FY 2007 Compact Health Sector Performance Scorecard[1]
Federated States of Micronesia

FSM-Wide Performance Measure[2]	2004	2005	2006
Decentralize primary care services: Number of encounters provided in homes and dispensaries will increase 20% by 2010	81,144	192,444	146,423
Decentralize primary care services: Number of patient encounters at hospital clinics will decrease by 10% by 2010	50,715	127,608	117,442
Immunization coverage of 2 year old children is increased to not less than 90% per year by 2010	80%	76%	79.6%
Essential drugs and supplies available 80% of days (in stock): Indicators: ORS, Combo OCP, Amoxicillin, IV Chloramphenicol, Glyburide, Atanol, HCTZ	63%	65%	54%
Biomedical equipment is functional 80% of all days: Indicators: NA+, K+, Alt, Bilirubin, Creatinine	72%	87%	77%
Average length of hospital stay is less than 7 days for each state hospital by 2010	6	6	5.4
Infant mortality is reduced to less than 16/1000 by 2010	19	17	13
Mental illness is reduced: Indicator: Rate of completed suicide reduced to 10% by 2010	0.73	0.96	0.31
The number of individuals enrolled under a health insurance plan is increased 10% by 2010	28,175	28,525	4,939[3]
Off-island medical referral costs in all states reduced to less than 10% of total health sector expenditures	9%	4.5%	5%
At least 70% of seven year old children receive dental sealants by 2010	N/A[4]	32.27%	46%
Reduce the incidence of diarrheal disease by 10% by 2010	N/A[5]	3,297	2,578
NCD control: Indicator: Reduce the incidence of diabetic hospitalization by 10% in 2010	3374	3401	3786
Quality assurance systems are functional: Indicator: Quarterly audits and improvement plans, based on written policy and procedure standards are produced in each state hospital for the following areas: wards, OPD, medical staff, x-ray, laboratory, dental, public health	Established in 1 state (25%)	Established in 3 states (75%)	Not fully functional: 2 states (50%)

[1] Color coding indicates whether measures show improvement (green), no to little improvement (yellow) or decline (red). If data collection was incomplete, the measure was coded as yellow or red. It is meant to give a quick indication of progress using FSM's data.
[2] All measures use 2004 as the baseline.
[3] Two states did not submit information to HESA.
[4] The FSM used zero (0) as its baseline. In actually, the sealant program existed in 2004 but historical data is difficult to obtain...
[5] The FSM used zero (0) as its baseline. In actually, diarrheal diseases occurred in 2004 but historical data is difficult to obtain.

What the Performance Scorecard Represents

The performance scorecard for FSM's Compact health sector is the first of its kind produced for JEMCO's review. The fourteen measurements were selected by health principals from the National Government (HESA) and the four states of Chuuk, Kosrae, Pohnpei, and Yap in early FY 2004, and refined in FY 2005 and FY 2006. They selected 2004 as the baseline year for progress tracking.

The scorecard is based on a self-assessment report provided by the FSM itself in August 2007 (see Appendix) and interprets composite information collected from the states during the period, 2004-2006. HESA is the repository of that data and has the responsibility for compilation, analysis and reporting for the nation.

Because health status data analysis and reporting generally lags by a year, measurements for 2007 are not included. This information should be available shortly.

Setting the Scene

The FSM's estimated population is 108,000[6] and still relatively young. The median age is approximately 18 years. The ratio of females to males is nearly 1:1.

The four states that make up the nation vary greatly in size and geographic dispersion, and in the number of people that call each island jurisdiction home:

Chuuk	53,300
Kosrae	8,100
Pohnpei	34,900
Yap	11,700

<u>Health Spending</u>. By the end of FY 2008, the FSM will have received a total of $84,320,338 in Compact health sector grants. The estimated annual pattern of per capita Compact health sector grant spending is as follows:

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Chuuk	$80	$102	$117	$128	$130
Kosrae	$166	$199	$220	$247	$244
Pohnpei	$153	$171	$140	$141	$152
Yap	$162	$266	$237	$261	$237
FSM AVERAGE	$118	$148	$178.50	$194	$191

Each FSM state has seen an increase in the dollars available to spend on health care since the Compact began in 2004 but the rate and actual amount varies. The most dramatic increases are seen in Kosrae and Yap, the two smallest of the FSM states. Chuuk's per capita spending has grown the least among the four states. Pohnpei's will have changed little since over the life of the five-year period.

<u>Where People Go For Health Maintenance and Sick Care</u>. People seek health care from the nation's four hospitals, each of which is located on the main island (capital) of each state, from a network of dispensaries on distant atolls and islands, and from health centers located away from the central hospital campus. These hospitals provide secondary in-patient medical and surgical services and very limited

[6] Federated States of Micronesia Statistics Unit, Department of Economic Affairs, 2008. The population total is estimated for 2007, the most recent statistic available, and is based on the FSM's 2000 census.

higher level ("intensive") care[7]. Patients needing tertiary medical attention or specialized care are referred to off-island facilities. The Philippines is by far the most common referral site. Hawaii and Guam also are medical catcher's mitts for patients with certain conditions. It is not uncommon for people to self-refer themselves to off-island facilities.

Preventive services (public health programs) and major dental care are concentrated on the main islands and mainly located on or near the hospital campus. Outreach services to villages and municipalities on the main island and in the outer islands are provided by mobile program teams. Primary care[8] is offered through dispensaries and health centers, and at out-patients clinics and emergency rooms located at the hospitals. Private practice is still a relatively fledgling industry in the FSM and most active in Pohnpei.[9]

The number of residents who are medically insured is still fairly small. The FSM's insurance program, MiCare, was developed for National Government employees and for state government employees who opt to enroll. Chuuk is the only state to have launched its own health insurance program, financed through mandatory employee contributions. The cost of care in the FSM is high but actual fee charges are low. Patients who cannot afford to pay or who do not have medical insurance are not turned away. The health sector's dream of self-sustainable financing is a long way off. Cost recovery is fairly sluggish in most of the states.

Health Departments Face Scarcity. Sufficient funding and adequate staffing by well-trained health care providers, paraprofessionals, and support personnel are often in short supply. This situation affects everything that the state health systems do and can have far reaching implications – from an inability to mount more vigorous preventive programs or provide well-rounded and logistically feasible community-based primary care; to trouble maintaining the diagnostic capacities needed for timely on-island medical care; to shortages in even common drugs and medical supplies; increased biomedical equipment down time; and difficulty keeping up with repairs and maintenance of the physical environment in which patient care is provided. Choosing between competing priorities is difficult indeed.

The Transition in Disease Epidemiology is a Double Edged Sword

The dual epidemiologic profile of chronic and infectious diseases seen in the FSM places a double burden on its health care systems. A full transition to chronic disease as major causes of morbidity and mortality would mark the country's move into the "developed world's" panoply of ailments but it would come at a high cost. Mixed profiles of infectious disease, diseases that emerge from environmental health failures, and chronic conditions such as cardiopulmonary disease and Diabetes Mellitus Type II make choices of where and how to deploy resources for best results, very difficult. Only Pohnpei has dialysis capability for end-stage renal disease. The other states gave up their programs as to save money but political pressures continue to restart the service.

Going From Red to Green

Tracking the FSM's performance progress as it goes from red to green, will require following changes in other generally recognized indicators of national health status and, as reliable data becomes available, for individual states. Seen in combination with the FSM's own measures, a clearer picture will emerge.

	2000*	2004**	2006***

[7] An approximate total of400 in-patient beds are available in the FSM (government hospitals in Chuuk, Kosrae, Pohnpei, and Yap and one private hospital in Pohnpei). This translates to one bed for every 270 people.
[8] Primary care is defined as the first point of access to preventive care, health maintenance, and medical attention.
[9] In Pohnpei, there is a private hospital (Genesis), pharmacies, and medical and dental clinics.

Life Expectancy (Combined)	67.2	69.75	71.4
Crude Birth Rate	23	29.8	26
Crude Death Rate	3.8	6.4	6.5
Total Fertility Rate	4.4	N/A	N/A
Immunization Rate <2 Yrs	70%	83.1%	79.6
Infant Mortality	40	17.4	13
Child Mortality	12	59.6	N/A
Maternal Mortality	N/A	0	0

*Compact I
**Compact II
***Latest Available

Current statistics that are calculated and kept outside the health sector itself are hard to come by. HESA needs to find ways to make sure its database is linked and updated. To measure performance accurately, HESA also will need to standardize data collection and tabulation methods employed by each state, establish accepted timing intervals for collection and reporting, and ensure that outer island information is part of the endeavor. The value of the FSM's self-assessment performance report will be diminished if the states fail to report on required performance data elements. This situation is eminently improvable.

Budgets still follow organizational lines. Going from red to green requires a reorientation to budget formulation such that performance and not funding ceilings drive the process.

Measure 1: Decentralize primary care services as measured by the number of encounters provided in homes and dispensaries.

Status: Yellow

The measure marks the progress of the FSM in improving the delivery of community-based primary care. The number of encounters rose considerably in 2005 but slipped down in 2006. HESA notes that primary care services still needs to be strengthened and there are a number of issues that prevent full delivery, including land disputes and inadequate medical supplies and trained staff.

Measure 2: Decentralize primary care services by decreasing patient encounters at hospital clinics.

Status: Red

The measure again emphasizes the improvement of community-based primary care services but this time looks at the provision of outpatient clinics and emergency room visits as less appropriate sources of first contact for health care. In the baseline year 2004, the FSM recorded about 51,000 such visits. In 2005, the number almost tripled and has remained about the same in 2006. In explanation, the FSM says that patients still come to the hospitals despite efforts to decentralize services and programs, and that the trend is increasing. It may be very useful for the FSM to conduct consumer satisfaction and other surveys to determine why people choose hospitals rather than dispensaries and health centers for care.

Measure 3: Immunization coverage of 2 year old children is increased to not less than 90% per year by 2010.

Status: Yellow

The immunization rate for children under two years of age was 80% in 2004, the baseline year. The coverage improved over the previous year because of a stepped up measles vaccination campaign in Chuuk (outbreak in 2004). The rate slipped to 76% in 2005 and then rose slightly to 79.6% in 2006. The FSM cites collaboration between the national and state programs as an area that needs improving, as does finding a way to maintain the cold chain in remote areas and outer islands. In Chuuk, the sheer number of outer islands that need to be visited by immunization program nurses is daunting. Health assistants do not deliver vaccinations.

Achieving a successful rate of immunization coverage is especially important because of the high prevalence of vitamin A deficiency and other causes of childhood malnutrition in the islands. A-vitaminosis compromises the immune systems of the very young and increases the likelihood of more serious consequences from childhood diseases like measles.

Measure 4: Essential drugs and supplies are available 80% of days as measured by certain commonly used drugs that are kept in stock. (These drugs are ORS, combo OCP, amoxicillin, IV chloramphenicol, Glyburide, Atanol, and HCTZ.)

Status: Red

The FSM percentage of days that these drugs were kept in stock rose slightly in 2005 but fell to 54% in 2006. Kosrae and Pohnpei reported that their rates were 85% and 100% respectively. Yap could only keep these drugs in stock ½ of the time and Chuuk, much less than that. The FSM's self-assessment said keeping inventories adequate is a chronic problem. Ordering drugs from out-of-country vendors pose problems in terms of length of time in shipment and pricing. Local procurement practices are problematic. Not stated, however, is an issue that exists in almost every state; that is, maintaining a satisfactory inventory and advance order procurement system.

Measure 5: Biomedical equipment is functional 80% of all days as measured by the availability of Na+, K+, alt, Bilirubin, and creatinine lab tests.

Status: Green

Although there has been some slippage in the percentage of days these tests were available, the FSM has made progress in keeping biomedical equipment up and running more than 77% of the time as opposed to 72% in the baseline year. The FSM is currently encouraging the purchase of identical equipment in the states so that repairs and sharing of parts can be facilitated.

Measure 6: The average length of hospital stay is less than 7 days for each state by 2010.

Status: Green

Prior to the start of the Compact, the average length of stay for hospitalized patients averaged between 7 and 10 days because of higher acuity. Six is the baseline in 2004. The average stay has decreased to 5.4 in 2006 and although the shift is somewhat marginal, it is demonstrable. This performance measure is significant in that it provides yet another way to measure the effectiveness of public health outreach services, preventive measures, and primary care.

Measure 7: Infant mortality is reduced to less than 16/1000 by 2010.

Status: Green

This is an area in which the FSM has had successive years of improvement. In 2000, the FSM recorded a rate of 40/1000 infant deaths and in 2006, 13/1000. It may be that the 2006 rate is an anomaly but reported deaths are indeed shown decreasing year to year. A factor that calls the data into question, however, is that the underreporting of infant deaths in the outer islands is known to be problematic. Also, the HESA recognizes that some states have difficulty executing health statistical calculations.

Measure 8: Mental illness is reduced as measured by the decrease in the rate of completed suicides to 10% in 2010.

Status: Green

The wording of the measurement is awkward but the FSM does indeed record a decreasing rate of completed suicides between 2004 and 2006. Historically, the suicide rate among young males has been tremendously high. In 2000, the rate was 65/100,000. Between the years 2002-2004, the averaged rate was 60/100,000. Now a new phenomenon has arose: there are more attempts among young women. The reasons are complex and speak, in part, to the social and cultural fabric of Micronesia and rapidly shifting roles. The FSM cites that data collection needs improvement.

Measure 9: The number of individuals enrolled under a health insurance plan is increased by 10% by 2010.

Status: Red

Only about 1/5 of the FSM's population has health insurance. As a method of financing local health care costs either through capitation or fee for service and off-island care, mandatory national insurance is highly desirable but so far difficult to achieve. This performance measure is coded "red" not only because the number of enrollees seem to be stable but because HESA did not collect data from two states. Accurate reporting is important.

Measure 10: Off-island medical referral costs in all states are reduced to less than 10% of total health sector expenditures.

Status: Green

Where FSM states spent as much as 30% of their health care budgets on medical referrals just a few years ago, HESA now reports 5% of all health care revenues are spent on off-island care. Part of the reason is that even at a coverage rate of about 20%, health insurance subsidizes referral care costs that local hospitals would otherwise pay. All states have found ways to gain efficiencies in stretching their off-island health care dollar by negotiating third party agreements with Manila-based hospitals instead of sending most patients to Hawaii and by toughening up referral criteria. Until recently, Chuuk did not have the resources to send its "medically indigent" patients to Manila. A small allotment from the Compact grant has made this life-saving measure possible. In all hospitals, improvements in service capacity and small scale assistive facility repairs or renovation also have helped decrease the off-island referral burden.

Measure 11: At least 70% of seven year old children receive dental sealants by 2010.

Status: Red

Although the self-assessment states that no baseline data is available from 2004, records indicate that the sealant rate of coverage among third graders was 58%. In 2006, it has decreased and stands at 46%. Pohnpei, a state with a strong dental program, did not submit data for this measure. The FSM states that dental teams need to visit remote villages and outer islands on a more regular basis. The lack of visits to schools and remote health care sites is a problem but so too is a lack of funds in the dental budget to purchase sealants. The rate of dental disease among children is high and this program could be a very effective preventive measure.

Measure 12: Reduce the incidence of diarrheal disease by 10% by 2010.

Status: Red

Diarrheal disease continues as a major cause of morbidity in the FSM. The self-assessment shows a 22% reduction but in fact no data was reported for Chuuk where the condition is more common. The FSM admits there may be underreporting. What is known is that there have been recent outbreaks of cholera in Chuuk and in Pohnpei, and other diarrheal conditions that have gone uninvestigated. Poor sanitation, breaks in good personal hygiene habits, and the lack of potable water are usual root causes.

Measure 13: NCD control as measured by a reduced incidence of diabetic hospitalizations by 10% in 2010.

Status: Red

Diabetes-related hospitalizations are trending upward since 2004. The condition remains a major cause of morbidity and mortality in all states in the FSM, is being diagnosed in younger people, and contributes to a higher cost that the governments can or should absorb to control and treat the disease. Prevention has received increased emphasis but needs strengthening.

Measure 14: Quality assurance systems are functioning as measured by quarterly audits and improvement plans based on written policy and procedure standards for the following areas in each state hospital: wards, outpatient departments, medical staff, x-ray, laboratory, and public health.

Status: Yellow

Three state hospitals reported in 2005 that quality assurance programs were established. Only Kosrae had a partially implemented program in 2004 and the Yap program in 2006 was notably active. HESA now questions whether the hospitals have truly functional quality assurance programs. If they do, this development would facilitate the development of higher performance in terms of professional and clinical standards of care.