

THIS IS ONLY A DRAFT REPORT

(Note to Task Force members: I've highlighted in bold in the text my questions to you or other information I'm still seeking – Val)

Maui Health Initiative Task Force: A Call to Action

Findings and Recommendations

The Maui Health Initiative Task Force was created by the Hawaii State Legislature in 2007 to give the communities of Maui, Molokai and Lanai the opportunity to provide direction for the future of health care services and infrastructure in their county. A bill was introduced in the House of Representatives early in the session to request an exemption to the certificate of need requirements for Maui after a proposed private hospital was denied by the state. The Maui Health Initiative Task Force was established by Act 219 to take a deeper look at all the issues and to ultimately “develop a comprehensive strategic health plan” that would:

- Determine the current and future health care needs of Maui County;
- Develop an integrated plan for providing health care, including primary, acute and long-term care, urgent and emergency care, and disaster preparedness; and
- Determine an appropriate role for Maui County health care facilities within the statewide system of emergency and trauma care.

Act 219 also empowered the community “by expediting the approval of new acute care facilities and medical or emergency services on the island of Maui.”

After hearing presentations from experts, reading pertinent materials such as the Maui Bed Needs Study, conducting nine public meetings and **nearly/more than 20?** committee meetings, Task Force members agreed on a set of priorities that they believe must be implemented to provide a high quality of health care in Maui County. These priorities must be viewed not as separate actions that can solve the health care quandary on their own, but

as interlocking components, each one as essential as the other, of an overall plan.

***Extend Emergency Care and Transportation System** -- The county is in desperate need of a hospital with an emergency room in West Maui, emergency clinics in other underserved areas and an improved/expanded emergency helicopter transportation network to save lives.

***Expand and Modernize Facilities** – More beds -- acute, urgent and long term care – are required in updated hospitals, clinics and care homes to keep pace with a growing population of residents and visitors that could reach 250,000 in 2030, including a senior population that will triple by that time.

***Add Home and Community-Based Services** – To enable kupuna and people with disabilities to remain in their homes or home-like settings – which result in cost savings and happier lives -- more home-care programs must be funded and residential care facilities built as an alternative to traditional nursing homes.

***Boost Reimbursements** – Reasonable reimbursement levels are required to attract and retain superior health care providers, yet Medicaid and Medicare pay Hawaii among the lowest rates in the nation. Reimbursements from local third-party payers (HMSA) are also inadequate.

***Recruit and Maintain Workforce** – Incentives, more educational opportunities, better salaries and modernized facilities are essential to attract and retain a quality workforce that includes primary care physicians, specialists, nurses, nursing assistants, technicians, dentists, pharmacists, caregivers, home health workers and support staffers.

***Enhance Mental Health Services** – A lack of psychiatrists and in-patient facilities along with low reimbursements means there are few services available for those in need of mental health counseling or treatment, including veterans, seniors facing Alzheimer's disease and those addicted to crystal methamphetamine or other substances.

***Improve Access to Dental Care** – Periodontal disease has been linked to other serious illnesses, yet access to preventative dental care for the elderly, Native Hawaiians and those with Quest or Medicaid coverage is poor, leaving many with no option but to seek relief in costly emergency rooms.

***Upgrade Obstetric Care and Establish a Neonatal Resuscitation Team** – A larger birthing center and a round-the-clock neonatal resuscitation team at Maui Memorial Medical Center would improve survival chances for newborns who require resuscitation so they wouldn't have to be flown off-island, which increases risk to the baby and imposes hardships on families.

***Promote Healthy Living and Disease Prevention --** The better the primary care, the fewer hospitalizations resulting in a cost savings and a happier, more productive community of all ages that shares in the responsibility of health care. happy

***Improve Pharmacy Services –** Because there are a limited number of pharmacists in the county and no pharmacies open late or on weekends (Lanai has no pharmacy service at all), regulations should be modified so that a countywide tele-pharmacy system can be developed and implemented.

***Update Technology –** Health care facilities will lag behind if they are not supplied with the most up-to-date diagnostic equipment, a countywide (or statewide) electronic records system and telemedicine.

***Prepare for Disasters –** A Maui County coordinator should be appointed to take command during all types of disasters and an extensive public awareness/education campaign should be funded to get the community better prepared for inevitable natural disasters or pandemics.

Note to Task Force: Is this appropriate:

***Restructure the Certificate of Need Process –** (Only HCBS has come out in support of regionalizing decision-making process – this still needs to be discussed)

Strategic Health Plan for Maui County Developed by The Maui Health Initiative Task Force

Introduction

Fifteen residents from Maui, Molokai and Lanai were appointed to serve on the Maui Health Initiative Task Force: seven by the Mayor of Maui County and four each by the President of the State Senate and the Speaker of the State House of Representatives. Task Force members included physicians, administrators of health care facilities, other health care providers and concerned citizens who have been active in advocating for better health care for the community.

To build the foundation for its comprehensive integrated health care plan, the Task Force collectively turned to the cultural roots of the islands. By

emphasizing the values of old Hawaii and the sense of community that the county is in danger of losing, the Task Force shaped its plan with the same kind of compassion and dedication that they expect to find in all health care facilities. When members were asked to express what they hoped the plan would convey, remarks included such words or phrases as “honesty,” “pono (doing what is right),” “the best health care possible” and “equality – equal care and access for everyone.”

The Task Force adopted two statements to help guide them in their deliberations:

- High Quality Health Care requires that hospitals and health care practitioners be enabled to make accessible to all citizens a full complement of services to prevent disease, offer the best treatments possible and enhance the quality of life.
- High Quality Health Care requires that the public and private sectors cooperate to provide modern facilities, develop regulations with the guidance of the community and promote creative solutions.

In drawing up their comprehensive health plan, members also agreed to incorporate the same values the Maui Long Term Care Partnership used to guide it in developing its strategic plan as well as the Vision Statement adopted by Focus Maui Nui, which obtained input from 1,700 residents about their desires for the future of Maui County.

“Our values must be the driving point,” said Jeanne Skog. **(Check quote with her.)** (Note: these values and the vision statement are attached in the appendix).

Before the Task Force was established, the most recently debated issue on Maui was over the need for a new – or a replacement – hospital. A local physician had proposed that the 150-bed Malulani Hospital and Medical Center be built in Kihei. A private investor had pledged to fund the project, estimated at more than \$200 million. But almost immediately after plans were announced, emotions among residents ran high and rumors were rampant, splitting the community into those who supported Malulani against those who feared the new hospital would cause the collapse of the centrally located Maui Memorial Medical Center, which was the pride of the island when it opened its doors in 1952.

Not only was the public divided over Malulani, so were its leaders. The new hospital had the support of some key executives including Governor Linda Lingle, who indicated that the state could not afford to upgrade Maui Memorial Medical Center. **(check source of that statement with Rita.)** Lingle said she also supported a hospital for West Maui. Maui Mayor Charmaine Tavares and previous Mayor Alan Arakawa both endorsed Malulani. Among those opposing the new proposal were executives of Maui Memorial Medical Center, the physicians of Maui Medical Group and all three of the county's state senators.

During the state-required Certificate of Need (CON) process that calls for hearings before three subarea councils of the State Health and Planning Development Agency (SHPDA), the rifts grew even wider. Malulani was recommended for approval by the SHPDA committee made up of Maui County residents, but was rejected by two Oahu-based panels.

On Oct. 2, 2006, the application was denied by SHPDA Administrator David Sakamoto. According to The Maui News, Sakamoto said he was bound by criteria that prohibit new proposals that would have an adverse effect on existing facilities. Officials at Maui Memorial Medical Center had testified that the hospital would lose millions of dollars in federal subsidies if it lost its status as the island's sole provider.

In that same ruling, however, Sakamoto concluded that "One large, well-run facility, strategically located, would be the most efficient and effective means of addressing the acute care needs on Maui."

An appeal by Malulani officials for reconsideration was also turned down by a SHPDA panel on a 4-1 vote, effectively killing the project. The single ballot cast in favor of Malulani came from the only Maui representative on the committee. Malulani supporters were outraged that Oahu was determining Maui's future and demanded that the CON process be scrapped or, at the very least, restructured to allow local control. Lingle might be leaning in that direction, too: she did not reappoint Sakamoto to his position.

During the last legislative session, lawmakers offered different solutions to address the community conflicts that had festered during the debate and were still lingering long after the SHPDA decision. For legislators, the best remedy was to give the decision-making to the citizens of Maui County by

establishing a task force on the community's behalf to develop a strategic plan for the future of health care in the county.

Time, though, was short. The Task Force was not even put into place until mid-August. With a final report due 20 days before the next Legislative session which begins on January 16, 2008, the members – all of them volunteers – were compelled to put in long hours at meetings and at home doing research. Because of the short four-month window and the enormous assignment, the Task Force created three committees to concentrate on three specific health care fields that the legislation mentions: Acute Care/Primary/Emergency Services; Home- and Community-Based Services (previously known as Long Term Care) and Disaster Preparedness.

To be as accessible as possible to the public, meetings were scheduled in different locations around Maui, on weekdays as well as on weekends, during the day or in the evening. Agendas, minutes and information delivered in presentations by invited experts were all made available to the public on the SHPDA website. Newspaper articles announced meetings in advance and provided occasional coverage of more noteworthy developments.

Unfortunately, the \$100,000 appropriated to the Task Force by the Legislature in Act 219 to provide funding to hire consultants and a professional television camera crew to videotape all meetings for public view has not been released by the Office of Budget and Finance. **[Note: should funds be released, this paragraph will be revised]**. Because of the lack of money, no consultants could be hired to research specific issues and a team at Akaku: Maui Community Television could not be contracted for services. The Task Force was grateful that an producer trained by Akaku offered to videotape the meetings, quoting a much lower cost. At this writing, the person has not been paid. SHPDA has authorized the hiring of a facilitator and a communications consultant to assist with strategic planning, taking minutes of meetings, and preparing the draft and final reports.

How the plan came to be

During the first two months of meetings, the Task Force heard from health care executives, community leaders and knowledgeable citizens who had been invited by the panel to give presentations about their particular

specialty. Presentations included statistics, first-hand accounts from years of experience and other information to help members better understand the various aspects of health care in the county and the most important needs.

Although the presenters came with different backgrounds and opinions, several common themes emerged:

- a looming shortage of beds in all facilities and a shortage of health care providers at all levels, from physicians to caregivers, could lead to a crisis without immediate action;
- low reimbursement rates from Medicaid, Medicare and third-party payers (HMSA) make it impossible for providers and facilities to get paid what they're owed;
- telemedicine has the potential to fill many gaps in the system and connect doctors or other providers to anyone with a telephone or computer, even in the most isolated pockets of the county;
- the high cost of living and high cost of housing in Maui County coupled with wages lower than Mainland counterparts threaten to drive away the workforce.

To speed up their overall work, the Task Force agreed to form the three committees to delve further into the issues. In barely a month of consulting with more experts, reviewing case studies, reading written reports and gathering more data, the committees had produced detailed reports that spelled out priorities to improve the health care system in Maui County and how to achieve them. At the same time, members stated that the priorities must not be viewed as separate items, but as part of a whole package. Health care in Maui County will not be improved until all priorities are addressed. For example, the county could have enough state-of-the-art medical centers to handle all the patients admitted, but if there are not enough health care providers or workers to staff the facilities, a serious problem still exists.

The committees benefited from a great deal of expertise among their members. Perhaps this was no better demonstrated than on the Disaster Preparedness Committee where Dr. Richard Weiland, the chairman, had experienced Hurricane Katrina at ground zero when he was living and practicing in Biloxi, Miss. Weiland lost almost everything he owned to Katrina, even most of his identification papers, but he lived. He knows all too well the importance of being prepared. When Weiland asked Task Force

members how many of them had basic disaster survival kits assembled, only one other hand – besides his – went up.

Titled “Long Term Care” by the Legislature, the Task Force panel assigned to explore that topic quickly recommended that the name be changed to the more appropriate “Home- and Community-Based Services” committee to reflect the overwhelming desire of kupuna and people with disabilities to remain to in their homes or home-like settings rather than institutional nursing homes. The committee benefited from five years of planning by the Maui Long Term Care Partnership, which has evolved into a national leader on preparing for the upcoming “silver tsunami” that will occur when the Baby Boomers retire. Three leaders of the Partnership were also members of the Task Force.

The group with perhaps the most daunting task was the Acute/Primary/Emergency Committee which was charged with examining the state of health care services in the county (everything from emergency care to prevention) as well as sizing up infrastructure needs. Again, the committee was fortunate to have in its ranks two longtime physicians who also had experience in administration and five dedicated citizens who have long been with health care or community planning.

Priorities for a High Quality Health Care System in Maui County

After hearing public testimony, reviewing presentations by experts in various health care fields and assessing additional research conducted by the committees, the Task Force identified key priorities that would lead to a much improved health care system in Maui County.

Extend Emergency Care and Transportation System

West Maui

The Task Force found that the most pressing need for emergency care and transport was in West Maui where there are no emergency care facilities for a region with a significant resident and visitor population that is expected to continue to rapidly grow. Unreliable access to Maui Memorial Medical Center compounds the problem: West Maui relies on one two-lane highway

to get to Central Maui and the hospital, but that road is often closed due to car accidents or brushfires. Even when the road is open, the heavy traffic can often lead to delays. Joe Pluta, president of the West Maui Taxpayers Association and a leading proponent of a West Maui Hospital, said the average time it takes for an ambulance to travel the 25 miles from Lahaina to Maui Memorial is 66 minutes – a crucial hour lost for someone who has suffered a heart attack or another catastrophic illness.

The West Maui Improvement Foundation and the West Maui Taxpayers Association have been leading a community effort for years to establish a hospital and emergency room in West Maui. Land has been donated and a private investment firm has pledged \$70 million to build a Critical Access Hospital with an emergency clinic, 25 acute-care beds, long-term care beds and assisted living. The project must obtain a Certificate of Need from the state to move forward. (If appropriate:) The Maui Health Task Force Initiative urges the state to support (OR EXPEDITE) the approval of a certificate of need application for the West Maui Critical Access Hospital.

Lanai

Although the Legislature appropriated \$1.2 million to provide an overdue upgrade to the Emergency Room at Lanai Community Hospital and pay for a digitized X-ray machine, the money has still not been released by the Administration, according to John Schaumburg, hospital CEO. By replacing old diagnostic equipment with digitized counterparts, the hospital can share information with outside health care providers when emergency care is needed. Emergency transport is generally good, but there are reports of waits for an air ambulance of up to 8 hours. (If appropriate): Maui Health Task Force Initiative requests that the Administration release the funds for the Lanai Emergency Room upgrade immediately.

Molokai

Molokai General Hospital reports very good emergency care and transport to Oahu because of its partnership with Queens Medical Center, but reports that it still relies on off-island Emergency Room physicians, laboratory technicians and radiology technicians for coverage.

Maui: Maui Memorial Medical Center and Outlying Areas of Maui

The Emergency Room at Maui Memorial Medical Center is being upgraded and expanded, but that will only help critically ill or wounded patients in Hana and other outlying areas once they arrive at the hospital. Getting there is the problem. An expanded and integrated emergency care transport system should be implemented with helipads strategically located in more isolated communities along with a helipad at Maui Memorial and in West Maui. The emergency helicopter is currently located in Kula with the crew at Maui Memorial – the helicopter and crew need to be located in the same place

Note from Val: What about emergency rooms or urgent care clinics in Kihei and Hana – does the Task Force want any specific language?

With emergency stroke and cardiac cases increasingly being transported from Hawaii Island to Maui, the emergency transportation needs to include the Big Island as well as tertiary care hospitals on Oahu.

The Task Force also learned that it is difficult to receive orthopedic and ophthalmologic care in the Emergency Room at Maui Memorial.

Expand and Modernize Facilities

With only one major acute-care hospital on Maui and the fastest growing population in the state, the island already faces a crucial need for more beds in all categories – acute care, urgent care and long-term care. This need will continue to increase along with the population which is only expected to grow more over the next 25 years. The Maui County Planning Department estimates that the current resident population of 141,000 will jump to 180,000 by 2030. At the same time, the county estimates that, on any given day, some 70,000 tourists will also be in the county, most of them on Maui.

In addition, the county must prepare for an aging population. Of the 13,000 residents who have moved to Maui since 2000, 60 percent were at least 55 years old. The percentage of Hawaii's population is increasing 2 1/2 times the national rate – and residents of the islands are outliving their Mainland counterparts. According to the Maui County Planning Department, there were 13,267 residents who were 65 and older in 2000 – in 2030, that figure is expected to nearly triple and peak at more than 37,000.

This means that the county will need not only need more acute-care beds in modern hospitals, but also additional long-term care beds and services in a variety of residential settings: “greenhouse” facilities that encourage

independent living, Foster Family Homes and other alternatives to institutional nursing homes.

For years, the “waitlist” of patients who no longer need acute care beds but can’t find any long-term care beds has plagued Maui Memorial, at times resulting in a quagmire of gurneys with admitted acute-care patients being held in the Emergency Room or stacked up in hallways until a bed opens up.

With the increasing number of seniors, the problem will only get worse if the needs for both acute-care and long term-care beds are not addressed.

The Maui Bed Needs Study was produced by the Hawaii Health Information Corporation, a neutral, nonprofit organization that gathers data from all hospitals in Hawaii to help determine needs, according to Susan Forbes, the agency’s president and chief executive officer, who addressed the Task Force. The study was commissioned in 2004 by SHPDA in collaboration with Maui Memorial Medical Center, Malulani Health Systems, Inc., Kaiser Permanente and the office of the mayor of Maui County to obtain “evidence-based” bed need projections.

In 2004, the study found that there were 1.4 beds per 1,000 people on Maui, below the national average of 2 per 1,000 and the Hawaii statewide average of **xx per 1,000. (e-mail sent to Susan Forbes to double-check all numbers).**

The study examined data and patterns to project the various types of bed needs on Maui from 2005 to 2025. It determined that – if there were sufficient long-term care beds and no waitlist – Maui Memorial could meet the acute-care needs in 2005, but not beyond that. When the Bed Needs Study factored in the current waitlist, however, it ascertained that – in 2005 -- Maui Memorial should already have been equipped with an additional 41 beds to meet the overall demand. The study found that waitlisted patients created a particular problem for the hospital -- a problem that was worse on Maui than any other island. John Schaumburg, chief executive officer of Lanai Community Hospital, said that the waitlist on Maui even impacts Lanai because there might not be any space in the Emergency Room for seriously ill patients who need to come from off-island.

Schaumburg said that when all beds are full at Maui Memorial, it leads to a condition he calls “Congestive Hospital Failure.”

Because most of the waitlisted patients are covered only by Medicare or Medicaid, that means reimbursements to the hospital are poor. Wes Lo, chief executive officer at Maui, told the Task Force that waitlisted patients in acute-care beds cost the hospital up to **\$15 million a year (number being double-checked with Wes Lo)**. Waitlisted patients are also more susceptible to be the new “superbug” known as MRSA (methicillin-resistant Staphylococcus aureus), a staph infection that is resistant to typical antibiotic treatment. MRSA seems to be transmitted most often in hospitals and preys upon patients with weaker immune systems.

Currently, Maui Memorial has 196 beds. That number is expected to increase to 208 by early 2008 when the Molokai East unit is reopened. By the end of the first quarter of 2008, the number of acute-care beds is expected to increase to 221 when the remodeling and conversion of beds in the former Intensive Care Unit is complete. Projecting further into the future, Maui Memorial expects to increase the number of acute-care beds to 287 with the opening of the proposed Heart, Brain and Vascular Tower. In 2011-2012, Maui Memorial anticipates construction of a new maternal care wing with full obstetric and neonatal resuscitation facilities, subject to a feasibility study that must be done. **(Note from Val: not sure where these stats came from, but they were in the Acute/Prim/ER Nov. 10 report)**

The Bed Needs Study concluded that Maui will need approximately 30 more acute-care beds every five years beginning in 2015 to keep up with the increasing population.

Another obstacle facing the hospital is the shortage of primary care doctors and specialists. Wes Lo said that Maui County has the least number of physicians in the state. According to statistics provided by Maui Memorial, Maui has just two doctors per 1,000 people, compared to a statewide average of 2.8 per 1,000. Honolulu has 3.1 doctors per 1,000 people.

Dr. Howard Barbarosh, a cardiologist, president of the Maui County Medical Society and liaison to HMSA, said that because of inadequate reimbursements and high medical malpractice insurance, more doctors are leaving Maui County and fewer new ones are taking their place. As a result, many residents do not have a primary care physician to provide them with timely or managed care. Instead, these individuals rely on the expensive Emergency Room to treat conditions that could have been kept under control

or handled in an outpatient setting by a primary care doctor. This is an inefficient -- and costly -- use of the Emergency Room staff and facilities. Lo said that Maui Memorial's Emergency Room is the second busiest in the state.

Forbes said although there's no question that more beds are needed on Maui, beds are not the only issue. The entire continuum of care must be addressed: prevention, treatment and after-care. Forbes also said that some hospitalizations can be prevented by managing care for people who have conditions such as asthma or diabetes -- if these individuals don't manage their disease, they end up in the hospital.

Conclusions of Maui Beds Need Study:

1. More acute and long-term care beds needed
2. Insufficient primary care resources create greater demands on the acute hospital
3. Lack of long-term care beds creates greater demands on the acute hospital
4. Antibiotic resistant infections place greater demand on the acute hospital

Regional Facilities

There is a need to build and staff regional emergency stabilization facilities in outlying or underserved areas of Maui and enhance the emergency transportation system to provide better accessibility, **particularly in South Maui and Hana.?? What about the Hana Health Center?**

In a presentation to the Task Force, Wes Lo agreed that Maui must build and staff round-the-clock urgent care centers in key geographic locations. He suggested forming partnerships to address this gap because Maui Memorial can't be responsible for everything -- an integrated system is required with active participation from the community, health care providers, payers and government agencies.

West Maui Critical Access Hospital

West Maui has no medical facilities beyond the individual physician offices, medical clinics and an after-hours urgent care clinic operated by Maui

Medical Group with a state subsidy. Given the population in the area of both residents and tourists, along with the projected growth for the region, a Critical Access Hospital (CAH) seems to be a logical solution.

Although CAHs in Hawaii generally operate at greater than 10 percent loss, West Maui might actually be able to turn a profit because of its larger population. Eric Shell of Stroudwater Associates, whose East Coast firm specializes in the development of CAHs and who has worked with all nine CAHs in Hawaii, said the median population service area for such a hospital is 11,000 – Lanai has just 3,000 residents and has a CAH. With Lahaina's average daily population at 50,000, the West Maui Hospital stands a better chance at turning a profit because of the higher volume, said Shell.. In addition, the Hawaii Medicaid program pays reimbursement fees to CAHs based on cost, which is another advantage.

West Maui is also growing. Joe Pluta of the West Maui Taxpayers Association said 1,400 housing units have been added to the region's inventory since 2005 and another 17,000 new housing units are on the drawing board.

The proposed West Maui Hospital would feature 25 beds, with acute emergency care, two surgical operating suites, medical offices and clinic, a 40-bed sub-acute care nursing facility with 39 units for assisted living and 40 units of medical staff housing. Kaanapali 2020, which donated the 14.5 acres for the complex, will build the affordable housing in conjunction with the hospital.

Regulations require that a Critical Access Hospital can be approved only in an existing hospital so the West Maui facility would have to open its doors as a standard medical facility and then seek the proper designation.

Organizers of the proposed hospital told the Task Force that they want to cooperate with Maui Memorial Medical Center and not cause negative impacts to that facility. It is hoped that a hospital on the West side can actually help Maui Memorial by freeing up beds and lessening the burden on the Emergency Room staff.

Shell said that the West Maui Hospital could develop a transfer agreement with Maui Memorial should a need arise for more beds than the limit of 25.

In mid-November, the West Maui Hospital cleared a major hurdle when a required change in zoning was approved by the Maui Planning Commission. The zoning request must now be approved by the Maui County Council. After that, the only piece of paper left for the hospital to obtain is the Certificate of Need.

Add Home and Community-Based Services

Hawaii has one of the fastest growing, longest living senior populations in the United States. In 1960, elders accounted for just 5 percent of the population of Hawaii. By 2020, approximately one in five residents will be 65 or older – by 2030, that number will leap to one in four. Affordable housing, home-like care facilities and home services are needed to allow these seniors to maintain their independence in the community for as long as possible and to “age with aloha.”

The Task Force’s Long Term Care Committee, as it was originally titled, benefited from five years of community planning and research already conducted by the Maui Long Term Care Partnership, a coalition of local leaders and interested citizens that was part of nationally funded project by the Robert Wood Johnson Foundation to prepare for the demographic upheaval that will take place when the Baby Boomers retire. The Foundation believed that, without addressing major shortfalls now, America would face a crisis in services, facilities and workers to handle the sudden surge of seniors.

Through information shared by the Partnership and the chief executive officer of Maui’s Hale Makua nursing homes, the Task Force learned that a paradigm shift has been occurring on the national level with regard as to how long term care is viewed. Historically, the United States has spent billions of dollars in a long term care system that has centered on institutional handling of frail, vulnerable children and adults. Medicaid is the primary financier of publicly funded long term care services. The national government is recognizing more and more what the Partnership also found to be true: that people prefer to stay in their homes (“aging in place”) for as long as possible and would like to receive services in their homes to allow them to remain independent.

Even those in need of care in the long term preferred more residential settings such as Foster Family Homes or Alternative Residential Care

Homes rather than nursing homes. Tony Krieg, chief executive officer of the Hale Makua facilities, told the Task Force during a presentation that the “nursing homes of the 1950s and 1960s are a failed model.”

Because of these trends, the Long Term Care Committee members decided to change its name to the Home and Community-Based Services Committee to accurately reflect the mission and goals of the group.

Infrastructure needs

Hawaii ranks 51st in the nation for the number of long term care beds available, according to a presentation by Nancy Johnson, a registered nurse and chair of the Allied Health Department at Maui Community College. Maui County has the greatest number of non-acute patients occupying acute-care beds in hospitals in the state because there’s nowhere for them to go for long term care. This waitlist has become one of the biggest problems for Maui Memorial Medical Center with anywhere from 10 to 25 percent of its beds taken up by long term care patients waiting to be transferred to a more suitable facility or a lower level community setting.

It is difficult to predict how many beds Maui County will need in the future. The population of those over 65 years old is expected to triple by 2030 because of multiple factors: a rapid increase in the aging of the overall population, Hawaii’s high rate of longevity, relocation of retirees to Maui from the Mainland and the Hawaiian culture of caring for one’s kupuna at home. However, because of the high cost of living, many families must work two or three jobs and no longer can care for an aging parent at home.

Currently, there are four facilities to care for long term care patients in the traditional, institutional manner: Lanai Community Hospital has 10 beds available, Kula Hospital has 99 and the two nursing homes operated by Hale Makua in Wailuku and Kahului have 124 and 254, respectively. There are 16 licensed Adult Foster Family Homes that can care for two people each (presently, five beds are available) and 10 Alternative Residential Care Homes (ARCH) that manage five people each (presently, there are 16 beds available). In more heavily populated Oahu, ARCHs have proliferated with the demand. Recognizing the need, the County of Honolulu provides a \$75,000 revolving, low-interest loan for ARCH providers to renovate their homes for the elderly. (If appropriate: The Task Force believes it would be

beneficial for the state to establish a similar loan program to stimulate this industry.

Alternative residential care homes are not only preferred by consumers over nursing homes, they are more cost effective. One month in a nursing home costs at least \$7,000. **(What about estimated costs for foster family and ARCHs. Roselani Place is \$3,500 a month – note that Medicaid now covers foster families through MLTCP urging Lillian Koller to change administrative rules)** But because there are limitations to the level of care that can be provided in these residential settings, nursing homes will always be necessary for some.

Assisted living facilities, like Roselani Place, are another model of senior housing. They provide a home-like environment while having care attendants on the premises round-the-clock with medications provided by staff. However, due to building codes and state regulations, residents must be able to independently evacuate the facility during an emergency. This strict requirement leads to the premature institutionalization of many elders and increases their health care costs.

A newer type of living arrangement known as “Greenhouses” should be part of senior housing plans, said John Schaumburg. Greenhouses are home-like facilities or large, one-story houses where residents have individual rooms and share common living spaces with a nurse or health care worker on the premises.

Hawaii has just adopted the International Building Code in all counties. The National Fire Prevention Agency’s 2006 life-safety regulations provide for assisted evacuation in assisted living facilities. The majority of states have amended their building codes to allow for this – Oregon adopted the change 20 years ago and has not reported a single death in assisted living facilities due to fire or other disasters. (If appropriate): The Task Force recommends that the Maui County Building Department be the first in the state to adopt and implement these national guidelines to increase options for Maui’s kupuna and people with disabilities.

Personal homes also need to be retrofitted to allow for “aging in place.” Currently, there is a proposed Maui County ordinance that promotes universal design to allow elders to remain in their homes for as long as possible. A Hana High School class retrofitted the homes of more than 20

kupuna – the Maui Long Term Care Partnership is exploring expansion of the program in other Maui communities.

To solve some of Maui's bed shortages, the Legislature appropriated \$1 million in fiscal year 2006 for the planning and design of a West Maui long term care and medical facility. The money was funneled through Maui Memorial Medical Center which has encumbered \$350,000 and spent \$285,000 on planning so far with \$650,000 not encumbered. (IF appropriate) The Task Force has written to Maui Memorial with copies to State Budget Director Georgina Kawamura, Governor Lingle, Department of Health Director Chiyome Fukino and the Legislature to request an updated status report, budget report and research consultant reports to assist with development of a countywide plan.

Maui has been fortunate that Hale Mahaolu and president Roy Katsuda have provided affordable housing to the county's senior population and those with disabilities for 27 years. Currently, there are 13 housing sites with 864 units. There is a waiting list of 200 for EACH site. It is estimated that 1,500 seniors or those with disabilities would move in immediately if additional units were available. (IF appropriate) The Task Force recommends that the state and county support Hale Mahaolu projects underway and future complexes to address the growing need.

Planning for maintenance and support of home and community-based services facilities must begin now. While it is generally thought that Hawaii state government has the responsibility for provision of health care, the County of Maui has an equal responsibility to its citizens. (If appropriate) The Task Force recommends that Maui County define its role in health care planning and integrate that in the County Department of Planning's General Plan and Community Plan process. The county should establish a county level health care task force to monitor progress with implementation of the Comprehensive Health Strategic Plan.

The current state system for developing uniform regulations and licensing procedures for alternative care facilities is fragmented because operators are required to follow regulations and procedures adopted separately by the State Department of Human Services and the State Department of Health. This leads to inefficiencies and barriers to meet multiple sets of regulations. (If appropriate) The Task Force recommends placing all alternative care

facilities under the Department of Human Services for licensing and administration.

Home and Community-Based Services

“Aging in Place” at home or in home-like settings is a national, consumer-driven trend. Alternative care services prolong independence in the community, decrease institutionalization and lower health care costs. Numerous services exist on Maui and the need will continue to grow. People with disabilities who want to remain at home also need dental care, assisted transportation, home-delivered meals, personal care/chore workers and other services.

Programs that exercise the body and/or mind help prevent injuries and keep kupuna vital and active in their communities longer.

Boost Reimbursements

Inadequate reimbursements from Medicaid, Medicare and third-party payers such as HMSA remain as one of the biggest roadblocks in maintaining and expanding a quality health care system. Hospitals are unable to break even, established doctors are leaving Maui and young ones are not coming here because of poor reimbursements.

The Maui Bed Needs Study said that hospitals in Hawaii lose an average of six percent of the amount it takes to care for each patient. In the past six quarters, every single hospital in Hawaii has lost money.

Maui Memorial’s Lo said that Medicaid pays 31 percent below cost and Medicare pays 18 percent below. The problem is compounded because of the hospital’s waitlist of non-acute patients seeking long term care beds because most of those people are being covered by Medicare and/or Medicaid. In addition, the premiums charged by private insurance carriers in Hawaii are much lower than the rest of the nation, meaning that reimbursements from third-party payers are not enough to make up for other losses.

Eric Shell of the national health care consulting firm Stroudwater Associates told the Task Force that HMSA pays “horribly” in reimbursements – he said

he would say that even if HMSA representatives were at the meeting. He added that Hawaii insurance rates are considered to be low. But could Hawaii employers afford higher rates and could employees afford higher co-payments? **Lo said that efficiencies in the system were a key and that everyone must “pitch in” (E-mail sent to him to clarify.)**

Hale Makua also suffers from low reimbursements. Krieg said that 85 percent of nursing homes’ revenues come from Medicaid, 11 percent from private pay and 5 percent from Medicare. The cost for care in nursing homes for a one person for a single year can range from \$80,000 to \$100,000.

Dr. Howard Barbarosh said the poor reimbursements are contributing to the shortage of physicians on Maui. Barbarosh said when he has talked to young doctors on the Mainland about transferring to Maui, they tell him that while the lifestyle is attractive, the financial realities are not. Doctors say they make 30 percent more on the Mainland and that doesn’t even factor in the high cost of living on Maui, the high cost of housing, the high cost of office space and the high cost of medical malpractice insurance.

Dental care and mental health services also suffer from low reimbursements. Nancy Johnson said few dentists participate in Medicaid because of the poor reimbursement rates meaning that it’s extremely difficult for Medicaid patients to get preventative or primary dental care – they have no recourse but to seek treatment in the Emergency Room – which costs 10 times the amount it would have been cared for by a primary dentist.

Recruit and Maintain Workforce

The health care industry in Maui County is facing shortages in every field: primary physicians, specialists, nurses, nursing assistants, pharmacists, dentists, psychiatrists and psychologists, technicians and other support staff. Even more volunteers are needed to keep up with less skilled needs, such as visiting lonely seniors or providing respite to stressed-out family caregivers. Other families would like to provide care for their loved ones, but because of the high cost of living, they must work multiple jobs to make ends meet and send their aging parents for care elsewhere.

The ranks of physicians and nurses are aging and nearing retirement. **(No figures for doctors – Call Barbarosh).** Currently, Maui County has the lowest number of doctors of any county in the state. According to statistics

gathered by the State Department of Business, Economic Development and Tourism, there were 289 licensed physicians in Maui County in 2005.

Hawaii is already 46th in the nation in terms of the number of registered nurses, according to Nancy Johnson, and the average age of Maui nurses is about 51 years old. In the **next XX years**, demand for nurses here is expected to increase by 28 percent while supply is expected to grow by 9 percent or less. **(E-mail sent to Nancy to get that number.)**

The projected shortfall of nurses:

*2006 (needed 960 nurses – short 96)

*2016 (need 2,220 with 244 short)

*2020 (need 2,670 with 293 short)

The good news: Ninety percent of nursing graduates in the University of Hawaii system remain in Hawaii. Johnson said Maui Community College has not taken a nonresident nursing student in the 25 years she has been here because Hawaii students are prioritized. In addition, a pilot program to provide free training for certified nursing assistants that was made possible by a \$250,000 workforce development appropriation by Maui County resulted in 60 inquiries for the 10 positions.

The severe shortage of labor has driven up costs at Hale Makua where nurses are being flown in from the Mainland just to keep the building open, but at a cost of 25 to 40 percent more for each one than a full-time nurse living on Maui. Because salaries are higher at acute-care hospitals, nurses leave Hale Makua for more lucrative opportunities at Maui Memorial. Krieg said has 10 empty beds at Hale Makua – not because there aren't patients who need them, but because he has no one to staff them.

A healthy and sustainable workforce is essential to a quality health care system. Not only must salaries be addressed, but so must the high cost of living and the high cost of housing, which forces residents – especially adults in the prime of their careers when they are raising families – to leave Maui. In 2000, the average price of a home on Maui was \$290,000 – in 2005, it was near \$700,000. During the same time span, wage increases have hardly kept pace: in 2000, the average family could afford a home costing \$200,000 – in 2005, that same family could afford a home costing just \$220,000.

“If workers can’t afford the cost of housing, there’s no need to build more (health care) facilities, because there will be no one to work in them,” said Maui County Planning Director Jeff Hunt.

Enhance Mental Health Services

There are few psychiatrists or psychologists in Maui County, even fewer or none in remote areas such as Lanai, Molokai or Hana. Reimbursements are poor not only for the psychiatrists/psychologists, but also for inpatient facilities: Dr. Al Arensdorf, a psychiatrist and executive assistant for health to Mayor Charmaine Tavares, told the Task Force that reimbursements to psychiatric units fall 40 percent short of costs.

A need for mental health services exists among veterans, those recently returned from war as well as others who were in wars many years ago – even World War II veterans still show signs of post-traumatic stress. Residents with substance abuse problems would also benefit from more mental health programs – those addicted to crystal methamphetamine face severe mental incapacities that will have an even greater impact on the community as they require long term care at younger ages and will compete for limited beds with elders. Seniors with Alzheimer’s disease or depression would use mental health services, too.

Pilot telemedicine programs have proven to be enormously successful. In most cases, the patient and doctor will meet in person for a first visit, but after that, appointments will be over the telephone or computer with the doctor remaining in his/her office and the patient at his/her home.

Arensdorf also reported that a creative solution enabled the children’s psychiatric unit at Maui Memorial to open after it was closed for two years. With an Emergency Room doctor serving as attending physician, an APRN (advanced practice registered nurse) was allowed to write prescriptions for patients. Without the nurse, the unit would not have opened. Wes Lo said Maui Memorial is the only Neighbor Island hospital with a children’s psych unit.

A five-year process known the Mental Health Transformation State Incentive Grant in Hawaii has just begun with the goal of developing a revised mental health plan for the state.

Improve Access to Dental Care

Dr. Lorrin Pang, Maui County Public Health Officer, said a recent Surgeon General called the disparity in oral health the greatest medical problem in the United States. It has also been proven that periodontal disease leads to other life-threatening conditions, such as heart disease and strokes. There is also a link between periodontal disease and diabetes.

On Maui, the statistics tell a frightening story that begins with the very young. Maui children who are 5 years old have twice the number of cavities than the national average, according to Nancy Johnson. Lanai children have more cavities still. Although Medicaid pays for teeth cleaning that can prevent periodontal disease and cavities, there's a four-month waiting period at the Maui Oral Health Center, a collaborative project between the Maui County Dental Health Alliance, Maui Community College, the County of Maui, No Ke Ola Pono and the Maui District Health Office with the State Department of Health. The Oral Health Center serves as a classroom and clinical site for Maui Community College's dental assisting program and seeks to provide affordable and accessible oral/dental health care to the underserved, underinsured and low-income families of Maui.

Maui County has been designated as a "Dental health professional shortage area" by HMSA. Groups that are particularly underserved are those with very low incomes, the elderly, Native Hawaiians and residents covered only by Quest or Medicaid.

Because of poor reimbursements, only a few dentists on Maui participate in Medicaid. Although there is a mobile dental van that travels to various communities on the island, appointments are generally limited to those in need of emergency extractions, not teeth cleaning. **(Is there a mobile van or free services on Lanai and Molokai?)**

As a result, many people without access to preventative dental care have no other option but to seek emergency treatment at hospitals. The Emergency Room at Maui Memorial Medical Center sees 40 to 50 dental patients a month at an average of \$400 each. Johnson reported that two patients with

dental abscesses had to be treated in the intensive care unit at a total cost of \$254,000. A national study showed that pediatric dental care in emergency rooms cost 10 times the cost of routine dental care.

Water in Maui County is not fluoridated. Attempts to add fluoridation have met with strong resistance from the communities.

Improved reimbursements for dentists and easier access to simple teeth cleaning and other preventative care would save hospital costs and lead to healthier lives.

Upgrade Obstetric Care and Create a Neonatal Resuscitation Team

To keep up with a growing population, the birthing center at Maui Memorial Medical Center must be expanded and redesigned so more women can be accommodated and so families can be together after the birth of a child. Currently, babies and mothers are separated after birth – babies are placed in a nursery while mothers are moved to a post-partum room. The goal should be to keep mothers and babies together through the postpartum phase in the hospital. Family members, if they choose, should also be part of the event.

Maui Memorial Medical Center reported 1,757 deliveries in 2006 – 54 babies were of low birth weight (5 pounds or less) and nine babies were very low birth weight (3.3 pounds or less).

There is no neonatal resuscitation team in place at the hospital, meaning that newborns with low birth weights or those in need of resuscitation must be flown to Oahu for proper treatment. Such a stressful trip in the first 12 hours of life reduces the baby's chances for survival and, if extended treatment is needed off-island, imposes financial and emotional hardships on the families. Jan Shields, a former neonatal nurse who is public relations consultant for the Association for Improved Healthcare on Maui, estimated that a 20-day stay on Oahu would cost a family \$7,960 in expenses and lost wages.

Dr. Guy Hirayama, a pediatrician and president of Maui Medical Group, said that Maui Memorial does Level I and sometimes Level II care for newborns – once the babies are on ventilators or are expected to be on

ventilators, they need to be transported to Oahu for Level III care or more intense treatment. Hirayama said there were 32 neonatal transports from Maui to Oahu who required Level III care or higher in 2006 (21 to the Kapiolani Medical Center for Women and Children). He said 40 Maui mothers delivered at Kapiolani for various reasons, some simply because of personal preference. Thirty-five newborns from Maui were transferred or delivered at Kaiser Moanoloa on Oahu with six born with very low birth rates (3.3 pounds or less).

Hirayama said that 96 Maui babies were either born on Oahu or transferred there in 2006 (21 transported to Kapiolani, 40 delivered at Kapiolani for various reasons and 35 transported to or delivered at Kaiser on Oahu). Not all of those babies required the kind of advanced care only available in a neonatal intensive care unit.

Maui Memorial is in need of a round-the-clock neonatal team that could quickly respond to a newborn that requires resuscitation or other special care so the baby could be treated in the hospital with no need to be flown to Oahu. Because such a crew is not in place, an emergency team must be called in when emergency C-sections are performed, causing a critical loss in time.

Doctors at Maui Memorial believe there is sufficient volume to support establishing a 24-hour neonatal team. **(Question to Task Force -- Do we need to explain why a neonatal ICU is not recommended now – is that the ultimate goal when the population gets larger?)**

The team would consist of an obstetrician, anesthesiologist, pediatrician and operating room staff along with in-house ob/gyn hospitalist services and in-house anesthesia services. With the addition of 24-hour anesthesia services, epidurals (presently not available) could be performed.

Promote Healthy Living and Disease Prevention

The costs of medical care are increasing at twice the rate of inflation, according to Dr. Lorrin Pang, who urged the Task Force to push hard for more prevention programs. The cost savings that prevention programs provide by avoiding future hospitalizations or emergency room treatments are enormous. **I think that Wes Lo said that 13 percent of discharges**

from Maui Memorial are patients who were admitted because of behavioral or lifestyle problems. E-mail has been sent to him.

Pang focused on two serious dilemmas that are seriously impacting Maui County: addiction to crystal methamphetamine (“ice”) and obesity. The ramifications of the ice epidemic will continue years from now as many of those addicted to the substance will suffer additional mental incapacities and need long term care. Obesity, said Pang, costs taxpayers millions of dollars a year because it leads to a host of other life-threatening diseases that require hospitalization.

According to the Maui Bed Needs Study, a “high volume” of patients with congestive heart failure, bacteria pneumonia and cellulites – all preventable diseases – sought treatment at Maui Memorial when the survey was conducted in 2002. The study concluded that the number of hospitalizations for people with these types of often avoidable conditions could be reduced with an improved primary care system: more doctors, more health care workers, increased insurance coverage, better transportation and other access.

It has already been stated that the cost of savings would be substantial with more accessible preventative dental services – basic teeth cleaning and maintenance.

Certain segments of the county’s population are at particular risk for preventable diseases and should greatly benefit from education and other outreach programs aimed at healthy living and managing chronic conditions. The life expectancy of Native Hawaiians is significantly less than other ethnic groups. Eighteen percent of Native Hawaiians die before reaching the age of 45 – 2 ½ times the death rate of other populations. In general, Native Hawaiians experience higher death rates than the general population from cancer, diabetes, heart disease and other conditions.

Investment in preventative programs will also help elders. Healthy aging will increase productivity, limit high health care costs and improve quality of life for aging Baby Boomers. Falls are the leading cause of injury and death in elders, but educating seniors about proper footwear and the need to exercise can cut down on the number of injuries. Influenza and pneumonia often result in increased hospitalizations. Interactive programs such as

“Brain Gym” keep seniors mentally alert. Prevention programs make people realize that personal responsibility is part of good health and healthy aging.

Improve Pharmacy Services

All of Maui County suffers from a lack of pharmacy services except for Molokai where a local family has produced three generations of pharmacists who can be called after hours to fill prescriptions in cases of emergency. This family provides this service because out of the goodness of their hearts because they care for their community.

For the rest of the county, it’s difficult – if not impossible – to find a pharmacy open in the evening. Lanai has no pharmacy service at all because a tele-pharmacy agreement with Kauai was suspended. (Doctors can dispense medicines during weekdays). (**Check this with John Schaumburg**). West Maui reports no pharmacy open after 5 p.m.

Prescriptions can be written and filled in the emergency rooms at Maui Memorial and Kula Hospital, but the cost is prohibitive. Kula Hospital pays a pharmacist to be on-call to fill prescriptions. In addition, Kula Hospital and the clinic and hospital on Lanai are not considered to be pharmacies, according to Medicare Part D, so patients with that coverage can’t receive needed medicines there. In some cases, doctors can give injections, but not pills, which might be more effective. Kula Hospital is in the process of trying to set up its own pharmacy as a separate unit.

A shortage of pharmacists exists and is expected to increase. It is hoped that the state will benefit from a new pharmacy school at the University of Hawaii at Hilo where 90 students are enrolled in the first class. A curriculum at Maui Community College should complement the UH-Hilo program.

Maui Memorial staffs a round-the-clock pharmacy. A tele-pharmacy system should be explored where the Maui Memorial pharmacist on duty could provide services to other county clinics or hospitals in need when there is no other option. Other states have developed regulations to allow for this -- a rules change by the State Legislature could enable such a system to be put in place. Best practices adopted by those rural communities could provide

guidance. Tele-pharmacy should only be used as a stop-gap measure and never become a substitute for actual pharmacy services.

Update Technology

(Note from Val: This could also go under Modern Facilities)

All diagnostic equipment should be digitized and an improved CT scan is needed at Maui Memorial.

The county and/or state should fund an electronic medical records system known as Regional Health Care Information Organization (RHIO) so that information can be made to doctors faster, resulting in better outcomes for patients. Presently, paper records must be transferred and files must be shared by teams of doctors working on the same procedure, once again slowing things down when time matters the most. Physicians at Kaiser Permanente have one system of record-keeping and non-Kaiser doctors have another, which is not efficient. Dr. Guy Hirayama called the lack of an electronic system “a huge missing piece” from a quality health care plan.

It was believed that such a system would also help to reduce the waitlist at Maui Memorial by making more information quickly available. Controls would be established to protect privacy. Patients would have to sign release forms before their personal medical information could be transferred.

One of the bright spots in the current health care system that could be expanded to meet various needs without considerable costs is telemedicine or telehealth where medical information and/or services are delivered through a standard telephone line.

Nancy Johnson reported that use of telemedicine has been shown to decrease hospital mortality, the length of stay in the intensive care unit and the overall length of stay in the hospital. Telemedicine can especially help with disease management – patients can communicate with nurses and doctors without going to the clinic or hospital. Blood pressures and other measurements can be done at home so problems can be caught before they become acute -- medications or regimens can be changed so people don't end up in the hospital. Because many people with chronic conditions receive Medicaid,

reimbursements for hospitals and office visits are low, making telemedicine extremely cost-effective.

“We believe this is the future of health care,” said Johnson.

A pilot telehealth program placed computers for monitoring purposes in the homes of Native Hawaiians who were at high risk for diabetes. The program proved very helpful, especially for children.

The Community Clinic of Maui has been using telemedicine for psychiatric needs. A similar program on Molokai has also been successful.

Prepare for Disasters

Disasters in Maui County – especially hurricanes, tsunamis or pandemics – are a distinct possibility yet most residents are nowhere near ready for the impacts. Through meetings with leaders of several state, county and federal agencies, the Task Force’s Disaster Preparedness Committee of the found that the county was reasonably prepared for small-scale incidents with plans in place and drills undertaken, but not necessarily ready for a large-scale event. Disaster response agencies for both the county and state have prepared for their roles, but are woefully understaffed and underfunded. Staffing and funding for these agencies should be immediately increased.

Disasters come in many categories and of varying degrees of magnitude. Various state and county agencies have their own plans for different types of disasters, but there is the utmost need for an overall Disaster Coordinator for the county, someone who is trained and knowledgeable in the major aspects of the administration, management, health care, environmental and epidemiological concerns of the differing types of catastrophes. The Disaster Coordinator would be under the guidance of the Mayor’s office and be given the authority to procure funding, stock points of distribution with proper supplies and coordinate the agency responses of the departments of Fire, Police, Civil Defense and Health.

Outlying areas of the county – in particular, Molokai and Lanai – will have little recourse but to survive major events on their own until help arrives later. Plans for immediate transport of additional fire and police personnel to

Molokai and Lanai during times of major disasters should be put in place now. **Note from Val: what about Hana?**

Assistant coordinators should be appointed for Molokai and Lanai along with regional coordinators on Maui to maintain contact with the Disaster Coordinator and lead their respective communities.

Shelters and centers for the distribution of food and/or medicine are planned on paper, but have yet to be tested. Stockpiles of provisions are inadequate. The county should begin to stockpile goods, medicine and nonperishable food supplies at strategic points throughout the county.

There will be few hospital beds, if any, in the case of a disaster that results in massive injuries and/or deaths.

Disaster Medical Assistance Teams should be established, funded and supplied so they can quickly respond to the scene of a disaster on each island. All inoperable or dysfunctional tsunami sirens should be immediately repaired.

The communications system throughout the county needs to be immediately upgraded into the 800-900 megahertz frequency. Communication needs to be integrated between each and every agency on the island. Satellite phones should be funded, distributed and tested throughout the county. Solar phones should be considered in all rural areas.

Most of all, funding must be increased for public education and disaster awareness through television, radio and newspapers. A series of public meetings should be held in schools, churches and other places to give the public a better understanding of their roles in disaster planning and preparedness.

Restructure the Certificate of Need Process

To be decided

End of First Draft

