to decide how

to apply or not apply the new program. An internal or “grassroots” movement would be expected not only to be more effective than top-heavy vertical health programs but also more cost-effective. However, this effectiveness cannot simply be assumed but must be assured especially in a setting of limited resources. Also, efforts to create community-owned medical homes cannot deprive the central healthcare infrastructure of necessary resources. Health leaders and planners must ensure that there remains a firm base upon which to draw including more specialized care and an appropriate referral and follow-up system for those identified with further medical needs at the outlying community level.

#### Behavioral Modification (B)

Behavioral modification was repeatedly emphasized as a key concept, even though people were often left with more questions than answers regarding how best to accomplish it. Obviously changing what people do is and will continue to be a difficult objective not only in Palau. It is very difficult to address a person’s behavior, monitor it, and effect positive, measurable change. Overall, many of Palau’s public health officials feel that although the knowledge base of Palauans is generally high, this doesn’t translate into behavioral changes. As the Director of Behavioral Health summarized, “Behind every diagnosis there are cultural issues.” A need has been identified for individualized intervention strategies that can work in specific socio-cultural contexts; this is an area that the international health community must research further.

Sometimes simply imparting knowledge can make a difference in improving behavior. One example is breastfeeding, with an increased number of Palauan women now breastfeeding due to social marketing and other interventions that targeted the population. However, there have also been failures. For example, the number of smokers during pregnancy has not decreased despite prenatal and antenatal counseling. Another example is in oral health, despite public education campaigns, people apparently remain unaware that a betelnut/tobacco combination will increase the amount of oral cancers, cause accelerated breakdown of enamel, periodontal loss, and worsen bone loss. Dental problems are likely to increase in Palau as even first-graders are now chewing tobacco with betelnut, most often obtaining tobacco from their parents. One way this has been addressed in rural areas is by educating the parents and children simultaneously about oral health realizing that the parent’s behaviors will have a

much greater impact than anything that is said to the children. Many parents, however, continue to believe is that it is okay for baby teeth to rot and fall out because the children will grow new permanent teeth.

Certain ambitious initiatives have been directed at the problem of adding tobacco to betelnut, such as the efforts by one State Senator to replace tobacco with cloves. However, this did not work; people simply began adding both cloves and tobacco to their betelnut. Nevertheless, the effort by political leadership to acknowledge an issue such as this and attempt to initiate a solution is certainly commendable.

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Clearly, knowledge is often not enough to break behavioral patterns. Returning to the area of oral health, many people in Palau still think that repairing teeth is all the dental care that is needed; they don’t take regular care of their teeth. It is estimated that while 75% of people brush their teeth, at least 25% don’t, and that at least 25% use betelnut for cleaning their teeth on a daily basis. The only private dentist office in Palau had to close and once the public office started charging fees for services the numbers of visits to it decreased. This demonstrates the necessity for early education programs, improving children’s oral health is seen as a “battle that we can win.” One of Palau’s innovative approaches is a program that sends a dental coordinator on home visits to meet parents and distribute toothbrushes while teaching about their usefulness.

Another example of a program improving local conditions is the Behavioral Health Division. Until 2001, although Behavioral Health was located in the Public Health Division it remained very clinically-oriented, emphasizing the diagnosis and categorization of mental illness. However, the Public Health Division began to recognize that behavioral health is critical as a first line defense against future problems. Realizing that behavioral change is the key, they have evaluated various ways in which to affect this change. An effective model has been tested, derived from the American Psychiatric Association’s “stages of change” and motivational changes counseling. Implementation has remained problematic, as this approach is time-consuming and labor intensive, but the behavioral health division hopes to test whether this can be developed on a larger scale, such as in a community-wide setting or whether this may destroy the very effectiveness of the intervention.

The Behavioral Health Division has conducted community-wide assessments to determine the stage of change a given community is in, hoping to tailor outreach for that community on that basis. If community-wide approaches are effective, then funding may be directed for larger efforts. If not, back-up strategies include marshalling other community groups and services such as faith-based organizations and churches to help provide this counseling, understanding that a person's spiritual health is intertwined with their overall physical health and their behaviors. This approach has yet to be fully evaluated but it demonstrates Palau's attempt to try innovative strategies to solve common problems.

Internal Training and Infrastructure (B)

"Internal training" encompasses training programs within Palau, partnerships with regional schools and internally funded programs to send Palauans elsewhere to receive a specific set of skills. Palau has yet to identify what are the most cost-effective strategies for different sets of special skills training and has consequently developed multiple strategies that have attempted to address this issue. Clearly, it makes little sense to recruit a very specialized oral surgeon when the general dentists are stretched beyond their capacity. One innovative and successful example, is the Health Alliance Training Program, which attempts to minimize the cost of sending people for training while linking specific individuals with needed specific skill sets. The program begins by teaching basic auxiliary health care skills in Palau, then works to identify each individual's specific talents and aptitudes and then places them in settings where they can further develop those skills in Palau if the training is available or elsewhere. The program allows Palauans to be trained and to care for their community while trying to minimize recruitment of outside healthcare providers.

A common concern across divisions was the ability to get information back in a timely manner. Specimen shipment relies on commercial airlines, whose post 9-11 rules and regulations are increasingly complex. For example, results for a pap smear may take up to six weeks to return. One possible solution may be to train Palauans to develop sufficient skills to perform the initial screening and only send the specimen further if there is a concern or uncertainty. Another potential solution may be to train or hire specialists within the Pacific so that sending specimens to California, Hawaii, or Australia is not required.

Every public health system requires infrastructure

to function, monitor and accomplish its goals. If the "community-ownership" model of healthcare is utilized then perhaps there would be less centrally-based infrastructure required. There is a wide variety of training and infrastructure needs across the different divisions and programs, including problems with sufficient manpower, adequate space, lab capacity, outdated databases, and similar weaknesses. However, the overall approach to improved infrastructure must be not to seek ways to increase manpower for specific needs but rather to focus on decreasing the need for a given level of workforce and infrastructure by permanently reducing a population's morbidity rates and improving overall health.

Quality Assurance (B)

There is increasing emphasis on evidence-based practices with the ability to measure outcomes and results from these interventions. This is easier to accomplish for a screening program such as cervical cancer, but more difficult for programs that focus on community awareness, education and behavioral intervention strategies. When these programs come out of a public health system's budget then there needs to be a systematic way to look at the given population before, during, and after the intervention strategies.

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For example, in Palau there have been two surveys on risky behaviors and other data on adolescents collected in schools across Palau. A large volume of data has been collected since 2002, but most has not been analyzed. If interventions are targeted at the behavior of these populations there should ways to evaluate whether the strategies make a difference. If not, then that program should be stopped, evaluated to determine why it didn't work and a different intervention that might work should be developed.

It is also important to collect and manage the data efficiently by using databases. Palau has made great strides in this area but there remain multiple non-compatible databases for different programs. An ultimate goal is to upgrade these systems so that they are all synchronized into one database.

Leadership Modeling (B)

The concept of leadership modeling means to lead by example. It is difficult for dental staff to lecture clients and effectively convince them to quit chewing betelnut with tobacco, when 90% of the Palauan public health dental staff chew betelnut with tobacco. Often when addressing this issue it becomes very personal and people start talking about their individual rights. An

initiative was put forward to make tobacco illegal in Palau but it was defeated. Other issues that require leadership modeling include; alcohol consumption, diet and exercise. In discussions of how to change behaviors, key public health personnel repeatedly confessed that this remains a problem, admitting that they seem powerless to control their own known destructive behaviors.

#### Collaboration (B)

There must be collaboration within the Public Health Divisions and Programs. For example, family health works with oral health, communicable diseases, and a variety of other programs to enhance effectiveness. "We argue and we fight, but we move forward together at the same time," summarized one key official. All of the different programs try to coordinate visits to the community health centers at the same time. There is collaboration so that public health can persuade the government to enact laws that improve health and encourage healthy behaviors. Local government has also collaborated with public health by providing transportation for women who need follow-up or mammography for the Breast Cancer Screening Program.

Collaboration between public health, community organizations, and the private sector is also crucial. For example, there is an agreement with a local water company to add fluoride to their five gallon jugs of water. However, because public health is a government bureau they cannot promote this specific company in the private sector and have to find indirect ways to promote the fluoridated water. The Breast Cancer Program realized that to adequately address its agenda it requires a multidisciplinary group of psychologists, religious organizations and other groups. Collaboration with Palau's Public Health efforts also includes agencies outside of Palau, including the Fiji School of Medicine, University of Hawai'i, the World Health Organization and other organizations.

#### Conclusions

The Republic of Palau has an efficient, well organized public health system despite being a small, relatively isolated island country with limited resources and limited funds. Contributing to this success has been Palau's embrace of a comprehensive definition of health that makes explicit the complex forces involved in keeping a community healthy. Several key concepts also contribute to Palau's public health successes, including the themes

of community ownership, behavioral modification, internal training and infrastructure, leadership modeling, and collaboration. Palau's definition of health and these key concepts could be utilized and developed in other public health settings within the Pacific that have similarly limited resources and are likewise relatively isolated geographically.

These concepts can be applied more widely to other healthcare settings throughout the world. Everyone involved in public health or primary health care should be reminded of the Alma-Ata declaration of 1978, which stated "health, which is a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector."<sup>f</sup>

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Each of Palau's public health key concepts can be applied across public health and primary care settings. For example, the concept of community ownership is being realized in the United States as patients report increasing dissatisfaction with the fragmentation and specialization of Western healthcare. The American Academy of Family Physicians in their Future of Family Medicine Project has identified this as creating a "medical home," a top priority in redefining the

clinic and primary healthcare providers.<sup>9</sup> Empowering people with knowledge alone is inadequate. Worldwide we know that knowledge doesn't always change behaviors, however, it remains part of public health's and primary care provider's obligation to lead the way by example. Countries also should encourage political pressure and initiatives to make unhealthy behaviors more difficult or more costly. For healthcare there should be appropriate infrastructure that allows individual physicians and public health personnel to access data from various programs quickly and easily. This is a challenge, especially as the terminologies of computer specialist and medical provider are often foreign to each other. However, in developing medical and public health databases these two are often required to communicate effectively. Bringing healthcare back to the community level, providing effective behavioral modification, funding adequate healthcare infrastructure and training, leading by example and a willingness to collaborate and compromise will go a long way toward ameliorating the fragmented and dysfunctional healthcare system in the

United States today and will move us toward “Healthy People in a Healthy World.”

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*13 years ago in Pacific Health Dialog, K. Helu - Thaman stated, “Today in our Pacific Islands we can no longer use ‘culture’ as an excuse for inaction - rather we ought to use ‘culture’ as a privilege that enables us to move meaningfully towards those objectives....” PHD, 1995; 2 (2): 83.*