Official newsletter of the *Doctors and Dentists for Tomorrow Program* April 2017 / Vol. 1, Issue 4

the heartbeat

DDFT STUDENTS PREPARE FOR FINAL EXAMS

The first DDFT cohort, which began their studies in summer 2016, is now preparing for their end of year examinations. Students will sit examinations in human anatomy and physiology, introduction to biochemistry, advanced writing, and the history of Micronesia. The examinations, which will be held in the first week of May, will be rigorous and require students to apply not only the material they have learned this semester, but because the health sciences build upon themselves, material from previous semesters, as they will be called upon to answer clinically-based questions drawn from their past PBL presentations. Students have now completed one full academic year, plus the summer session from 2016, in the DDFT program. The end of the 2016/17 academic year marks a watershed moment for the DDFT program as students continue to build upon their repository of knowledge in the different areas of the basic sciences, in preparation for the fall 2017 semester in which students will be given increased responsibility for their own learning in an enhanced PBL environment. Such is part of the larger DDFT program's teaching philosophy designed to create self-directed learners who are well-prepared for the rigorous demands of both medical and dental school at regional partners such as Fiji National University, which also uses PBL, and places a premium on self-directed learning. Such is also preparation for a career in medicine and dentistry in which students must be committed to being life-long learners, given that neither medicine nor dentistry are static disciplines.

DDFT Videos Debuted at PIHOA Conference in Saipan

The annual Pacific Island Health Officers' Association (PIHOA) meeting saw the debut of several DDFT recruitment and marketing videos. The videos, which are available on YouTube, were shown during the Board of Directors Meeting as part of a presentation by DDFT faculty members on the innovative approach to premedical and pre-dental education being used by the program to prepare high-performing Micronesian students for entry into regional medical and dental schools. The videos were praised by the Board of Directors, as well as other meeting attendees, including representatives from across the United States Affiliated Pacific Islands, the US Centres for Disease Control and Prevention, and the Association of State and Territorial Health Officials, as highlighting the many advantages of the DDFT program in an exciting and fast-paced manner.

In this issue

> second cohort to begin in summer 2017

> student propose solutions to domestic violence

> student profiles of success

> faculty teach COM-FSM how to do PBL

> osteoporosis, hyperthyroidism, and heart palpitations focus of PBL

> scientifically-proven methods to prep for finals

HEART PALPITATIONS, OSTEOPOROSIS, AND HYPERTHYROIDISM FOCUS OF APRIL PBL

DDFT students continue to use the innovative Problem-based Learning (PBL) approach to learning the basic sciences through solving real-life patient problems.

Recent PBL exercises have included an elderly woman with osteoporosis which was used to teach the anatomy and physiology of bones, in which students had to correctly identify the underlying pathophysiology that led to the osteoporosis, and then make medical as well as psychosocial treatment recommendations.

Or a middle-aged woman with night sweats and palpitations (rapid heart rate) to teach the anatomy and physiology of both the cardiac muscle as well as a basic introduction to the endocrine system by learning about how hyperthyroidism could be responsible for the patient's cardiac symptoms.

This was a particularly challenging PBL for the DDFT students, as they had to determine how to treat both the immediate cardiac symptoms, such as tachycardia and an arrhythmia, as well as the underlying endocrine causes of the symptoms; thus illustrating not only concepts in anatomy and physiology, but also the complex interplay that is internal medicine.

DDFT uses a PBL-based curriculum to create greater student engagement in the application of basic science principles to real-life patients and problems they are likely to encounter in medical and dental school. PBL is the current mode of instruction at most Pacific-basin medical and dental universities. No knowledge of PBL, which is a learner-centred method which requires students to take responsibility for their own learning under faculty tutelage, was identified as one of the major reasons why students from Micronesia fail in their first semester of medical school; and as such, is one of the key reasons that the DDFT program uses this approach, or to better prepare students for success in their future medical and dental studies.

Past PBL sessions have dealt with basic trauma life support, x-ray interpretation, fracture care, dermatology, genetic disorders, and others; all as means of teaching the basic sciences through applied patient scenarios.

Grand Rounds: Progressive Memory Loss in an Elderly Indo-Fijian Female

Mrs Singh lives in Ba, on the island of Viti Levu in Fiji. She has lived alone for the past several years, doing her own cooking and caring for herself. Her daughter, Pragya, who lives in Suva, calls Mrs Singh several times a week, although has not seen her mother for about six months. During the last phone call, Pragya became concerned. Her mother seemed distracted, frequently interrupted the conversation and repeatedly said that she was 'so worried.' When asked what worried her, Mrs Singh said, "I just don't know.' She repeatedly asked the same question. Alarmed, Pragya drove to her mother's home six hours away. When she arrived, Pragya was shocked to see how thin her mother had become. There was little in the house to eat except tapioca pudding. Pragya was able to figure out that Mrs Singh had broken her dentures, and was having difficulty chewing. Her skin turgor was sluggish. Mrs Singh said the coffeemaker and the TV did not work. The daughter used both and found them to be working. Mrs Singh often started tasks but did not finish them, she seemingly forgot what she was doing and often could not think of words, such as the name of the dresser in her bedroom. As evening approached Mrs Singh became more agitated and was unable to sleep. She said she had to 'see about the children and your father's tea,' even though all of her children are grown and her husband had died several years ago. Pragya brought her mother home with her the following day and made an urgent appointment with her GP to evaluate Mrs Singh's condition. During the examination, Mrs Singh was unable to focus on the questions and instructions. She knew her own identity, was unsure of her exact location and did not know the current date. She became visibly agitated with the questions and said she didn't want to answer or said, 'I don't know, well I do know but I am not going to answer.' Mrs Singh thought the physician was the son of one of her friends from home and asked him several times about his mother. She complained of fatigue and epigastric tenderness. She was 20 pounds under her ideal body weight and she was pale. Lab tests revealed iron deficiency anaemia, low albumin, and dehydration. **DDFT Students: If you know the most likely diagnosis, email Dr Mangum for five extra credit points.**

Drs Daccanay and Mangum Teach COM-FSM Faculty PBL

PBL has been shown to increase student engagement and learning by providing students with real-life problems they must solve as a team. The DDFT approach to PBL uses real-life problems from the world of medicine and public health to teach basic science principles. For example, a recent PBL used a patient presenting with heart palpitations to teach the anatomy and physiology of heart conduction as well as the endocrinology of hyperthyroidism.

However, PBL has applications well beyond the world of medicine, which is why Ms Karen Simian, Vice President of Instructional Affairs at COM-FSM, recently asked DDFT faculty members to conduct a semester-long training session with COM-FSM faculty who are interested in applying PBL techniques in their own classes.

Training has begun with interested faculty from the Pohnpei State and FSM National Campus, and includes seven instructors from English, math, and vocational education.

According to Dr Paul Dacanay, 'It's exciting to see the group come together as they learn how to apply PBL in their own classrooms, as well as work together as a group to help each other come up with innovative ideas on how to apply the PBL model.'

Ms Simian has applied for a grant to allow the DDFT faculty to take these training sessions to the other campuses of COM-FSM in Kosrae, Yap, and Chuuk in the future.

DDFT2 RECRUITMENT TO END IN EARLY MAY

With the second DDFT cohort slotted to begin their 'Basic Science Summer Boot Camp' at the COM-FSM National Campus in June, recruitment of this important second cohort is set to come to an end in early May.

Mr Robert Spegal, DDFT Program Manager, has visited high schools in all four states of the FSM, recruiting students who have a passion for making the FSM a healthier place.

According to Mr Spegal, he has given out over 300 applications, many of which are now being returned to the DDFT office for selection. Ultimately, from the hundreds of applications received from high-performing students across the FSM, twenty-five will be chosen, or approximately six from every state.

From these applications, the State Departments of Health and Education will form an ad-hoc committee to rank applicants. This final rank order list will be submitted to the DDFT faculty who will make the final decision on who to accept.

Applicants must submit recommendations, a short essay on why they wish to be a doctor or dentist, and their high school transcripts. The application process is rigorous and selective, but DDFT wants to ensure that the highest calibre of students are selected for the program, given that these students will be responsible for securing the future health security of the region as the doctors and dentists for tomorrow.

COM-FSM NATIONAL CAMPUS, WHERE DDFT2 WILL STUDY ALONGSIDE DDFT1 BEGINNING THE SUMMER OF 2017

Medical Oddities and Trivia

Patient presents with a 'fishy' eye

Nothing ruins a day at the beach quite like getting a fish bone stuck in your eyeball. Unfortunately, that's what happened to a beachgoer visiting the Red Sea in 2015. The 52-year-old tourist was swimming in the Red Sea when he collided with a school of fish. Not long after the incident, the man developed a swollen and droopy eyelid that wouldn't heal. A doctor's visit revealed he had an area of inflammation called a granuloma on his eyelid, and the patient underwent surgery to correct the issue. But a granuloma wasn't the only thing that doctors removed from the erstwhile swimmer's eyeball during the surgery. Two tubular structures were also removed from the man's eyelid, according to a report published in the New England Journal of Medicine in September 2015.

A biologist was called in to examine these strange specimens, which turned out to be the jawbones of a halfbeak, a fish that dwells in shallow coastal waters. The fish bones had immobilized the muscles controlling the man's eyelid, causing it to droop. But the droopy-eyed swimmer recovered shortly after his surgery. DDFT students: If you can identify the muscle surrounding the eye of the patient that was immobilized, email Dr Mangum for five points extra credit.

Too much of a good thing: Sudoku Seizures Plague Patient

You know that expression 'too much of a good thing?' Well, that applies to this next case. A young man in Germany completed so many Sudoku puzzles that he began having seizures. Of course, that's only part of the story. The man had been an avid Sudoku solver for some time before experiencing such seizures, but that changed after he was trapped in an avalanche during a ski trip. He was eventually rescued, but while buried under the snow, the man experienced a condition known as hypoxia, in which the body tissues and brain don't receive enough oxygen. This condition caused the man to develop sudden muscle twitches around his mouth when he talked and in the muscles of his legs when he walked. He also experienced spontaneous seizures in his left arm. Doctors prescribed anti-epileptic medications and thought they had these seizures under control. However, a few weeks after he was discharged from the hospital, the man began having seizures in his left arm again … but only when he did Sudoku puzzles.

Eventually, doctors got to the root of the problem: The man had a very intense three-dimensional imagination that was activated whenever he did these brain-stimulating puzzles. The part of his brain that he used when thinking about things in 3D happened to be the part of his brain that was most affected by his 15 minutes of oxygen deprivation under the snow. Over activating this damaged part of his brain was what caused the man's seizures. Unfortunately, he had to give up Sudoku in order to make a full recovery. DDFT students: If you can identify the area of the brain that is used when thinking about 3D structures, email Dr Mangum for five points extra credit.

PIHOA Board Praises DDFT

The Doctors and Dentists for Tomorrow program is being praised by the Board of Directors of the Pacific Island Health Officers' Association (PIHOA) for its pioneering approach to premedical and pre-dental education in the Northern Pacific.

During a recent PIHOA meeting in Guam, Mr James Gillan, PIHOA Board President and Director of Public Health for Guam, stated, 'You've broken the mold on education with this innovative approach.' Other Board members echoed Mr Gillan in praising the program for addressing the future healthcare needs of the Federated States of Micronesia through an enhanced basic science preparatory program that uses Problem-based Learning (PBL). The results of the first year-and-a-half of the DDFT program were presented at the PIHOA meeting in Saipan by Dr Brian Mangum and Ms Holly Lyons, both DDFT faculty members.

Dr Mangum spoke on the history of the DDFT program, beginning with the reverse engineering of the first year of medical school at Pacific-basin institutions, such as Fiji National University; and how the DDFT program was designed to meet these core competencies, including better study skills and more rigorous applied basic sciences, using PBL, which is the standard method of instruction at many Pacific medical and dental schools.

Dr Mangum also spoke on how PBL creates greater student engagement through applied learning, such as using fractures and x-rays to teach the anatomy and physiology of bones. Dr Mangum also stressed that DDFT is designed to prepare students for Pacific medical and dental schools, stating that, 'Where they train, they remain.' 'Experience shows us that if they train in the Pacific, they will remain in the Pacific,' stated Dr Mangum, before adding, 'We don't want to prepare graduates to attend medical school on the mainland and never return to their home islands.'

Ms Lyons then spoke about keys to success through the provision of wrap-around support services, such as academic and personal counselling, mandatory study hall, small-group tutorials, journal clubs, and more. Ms Lyons also praised the use of the cohort model as creating greater group cohesion and inter-

DR MANGUM ELECTED TO FELLOWSHIP OF RAI

DDFT faculty member Dr Brian P. Mangum has been elected a Fellow of the Royal Anthropological Institute of Great Britain and Ireland (FRAI). Dr Mangum was elected to fellowship by the Board of the RAI in April in '…recognition of his work in applying the principles and practice of medical anthropology to public health and medical settings during his career in global health.' Dr Mangum was sponsored by Dr David Shankland, of the University of Buckingham, and Director of the RAI. Dr Mangum holds an MSc in Medical Anthropology from Idaho State University, where is a former Senior Lecturer in medical anthropology, public health, and family medicine.

Careers in Public Health: Population-Based Medicine Reaches Millions Globally

According to the US Centers for Disease Control and Prevention, globally, between 1990-1999, average life expectancy increased by thirty years, twenty-five of which were attributed to public health programs. Just a few examples included vaccination programs, healthier foods, family planning, recognition of tobacco as a health hazard, better maternity care, and more. Public health programs, such as vaccinations, have had a greater impact on saving and improving lives worldwide than any other interventions.

Despite this, the global pandemic in preventable diseases continues, and is reaching crisis proportions, and many global public health agencies which specialize in human resources for health, such as the World Health Organization and the US Centers for Disease Control and Prevention, are predicting a shortage of 12.9 million public health workers by 2025.

As such, there is a critical need for more physicians and dentists to consider specializing in public health here in the Pacific and elsewhere. Medical and dental graduates are well-prepared to work in public health, as they understand the underlying mechanisms of disease, including those which are preventable, and which represent the biggest burden of both morbidity and mortality in the Pacific region, or that of non-communicable diseases.

Consider Dr Eliasar Johnson, who is now the Chief of Public Health for Pohnpei State. Dr Johnson is a graduate of the Pacific Basin Medical Officers Training Program, which trained physicians for the region from its programme based in Pohnpei in the late 1980s and early 1990s. Dr Johnson went on to have a successful career as a practitioner before transitioning over to lead public health efforts in Pohnpei.

DDFT students have the chance to rotate through medical settings, such as surgical and medical wards at Pohnpei State Hospital, but also rotate through various public programs, in order to show them the impact of curative as well as preventative services in the region.

The DDFT program has a dual teaching philosophy in preparing students for medical and dental school, that focuses on learning not only curative medicine, such as learning how chemotherapy kills cancer cells in a smoker who has developed lung cancer; but just as importantly they learn the preventative side of medicine, including why people chose behaviours such as smoking, and how to either help people stop, or never start in the first place. This dual philosophy is in recognition that prevention is the only sustainable answer for the medical issues facing not only Micronesia but the world.

Public Health Practitioners Work in a wide-range of settings, from public health agencies across the USAPI, to international organisations such as Doctors Without Borders, the World Health Organization, CARE International and others, where they may work to ensure Micronesian children receive measles vaccinations, or with refugees in Syria and sub-Saharan Africa — possibilities in public health are endless

Within the region there are multiple opportunities for DDFT graduates who go on to medical school to specialize in public health, including the University of Papua New Guinea which offers a Masters of Public Health and a Doctor of Philosophy (PhD) in Public Health. Or the Masters of Public Health, the Masters of Applied Epidemiology, and a Post-graduate Diploma in Public Health Dentistry offered by Fiji National University. An MPH, MAE, or PhD are the equivalent of a residency program (a special training track of at least three years' duration for physicians who wish to specialize in clinical areas, such as surgery or paediatrics) for physicians who wish to concentrate in public

DDFT Faculty to Attend Global Health Conference

Dr Paul Dacanay, DDFT faculty member and Chair of the Division of Health Sciences at COM-FSM, will attend a week-long conference on global health in Washington, DC, in late April. Global health is closely aligned with preventative and curative medicine, both key tenants of the DDFT program's teaching philosophy.

Global health explores issues of global impact with an emphasis on prevention and improvements of health in all contexts, and for all people, regardless of whether they live in a highly developed nation, such as Australia, or a developing nation state, such as those commonly found in the Pacific.

DDFT is committed to giving its students a global perspective on the health issues facing Micronesia, such as the NCD crisis, so that they can see how other similar settings are addressing these issues.

Recent examples of this include the visit of Dr Douglas Taren, Dean of the Zuckerman College of Public Health at the University of Arizona, who spoke on the importance of nutrition, and gave examples of programs in other developing areas of the world that use innovative approaches to ensure adequate nutrition for at-risk populations.

In order to achieve this goal, DDFT faculty and staff must remain current in global trends of prevention and health parity for small nation states. Dr Dacanay's attendance at the conference will allow him to return and share this current information with other DDFT faculty as well as students.

The need for students to be global in their understanding of the challenge and opportunities in global health, but local in their application, stems from the knowledge that the DDFT students of today will not only be the family physician and surgeon of tomorrow, but also very likely the secretary or minister of health of their respective states or jurisdictions. As such, it is critical that students have a global perspective in cutting-edge research and practice.

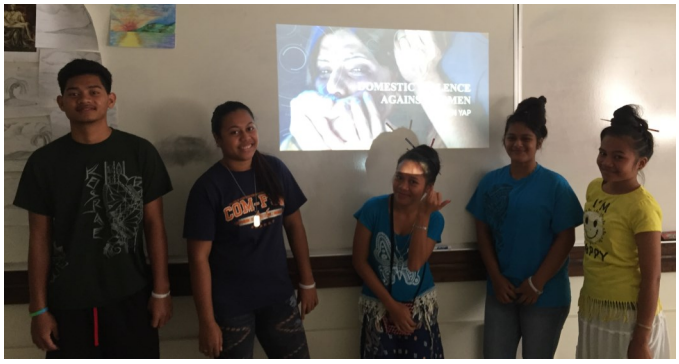
DDFT Students Tackle Domestic Violence in the FSM: Recommend Better Education, Shelters, Empowerment of Women

According to a recent presentation by PBL students, domestic violence is a significant medical, cultural, and public health issue in the FSM. Four different student groups each presented their findings and proposed solutions from an article which surveyed the rates of domestic violence in the FSM.

Following a review of the article, and a critique of its methodology, students then presented proposed solutions to the issue of domestic violence. These included both immediate solutions, as well as long-term public health and policy-based interventions. In the immediate sense, students proposed better laws and enforcement of laws, given that many times domestic violence is viewed as a matter for the family, and not a legal issue. The building of shelters for women and children who are working to leave a domestic violence situation; as well as access to mental health counsellors for victims and abusers.

Long-term solutions included access to parenting classes, better educational opportunities leading to better economic opportunities for both women and men to reduce the stress of economics that often leads to abuse; and finally, educating children from a young age on equality between men and women, and that violence against a women or child is never acceptable.

Each week students are presented with an academic article detailing a study of a medical or public health issue facing the Federated States of Micronesia. Students must dissect the article to discuss the research methodology, the findings, and other key issues presented by the authors. Students must then must propose medical and public health solutions to the issues discussed in the articles.



IS THERE A BEST WAY TO PREP FOR FINALS?

Science tells us, Yes there is! And we've got it for you!

Final examination week is a stressful time for students, so knowing how to best manage your stress and make sure you are ready for those exams can make a key difference. Here are some scientifically-proven methods to help you prepare for exams and ace your finals!

Say NO to cramming

Oh please, don't do this! It doesn't work. Cramming causes anxiety, which lowers your ability to retain information. By creating a balanced study plan and schedule, you will be able to study each subject in its entirety and ultimately boost your test performance. Study in intervals! Studying in 20-50 minute increments and giving yourself 5-10 minutes in between is more beneficial than cramming.

Distributing learning over time typically benefits long-term retention more than a short period cramming session.

Say YES to cardio

Science shows that just 20 minutes of cardio can improve your memory. Whether you're dancing, jogging or busting a sweat by walking, exercise will increase your energy level and reduce the effects of stress. Very important!

Say YES to superfoods

Everybody knows you should eat breakfast the day of a big test. Research suggests that high-carb, high-fibre, slow-digesting foods like oatmeal are best. But what you eat a week in advance matters, too.

When 16 college students were tested on attention and thinking speed, then fed a five-day high-fat, low-carb diet heavy on meat, eggs, cheese and cream and tested again, their performance declined.

The students who ate a balanced diet that included fruit and vegetables, however, held steady, says Cameron Holloway, a senior clinical researcher at the University of Oxford.

When you study, your brain consumes glucose, so, take a five-minute break every hour to let your body produce more fuel for your studying.

Say YES to alternating study spots

Shake up your finals routine! Spending all night in the library can be draining. In an experiment, psychologists found that college students who studied a list of 40 vocabulary words in two different rooms did far better on a test than students who studied the words twice, in the same room. Why? Supposedly, the brain makes subtle associations between what it is studying and the background sensations it has at the time.

Try alternating your study spots between the library, your dorm, and a study room.

Say NO to the all-nighter

I've seen you on FB posting selfies at 2AM the morning of the exam telling everyone how hard you're studying! Then I've seen your grades that afternoon. It doesn't work. A 2008 study by Pamela Thacher, Professor of Psychology at St. Lawrence University, showed all-nighters impair reasoning and memory for as long as four days. As a result, you will receive lower grades.

So, get a good night's sleep and expect to perform better on tests. (Quick tip: Review the toughest material right before going to bed the night before the test. It makes it easier to recall the material later!)

Say NO to distractions

Remember me seeing you on FB at 2AM the morning of the exam posting selfies? The same goes for distractions like texting, watching Korean soap operas, listing to music, and taking pictures. These are all distractions that impair the ability of your brain to retain the information you are learning – especially if you are tired and not eating the right foods.

This is a formula for failure if you follow it. If you must listen to music, consider instrumental music, such as classical, which has been shown to boost memory and recall.

DDFT2 Begins Summer 2017: Basic Science Summer Boot Camp to Kick Start Second Cohort

The second cohort of Doctors and Dentists for Tomorrow, which will include twenty-five high school graduates drawn from all four states of the FSM, will begin their training in June 2017 with an eight week 'Basic Science Summer Boot Camp.'

The summer boot camp experience, which will be based at the College of Micronesia FSM National Campus in Palikir, Pohnpei, will include medical math, health sciences, physical education, and special courses in study skills, such as how to successfully balance life and school, an introduction to Problem-based Learning (PBL), and how to access the range of special services offered by both DDFT as well as COM-FSM. Courses will be taught using PBL, in which students work as a team to solve real-life medical problems that are impacting Micronesia today, and thus learn basic science principles, such as anatomy and physiology, through application.

The problems students will tackle this summer include non-communicable diseases, such as hypertension, heart disease, type 2 diabetes, and so forth. As well as communicable diseases, such as leptospirosis, sexually-transmitted infections, and others. Students will work as a team, rotating the role of team leader each week, to solve these real-life problems, and then present their solutions each week in a formal critique by DDFT faculty members. In this way, not only will students learn about healthcare issues facing their home country, but will also develop presentation, team-building, research, and other skills that will be essential for their success in the rest of the DDFT program, as well as in the future when they attend medical and dental school. In addition to PBL teaching in both health sciences and medical math, and special sessions on study and life skills, students will also undertake clinical observerships from week one, being posted as small groups to hospitals, clinics, and public health agencies in Pohnpei where they will see the things they are learning in the classroom applied on patients.

The combination of PBL teaching, early clinical observerships, and wrap-around support services for school and life success, are all part of the larger DDFT program's goal to produce students who are better prepared to compete for entry into regional medical and dental schools to become Micronesia's future healthcare leaders and providers of tomorrow.

DDFT1 Students Could Work as Tutors for DDFT2: *Discussions Ongoing*

Discussions are underway within the DDFT program to recruit the highest performing students from DDFT1 to act as tutors for the incoming DDFT2 students during the summer boot camp experience.

The first cohort of DDFT students, known as DDFT1, know the value of tutors. During the summer of 2016, when they underwent the Basic Science Summer Bootcamp, DDFT1 students were assisted by an able cadre of COM-FSM graduates who acted as basic science tutors.

The tutors assisted students with difficult science concepts, helped them identify learning resources to answer patient-based questions, worked with them on preparing weekly patient presentations that would be critiqued by DDFT faculty, and were there as a friendly face and sympathetic ear when the inevitable problems of being new to college life in a high-demand program came to the surface.

Two of these former DDFT tutors have already shown that DDFT is a success. After working alongside the highly experienced DDFT faculty for two semesters, and gaining valuable experience and insight into the application of the basic sciences to patient problems, two of the former DDFT tutors were accepted to medical school at the University of Fiji. Both former DDFT tutors wish to become general surgeons and return to practice in Pohnpei and Chuuk.

If the new tutor program is approved, DDFT faculty will choose only the highest performing DDFT1 students to act as tutors over the summer, where they will provide the same high-quality tutorial support to DDFT2 that they themselves received in 2016. This highly competitive program will allow the best-of-the-best to shine even brighter as they continue to excel and prepare for medical and dental school.

According to Dr Brian Mangum, 'The tutors were instrumental to the success of the DDFT1 cohort during summer 2016, and set the stage for student success by preparing the cohort to be self-directed learners. We hope to repeat that success in DDFT2!'

SPECIALTY ROUNDUP / What's the difference between family medicine and general internal medicine?

This is perhaps one of the most confusing questions for many students (and patients alike), particularly when referring to internists who practice general internal medicine. However, there are fundamental differences in the focus, training, and patient care activities of these two specialties.

Although the length of basic training for both is three years, internal medicine focuses only on adults. Required internal medicine training focuses on common general medical conditions. Internal medicine training must also take place in both outpatient and inpatient settings. At least one year of internal medicine training must involve caring for hospitalized patients, with at least three months of work in intensive/critical care settings.

Family medicine training is typically based in dedicated outpatient training centres in which residents work throughout the course of their training. Trainees are required to provide acute, chronic, and wellness care for a panel of continuity patients, with a minimum number of encounters being with children and older adults. Family medicine trainees are also required to have at least 6 months of inpatient hospital experience and 1 month of adult critical care, and up to 2 months of care for children in the hospital or emergency settings.

Family physicians are trained to care for patients of all ages. This is known as 'cradle to grave' medicine. Family physicians may deliver babies, perform minor surgical procedures, provide psychological support to patients, provide inpatient care, and focus on a holistic approach that takes into account the biological, psychological, and social causes of illness in their patients.

Internal medicine focuses on the care of adult patients in both the primary care and hospitalised settings. General internal medicine training equips individuals to handle the broad spectrum of illnesses that affect adults, and general internists are recognized as experts in the diagnosis and treatment of chronic illness.

Family medicine trainees must also have experiences in behavioral health issues, common skin diseases, population health, and health system management, and there is a particular emphasis on wellness and disease prevention.

These differences between internal medicine and family medicine training result in unique skill sets for each discipline and different strengths in caring for patients. Because internal medicine education focuses only on adults and includes experience in both general medicine and the internal medicine subspecialties, training in adult medical issues is comprehensive and deep. Internists are well prepared to provide primary care to adults through their outpatient continuity experience during training, particularly for medically complicated patients.

Family medicine education is broader in nature than internal medicine since it involves training in the care of children and procedures and services often provided by other specialties. This breadth of education equips family physicians to deal with a wide range of medical issues, and this broad skill set may be particularly valuable in communities or geographical areas where certain specialists and subspecialists may not be available.

PROFILES IN #SUCCESS

Naomi Nakasone / Pohnpei

From the Garden Isle of Micronesia, Pohnpei, Naomi has already decided what kind of doctor she wants to be, and where she will practice – something not always seen in someone in their first year of college, but not uncommon in a DDFT student who from day one of their schooling has been exposed to patient problems both in the PBL classroom, which they must solve with their teammates, and in the hospital during the clinical rotations they undertake from week one.

These experiences, coupled with personal experiences with family members, means that Naomi wants to be a cardiologist working in Pohnpei State Hospital where she can, 'Serve my people!' Service is a common theme among the DDFT students. The DDFT program specifically chose those students who were academically prepared, as well as possessing a strong desire to make the FSM a better and healthier place through service to their people. Indeed, one of the overriding tenants of the DDFT program is that by training Micronesians to be the Micronesian doctors and dentists of tomorrow, that graduates would possess the cultural and familial connections that would prompt them to return home to practice in Micronesia where they speak the language and understand the needs of their own people.

This is one of the reasons that DDFT promotes attendance at Pacific Basin universities, as the program knows that where they train they remain! When asked what she likes most about DDFT, Naomi responded that she has really enjoyed working alongside, and getting to know students from different states of the FSM. During a recent speech to the COM-FSM faculty, and then later the Board of Regents, Naomi highlighted this as a key element of the DDFT program, or that it brings together people from different areas of the FSM and makes them work together to solve problems as a group through the PBL process. PBL ensures that students study together, work together, learn together, present together, and succeed together—all of which is emblematic of both the medical school experience as well as the experience of practicing medicine or dentistry, all of which require teamwork.

This is also seen in the fact that Naomi states that staying in the dormitories, which is part of the DDFT program to develop a strong cohort of students who work well together, means that she sees her classmates both in the classroom and outside. Naomi says that staying in the dorms, and working as a cohort, also means that students have more time to learn together, given that classroom time is never sufficient to prepare for the weekly presentations students must give in each class.

So by living on campus, as Naomi points out, the library is available for group work, even on the weekends. All of this hard work inside and outside class doesn't mean there isn't time for fun; in fact, Naomi states that her favourite memory thus far has been the Christmas party hosted by the DDFT faculty to celebrate the end of first two semesters of the program.

Mira Pama / Pohnpei

You might say that Mira Pama, who hails from Pohnpei, has her eye on the future! That's because she has decided to be an ophthalmologist when she finishes medical school. An ophthalmologist is a physician who specializes in the medical and surgical treatment of the eye. They are different from optometrists, who are not physicians, and who do not provide surgical treatment of the eye.

Mira knows the importance of eye care from both her classroom work as well as her rotations at Pohnpei State Hospital, which are provided as part of the DDFT program from week one, where she would have seen many of the patients who suffer from eye problems because of diabetes and other diseases. Currently, the Pacific has some of the highest rates of type 2 diabetes in the world, with diabetics suffering complications related to sight, such as diabetic retinopathy, which can be hard to identify and treat without consultant ophthalmologists.

Training for medical school graduates who wish to specialise in ophthalmology is available in Fiji at the Pacific Eye Institute and Laser Centre, and in Papua New Guineas at the medical school there. So Mira will have plenty choices to choose from when pursuing her post-graduate training before returning to practice in Pohnpei. Mira is excited to serve the people of Pohnpei, and jokes that even though she is not 100% Pohnpeian, she still has a strong desire to bring better eye care to both Pohnpei and the entire FSM.

But Mira knows that it will take hard work and dedication to achieve this goal. Which is why DDFT is dedicated to supporting Mira, and ensuring Mira has the resources she needs to become an ophthalmologist, including being provided with a laptop on which she can access online learning resources, undertake research, prepare presentations, and even stay in touch with family and friends on Facebook. Mira says that this has been a great help, as she can do her work and research anywhere on campus.

Speaking of the campus, and the many benefits of the DDFT program, Mira also singled out living in the dorms, which is a DDFT requirement, as a huge perk, because, 'I don't have to look for rides from home or from campus.' In addition to making it more convenient for students by living and eating on campus, all of which is provided under the DDFT program, students also become much closer to their classmates as they eat, work, live, present, and study together as a single cohort.

Of course, it's not all work and no play in the DDFT program, and Mira states that her favourite memory thus far has been going to the six waterfalls with her new DDFT family where they, '...swam, slid, and laughed together as a group...even when we are not in class, we still help each other out!' Well-said, Mira. The cohort model of the DDFT program was designed to create just such a situation in which students learn to depend upon each other both inside and outside the classroom!

PROFILES IN #SUCCESS

Annielisa Sam / Kosrae

Originally from Kosrae, Annie is known for her happy attitude, quick smile, and laughter. But that doesn't mean Annie doesn't enjoy a little peace and quiet. In fact, one of the things that Annie likes most about being part of the DDFT program is living on the COM-FSM National Campus where it's '...so quiet and breezy at night, it comes in handy when you are stressed out about school and social activities.' DDFT students know about stress.

The program is designed for high-performing students, and places them in a situation in which as a group they become responsible for their own learning through solving real-life patient problems. Of course, faculty are always available to for backup, but the real emphasis of the program is to teach students like Annie to be problem solvers and leaders as they prepare for medical and dental school.

And while stress is a part of the program, DDFT and COM-FSM also provide wrap-around support services, such as counsellors, study skills support, and faculty who are available for assistance when needed. Of course, having access to support services, like caring faculty, doesn't mean that students won't miss home, and Annie is no different. She states that she misses everything about her home, but most especially being around her family and friends. Still, she knows that DDFT is also like a family, a family that she learns and grows with, and who are there to support her in achieving her goal of becoming a physician.

Annie is hoping to be a psychiatrist—a type of physician who deals with mental health issues. Annie states that there are no psychiatrists in the FSM, and through her classes and hospital rotations, she has learned that mental health issues are a significant problem. She hopes to one-day return to Kosrae to practice as a psychiatrist, but is willing to travel to all the states of the FSM to offer mental health services. Psychiatric disorders, such as depression and suicide, schizophrenia and bipolar disorder, alcohol and substance abuse, and others are significant sources of morbidity in the region; and while local providers work hard to care for these patients, having a consultant psychiatrist in the form of Annie would be of inestimable value to the FSM. This would be particularly true, since Annie is a local, who speaks the language and understands the culture of the islands, and how such can impact mental health. Currently, there are training opportunities for medical school graduates to become psychiatrists in both Fiji and Papua New Guinea, so Annie should have no problem getting the training she needs to make the FSM a healthier place to

Caroline Apaisam / Pohnpei

From beautiful Pohnpei, Caroline has set her goals high, hoping to one day be a dermatologist, something that the FSM could certainly use. Dermatologists work with skin disorders, and do much more than prescribe medication for acne.

Dermatologists are involved in treating a wide range of skin disorders, as well as performing minor surgery, and treating skin cancers. One of the advantages of the PBL curriculum run by the DDFT program is that students are exposed to a wide-range of specialties as they explore different patient presentations. Caroline, and others, recently spent an entire two weeks learning about the anatomy and physiology of the skin by using dermatology patients as cases. Students learned about differentiating erysipelas versus cellulitis, different kinds of bacterial skin infections in adults and children, such as impetigo, the major forms of skin cancer; and of course acne. Students rapidly learned that dermatology is quite complicated, and requires specialized physicians, such as Caroline the future dermatologist!

When asked about what she likes most about DDFT, Caroline responded that it was the cohort model—being surrounded by the same faculty, staff, and classmates makes the educational setting more enjoyable, as you learn to work together, and rely on each other to make sure that the weekly patient presentations for which they are responsible are a success. She states that the bonding with fellow students has helped her grow academically as well as personally.

Indeed, Caroline had a chance to recently address the entire COM-FSM faculty, and then later the Board of Regents, in which she spoke about the advantage of PBL learning; one of the key points she made was that it had helped her grow socially, and learn to work as a team, something she did not feel would have happened in a regular classroom. So strong have the social bonds been, that Caroline now states that DDFT and COM-FSM have, '...become more like a home to me.' Growing together as a cohort is one of the key elements of the program, which is designed to help student learn to work well with teams, a key element of the medical school and healthcare environment.

When asked about her most memorable experience so far, Caroline stated that, 'To be honest, all of the days in this DDFT program are very memorable, because I either learn new things from instructors by jokes and scoldings or had fun with my DDFT class.' Well-said, Caroline, as the cohort model is designed to bring everyone, including instructors and students, closer together in resembling a team of colleagues more than a traditional student-teacher relationship. The cohort model is just one more way that DDFT is preparing it's students to be the doctors and dentists of tomorrow!

What is DDFT?

The Doctors and Dentists for Tomorrow program is a two-and-a-half-year program to prepare high-performing students from the four states of the Federated States of Micronesia to be competitive for entry into regional medical and dental schools, as well as prepare for success in upper-level baccalaureate pre-medical and pre-dental programs at other Pacific Rim institutions of higher learning.

This intensive program includes a summer basic science 'boot camp' with courses taught in the problem-based learning (PBL) style, the standard format of instruction common in regional medical and dental schools, as well as other health science programs globally.

The summer boot camp is followed by two additional years of science courses which emphasize application of knowledge to clinical settings. A hallmark of the DDFT program is early access to clinical settings, with students rotating through hospitals, clinics, and the public health department. Students are given access to a range of wrap-around services to promote success, including mandatory study hall, tutoring sessions, counselling, special training courses, guest lecturers, international faculty, an emphasis on the health issues facing Micronesia, and much more.

Want to learn more?

Please contact Mr Robert Spegal, DDFT Program Manager, at robertspegal@yahoo.com

Missed an issue of The Heartbeat?

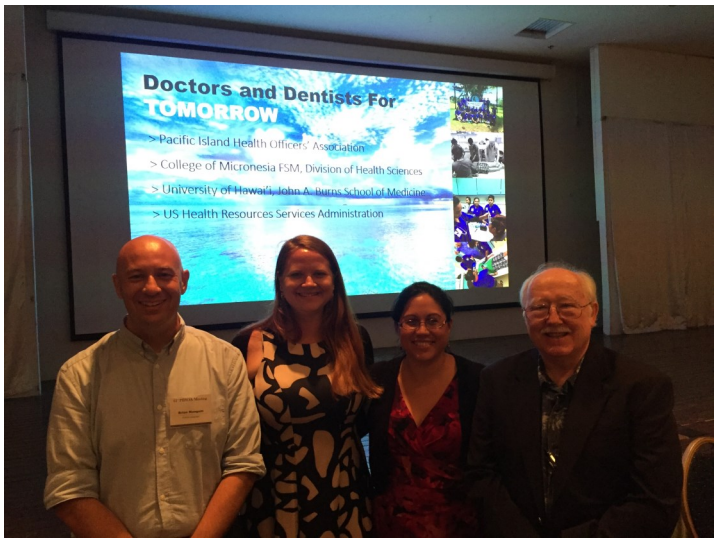
No problem! You can read current and back issues of The Heartbeat online at . . .
http://www.comfsm.fm/?q=publications

Special thanks to COM-FSM for hosting The Heartbeat online.

More than just a pre-medical or pre-dental program . . .

A preparatory program for leadership and success in Micronesia!

- **Preparing Micronesians to be the Micronesian healthcare providers and leaders of tomorrow**
- **Intensive preparation for medical and dental school**
- **Preparation for upper-level bachelor's degree programs**
- **International faculty**
- **Early clinical exposure in hospitals and clinics**
- **Basic science summer boot camp**
- **Emphasis on PBL and applied clinical learning**
- **Wrap-around support services, such as study hall and counselling**
- **Emphasis on policy and prevention, not just medicine and dentistry**
- **Emphasis on learning public presentation and critical thinking skills through researching and proposing answers to FSM's leading causes of disease and death**



Doctors and Dentists for Tomorrow (DDFT)

This project is funded from the Health Resources services Administration, an agency of the US Department of Health and Human Services, awarded to the John A. Burns School of Medicine Area Health Education Center of the University of Hawaii, and sub-awarded to the Pacific Island Health Officers' Association. DDFT is a joint program between these agencies and the College of Micronesia FSM. The faculty and staff of the DDFT would like to thank all of those organizations that have made this program possible, including the support of our many local partners across the Federated States of Micronesia.