

**FOR THE HEALTH OF A PEOPLE:
THE RECRUITMENT AND RETENTION OF NATIVE HAWAIIAN MEDICAL
STUDENTS AT THE UNIVERSITY OF HAWAI'I'S JOHN A. BURNS SCHOOL
OF MEDICINE, A GENEALOGICAL APPROACH**

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ABSTRACT

Considering that Native Hawaiians make up approximately 20 percent of Hawai‘i’s population, but Native Hawaiians make up only 5 percent of Hawai‘i’s physicians, it is obvious that there is a deficiency within Hawai‘i’s medical education system. This paper explores the issue of culturally competent physician workforce development and the current recruitment and retention techniques used by the John A. Burns School of Medicine.

In order to discover the true nature and identity of these barriers, twelve Native Hawaiian doctors, medical students, and pre-medical students were interviewed. The narratives of the doctors and students interviewed will be the major method of information presentation. After an analysis of the interview data, solutions such as a formal mentoring program for pre-medical students within the current infrastructure of the medical school to foster the academic, cultural, and professional development of Native Hawaiian medical and pre-medical students will be suggested.

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CHAPTER 1: INTRODUCTION AND BACKGROUND

*Po'ohū ka lae kahi i ka pōhue.
When the forehead lumps, rub it with a gourd.*

**Find the remedy for the problem.
-‘Ōlelo No‘eau**

Introduction

Although Kanaka Maoli¹ make up approximately 20 percent of Hawai‘i’s population, they make up only about 5 percent of Hawai‘i’s physicians (‘Ahahui o Nā Kauka 2003; Office of Hawaiian Affairs 2006, 15). This relative lack of Kanaka Maoli physicians raises many interesting questions. Why are Kanaka Maoli students not choosing medicine as a career? Do these students have any specific cultural, academic, or financial needs that are not being met? How can the University of Hawai‘i’s medical school and other community organizations help to recruit and retain Kanaka Maoli students? In this project I explore the cultural, academic, and financial barriers that prevent, or deter, Hawaiian students from obtaining medical degrees and discover what Kanaka Maoli students and doctors believe needs to be done to overcome such barriers.

Cultural rapport between a physician and patient is an important factor in patient satisfaction, trust, and compliance (Saha 1999, 998; Saha 2000, 77). While physicians may be able to form strong relationships with patients of different ethnic groups, the shared cultural and historical bonds between a Kanaka Maoli physician and a Kanaka Maoli patient can facilitate a bridge that better spans the gap between Western healthcare and the social, medical, economic, and cultural issues that many Kanaka Maoli patients are concerned about. Research on Māori patient-physician relations has shown that clinical outcomes are more positive when the patient and clinician share a cultural and ethnic bond (Durie 2001, 68-69). A Hawaiian physician may also be more familiar with

¹ Out of respect for my ancestors, I will often use the term “Kanaka Maoli” as an alternative to the term “Native Hawaiian.” While both terms are politically charged, “Kanaka Maoli” is the way in which my ancestors described themselves and is a more culturally appropriate way of referring to the indigenous people of Hawai‘i.

traditional healing techniques such as lā'au lapa'au, lomilomi, and ho'oponopono and may be more willing to work with a traditional healer as part of the treatment plan.

While there are always several Kanaka Maoli applicants to the University of Hawai'i John A. Burns School of Medicine, low numbers of qualified applicants and anecdotal evidence from faculty members suggest that significant barriers exist for Kanaka Maoli students seeking to receive medical degrees. Therefore, the recruitment and retention of more indigenous Hawaiian medical students is important to the ongoing efforts of the State of Hawai'i and community health agencies to improve the health status of Kanaka Maoli.

In order to explore the nature of these barriers, twelve Native Hawaiian doctors, medical students, and pre-medical students were interviewed. Modeling this thesis after two other influential works, *Voices of Wisdom: Hawaiian Elders Speak* and *Ho'oulu*, large portions of the interview transcripts will be the major method of information presentation (Harden, 1999; Meyer, 2003). Instead of the reader only hearing my voice reiterate and interpret the words of the interviewees, this method will allow them to tell their stories.

This thesis explores barriers to entering and graduating from medical school that are common among Kanaka Maoli students and also introduces the idea of the creation of a mentoring network for indigenous Hawaiian pre-medical students, medical students, residents, and physicians. This network would use mentoring, cultural competence workshops and conferences, and culturally relevant social activities to build the individual confidence and excellence needed to graduate from medical school as well as fostering the development of a qualified, culturally competent, Native physician

workforce (Kamaka 2001, 423; Palafox 2001, 388). Although this thesis is exploratory, it is an essential step in identifying issues and possible solutions associated with the low numbers of Native Hawaiian physicians as told from the perspective of physicians, and more importantly, current medical and pre-medical students.

Small beginnings: My journey to medicine

Like so many other future physicians I knew I wanted to be a doctor from a very young age. Recently, I was sorting through old schoolwork stored in my closet and found a journal book from kindergarten. Every day my teacher, Mr. Yorck, would write a question on the chalkboard and ask us to copy the question into our journal and answer it. Flipping through the pages I found the question “What do you want to be when you grow up?” The answer: I want to be a pediatrician and help other kids like me when they are sick. It was just one sentence, much of the spelling was incorrect, but the words hit me like a rock. Nearly 20 years later and they were still true. At the time I obviously had no idea what it would be like to be a doctor and I certainly did not know what it would take to get there. All I knew was that doctors helped care for sick people. That was what I wanted to do with my life, and still do.

Throughout the years ideas about other professions came and went: biologist, veterinarian, lawyer, astronomer, archaeologist, but I always came back to medicine. My early interest in medicine was fueled partly by intellectual curiosity and partly by experiences with family illness. Throughout my life medicine has always been a large part of my life through serious illness in my family: my maternal grandfather survived two kinds of cancer and congestive heart failure only to pass from metastatic lymphoma

as did my paternal grandfather. My mother is a 15-year survivor of breast cancer and has lived with heart disease for five years. Most recently, my family has been dealing with my maternal grandmother's dementia, my mother's type II diabetes mellitus, and my father's discovery of an inherited heart defect.

When I started high school I began to prepare myself for medical school. I volunteered at Queen's Hospital and Kapi'olani Women and Children's Hospital in Honolulu and enrolled in two out of the three Advanced Placement science courses that my high school offered. In the fall of 2000 I entered Mills College, a small, womens' college in Oakland, California as a Biochemistry/Molecular Biology major. The summer after my freshman year a family friend who works with 'Ahahui o Nā Kauka, a Native Hawaiians physician's group, and the Protect Kaho'olawe 'Ohana suggested that I go to the island of Kaho'olawe² in August with 'Ahahui o Nā Kauka so I could network and meet some of the doctors. The physicians, or Kauka³ as they are sometimes called, had planned to do a series of Continuing Medical Education workshops on cultural competency while on the island and it was the perfect introduction to the Hawaiian medical community. It would take me nearly five years to realize how much those four days would change my life.

We arrived on Kaho'olawe early on a Thursday morning and for the first time I was able to look around and survey who I would be eating, sleeping, and working with over

² From 1942 until 1990 the island of Kaho'olawe, which is located six miles off the coast of Maui, was used by the United States military as a bombing target. The bombing has seriously damaged many archaeological sites that are sacred to the Kanaka Maoli and unexploded ordinance has left the island dangerous and uninhabitable. The Protect Kaho'olawe 'Ohana is a grassroots community organization that currently has cultural stewardship over the island and is allowed to bring up to seventy people to Kaho'olawe for four days a month. On these accesses participants learn about Hawaiian culture, religion, and environmental stewardship. Participants groups have included high schools, canoe paddling clubs, hula hālau, lua pā, business groups, individual families, church organizations, and many others.

³ "Kauka" is the Hawaiianized word for "doctor."

the next four days. The first night on the island I lay awake in my sleeping bag amidst the scurrying of field mice and creaking of kiawe trees thinking about the enormity of where I was and who I was with. Previously, I had only met two Kauka, both of whom were on this trip to Kaho‘olawe, but I only had limited contact with them during my childhood. In that one day had I tumbled in the shore break of a former bombing range, eaten fresh fish caught just hours before dinner, met several Kauka and their families, cried at the sight of exposed ‘iwi in a decaying heiau, and heard the words “cultural competency” for the first time.

On the island I was so overwhelmed by the emotional and physical exhaustion of living in such a raw environment where the pain of 50 years of military abuse can literally be felt emanating from the land that I was unable to digest much of what I had learned there. It was not until after I returned to school and began an Ethnic Studies class on African-American history that my thoughts on health disparities, cultural competence, and how the healing of our land is absolutely connected to the healing of our people started to settle in my mind. It did not take long for me to realize that Ethnic Studies would fill the cultural void that life on the mainland had created and satisfy my newfound passion for health disparities. I quickly changed my major to Ethnic Studies, but resolutely remained “pre-med.” There were answers I needed to find in cultural studies before I began medical school that simply could not be found by looking into a microscope.

I graduated from Mills and returned home to the University of Hawai‘i at Mānoa to begin my Master’s degree in Pacific Islands Studies and finish my medical school pre-requisites in January of 2004. It was not until then that I began to notice how rare it was

to encounter a fellow Native Hawaiian pre-medical student. I began to ask myself why there are not more Kanaka Maoli students going into medicine. As I began an initial investigation of this issue more questions surfaced and begged to be answered. Could the discrepancy be explained by socioeconomic class? Lack of emphasis on education in the home? Lack of trust in Western medicine on the part of Kanaka Maoli? What measures have been taken to reverse the under representation of Kanaka Maoli in the field of medicine? Do these programs seem to be working or are more needed? As I was told by a senior member of 'Ahahui o Nā Kauka:

...Native Hawaiian families don't understand what it means to walk into medicine. You become a priest, it's a calling, you become a priest. The day that I graduated from medical school, my father asked me for a loan...but he had no concept of the fact that I had amassed \$80,000 in loans....And you don't go to family functions and they don't understand that because it's just not Hawaiian. And you tell them you have to study and they wonder, "Well, you were the smartest kid, why do you have to study? Did you use drugs on the way, did you screw your brain up or something?" And it's a very different life and actually, I guess from your med students, you've found that. Some of our Hawaiian medical students have had real problems, not because they haven't been able to do what they need to do, but they haven't been able to focus on medical school.⁴

At times, it is difficult for Native Hawaiian families to understand exactly what their child must do to get accepted to and graduate from medical school. Hours of homework, volunteer activities, community service work for scholarships, and club activities all cut into the time a student normally spends with their family. The families of most of the participants of this study were supportive of their decision to become doctors, but had trouble accepting their busy schedules. One second year medical student told me:

So, they're really supportive, but it's hard because nobody's gone through college so they don't know what it takes and then when you go on to graduate school it's harder for them to understand because you really need

⁴ Interview with K2. December 23, 2005. Honolulu, Hawai'i.

to study all the time. So when they ask, “Oh, can you do this for me, can you do this” or “How come you’re not coming home so often?” It’s harder, I think it’s harder for them to understand that it’s a sacrifice I need to make right now and I’m not neglecting them, I’m trying not to, but I think it’s what’s needed.⁵

It seems that between family obligations, financial constraints, academic challenges, and perceptions of the Western medical system, medicine just isn’t an option for many Native Hawaiian students. I found myself talking to other pre-medical students and members of ‘Ahahui o Nā Kauka and discovered that most, or all, of these factors played a part in each of their lives and journeys toward a career in medicine. It was at this point in time that I decided to do an in depth, qualitative research project on overcoming the barriers that Kanaka Maoli students must face while pursuing a medical degree.

Development of this project and its methodology

One of the first articles I read regarding social barriers to the medical field was an article on Filipino, Native Hawaiian, and Samoan nursing students (Harrigan 2003). Focus groups concluded that the students faced multiple social and economic barriers. Nursing is a physically and emotionally demanding job, the training is difficult and expensive, and families often did not understand the rigors of completing a nursing degree (Harrigan 2003, 29). The stories of the students in the article sounded similar to the stories that I had heard from the few Kanaka Maoli pre-medical students I knew. It became important to uncover the barriers that make entering and finishing medical school difficult for Kanaka Maoli students and explore new techniques that may help recruitment and retention.

⁵ Interview with M2. January 9, 2006. Honolulu, Hawai‘i.

When this project was in the first stages of infancy I imagined it as a large-scale, quantitative research project, full of scientific rigor and finished off with charts, graphs, and statistical analysis. An anonymous survey was to be developed and sent out to Native Hawaiian physicians and upon their return, the results would be analyzed and reported. Focus groups would be conducted to validate the survey results. However, as my exploratory research progressed I was inspired by two books in particular: *Ho‘oulu* by Dr. Manulani Meyer (Meyer, 2003) and *Voices of Wisdom, Hawaiian Elders Speak* by M.J. Harden (Harden, 1999) and my methodology shifted drastically.

The work of Dr. Meyer, a Kanaka Maoli educator, has motivated and inspired me since I first received her book, *Ho‘oulu*, as a gift from the University of Hawai‘i’s Kua‘ana Native Hawaiian Student Services Center in the fall of 2004. Eventually, *Ho‘oulu* became a model for this project. I wanted to emulate the way she uses poetry, academic writing, interviews, and ‘ōlelo no‘eau. Her work is engaging, challenging, and beautiful at the same time and often makes you work to realize the full truth of the words. Many times I found myself discussing the book with friends or writing in a journal to try and connect her thoughts and concepts to my own life. This unique way of writing allows for academic rigor as well as creative narrative that appeals to both scientific and Hawaiian thought. Since I have experience with both Pacific-centered, narrative writing as well as objective, scientific writing, I wished to emulate Dr. Meyer’s ability to blend academic reporting and narrative in this paper.

For example, you, the reader, may have noticed so far that while concepts are explained in detail Hawaiian words are rarely translated. This was not done to exclude those who are unfamiliar with Kanaka Maoli culture or language, but rather to promote

learning by self-direction. Too often in Western education, especially Western science education, information is processed, packaged, and sold very much like the high-calorie, high-sugar plate lunches many of us enjoy. This teaches the public to expect an easy, pre-processed lesson that they don't have to work for. The reading of this text may require consultation with a dictionary, history book, or a friend; it may even require introspective thought or contemplation. As this extra work commences, it gives the ideas in this thesis continued life and expansion. Also, Hawaiian words will not be italicized as they are an equal and legitimate part of the dialogue found in this thesis and should not be distinguished from the English words as "other."

Although I no longer remember the original reason for my interest in *Voices of Wisdom* (Harden, 1999), I do remember being captivated by the beautiful black and white pictures of the kūpuna who were interviewed for each respective chapter. Each chapter was simply a transcription of the interview with the featured elder, prefaced by a short introduction by the author. While I knew this format was not feasible for a thesis project, I was moved by the way the author allowed the words of the kūpuna to speak for themselves instead of being filtered by the author. The conversations included in this book directly inspired my decision to shift my methodology from anonymous surveys to intimate, one-on-one interviews with a smaller number of participants. Large excerpts from some interviews will be included in this paper so that the words of the individuals interviewed will be allowed to speak for themselves.

Instead of conducting a formal interview that followed guidelines and objective questioning, I employed a looser method of a "talk story" session. Although "talk story" methodology can also be used in Western interviewing, the building and reinforcement of

personal relationships used in this method is an important value in the Kanaka Maoli community, where family and interpersonal connections are of utmost importance (Meyer, 2003 #54). Meyer also used this technique while conducting interviews for her doctoral thesis on Hawaiian epistemology and it proved to be an effective and culturally valid vehicle for my own research (Meyer, 2003 #54). In *Decolonizing Methodologies*, Linda Tuhiwai Smith explains that much of the interaction between Western research and knowledge and Native peoples has been built on dominance, mistrust, and abuse of indigenous groups (Tuhiwai Smith, 1999 #66). Although social hierarchies exist in many indigenous cultures, and was especially strong in traditional Kanaka Maoli culture, relationships formed through Western research objectified and limited research participants' identities to "research subjects."

All interview participants did not have the same level of acculturation to the Native Hawaiian culture and may not have had the same appreciation of this interview method. However, finding personal and familial connections between individuals links people through trust and a type of philosophical genealogy as opposed to forming a Western researcher-researched relationship that is often based on power and dominance (Tuhiwai Smith, 1999 #66). The research completed for this thesis valued the interviewing process as well as the voice and wisdom of each interview participant as much or more than the final data collected. The interviews were set up to be enjoyable experiences both for myself and for the interview participant.

Some interviews were conducted in offices at the medical school, but most were held over meals at the medical school's cafeteria, cups of coffee, and even a long afternoon lunch at one of the individual's homes. The interviews themselves mostly lasted between

30 and 60 minutes, but some went on for over three hours and extended far beyond the intended interview topic to politics, sovereignty, the ancient names of the Northwestern Hawaiian Islands, and even a description of a student's new apartment. Essentially, when an interview was scheduled I cleared my day for several hours and allowed each interviewee to dictate the length and much of the topic of the interview.

A set of six interview questions were developed to serve as guidelines for the interviews. Originally, the same six questions would be asked to each of the three groups of interview participants, but later the questions were tailored to fit each group specifically. This generated three sets of questions, one for Kauka, one for medical students, and one for pre-medical students (for a list of interview questions, please see Appendix A). Since the interview questions served only as guides for the conversations there were times when the questions were worded differently or not asked at all if the participant gave the information as part of the answer to another question. Many times, follow-up questions or other questions which were not included in these lists were asked as they conversation flowed.

Twelve interview subjects were chosen and recruited to participate in the individual, "talk story" sessions: four Kauka, four medical students, and four pre-medical students. To protect the identity of the individuals interviewed for this project a numbering system based on each individual's designation as Kauka (K1-4), medical student (M1-4), or pre-medical student (P1-4). Interviewees were recruited based on geographic accessibility, willingness to participate, and connection with the John A. Burns School of Medicine (JABSOM) either by suggestion from Department of Native Hawaiian Health faculty or through my previous personal connection to them. All four Kauka are faculty members

at the Department of Native Hawaiian Health at JABSOM and two are graduates of the school. The medical students were currently enrolled in JABSOM at the time of the interviews and the pre-medical students were all in the process of applying to the John A. Burns School of Medicine. Three of them are now attending JABSOM as first year students and the fourth was accepted into JABSOM's 'Imi Hō'ola Post-Baccalaureate Program⁶ and will begin as a first year student in the fall of 2007.

After each interview was completed the voice recordings were transcribed and stored. Analysis of the data gathered from the interview transcripts was done by hand and not through a software program. Since I was not looking to count the number of times a particular phrase or keyword was repeated, but rather looking for more general concepts or ideas reading through the transcripts and making notations by hand allowed me to select important passages that may not have been found through computer analysis. Issues pertaining to recruitment and retention were brought up in many of interviews such as mentoring, financial aid, and family support. Each will be discussed with corresponding narratives from the interview transcripts. It is important to note that each interview participant will be identified by their corresponding alphanumeric code (e.g., P1, K3, etc.); I will be identified by my initials, NKB.

A history of Hawai'i, her people, and her medicine

One theory of the origins of the Kanaka Maoli people states that the Polynesian ancestors of the Kanaka Maoli arrived in Hawai'i from the South Pacific in great

⁶ The 'Imi Hō'ola Post-Baccalaureate Program is a one-year long program for disadvantaged students who have been rejected from medical school for academic reasons but who still have the potential to succeed if given the proper support. The program will be discussed in further detail in a later section of this thesis.

voyaging canoes approximately 2,000 years ago and continued the tradition of trans-Pacific voyaging for several hundred years (Blaisdell 1989, 295; Blaisdell 2001, 1). Although the Kanaka Maoli introduced many plants to the islands they found themselves surrounded by a wealth of different flora in their new home and it was not long before hundreds of new uses were discovered and utilized. Ancient Kanaka Maoli were extremely knowledgeable in many scientific disciplines including: astronomy, marine biology, botany, pharmacology, evolution, human anatomy, and meteorology (Kanahele 1986, 293, 302). Traditional healers were especially skilled diagnosticians and their pharmacological knowledge was considered the most advanced in Polynesia (Kanahele 1986, 302). Bone setting, enemas, pills, ointments, eye drops, balms, and lomilomi are just a few of the many techniques utilized by Kanaka Maoli healers ('Ahahui Lā'au Lapa'au of Wailuku Maui 1867).

Kahuna lā'au lapa'au were trained much as modern physicians are and often recited the names of their teachers and mentors as they would a genealogy. Kūa'ua'u of Wailuku, Maui was one of the chief practitioners in the islands during the time of Kamehameha I ('Ahahui Lā'au Lapa'au of Wailuku Maui 1867, xxvi). Many of his students were noted kahuna lā'au lapa'au and were leaders in the practice of healing. After being chosen by a senior practitioner students attended special schools such as the Keaiwa heiau in 'Aiea (Sterling 1978, 11) to study pharmacology and hāhā⁷ using special Makaloa mats, and papa 'ili'ili, which was basically an anatomical chart made of small pebbles laid out in the shape of a man that was used to describe different pathologies ('Ahahui Lā'au Lapa'au of Wailuku Maui 1867, 198). Armed with their powerful new

⁷ Diagnosis by palpitation.

knowledge, the students were then sent to other schools across the islands to continue their education in various specialties, just as fourth year medical students are sent across the country to complete their residencies after graduation (Sterling 1978, 11).

Traditional healers used a combination of prayer and herbal medications to heal the sick. Although philosophical thought changed over the 2,000 years that Kanaka Maoli have lived in Hawai'i, in what is now thought of as "traditional" Kanaka Maoli thinking, health is the attainment of pono, or balance (Blaisdell 1989, 3). If a person becomes sick, pono must be restored between the ill person and his or her natural and supernatural environments before health is also restored. From this world view, health is intertwined with a person's wider social, cultural, and spiritual worlds (Durie 1998, 68). Illness could be caused by a variety of problems such as: accidents, poisoning, infections, excessive 'awa use, animal bites, warfare, and sickness or death by prayer (Blaisdell 2001, 201). During the treatment of a sick person the healer often instructs the person, or a helper if the person is too ill, to give an offering to the gods in addition to prayers by the healer and herbal treatments (Blaisdell 1989, 6-7; Malo 1898, 95; Sterling 1978, 11). Common botanical remedies include: 'awa as a sedative, pa'akai, 'awapuhi kuahiwi for compresses, hala and ko'oko'olau for relieving thrush, hau and guava as laxatives, and mamaki as a tonic for general health (Abbot, 1992, 97-104).

As soon as Captain James Cook made contact with the Hawaiian Islands in 1778 Western medicine and diseases began to make their mark on the islands. Epidemics of measles, whooping cough, influenza, venereal disease, smallpox, typhoid, leprosy, and bubonic plague ripped through the islands and claimed hundreds of thousands of lives (Inglis 2005, 216-218). At the time of contact with the West there were approximately

800,000 to 1,000,000 Kanaka Maoli (Blaisdell 1989, 1; Blaisdell 2001, 295; Stannard 1988, 37) and in 2000 there were only 239,655 Native Hawaiians in Hawai‘i, an estimated 4,000 of those being pure Hawaiian (State of Hawai‘i, 2002).⁸ In 1861, famed Kanaka Maoli historian, Samuel Kamakau wrote of the 1850 smallpox epidemic, one of many that gripped the islands:

The writer went into the hospital and saw for himself how fatal the disease was, even under foreign doctors....The writer himself saved over a hundred persons at Kipahulu where the government could not care for patients....The dead fell like dried kukui twigs tossed down by the wind. Day by day from morning till night horse-drawn cars went about from street to street of the town, and the dead were stacked up like a load of wood, some in coffins, but most of them just piled in, wrapped in cloth with heads and legs sticking out....On Maui there was not a member of the Board of Health who did anything to care for the sick....The whole population was wiped out from Wailuku, the uplands of Kawaipapa, Palemo and mauka of Waika‘akihi in the Hana district, and so for Kipahulu and Kaupo...for six months the epidemic lasted, by October its rage seemed spent. Ten thousand of the people are said to have died of this disease (‘Ahahui Lā‘au Lapa‘au of Wailuku Maui 1867, iii).

In the 224 years since Western contact the population of Kanaka Maoli has been decimated by Western diseases and the Kanaka Maoli began to question if their medicine had the strength to fight these new illnesses (‘Ahahui Lā‘au Lapa‘au of Wailuku Maui 1867, iv). Western medicine and educational styles soon dominated over lapa‘au and traditional Kanaka Maoli education (Blaisdell 1989, 10). Even today, many Western physicians are reluctant to accept lapa‘au and other traditional or alternative healing methods as reliable. In 1866 a group of lā‘au lapa‘au in Wailuku, Maui joined together to form ‘Ahahui o Lā‘au Lapa‘au of Wailuku to answer some of the questions raised by the

⁸ The number of Kanaka Maoli living in Hawai‘i prior to Western contact is a hotly debated point. Estimates range from 1,000,000 to less than 500,000. Within the Kanaka Maoli community the range of 800,000 to 1,000,000 people is most accepted and is a source of pride for the Native community.

reoccurring epidemics and the increasing marginalization of lapa'au. During the course of several meetings this group posed four major questions:

1. Can only the Board of Health investigate and research medical treatments for the benefit of public health? Is it against the law for others to seek alternative treatments?
2. Are there appropriate Hawaiian medicines to treat diseases present throughout the Kingdom?
3. Is it possible using traditional medicinal treatments to diagnose and treat diseases?
4. Is it better to disregard traditional medicines and to rely on modern medicine [practiced] by those appointed by the Board of Health? ('Ahahui Lā'au Lapa'au of Wailuku Maui 1867, iv)

It is important to note that these questions are still being asked today among members of Hawai'i's medical community and a familiarity with these issues is important to the culturally competent practice of medicine in today's Kanaka Maoli communities. As traditional Hawaiian medicine was further marginalized, Western medicine came to strongly dominate healthcare in Hawai'i.

Some of the first Western physicians to arrive in Hawai'i were missionaries from New England. The first one, Dr. Thomas Holman, arrived in Kailua-Kona from Boston in 1820 (Mills 1981, 273). As infectious diseases raged through the Hawaiian kingdom, affecting everyone from the maka'āinana to the highest ali'i, lā'au lapa'au were not able to combat many of the diseases brought by foreigners that caused the high mortality rate of the non-immune Kanaka Maoli. As questions of traditional medicine's competency were raised, Western doctors were charged with the responsibility of maintaining public health when Kamehameha III established Hawai'i's Department of Health in 1850 (Mills 1981, 274). This was a full five years before the first American Department of Health was opened in Louisiana in 1855 (Mills 1981, 274). The domination of Western medicine in Hawai'i continued as Queen's Hospital was opened in 1859 at the request of

Kamehameha IV and his wife, Queen Emma, after his concerns about high infant mortality and venereal disease-related sterility among Native Hawaiians, but did little to decrease the overwhelming mortality rates (Blaisdell 2001, 296; Mills 1981, 274).

By the turn of the 20th century Hawaiians had become a tiny minority of the population in their own homeland (Mills 1981, 274). According to population statistics from an 1896 census, Kanaka Maoli made-up less than 11 percent of Hawai'i's population (Mills 1981, 275). Similar to the process of physical and mental colonization that was occurring throughout the globe, faith in the old ways was quickly being lost and Western ideas replaced traditional ones (Blaisdell 1989, 10; Tuhiwai Smith 1999, 20-21). In 1867 missionaries from the Hawaiian Evangelical Association expressed the need for more licensed, native physicians to help with the maintenance of native health (Bushnell 2001, 353). There was concern regarding the thousands of unlicensed healers that were giving medical advice and prescribing treatments, sometimes doing even more damage than good (Bushnell 2001, 353). It was determined that instruction, which would take place at the Queen's Hospital, would be in the Hawaiian language and would greatly resemble a continental medical education in the form of clinical lectures (Bushnell 2001, 354).

In 1870 Dr. Gerritt P. Judd opened the medical school with just ten students (Bushnell 2001, 357). Unfortunately, the school closed in 1872 when Caucasian non-supporters of medical education for Hawaiians serving on the Board of Education recommended that the school receive no further funding (Bushnell 2001, 362). Although the medical school only lasted two years, it served an honorable purpose and set a previously unknown precedent for Kanaka Maoli medical education.

After the closure of Dr. Judd's medical school, students interested in medicine had to leave Hawai'i to complete their education. Two pioneering Kanaka Maoli physicians, Dr. Ben Young and Dr. Kekuni Blaisdell, both of the Department of Native Hawaiian Health at the John A. Burns School of Medicine, were among the students who chose this educational path. Dr. Young crossed the country to attend Howard University in Washington D.C. in the 1960s; Dr. Blaisdell received his medical degree from the University of Chicago in 1948. In 1967 the University of Hawai'i's John A. Burns School of Medicine (JABSOM) was established as a two year school with third and fourth year students sent to medical schools in the continental United States to finish their last two years of education (John A. Burns School of Medicine 2004). It was not until 1973 that JABSOM began offering a third and fourth year curriculum. 1975 saw the first graduating class of 62 students at JABSOM, four of them Native Hawaiian. Those first four students, now prominent members of Hawai'i's medical community, marked the beginning of a new era for medicine in Hawai'i. Finally, Kanaka Maoli students and other Hawai'i residents did not have to leave Hawai'i and their families to pursue a career in medicine. However, anecdotal evidence from JABSOM faculty working in admissions and at the Department of Native Hawaiian Health, the numbers of Kanaka Maoli applying and accepted to the medical school would remain low.^{9,10,11,12} Retention of such students was, and is, a major challenge at JABSOM.

JABSOM's mission statement reflects its desire for a multicultural focus:

JABSOM's mission is to teach and train high quality physicians, biomedical students, and allied health professionals for Hawai'i and the

⁹ Personal communication with Nanette Judd. May 19, 2006. Honolulu, Hawai'i.

¹⁰ Interview with K3. December 23, 2005. Honolulu, Hawai'i.

¹¹ Interview with K4. December 23, 2005. Honolulu, Hawai'i.

¹² Interview Dr. Ben Young. December 16, 2004. Honolulu, Hawai'i.

Pacific, and to conduct both clinical and basic research in areas of specific interest to our community and region. JABSOM is the most culturally and ethnically diverse medical school in the country and its student body mirrors the rich diversity of the state's population (John A. Burns School of Medicine 2004).

In 2001 former Dean Edwin Cadman expressed the need for the John A. Burns School of Medicine to remain focused on the health needs of Hawai'i's special population and the eventual creation of a Department of Native Hawaiian Health and Health Disparities, a Department of Integrative Medicine, and the creation of a lā'au lapa'au garden (Cadman 2001, 245). These efforts reflect the medical school's desire to integrate the traditional foundations of medicine in Hawai'i as well as remain a leader of medical education in the Pacific. Native Hawaiian student and faculty recruitment and retention as well as culturally relevant curriculum development were also included as goals for the medical school (Cadman 2001, 245). Today, the medical school continues this effort with the Department of Native Hawaiian Health (founded in 2002), the Native Hawaiian Center of Excellence, the 'Imi Hō'ola Post-Baccalaureate Program, and a lā'au lapa'au garden. With over 25 Kanaka Maoli students out of approximately 250 the school is still in the process of strengthening retention and recruitment techniques.

The physical, emotional, and educational effects of Western colonization of Hawai'i has had deep and long lasting consequences for the Native Hawaiian people. Although there are Hawaiian families who have prospered in Hawai'i's Westernized culture, Hawaiians are disproportionately affected by illness, poverty, low educational levels, and incarceration (Office of Hawaiian Affairs 2006, 52, 98, 114, 170; State of Hawai'i 2002). Today, there is a desire to divide Polynesian groups such as Māori and Kanaka Maoli into those who are urban (and thus, more Westernized) and those who are rural (and

stereotypically more traditional) (Durie 2005, 23). In this process Kanaka Maoli are split; the “Hawaiianess” of urban Kanaka Maoli is questioned and the capability of rural Kanaka Maoli is also put on trial (Durie 2005, 23). However, Hawaiians, rural or urban, “traditional” or Westernized, share a cultural and historical bond that separates them from the rest of the population. This theory also holds true for indigenous physicians and medical students. Māori scholar, Mason Durie, suggests that the challenge for Māori and other Polynesians is to function as Māori and as citizens of today’s global world (Durie 2005, 24-25). Therefore, it can be theorized that Kanaka Maoli students who desire to embrace and combine their roles as both Native people and as physicians should have the option to develop these roles as part of their personal and professional development.

During my own medical school application process I was told that while the number of Kanaka Maoli students applying to medical school has increased in past years, the number of qualified applicants remains the same-discouragingly low.^{13,14,15} This information suggests that current recruitment and retention efforts must be focused on developing a pool of Native Hawaiian applicants who are academically qualified to withstand the rigors of medical school and are motivated to return to their communities to practice medicine when their educations are complete.

The rest of this thesis will explore some of the barriers to Kanaka Maoli recruitment and retention and recommend solutions to overcome such barriers, such as the creation of a mentoring network of Kanaka Maoli students and physicians that will identify Kanaka Maoli students and follow them from college through graduation from medical school

¹³ Personal communication with Nanette Judd. May 19, 2006. Honolulu, Hawai‘i.

¹⁴ Interview with K3. December 23, 2005. Honolulu, Hawai‘i.

¹⁵ Interview with K4. December 23, 2005. Honolulu, Hawai‘i.

into residency and professional life. Such a mentoring program will be based on shared cultural and professional ties and will use cultural competency conferences, culturally relevant community service activities, and social events to develop students academically, personally, and culturally in order to prepare them to live and work as Native Hawaiians in a Western physician workforce. Chapter 2 explores the importance of cultural competence during the treatment of Kanaka Maoli patients and how identity and cultural affiliation affects Kanaka Maoli physicians working in a Western profession. Chapter 3 will discuss the academic, financial, and personal challenges that Kanaka Maoli students face while applying for and finishing medical school such as: the high cost of tuition and test preparation classes, lack of Kanaka Maoli professional role models, and other familial barriers. This thesis will conclude with Chapter 4, which highlights the past and current recruitment and retention efforts at the John A. Burns School of Medicine including the previously mentioned Department of Native Hawaiian Health (DNHH), Native Hawaiian Center of Excellence (NHCOE), and the 'Imi Hō'ola Post-Baccalaureate Program and the recommendation for the creation of a mentoring 'ohana for Kanaka Maoli students.

CHAPTER 2: CULTURE, IDENTITY, AND THE KANAKA MAOLI PHYSICIAN

*Ke ēwe hānau o ka ‘āina.
The lineage born of the land*

**A Native Hawaiian who is island-born and whose
ancestors were also of the land.**

-‘Ōlelo No‘eau

Cultural competence: what is it and why is it important?

In 1997 Anne Fadiman's book *The Spirit Catches You and You Fall Down* brought the issue of cultural competency to mainstream America (Fadiman 1997). The story features a young Hmong girl, diagnosed at an early age with epilepsy, and her noncompliant parents. Throughout the book the girl's physicians are constantly at odds with her parents over her treatment method. The doctors attempt to explain that with treatment the girl would live a fairly normal life, but without medication she was doomed. However, her parents refused treatment, claiming that in their culture her condition identified her as special and that whatever consequences followed their denial of treatment were, basically, meant to be. The girl, Lia Lee, now 24 years old, eventually suffered a grand mal seizure and has been in a comatose state ever since. Her story forced the issue of culture versus Western medical treatment and made readers question both Lia's doctors and her parents.

As Lia is just days older than I am, her story spoke to me. What if her doctors had been able to explain Lia's condition to her parents in such a way that they may have accepted treatment for their daughter? Would she be a "normal" 24 year old today? And if her parents still refused treatment could there be some way for the doctors to accept that their decision was right for their family and their culture? Maybe this case had no possible happy ending, but there are certainly thousands of other incidents across the country every year in which cultural differences act as major barriers between patients and the medical profession.

Cultural competency is the ability to treat patients with a degree of cultural empathy or sensitivity. As language and cultural differences remain barriers that contribute to the

health disparities of underrepresented minorities, physicians, nurses, social workers, and even teachers must exhibit a certain amount of cultural competence in their work. Many minorities are unwilling to go to the doctor due to trust or language issues until their conditions have advanced to an untreatable stage. When a patient knows that their physician will be sensitive to their culture and beliefs trust is more readily formed and barriers are overcome.

The idea of cultural competency was around in Hawai‘i long before it became a popular “buzzword” in contemporary medical education theory. The desire, and need, for Kanaka Maoli traditions to remain a part of medical treatment was aptly put when J.K. Unauna, a member of ‘Ahahui Lā‘au Lapa‘au of Wailuku, responded to the question of whether Kanaka Maoli should abandon their traditional medicinal practices in favor of Western medicine:

If I were to answer *yes* in my reply to this question then the predictions of those who speak of the demise of our people will be quickly fulfilled and our people would be cut off from their land. Such a demise would come quickly if native medicines can no longer be used... (‘Ahahui Lā‘au Lapa‘au of Wailuku Maui 1867, xxviii).

Unauna goes on to say that while kahuna lā‘au lapa‘au and their practices are dying out, Western physicians do not understand traditional medicines or techniques and asserts that the number of knowledgeable physicians must be increased (‘Ahahui Lā‘au Lapa‘au of Wailuku Maui 1867, xxviii).

The President and Chairman of ‘Ahahui Lā‘au Lapa‘au of Wailuku, J.W.H. Kauwahi hypothesized that Kanaka Maoli suffered from “hybrid” illnesses that resulted in the combination of traditional and introduced diseases and, therefore, should be cured with “hybrid” treatments consisting of both native and foreign remedies (‘Ahahui Lā‘au

Lapa'au of Wailuku Maui, 1867 #5). Although these words were recorded a century and a half ago, they indicate that the importance of cultural competence was already being recognized. While we now know that such hybrid illnesses do not exist in the same sense as Kauwahi meant. However, Kanaka Maoli do exist at the interface of the Kanaka Maoli and Western cultures and they are affected, physically and psychologically, by these conflicting cultures. While it is important for students of all ethnicities to learn cultural sensitivity, it is also important to take this idea one step further in an effort to recruit and retain both students of color and indigenous students. Durie stresses the importance of "medical pluralism" and "bicultural therapies" that utilize knowledge and techniques from both traditional and Western medicine to help bridge the gap between indigenous patients and the Western medical system (Durie, 2001 #19).

Importance of patient-physician racial concordance and cultural competency

While obtaining a medical degree is difficult for anyone to achieve the low numbers of Native Hawaiian physicians speak for themselves. According to the 'Ahahui o Nā Kauka, a professional organization of physicians of Kanaka Maoli descent, there are less than 200 Kanaka Maoli physicians worldwide and only 141 in Hawai'i, who make up only 4.4 percent of licensed physicians in the State ('Ahahui o Nā Kauka 2003). Since Kanaka Maoli make up approximately one-fifth of Hawai'i's population, it is difficult for Kanaka Maoli patients to find a doctor with a similar cultural background when there are so few Kanaka Maoli physicians (Greico, 2001). This forces these patients, myself included, to get healthcare from a non-Hawaiian physician who may have a hard time

understanding the cultural values or socioeconomic obstacles that are so common in the lives of many contemporary Kanaka Maoli.

Why more Native Hawaiians physicians are needed is a valid question. Using data from the 'Ahahui o Nā Kauka and the U.S. Census 2000, the Kanaka Maoli patient to physician ratio is 1,976:1, compared to 378:1 for the State of Hawai'i's general population ('Ahahui o Nā Kauka 2003; Greico 2001). Identifying and overcoming these unmet needs is a problem on which the very survival of the Kanaka Maoli people may rest. As one of the pre-medical students stated in his interview:

We need physicians to want to practice in the rural areas, we need physicians to go to the places that people don't want to go to. Because if not, our numbers, Native Hawaiian numbers, are going to decline even more. There are too many health problems for Native Hawaiians to ignore, too many health problems for someone to walk away because it's not their kuleana.¹⁶

However, are not doctors are supposed to provide care to whoever is in need of it, regardless of race, ethnicity, religion, or socioeconomic status? Taking this stance, the ratio of Kanaka Maoli patient to Kanaka Maoli physician also should not matter. This may be true for some patients, but the literature regarding the subject of patient/physician ethnicity suggests differently.

An article written by 'Iwalani Else, a research assistant for the Native Hawaiian Mental Health Research Development Program at the University of Hawai'i, states that "patients tend to prefer ethnic-racial concordance with their physician" (Else, 2001 #22). Another study which surveyed 3,789 adults from the continental United States via telephone sought to determine whether minority patients chose physicians of the same race (Saha, 2000 #63). The study concluded that physician race and language ability was

¹⁶ Interview with P4. January 5, 2006. Honolulu, Hawai'i.

factor for the majority of African-Americans and Hispanic patients (Saha 2000, 77).

Although this particular study was not specific to Native Hawaiians one can easily transfer the results to any minority population, such as Kanaka Maoli or even women.

While not everyone insists on having a physician whose ethnicity matches their own, it is clear that a physician's ability to relate, both culturally and linguistically, to their patients is important to minority patients as culture can be a factor in how a disease is perceived and experienced (Durie 2001, 229). For Hawaiians, receiving medical care is not just about receiving care for a medical problem, but also an issue of trust and respect. Within the Hawaiian community there is an air of mistrust of Western doctors and hospitals. These physicians and facilities are perceived as cold, unfeeling, and insensitive to Hawaiian customs and ideologies, especially when a physician insists that a patient choose Western techniques over Native ones. In short, as my uncle says, "You go in sick and come out dead." Saha suggests that increasing the number of minority physicians to keep up with patient demands could lead to decreased health disparities and increase the quality of and access to medical care for minority populations (Saha, 1999, 998-999; Saha 2000, 79). A more trusting and respectful patient-physician bond is formed when the patient feels that their physician understands their language and culture, which, in turn, can lead to increased use of the health care system and greater patient satisfaction (Durie 2002, 23; Saha 1999, 998).

Compliance, which is another major issue related to trust and respect while treating Kanaka Maoli and other minority patients, could also be increased with patient-physician racial concordance, especially in rural areas where access to Western healthcare is limited. For example, Kanaka Maoli patients who utilize traditional healing methods, or

lā'au lapa'au, may feel ashamed to admit this to their doctor if they believe they risk being scolded or ridiculed. Many Native Hawaiians also believe that body tissues and fluids contain a person's mana and should not be discarded as "biohazard" as is common, and even required practice, in Western hospitals (Pukui 1972, 37, 151). The unwillingness to admit to a physician the use of traditional medicine can lead to marginalization, or worse, serious interactions between the chemicals in Western and traditional medications. However, even if the physician has virtually no knowledge of traditional methods, if the patient believes that the physician will understand and respect their desire to use lā'au lapa'au due to a shared ethnic and cultural experience the patient will be more willing and motivated to communicate honestly. Native doctors "exist at the interface between two bodies of knowledge," the utilization of this position can increase compliance in office visits and treatment regimes (Durie 2002, 18).

Native Hawaiian epistemology and pedagogy

Many non-Hawaiians are familiar with only a few Hawaiian values, and even then, only on a superficial level. Aloha, 'ohana, mālama, kōkua, and pono are some of the most common ones and have been used as token phrases to show cultural sensitivity. Such words were pasted on the walls of my Punahou School classrooms, printed on bright copy paper. However, these values mean more than just performing occasional deeds that fit the literal definition of these words. For Kanaka Maoli they are rules which bind us together in a shared culture, history, and language in today's colonized Hawai'i and are a way for Kanaka Maoli to reassert their indigenous identities.

Over the centuries Polynesians have gone through several states of transition and are still in yet another: 1) Pacific transitions in which voyaging and settlement took place, 2) indigenous transitions where the process of forming an indigenous identity to the new home takes place, 3) colonial transitions represent the social, economic, and religious shifts which take place during colonial oppression, 4) urban transitions occur during the “Westerization” process when the Native population is moved from a traditional lifestyle to an urban environment where a subsistence way of life is difficult or impossible (Durie 2005, 3-25). Kanaka Maoli are now in the next stage: global transition. In this state, Native peoples must fight to reclaim, assert, and sustain their identities in the face of both national and global threats (Durie 2005, 24-25).¹⁷ Throughout these multiple transitions, a connection to the land, ancestors, and descendants of those who live today bind Native people in a historical and cultural context that forms the indigenous identity.

Then, and today, Kanaka Maoli have a practical, cooperation-based culture, in which every individual has a function and purpose within both their family and community (Kanahele 2005, 28). ‘Ohana and land are the essences of life in Kanaka Maoli culture.

In the words of a pioneering Kanaka Maoli physician:

Our ancestors are still with us as long as we remain connected to them and what Westerners call the physical, natural world around us, to us, it represents our ancestors. The sky isn't merely the sky, it is Wakea, the Sky Father. And the earth isn't just the earth, it is Papa, our Earth Mother. And out of the mating of those two primordial forces comes everything in our cosmos, which means everything is related, everything here is ‘ohana. That also means that everything is alive. Westerners believe that this table or this chair are not living, they are inert, inanimate. But we believe that

¹⁷ Kanaka Maoli have fought, politically and legally, to keep many of their cultural traditions alive through native gathering rights, the opening of Hawaiian language immersion schools, reburial of Kanaka Maoli remains housed in museums, the protection of Kanaka Maoli intellectual property rights, and the return of Kaho‘olawe to the Kanaka Maoli people.

they are alive, not only alive, but conscious, not only conscious, but communicating.¹⁸

Everything revolved, and still does, around the family and the interconnection between the living and non-living: the ancestors, the living, the unborn, and the land itself. The concept of familial connection across space and time is explained through the three piko: head, navel, and genitals. As the same Kauka explains,

So most people know about this piko [the navel]. It connects us in intrauterine life, each of us, with our mama right through the umbilical cord and the placenta and that's how the developing embryo, fetus receives nourishment. So, that also covers the na'au. And the na'au, the guts, is the seat of knowledge and learning and wisdom and also represents the contemporary world. But then there's the piko po'o [located at the site of the fontanel]...that connects us to our ancestors from the beginning of time, but it requires each person to maintain that connection, to talk to our ancestors, to listen to them and to be guided by them. And the third piko is the piko ma'i, the genitalia, that connect us to our mamo, our descendants, forever after us and they connect to our ancestors so there is a circular, continuous connection-it's not linear and it's timeless. Always has been, always will be, but it's up to us to maintain that connection.¹⁹

To further explain this concept of family and its connection to land is the story of the origins of Kanaka Maoli which explains why we must always remember to care for both land and family. Wākea and Ho'ohōkūkalanī gave birth to a stillborn son who was buried near their house. The grave was cared for and eventually a taro plant sprouted from the body of their son, who was then named Hāloanakalaukapalili (Malo 1898, 244). Their next son, also named Hāloa, was born strong and healthy and is said to be the ancestor of all Kanaka Maoli (Pukui 1972, 173). As the younger brother of Hāloanakalaukapalili, the second Hāloa was taught to care for his older brother, who in turn, who nurtured him with food (Beckwith 1970, 293-306).

¹⁸ Interview with K1. December 23, 2005. Honolulu, Hawai'i.

¹⁹ Interview with K1. December 23, 2005. Honolulu, Hawai'i.

This is important for Kauka, who understand that they are connected to patients through shared cultural and genealogical bonds and must care for their patients as if they are their own family. In the Māori medical community this concept has been called “whanau healing”-whanau meaning “family” (Durie 2001, 206). Of course, non-Hawaiian physicians are capable of treating patients in this manner and are capable of as much empathy as Kauka. However, Kanaka Maoli students are constantly reminded of the importance of treating patients as family by older Kauka and mentors. While all medical students go through a process of socialization to learn how to “act” like doctors before entering the medical field as physicians, Kanaka Maoli medical students, especially those connected with ‘Ahahui o Nā Kauka and the Department of Native Hawaiian Health, go through an additional process to learn how to act like a “Kauka,” including to remember to always care for patients as if they were family.

This concept of mālama has been passed down to Kanaka Maoli of today. Mālama can be applied to family, other people, and land in the way that land is part of the extended family. In traditional thinking, the kalo is literally our older brother and will provide us with food when we provide him with care. This story shows how the ‘āina serves multiple functions and maintains multiple connects as it holds the bodies of our ancestors, gives the present generation a place to call home, and nurtures future generations with abundant produce. In fact, the word “‘āina” is related to the verb “‘ai,” “to eat,” and is indicative of how important a relationship the Kanaka Maoli had with the land (Kana‘iaupuni 2006). This familial connection shows the dynamic, two-sided relationship between the Kanaka Maoli and the land; both must care for each other and the relationship takes hard work, patience, and nurturing.

Social science theory suggests that people are affected by their surroundings and studies have indicated that a sense of place and the complex identity that is tied to place is essential to indigenous thought process (Kana'iaupuni 2006; Oneha 2001). The relationship between land and people is a primary characteristic of an indigenous identity; it is from this relationship that secondary characteristics such as culture, religion, language, knowledge systems, and economics arise (Durie, 2005 #21). Because the land binds multiple generations throughout time and space it gives Kanaka Maoli a sense of where we come from, who we are, and where we are going. Indeed, the Kanaka Maoli did not believe that we could "own" the land as Westerners do; rather, it was the land that owned us and thus, provided the foundation of our knowledge system (Kanahele 1986, 178). Although the relationship that contemporary Kanaka Maoli have with the land may not be as intimate or intense as that of our ancestors, our fundamental connection is still very much alive.

While our ancestors, and the land which continues to hold them, help to guide Kanaka Maoli from beyond the physical world, our living human relations are our daily support system. Undeniably linked to land (through our relationship with Hāloa), 'ohana is the most second important value in Kanaka Maoli culture (Meyer 2003, 99). Family provided us with food, protection, connections, guidance, companionship, and love; without family life in our communal, hierarchical society was difficult, if not impossible. In today's Hawai'i family is equally important and can also include our professional and educational relations.

Traditionally, information was passed down in a genealogical fashion and as it was bestowed on a student that student became part of that particular lineage. It was common

practice for students to explain their “educational genealogy,” as is seen in the 1867 interviews of members of ‘Ahahui Lā‘au Lapa‘au of Wailuku (‘Ahahui Lā‘au Lapa‘au of Wailuku Maui 1867, 128-278). This practice is alive and well today among students of Hawaiian culture. In contemporary culture, students of lua, hula, lā‘au lapa‘au, ‘ōlelo Hawai‘i, and navigation often recite their educational genealogies. For example, as a hula student of Kaha‘i Topolinski in Ka Pā Hula Hawai‘i I was required to memorize my “hula genealogy” and tested on that knowledge on an annual basis. Essentially, my hula hālau was a family that provided support, guidance, and leadership and I became a representative of that lineage.

Inherent in this idea of educational and professional ‘ohana is one-on-one, hands-on learning. Traditionally, a teacher would select a few promising youngsters, or even just one, to pass their knowledge to. The teacher would work closely with these students through observation and repeated demonstration until finally, the student was ready for assessment and could perform the task on their own. There is an old Hawaiian saying that says “ma ka hana ka ‘ike,” which translates to “the work is the learning.”²⁰ Hawaiian learning comes directly from a respected, devoted teacher as well as from doing the work required with ones own hands, after much observation of the teacher by the student, which often required physical contact with the land itself. Although JABSOM’s fairly unique Problem-Based Learning technique (PBL), which will be discussed in further detail at a later time, should not be compared to traditional Hawaiian educational methods, it can be noted that they are based on some similar foundational concepts: small groups and hands-on learning.

²⁰ My translation.

The genealogical nature of traditional learning with a small group of other dedicated students and a master teacher creates multiple connections: 1) between teacher and student, 2) student to land as the place of learning, 3) student to student, and 4) between the multiple locations of learning. Maintaining and caring for these connections is a significant part of the traditional learning process that is reinforced in contemporary Hawaiian culture-based learning programs such as the Hawaiian charter schools (Kana'iaupuni 2006, 298).²¹

Much of the Western education system in Hawai'i serves to cut the ties between Kanaka Maoli students and the land. High I.Q., SAT scores, objectivity, and "academic" achievement via memorization, lectures, and written examinations seem to represent the apex of Western learning. Students are confined to classrooms for most of the day, sitting before a teacher who, more often than not, simply talks at them from a book, especially in high schools where students are being prepared for the rigors of college. In this environment, learning occurs largely before "doing," which is opposite to Hawaiian learning. How can students be expected to relate to environmental studies or theories of social justice without experiencing it first hand through a hike or participating in a political event such as the annual Kū I Ka Pono marches through Waikīkī? Education that uses all the senses, sight, sound, touch, smell, taste, and emotion is so much more powerful and tangible than reading from a textbook.

Hawaiian educator and University of Hawai'i professor, Alice Kawakami argues that in a curriculum which is culturally effective for Native Hawaiian students, activities

²¹ Hawaiian charter schools are privately managed public charter schools that follow the standard curriculum for all public schools, but integrate Hawaiian values, culture, language, hula, and Hawaiian-based hands-on projects into the standard curriculum. Enrollment is open to all students in Hawai'i, but many are of Native Hawaiian ancestry.

should be carried out in an authentic environment and should involve hands-on, project-based learning (Kawakami 2003, 74; Kawakami 2001, 55; Kawakami 2005, 65-67).

Manu Meyer, another Hawaiian educator, echoes the words of Dr. Kawakami and urges us to “Learn from the land and not simply about the land” (Meyer 2003, 8). Sense of place and authentic environments are central to Kanaka Maoli learning because they connect the learner with land and task by instilling a positive sense of identity and pride. Mary Francis Oneha defines sense of place as “the feelings, beliefs, behaviors, and knowledge a participant had about the land, water, and air where he/she lives and the place he/she comes from” (Oneha 2001, 301). The charter schools employ a methodology of hands-on projects that get the children out of the classroom and onto the land, learning from a respected community member about canoe building, repairing loko i’a, hale building, fishing, working in lo’i, and traveling to the island of Kaho’olawe (Kana’iaupuni 2006, 298; Kawakami 2003, 76; Kawakami 2001, 54).

The Hawaiian Studies Program at Wai’anae High School uses a similar methodology by taking students out of the classroom and onto the land (Kawakami 2001, 54). Some of the programs included plant restoration, research on the environmental conditions of Mākaha and Wai’anae streams, health promotion events and activities at the Wai’anae Coast Comprehensive Health Center, and canoe building (Kawakami 2001, 54). In these projects the students learn, first by watching their elders demonstrate and then by doing the task together, with their own hands, in the natural environment. This enables them to maintain the connections between each other and the land while instilling them with a sense of personal and cultural pride in themselves as Kanaka Maoli.

Studies have shown that the methods used by Hawaiian charter schools are successful with Kanaka Maoli students (Kana'iaupuni, 2006 297-298). For example, the 1,500 students of the New Century Public Charter Schools have higher attendance rates and higher achievement test scores than Kanaka Maoli students in public schools, which may be due to several factors such as curriculum content and small class size (Kana'iaupuni 2005, 3; Kawakami 2001, 54). Other studies have shown similar findings with Native American students who also learn best with hands-on assignments (Kana'iaupuni, 2006, 298-299). Mixing Western and Hawaiian knowledge to meet Department of Education standards with a culturally relevant delivery system can give the Hawaiian charter school students a well-rounded and culturally effective education that will also allow them to survive in today's Westernized culture (Kawakami 2001, 54). Aside from scientific study, the success of the charter schools is also apparent by the children's' faces and the way their eyes light up at the discovery of learning something new about their culture or their land.

In the contemporary Hawaiian medical community 'Ahahui o Nā Kauka and the Department of Native Hawaiian Health can provide a similar type of familial environment. There are many physicians who are eager and willing to take students under their wing and "raise" them to be competent, culturally responsive doctors. Personally, there are been a handful of Kauka who have been generous enough to share their time and knowledge with me and have made me feel welcome in the Hawaiian medical community through clinical shadowing opportunities, community service events, and academic advising. Their help has been an essential part of my education and pre-professional development. The involvement of both the Department of Native Hawaiian

Health and 'Ahahui o Nā Kauka in the development of Kanaka Maoli medical and pre-medical students will be further discussed in the last chapter of this thesis.

Interest in medicine

One of the most important topics covered in each of the interview was how each interview participant became interested in medicine. Knowing why one is interested in medicine is critical to maintaining the self-motivation and discipline needed to finish medical school. Many of the interviewees had a specific experience in their life such as a family or personal illness that gave rise to their interest in medicine. M1, a second year medical student from Kona, Hawai'i, described how her grandfather's battle with lung cancer ultimately inspired her to pursue medicine rather than a career in counseling or social work as she had originally planned.

NKB: So how did you initially get interested in medicine? Was there any one thing or one person that was inspiring to you?

M1: The thing that really impacted me was when I was 15 years old, my grandpa, who I knew was always a very strong man, he became diagnosed with lung cancer. So it was a very aggressive lung cancer. I think, from the time of his diagnosis to the time of his death it was only a matter of nine months or so. So we decided to enroll him in hospice so we were really instrumental in his care so I think that really affected me. Y'know, caring for him and just seeing the kind of pain he had to go through and just see him deteriorate from this strong, vibrant man to this, just y'know.²²

Others were interested in science and medicine from a very young age and naturally gravitated toward becoming a physician.

K2: My parents tell me I was interested for as long as they could remember, five, six years old. By the time I was in high school I had done research, medical research at Kuakini Medical Research Institute after my freshman year of high school and after my

²² Interview with M1. March 20, 2006. Honolulu, Hawai'i.

*sophomore year and there after I had done medical research with Straub Medical Research Institute. So, I started with them in '71.*²³

P4, a Kamehameha graduate and non-traditional student, told me of the many “hats” she wears in her life: student, employee, wife, daughter, and patient. While she stated she had been interested in medicine for many years her role as a cardiac patient cemented her desire to go into the medical field. Because of her permanent “patient” status she is also determined to keep her method of practicing medicine patient-centered and holistic, instead of disease specific. Medicine will allow her to combine her passions with the ability to “give back” to other patients, a desire that is common among Kanaka Maoli students.

P4: It's something that I've always wanted to do. And, well, my dad's an attorney and there was a time I wanted to be an attorney and do what he did, but in high school I realized that it wasn't to be an attorney, it was more to obtain a profession which I was able to get out of it what my dad gets out of being a lawyer, that passion, that fire and I believe that medicine allows me to incorporate the things I like to do; teach, to help, to heal and it really incorporates my past experiences as well. And it's always interesting because even though I didn't really know anyone involved in it.... I didn't major in science, but I still maintained an interest and I took some classes. But actually, when I came home...in graduate school I had some friends who took the MCAT and they said, "Oh, yeah, take it" and I said, "No, no, no" because I wasn't sure if that was the direction I wanted to go in.

So I was always interested in it, but what solidified my interest in it, it has now been almost, about a year and a half that I've had a pacemaker. So I've had a pacemaker for, yeah, about a year and a half. And that really solidified it because I was a patient of both good and bad doctors. I went through so many different things that it was also a way, I see it, as a way to give back for the care I was given. For example, I volunteer at Queen's ER and I was there so many times, for so many visits.

*So there are so many facts about why, it's something that gives me that passion, it's because of my own experience, and it's also because of what I see as a problem in the plight of many Hawaiians in the sense of their lack of resources to achieve healthcare. And being Native Hawaiian I think that if I could become a physician I could actually go into the community and help them. So there's many different facets of why.*²⁴

²³ Interview with K2. December 23, 2005. Honolulu, Hawai'i.

²⁴ Interview with P4. January 5, 2006. Honolulu, Hawai'i.

Although many of the interview participants had been interested in healthcare from a young age, some were attracted to other healthcare positions such as nursing. K4 is a faculty member at the Department of Native Hawaiian Health as well as a member of 'Ahahui o Nā Kauka. In her interview she spoke of how she entered medicine without a Kanaka Maoli role model and was, in fact, motivated by Western nursing stories. She revealed that her early inspiration and lack of a Native Hawaiian mentor or role model is a reason why she participates in the academic and professional development of young Kanaka Maoli students.

K4: Actually, since I was a little girl I was fascinated by nursing stories, Clara Barton, Florence Nightengale. And then I had an aunt who visited once, who was a nurse, I think I was about sixth grade and I remember talking to her a little bit about nursing. So I originally started out being interested in nursing. So when I was in high school I volunteered and what I found out when I was volunteering was that I was more interested in what the doctors were doing because they seemed to be the ones making the decisions in terms of the main care. And then I thought "Hmm, maybe I should look at medicine because then I can be the one to make the decisions and if I don't get into medicine then I can always go into nursing." But I actually started as a young kid, being interested in nursing. I always had this thing that I wanted to help people and I didn't like people suffering or being in pain. So I was definitely one of those idealistic ones. I really didn't have a family member in medicine.²⁵

M2: I think I was always interested in something related to health, whether that was a nurse or a doctor or some other professions, always interested in health, but I never thought I could do medicine as a physician because I thought it was too much work or I wasn't smart enough. You always hear about these horror stories about how hard it is to get into medical school. Going into college I was like, "I don't know if I can really do it." And all my friends were pre-med and I saw how worried and stressed they were about the grades they were getting and they weren't having fun. It kind of steered me away from being a physician and I was thinking of becoming a physician's assistant or a nurse. But I don't know what it was about health care. I think it's more about being able to care for people and I really love the body so being able to learn more about the body and at the same time being able to apply it to taking care of people is what got me interested, I think.²⁶

²⁵ Interview with K4. December 23, 2005. Honolulu, Hawai'i.

²⁶ Interview with M2. January 9, 2006. Honolulu, Hawai'i.

A few needed a little pushing from teachers or friends to start them on this path. Two of the Kauka interviewed for this project were originally inspired by teachers while they were attending high school. The relationships these Kauka had with their teachers continued later in life: K3's mentor went on to medical school herself and both women actually were medical residents at the same time; years after completing medical school, K4 became his former teacher's physician upon his teacher's diagnosis with lung cancer.

K3: Y'know, growing up in Na'alehu was really neat because my next door neighbor was actually the physician of the community and so I'd always go to the doctor because I constantly got sore throats, but that's all I thought a doctor ever did was look at was sore throats because that's all I ever had...I guess I was interested in medicine ever since I was a kid...And I guess my mom had always told me that she wanted me to be a doctor. So she says while I was sleeping she would tell me, "...you wanna be a doctor, you're gonna be a doctor." And she said she put these subliminal messages. Now, I don't know if she's for real, she might be, because she also told my brother, "You wanna be an engineer, you wanna be an engineer." And he's an engineer today, and I'm a doctor today. So I dunno what happened! But that was the beginning.

When I was in high school my best friend wanted to be a doctor and I think that's where it kind of solidified. A lot of it was, "Oh, I like science, I like math-I can be a doctor." It got me more interested. And my teacher, Sister Charles Marie, she's awesome, she was my biology and physiology teacher and she, I tell you, brought science alive and made it really exciting for me. So much so, that I actually asked for another class after school that she would teach. And our principal said, "No. No, aren't you taking enough credits?" But I don't really care about the credits, I just wanted to learn more. And so, actually, they wouldn't allow us to do that. It was my friend and I, the one who wanted to be a doctor and we wanted her to give us another class in anatomy and physiology, but they wouldn't allow us to do that. Small school. I think that was kind of my road. And come to find out later on that Sister Charles Marie actually became a doctor herself. So when I was a resident, she was a resident too.²⁷

K1 is one of the two Kauka I knew growing up and he has been an inspiration to generations of Kanaka Maoli students. At his interview he asked me if I knew the three reasons why people were interested in medicine. I answered: money, intellectual challenge, and a desire to help. He agreed, but went on to say while students may start

²⁷ Interview with K2. December 23, 2005. Honolulu, Hawai'i.

out being primarily interested in money or the intellectual challenge of medicine they must end up wanting to be a doctor because they have an unstoppable urge to help the sick. For many Kauka the money and prestige of being a physician is secondary to the obligation they have to their community and the responsibility to remember their humble beginnings.

KI: [A]t Kamehameha my science teacher was Donald Kilolani Mitchell who, like all of the other faculty at Kamehameha School for Boys, was fresh off the boat from America and he had come from Kansas and spent a summer here after finishing college. See, he was supposed to go back to America to go to medical school, but he never did so he fell in love with our people and our culture and our land and became a teacher at Kamehameha School, my science teacher. And somewhere around 1940 or so, asked me if I had ever thought about becoming a doctor and I said no...he had two major effects on me, he suggested that I go into medicine and that's why I did go into medical school and the second is that he began my own quest for the answer to "who am I, where do I come from, why am I here?"

And then later, when I came back to Hawaii in 1966 to help start the medical school here Kilolani Mitchell was Dr. Kilolani Mitchell. So later, after I received my M.D. degree in 1948 from the University of Chicago, he went to the University of California in the 1960s and received a doctorate in education from the University of California. And then later in the 1980s he acquired myeloma, which is a serious cancer of the lung and I became one of his doctors. So, very close relationship with Kilolani.

So, I was first motivated through science, through my teacher and then I began to think about what it meant about taking care of people, taking care of sick people, but on the inside I was too afraid to think I could become like a doctor. I didn't think...it was something that was too, too advanced, required too much. I was trained to be a blue collar worker, an electrician. I think I told you that.

NKB: No.

KI: Kamehameha Schools, oh, you need to know that, Kamehameha Schools at that time was a military school, boarding school and so-called industrial arts school. So we trained to be blue collar workers so I was trained to be an electrician. And at that time we had an extra year at Kamehameha School, we had low 11th, high 11th, and 12th grade and during high 11th and 12th grade we worked. Every two weeks we worked, got up at 4 o'clock in the morning and went to work every two weeks and then we came back and went to school for two weeks. And that was the official curriculum. And so my mindset was, y'know, be a blue collar worker, get a job, oh, got a job, don't need to get a job, because I already got a job. Already got job, have a family and that's it. A ceiling.

I wasn't supposed to aspire to medicine, that was for haoles. So it was a departure for me that came about through Kilolani and just mainly intellectual curiosity regarding science and then to think about what that meant, taking care of people. So I wasn't confident at all, initially, that I could do it. So if people think I can do it, maybe I can do it.²⁸

P3, also a Kamehameha graduate, experienced an awakening of his cultural identity while attending college at Stanford University in Palo Alto, California. It was through this maturation of his identity as a young Chinese and Kanaka Maoli man that he became interested in health disparities in Kanaka Maoli communities and, ultimately, medicine.

NKB: How did you become interested in medicine?

P3: I'm not exactly sure. It just kind clicked. Actually, for most of my life I thought I was going to be an architect or a mathematician of some sort. I always liked to build stuff. And my parents, or at least my father was a carpenter and my grandfather was also a carpenter and did a lot of work with woodwork so it just seemed natural. But I think when I went away to college I found myself in a place that wasn't familiar or comfortable so it forced me to look within to try and find myself, y'know? So part of that finding myself and that process I started some cultural reawakening. And after I left Hawai'i, I found myself clinging to Hawai'i so I began to do a lot of cultural advocacy groups and cultural exchange and education; taking Hawaiian language and the Hawai'i Club and thinking about a lot of cultural issues: what does it mean to be Hawaiian, what does it mean to be Chinese, what does it mean to be a local boy from Hawai'i?

So that carried over to my work at Papa Ola Lōkahi and then that work opened my eyes up to a lot of health disparities that Native Hawaiians have been experiencing over many years so I saw that as kind of motivation. I've always wanted to help people out I just didn't know how I could do it. So after working with Papa I realized that there was this great need for improving the health and the well-being of Native Hawaiians. So that's how I decided to pursue public health and, in parallel with that, medicine and that kind of lead me to where I am today and why I want to help people and how I can help them. And I think it's the best if I help them directly as a doctor.²⁹

The most common reason to pursue medicine, however, was a concern for the community and many of the participants are motivated by the personal relationships and trust formed between physician and patient and the web of relationships created by caring

²⁸ Interview with K1. December 23, 2005. Honolulu, Hawai'i.

²⁹ Interview with P3. January 8, 2006. Honolulu, Hawai'i.

for the community. Native Hawaiian pre-medical and medical students, especially those associated with the Department of Native Hawaiian Health and the 'Ahahui o Nā Kauka, are constantly reminded of their obligation to serve the community whether it is through community service components of Native Hawaiian scholarships, the type of research we participate in, and which communities we will practice in following graduation. Interview participants were largely driven towards medicine by a desire to care for the Kanaka Maoli community. Many have a deep concern for the health of the Kanaka Maoli people, which started as a concern for their families and community and has continued as a desire to care for every patient holistically and respectfully. These two Kauka and the pre-medical student emphasize the importance of forming strong bonds with their patients and communities as part of their medical philosophy.

K3: I like to talk to people like they're real people and I like people to make their own decisions, but I also understand that they may not know how to make their own decisions, so I try and give them enough information that they can. I like us to work together as a team and I may not be able to cure everyone, but be able to have people make the decision to be able to better themselves. So you may not need to be a stick or be the skinniest person in the world, but you need to be healthy and so if you can balance your life and balance everything else then you can basically have your own good philosophy. And I think if you're good on the inside, mentally, then physically you're going to do well. So I try and work with my patients to do that. I hope.

Well, y'know, I really like working in Wahiawa because it's just like Na'alehu where I grew up because I have a gamut of people from "Well, I just took this off the internet, Doctor, and what do you think? And I have lots of side effects and I'm thinking this is from this medication." To the other patient on the other end of the spectrum who says, "Yes, Doctor. Yes, Doctor." And they don't know what the hell I just said. And I have everybody in between and I just find that to be really neat. And I just find people to be very trustworthy and loyal. And I think communication is the key, I mean, it's the key to any relationship, but definitely the key to the patient-physician relationship because if they don't understand you, there's no way.... And I love speaking pidgin and talking a little bit Ilocano, and a little bit Japanese, a little bit Hawaiian. And I find you have to make diversity really fulfilling. I love it. I think it's fun."³⁰

³⁰ Interview with K3. December 23, 2005. Honolulu, Hawai'i.

P1: Personally, I'm interested in Native Hawaiians. I feel a responsibility, sort of, to take care of other Native Hawaiians. I mean, I want to take care of Native Hawaiians, and...I want to become a doctor. And since Native Hawaiians are such a special group of people...the disparities for Native Hawaiians are so evident...also being Native Hawaiian makes you want to change those disparities. I wonder if someone maybe not Native Hawaiian sees it the same way or maybe sees it as another underserved minority population.³¹

K4: That was always an important part of the practice to me, to sit down with the patients, talk to them, get to know them. In my experience, too, a lot of times the important things or the real reasons why they came to see you don't come out until the very end. Like, when you're ready to leave the room and then it's like, "Oh, by the way." But they'll only do that with you if they're comfortable. So if you do a 10 minute rush-through you miss a lot of the real reasons why they came in.³²

Several interview participants indicated that they wanted to use a blend of Hawaiian ways of relating and Western knowledge to effectively communicate and treat their patients. K2 offers an especially good example of this technique by describing how he needed to communicate with two very different patients: a Caucasian man at his Straub practice and a Japanese man living at Kalaupapa, Moloka'i. This story is a good example of physicians, especially Native Hawaiian physicians working in rural areas that serve very diverse populations must be able flexible enough to culturally relate to their patients no matter whom the patient is or what region of the state they reside in. Mason Durie stresses the importance of this concept in Māori medicine and encourages Māori and all Native physicians to practice this type of medical pluralism (Durie 2001, 162-163; Durie 2002, 18). Young Kauka must be confident in their own culture and identity to effectively communicate with patients that have a greater degree of acculturation to Kanaka Maoli culture as well as with patients who relate to Western culture and medicine.

³¹ Interview with P1. December 18, 2005. Honolulu, Hawai'i.

³² Interview with K4. December 23, 2005. Honolulu, Hawai'i.

M3: I think I want to be a teacher first and a counselor. I ultimately want to enter pediatrics at this point so I'll be talking to the parents a lot. I don't think I should rub a lot of the Western medicine in their faces because a lot of those patients, should I practice here, I will be practicing here, at least for a short while, a lot of those patients will be Native Hawaiian. So, they're going to believe their own philosophies too so I don't want to say, like, "lapa'au's bad, you gotta take penicillin." So I need to remember to be culturally sensitive. So maybe I can hold that position of authority and say, "You'd better consider this. Go ahead and use your methods, but use this too." Maybe if I could find a way to emphasize synergy between two different approaches to medicine that would be ideal.³³

K2: Reaching the patient. Reaching the patient...So, I think we, as Western kauka, should use scientific method to maximize the chance of an effective treatment, or cure, for our patients and we need to blend that with the sensitivity of how best to reach them. I had a patient today, who is haole, but I was his Gestapo doc at Straub...and he has diabetes and made sure he was doing diabetes Accuchecks several times a day and keeping a log. And he has a diabetes doctor and he has a cardiologist and an orthopedic surgeon and all these specialists that he has continued to see for two years, but he has never been back to a primary care doc so when he came back to me, today I asked him, how about his sugars he said, "Oh, I stopped doing that, that doesn't work for me." And his wife was there and she said, "How come it doesn't work for you?" And he said, "Well, I just don't get around to it." So I showed them a Power Point that showed them the benefit, which is Western, of a 20 percent improvement in heart attack rate by dropping the hemoglobin A_{1c} one percent, one point. And he decided to make a New Year's resolution to start it again. [R]elating to him in his way to create success.

Same thing with a Hawaiian if he's using lā'au lapa'au. I have a patient who's not Hawaiian, in Kalaupapa who was raised on Kaua'i, who is culturally Hawaiian even though he's racially Japanese. He was the great lawai'a of Kalaupapa. Net fishing, any kind of fishing, he was the master fisherman, the lawai'a. And he came in and he has an ulcer, an infected ulcer. So, what do you think he's using on the infected ulcer? Laukahi. He's using laukahi leaf instead of using the ointments and antibiotic creams that we have in Kalaupapa. He comes in, the nurses have put an antibiotic ointment on, he comes back the next day and, of course, he immediately has gone home, wiped the antibiotic off, put the laukahi leaf, re-bandaged himself and walks around with a laukahi leaf. And he believes that's curing him. And if he believes that and it looks better, who are we to debate that?³⁴

³³ Interview with M3. February 7, 2006. Honolulu, Hawai'i.

³⁴ Interview with K2. December 23, 2005. Honolulu, Hawai'i.

Identity: Being a Kanaka Maoli in Western medicine

In a field that has been traditionally dominated by white males, being a woman or a minority physician can be difficult. However, balancing traditional values with the values held dear by the Western medical system can be even more difficult as an indigenous physician. As K3 explains, not all Kauka share the same degree of acculturation with the Hawaiian culture, the relationships formed between members of the DNHH, 'Ahahui o Nā Kauka, and the students they have accepted into their group are based on shared professional and cultural bonds. Social and professional relationships, such as those formed within 'Ahahui o Nā Kauka can be helpful for emotional and professional support and help with the retention of a strong native identity. All four Kauka interviewed for this project as active members of 'Ahahui o Nā Kauka. Here, three of them share their stories about being involved with this important group and some of the difficulties associated with being a Kanaka Maoli in a very Western field..

K3: Truthfully, in Western medicine, if you are not like everyone else, you will be ousted. So, getting into having an M.D. at the end of your name, you actually, not really turn in your Hawaiian-ness, but you probably do have to work like another typical Western doctor. It's only been, I think in the past 10 years or so, and it was really 1994 that 'Ahahui o Nā Kauka was put together. Although it was a concept for many years and I remember Clayton Chong trying to put it together and I was a resident at the time. And he said, "Y'know, what do you think about putting this together?" I'm sorry, it was 1998, because it was 1999 that the present 'Imi Hō'ola started. So I remember him saying, "What do you think about Hawaiian physicians getting together and forming a group, kind of similar to the HMA-the Hawaii Medical Association?" And I said, "Y'know, I think that would be great because I would love to be a part of that kind of establishment where Native Hawaiians have, y'know, we have similar backgrounds. We may not be from all the same...but at some point we're probably all related because we're Hawaiian! The thing is, maybe there is something that sets us apart from the other physicians that are not Native Hawaiians or maybe there are some people who are physicians who don't know how to deal with Native Hawaiian patients and we can help them to understand, to do it correctly, that kind of thing. I think it brings us together. I

*don't think we're there yet, unfortunately, in being extremely cohesive in a Native Hawaiian physician community.*³⁵

K4 explains the benefit of being a part of a cohesive group such as 'Ahahui o Nā Kauka. Members of the group support one another, professionally, academically, socially, and culturally, just as members of a family would. Much of the time, young Kanaka Maoli students do not have any medical role models in their biological families. In my own situation, I have never had a family member seriously attempt medical school and not one of my childhood friends is entering the health field. Although my family and friends are supportive of my academics, the mentors and students I have met as a result of the 'Ahahui o Nā Kauka have essentially become my "medical family." K4 confirms the life-long support system that exists between Kauka.

NKB: You were talking about the 'Ahahui a little bit. Is it nice to have that kind of community, that bond, to be with other Native Hawaiian doctors?

*K4: I love it, I really do, I think we're very close, we're very supportive of one another and I love having a community of physicians that I can ask...y'know, sometimes when you're dealing with specialists or other people in the hospital and you say you need help, people usually help, but sometimes you wonder if they're being a little critical, like "Oh, what a stupid question," or something. Y'know, just for example and I never get that kind of feeling from any of the people that we work with. And I think we have a bond that doesn't exist with other groups and that we are all, we're all Native Hawaiian, we're indigenous to this 'āina, we're kind of struggling against big odds as far as the health disparities. And I just think that bond is...it just makes me feel good about what I do and who I work with and that I know I can always count on these folks if I never need them, that they'll always be there. So I think that the 'Ahahui is something that really enriches my medical and professional life. I would really feel much more alone without them.*³⁶

K2 explains how 'Ahahui o Nā Kauka is different from other professional physician's organizations in that this group is bound, not only by a common profession, but by the cultural bonds of being Kanaka Maoli. While physicians of all ethnicities socialize with

³⁵ Interview with K3. December 23, 2005. Honolulu, Hawai'i.

³⁶ Interview with K4. December 23, 2005. Honolulu, Hawai'i.

one another and form close friendships, the anecdotes from interviews with the Kauka suggest that these bonds run deeper and are fairly unique within the medical community. Having such a support system could be invaluable to a young Kanaka Maoli student whose friends and family members are not also part of the profession.

K2: Well, I'm involved on the board, as you may know, so I have a lot more meetings with 'Ahahui than some people perhaps do, and therefore, it's like the [Department of Native Hawaiian Health] here, where I have a bunch of Kauka who have the same philosophy about how to deal with our fellow kanaka. Same thing with 'Ahahui, these are, a lot of them are community physicians like Momi Ka'anoi and Gerard Akaka and Miriam Chang and Nate Wong and Bill Ahuna from Kaiser, in addition to the academics like Martina and perhaps myself and then you have others who are still finding their way, the young Kauka, but we're all bound by our culture and the relationship that we have is very different than the larger Hawaii Medical Association where everything is goal oriented and outcomes oriented and it's very Western. In the Kauka, it's process oriented, it keeps teaching us, it's relating to one another, it's how we do things, it's knowing that 20 years from now and 50 years from now, maybe even, we'll still be around each other and how we relate to each other is with honor and respect and that's very special and that's not the case in medicine.³⁷

The importance of mentoring to Kanaka Maoli students and Kauka

Mentoring was one of the most common subjects discussed during the interview process. It was important to find out how mentors, or the lack of a mentor, affected each interview participant. While many interviewees had support from a special teacher or advisor, only a few were fortunate enough to have a mentor, as opposed to an assigned academic advisor, to help them through the process of applying to and graduating from medical school. It is important to emphasize, however, that such a mentoring relationship is not completely based on traditional Kanaka Maoli values does not attempt to indigenize medical school. For the purposes of this thesis, a mentor is a professional role model to who a young Kanaka Maoli student can look up to for inspiration and guidance.

³⁷ Interview with K2. December 23, 2005. Honolulu, Hawai'i.

Ideally, this role model will help the student develop themselves professionally, academically, personally, and culturally and help to assimilate the student into both the world of Western medicine as well as the smaller circle of Kanaka Maoli working within the Western medical system.

I believe that Native Hawaiian students have specific needs, different from those of their non-Hawaiian peers, which are not being met by the current system and would benefit from culturally appropriate role models who can guide them through the difficult journey of receiving a medical degree. Like Native Hawaiian patients, who may benefit from sharing cultural bonds with their physician, Kanaka Maoli students can benefit from having a Kanaka Maoli role model. Such a mentor would help the student to academically prepare him or herself for the rigors of medical school as well as develop and retain their cultural identities while working in a very Western profession.

For many Native Hawaiian students navigating this path can be difficult without the help of someone to guide them through the complicated process of applying to medical school: pre-requisites, volunteer work, taking the Medical College Admissions Test, and the multiple rounds of applications and interviews. Mentors also function as a cheerleader when times are difficult. Just to know that someone is rooting for you and will listen to your concerns can help immensely when attempting to “get back on the horse.” When asked what kind of programs could be established to help Kanaka Maoli students get into medical school the interview participants were adamant about the importance of mentoring.

M1: I think maybe more mentoring and if possible, just hooking them up with another Native Hawaiian physician. That would've been even more inspiring for me because it can be challenging and you want somebody there that you can see the end product and be like, "Okay, that person did it, I can do it, another Native Hawaiian did it, I can do it."

*And maybe have them walk you through the process and just have them there for encouragement, even if they don't know all the answers, just having them there for counsel.*³⁸

Many Hawaiian students who do not have family members or close friends in the medical profession are at a loss to understand exactly what needs to be done before they are accepted to medical school. For example, K2 explained that he was not even aware that he needed to study for the Medical College Admissions Test (MCAT), which is a very large part of determining whether a student should be accepted to medical school. Although he did fairly well after only a single night of studying, it was not until after his rejection from medical school due to a technicality when Dr. Ben Young, now director of the Native Hawaiian Center of Excellence, took him under his wing and gave him the guidance and study material needed to attain a truly excellent MCAT score.

*K2: Mentorship, for one. I think that when Ben [Young] took me under his arm, that made a big difference for me and it took someone with an application which was probably acceptable for UH to someone who was able to get into Columbia, Duke and Penn and a whole bunch of other schools and had my pick, I had a full scholarship wherever I wanted to go. I think that mentorship is really very, very important...It's really the mentorship. It's the continuing relationship with somebody like you say. When you were in high school and there was somebody that maybe you saw only three or four times a year, but every year and you had an insight into what they did and you had an interest and they could guide you a little bit, I think that's effective. And if we can provide that, if we can make that connection I think we can take the declining number of Native Hawaiians in medical school, which is atrocious, and reverse that trend. It really is sad that right now we have so few.*³⁹

Although P2 does have an extended family member in the medical profession, he too, has greatly benefited from his association with mentor-figures from the Department of Native Hawaiian Health and 'Ahahui o Nā Kauka with research opportunities, shadowing experiences, and social support.

³⁸ Interview with M1. March 20, 2006. Honolulu, Hawai'i.

³⁹ Interview with K2. December 23, 2005. Honolulu, Hawai'i.

P2: I think that having more role models is a key. One problem with Hawaiian children today and children of the Pacific in general, they don't have many role models to follow. For me, I didn't have anybody...on my Hawaiian side that are doctors or lawyers or any of those professional jobs. I think having more role models can give Hawaiian students encouragement that they can make a difference and compete with the fast growing economy and the foreigners. Many children, they feel that they are lower [in] status to Asians or haoles or, y'know.⁴⁰

P3 agrees with the attitudes of the other interview participants. For him, mentors have given him personal and academic guidance while deciding to pursue medicine as a career and he is excited about the idea that these mentors will continue to help him throughout medical school and his professional life. Even as a pre-medical student, P3, has already made the commitment to continue this tradition of mentoring with younger students as he recognizes the value of mentoring the next generation.

P3: For sure, definitely, I think that the mentorship relationship you can have with someone is really, really important and I would almost go so far as to say that it's been pretty critical or essential to at least my dealings with the challenges or the struggles and the great times as well in trying to become a doctor and just the application process itself. Mentoring is a great thing and I would definitely open my arms and open my mouth to other students along the way, like just next week I've been asked to sit down with a pre-med who's just a junior in college right now and she had questions about what to do as a pre-med and what is the best way to go about it. Just to pass around these pearls of wisdom, it's really helpful for each generation of future doctors. I think that's pretty much about it. I think that mentoring was a big help in my journey and dealing with all these stresses.⁴¹

Related to mentoring is the formation of a genealogical network that links pre-medical students, medical students, and experienced Kauka. This concept is a little different from the standard "mentor-mentee" relationship; something more of the 'ohana-like support system offered by 'Ahahui o Nā Kauka.

P4: I think a network. Meaning, Native Hawaiians are a culture, are a people that are very tight in support systems and I think that should carry on for school. When you have that support amongst your peers or amongst those who understand, if they're mentors,

⁴⁰ Interview with P2. January 9, 2006. Honolulu, Hawai'i.

⁴¹ Interview with P3. January 8, 2006. Honolulu, Hawai'i.

*they can help nurture that experience so they can help, not ease it, but help you understand what you're going through. And if you understand what you're going through, that can help you. And I'm not in medical school, but I don't know what would help you, but if you could make that link to support, the understanding and the mentoring, someone who has been in your shoes, who could share some perspective, that would be helpful.*⁴²

*K4: So somehow we're not getting the message to [Kanaka Maoli students] that, "Hey, we need you," two, "you can do it." And I think that if we could get there and say, "If you're interested, we can help you." I think we need to start...I mean, like right now we have programs where we have, for example, like Dr. Carpenter-Yoshino or the AHEC people to go out into the schools, but y'know what, we don't really have anything at the college level and for me, that's a big puka because for me, I didn't even formally decide on medicine until I was in college. And even when I went to college, in my freshman year, I was still considering nursing or some other career. I wasn't really committed to medicine. So I think that that would help. All I know is that our numbers have gone down.*⁴³

Members of the 'Ahahui o Nā Kauka have served as mentors for many Kanaka Maoli students, including myself and it is this type of support that seems to be sought after by students who know it is available. After my own rejection from medical school in 2006, some of these interview participants were among the first people I turned to for support. Throughout this year they have helped me to continue my personal, cultural, and academic development through my work with the Department of Native Hawaiian Health, volunteer activities with the 'Ahahui o Nā Kauka, and have even scolded me when I questioned whether I should reapply to medical school.

K4: I think that if they could hook up with somebody that could continue to encourage them when the dark times come. You got the D on the test and "Oh my god, am I never going to get into med school now?" ...But if they can hook up with somebody that would be nice. And let us know that you're there. These students apply and we don't know that they're there. And I know that, like, Dr. Carpenter-Yoshino, if she knows that you're there she'll try and meet you and look over your stuff, your applicant package and we can even help do mock interviews if you'd like that. Ben Young's done interviews for

⁴² Interview with P4. January 5, 2006. Honolulu, Hawai'i.

⁴³ Interview with K4. December 23, 2005. Honolulu, Hawai'i.

*years. And look over your essays and look over [it] to make sure that you've got your shadowing experience.*⁴⁴

In all cases where a mentor was absent, the interviewee stated that they would have liked to have had one. This is unfortunate since mentoring is available for Native Hawaiian students through members of the 'Ahahui o Nā Kauka and faculty members at the Department of Native Hawaiian Health. Most students who were not able to have a mentor indicated that they did not know about the mentoring opportunities available to them. M3, who is part-Korean in addition to being part-Hawaiian, shares the difficulties he faced as a pre-medical student without a mentor.

*M3: I took the MCAT four times. The first three times were the ones that counted actually, I'll explain that later. I've always had trouble with the verbal section so that's why I kept taking it and taking it. So I would say that taking the exam was the biggest hurdle and also not having a role model or anyone to really advise me and say, "You need to do this, you need to get on the ball." I went to school where not many people entered med school. Most people wanted to do physical therapy or optometry or something, something else. So it was really hard to get motivated. Neither of my parents finished college so they couldn't really counsel me. My med school advisor was new; he had just taken the position so he didn't really know what to do. None of my classmates really knew what to do. And I didn't have any idea of how hard I needed to study or what kind of extra-curricular things I needed to do and time management. I needed help with my time management, that was tough. So, time management was a hurdle, not having a good advisor or a good counselor, not having seen anybody do this before.*⁴⁵

K3 is one of the most active mentors of Kanaka Maoli students. As a faculty member at the Department of Native Hawaiian Health and current president of 'Ahahui o Nā Kauka, she constantly brings students into her clinic and teaches them about medicine, cultural sensitivity, and life as a doctor. As one of my mentors, she was especially helpful in my development as a future physician as she was able to talk to me about how

⁴⁴ Interview with K4. December 23, 2005. Honolulu, Hawai'i.

⁴⁵ Interview with M3. February 7, 2006. Honolulu, Hawai'i.

to balance being a wife, mother, doctor, and a woman. Her passion for mentoring was clear throughout our interview.

K3: I think there needs to be a general awareness of Native Hawaiian adults that they should push their children to getting a better education, period. That they should further education, that they should finish high school, that math and science are important and are exciting. They need to help their kids to get excited about these things whether they are or not. That learning English is important, that speaking English is important, but that keeping your Hawaiian culture is important too. But I think education in regards to getting through a system, which is an American system and not a Hawaiian system of education needs to be stressed by the parents. But unfortunately, when you've got your father in jail and your mother's doing drugs and you don't have that background and you have our grandmother raising you and your grandmother's just trying to get food on the table, much less trying to teach you how to get an education, and that it's important to do things. So I think it's really hard on a lot of families. I think they look upon athletics as a very good thing. I myself, love volleyball. So I was thinking that one of the ways to get kids excited is to have people like me, or you, or other students who are Native Hawaiian go to the volleyball clubs, go check out the canoe races and make them aware that, "Hey, y'know what? I came from Na'alehu. Do you even know where that is? And I became a doctor. Well my God, if I can do it, you can do it too."

And I have to tell you, I went [back to Na'alehu], y'know, because I do some recruiting around the state. And I specifically called them and I said, "I'm from your school and I grew up there and I went there for eight years, kindergarten through either grade. Can I come talk to your seventh and eighth grade class?" And the teachers were like, "You're kidding? Yes!" And I went and I talked to all the seventh and eighth graders and I swear to God, I walked into the cafeteria and I looked around and thought, "This looks just like the kids I grew up with." And of course, they're thinking, "Eh, who's this haole girl walking in here?" So of course I went with a friend of mine, they were all making noise and the teachers were all like, "Shh, shhh, shhh." And of course, they were still all talking, y'know typical seventh, eighth grade, what do you expect? So this friend of mine who recruits with me, Kehau Bishaw, she just started chanting, she did an oli aloha and all the kids were quiet. 'Cause y'know what, almost all the kids were Native Hawaiian. So they all realized, "Here's an adult who's come to talk to us" and they all were hushed and they all paid attention after that. And I tried to give them the "Rah Rah" speech, "Y'know, this is exciting. I was just like you guys and maybe even my classmates are your parents." And I bet you they are. I was looking at the last names and, "Oh, I went to school with this family!" And I said, "So if I can do it, then you can do it."

...Y'know and I was just like, "If I changed one kid while I was there, it's totally worth my time going there." And I think that's great. So I think education is the key and I think parents don't push enough. And my parents were not to the kind [to question education], it's not, "Are you going to go to college?" It's "Where are you going to college?" And if parents don't ask that kind of questions, how is the kid going to know, "This is what is expected of me. I need to do well in high school, I need to do well in high school just to

get into college and I need to do well in college so I can go to professional school.” So as a recruiter I’ve been wanting to go into other places to just have students realize that they can do more than just what it is that they’re doing...So anyway, I just try to do the “Rah Rah” thing and y’know...And I just come across good people...and that helps me to be happy about what I do.⁴⁶

As my most influential mentor, K3’s passion for developing an academically and culturally competent Kanaka Maoli physician workforce from students who will be committed to returning to their communities is obvious. However, as previously mentioned, several Kauka mentors and the many peers I have met through my connections with ‘Ahahui o Nā Kauka have formed my “medical family.” While the network of relationships formed by the Kanaka Maoli medical community is not solely based on traditional Hawaiian values or culture, this network does resemble a family in the truest Hawaiian sense of the word. When Kauka, young and old, participate in conferences, research projects, cultural activities such as Kaho‘olawe huaka‘i, and other social activities with students of all levels, life-long familial bonds are formed. The Kauka can be confident that another generation of Kanaka Maoli are willing and able to continue their legacy of service to the community and the elimination of health disparities. Students gain the confidence and support necessary to withstand the difficulties of medical school. However, it is the Kanaka Maoli people in general who will benefit most from this mentoring ‘ohana.

⁴⁶ Interview with K3. December 23, 2005. Honolulu, Hawai‘i.

CHAPTER 3: CHALLENGES AND BARRIERS OF MEDICAL SCHOOL

*He 'a'ali'i ku makani mai au; 'a'ohe makani
nana e kula'i.
I am a wind-resisting 'a'ali'i; no gale can push
me over.*

**I can hold my own even in the face of difficulties.
-‘Ōlelo No‘eau**

Tangible barriers to medical school

Although maintenance and development of one's cultural and personal identity as a Kanaka Maoli is important to future Kauka, there are many tangible barriers that keep Kanaka Maoli students from a medical career. Financial difficulties, standardized tests, finding appropriate and academically manageable research opportunities, and the yearning for more representation of Kanaka Maoli culture within JABSOM's curriculum are all barriers that students face while applying to and graduating from medical school. While these barriers apply to medical students of all ethnicities, they are often compounded in Kanaka Maoli students who may have a difficult time balancing the development of their ethnic and cultural identities and obligations while preparing themselves for medical school matriculation or graduation, especially without the guidance of a culturally appropriate role model.

This chapter first explains the curricula of most mainstream medical schools and the Problem-Based Learning system used by the John A. Burns School of Medicine and a handful of other schools throughout the world. The focus then shifts to discussing the different financial and academic challenges faced by medical students. For example, DNHH faculty members have discussed these challenges with me on several occasions even outside of the interviews conducted for this thesis. From their own experiences as former students and current faculty members, they believe that Kanaka Maoli students have the most trouble with achieving competitive scores on the Medical College Admissions Test. They may score relatively well on the Biological Sciences, which covers Biology and Organic Chemistry, and the Physical Sciences, which tests Inorganic Chemistry and Physics, but their Verbal Reasoning and Writing Sample scores seem to

be below average. Others have difficulty maintaining a high grade point average or balancing work, school, and volunteer activities. Other students were simply not aware of the challenges that lay ahead of them and became discouraged. As previously stated, medical school is difficult for any student, however, it must be understood that for Kanaka Maoli students these barriers also exist within a cultural and colonial history that is unique to indigenous Hawaiians.

Medical curriculum: traditional and problem-based

Most continental medical schools utilize a standard four-year curriculum; the first two years are heavily focused on lecture-based learning and memorization, the third and fourth years give students clinical experience in the form of specialty rotations where the students works in various hospitals under the guidance of residents and attending physicians for a period of several weeks per specialty. Daily lectures, written and oral tests, laboratory work, and medical research are all part of a standard medical education. This method usually does not allow for much patient contact or hands on learning in the first two years and is primarily concerned with rote memorization of facts. Faculty drives what students learn and how they learn it, which is mostly in preparation for an exam. Another purpose to the medical education system is preparation for the United States Medical Licensing Examination, or USMLE, a three-step test which all medical students must pass in order to become licensed physicians.⁴⁷ Due to the overwhelming amount of information that must be packed into four years of learning many topics, such as cultural competency and alternative medicine, get glossed over or simply pushed aside.

⁴⁷ Medical students take Steps 1 and 2 during school and complete Step 3 after graduation, during their residencies.

While this method produces doctors who are highly adept at diagnostics, pharmacology, anatomy and physiology, and clinical technique they sometimes lack other important qualities such as the ability to think critically and creatively and adequately deal with and treat patients from a different culture or belief system. It would not be advisable to discard some other component of the medical curriculum, as doing so would probably do more harm than good to these student's future patients. Rather the idea should be to integrate cultural competence into the general curriculum. This idea can be akin to the method of hiding or disguising fruits and vegetables in order to integrate them into a child's diet. Eventually, the child will become so used to eating the hidden fruits and vegetables that it simply becomes part of the child's lifestyle. If students are consistently exposed to and reminded of how to be sensitive to patients of other cultures these practices should, eventually, become second nature to them.

At the University of Hawai'i, the John A. Burns School of Medicine employs a slightly different method of instruction called problem-based learning (PBL). Although JABSOM still has third and fourth year clerkships the first two years are significantly different from most other medical schools. Instead of only lecture-based learning students are broken into small tutorial groups, lead by upper-class tutors, which review and analyze 83 paper cases that highlight various conditions and patient histories (Kasuya 2000, S90). The cases are further broken into "Learning Issues" that the students must research and outline before presenting their findings to the group at the next tutorial session. While the cases are supplemented by basic science lectures as well as other traditional components such as weekly pharmacology lectures and the anatomy lab, most

learning occurs via self-motivated research and study and interdisciplinary small group presentations.

For example, the students receive a “case” that consists of a packet of information for a “paper patient”. The first page of this packet will contain the patient’s age, gender, and symptoms, the second and third pages contain medical, family, and social histories, and the physical exam results followed by lab results.⁴⁸ The students then go through a step-wise process in which they: 1) examine the information presented to them, 2) brainstorm possible conditions and problems, 3) make hypothesizes, 4) identify other information they need to know (i.e. more labs tests, etc.), and 5) identify learning issues to research and present.⁴⁹

PBL, used at just a handful of schools around the nation, gives students the opportunity to problem solve via critical thinking and to integrate knowledge from multiple disciplines within a single case. This method of teaching has been shown to facilitate memory formation, storage, and retrieval, which should help students later in their residencies and practices (Katinka 2003, 15). Also, because the students are dealing with “whole patients” instead of merely learning about a specific disease or physiological system like the circulatory system, they are able to look at the case from a more holistic point of view. The “patient’s” age, race, lifestyle, and gender are just as important to consider in each learning issue as the physical symptoms.

Patient contact is also initiated from the first year at JABSOM rather than in the third year in more traditional schools. Students are given weekly clinical skills workshops, participate in a community health elective in which they are placed in the community and

⁴⁸ Personal communication with Marcus Kawika Iwane. December 19, 2006.

⁴⁹ Personal communication with Marcus Kawika Iwane, December 19, 2006.

work with senior clinicians or researchers, and spend a half day per week working directly with a community-based faculty member in a hospital, private office, or community clinic (Kasuya 2000, S91). JABSOM students are trained, nearly from their first day, to constantly look at the whole patient, to consider more than just symptoms, but also culture, socioeconomic status, and lifestyle. One of the goals of the problem-based learning system is to make the medical process patient, rather than disease, centered.

A 1998 study by JABSOM compared student opinion regarding the curriculum the year before PBL and the year in which PBL was introduced (Birgegard 1998). The surveys were measured on a 10-point scale and asked students to evaluate how the current curriculum helped them to achieve various educational goals. Group A (n=77) was surveyed at the beginning of their third year the year before PBL was introduced. This group rated the traditional curriculum high for questions regarding studying details (7.7 ± 1.9) and studying for exams (8.0 ± 1.7) (Birgegard 1998, 47). Other aspects such as making decisions (4.6 ± 2.0) and problem-solving (3.5 ± 1.5) were rated low (Birgegard 1998, 47). The students were surveyed once more at the end of their third year; scores for studying details, studying for exams, and problem-solving all decreased while the score for decision making increased.

Group B (n=113), who had experienced PBL as part of their curriculum was also surveyed at the beginning and end of their third year (Birgegard 1998, 47). Initial scores were significantly lower than those of Group A for many questions: critical-thinking (1.8), problem-solving (2.5), formulation and definition of problems (1.6), decision-making (1.4), and study of literature for solving problems (1.6) ($p < 0.0001$ for all

indicators) (Birgegard 1998, 47). Final scores increased significantly, most noted were the areas of problem-solving, formulation and definition of problems, and study of literature (Birgegard 1998, 48). However, studying details and studying for exams remained quite low (Birgegard 1998, 48). Although students in Group B expressed a certain amount of insecurity the study indicated that the PBL system improved problem-solving and decision-making skills, both essential to the practice of medicine (Birgegard 1998, 48).

The University of Missouri Columbia School of Medicine went a step further by surveying PBL participating and non-participating faculty on their attitudes towards problem-based learning. In 1996 494 faculty members were given a questionnaire regarding satisfaction with and attitudes toward Columbia School of Medicine's new PBL curriculum including: student interest, students' basic science factual knowledge, faculty interest, personal satisfaction, learning efficiency, student reasoning, clinical preparation, and overall value (Vernon 1996, 1233). The response rate of participating faculty was nearly three times the rate of non-participating faculty (76 percent versus 28 percent) and the opinions of participating faculty were more positive than non-participating faculty in each of the survey items (Vernon 1996, 1234). It is also important to note that faculty members reported that they enjoyed closer student-faculty working relationships, saw increased student motivation, and increased comprehensiveness (Vernon 1996, 1237).

There are, however, problems with the PBL system. Critics of the system have questioned its validity and rigor and the faculty surveyed in the Columbia School of Medicine study also noted that they disliked the increased demands that PBL made on

faculty time, faculty conflicts, and the subjectivity and insufficiency of student evaluation (Vernon 1996, 1237). Due to the student-directed, self-motivated nature of the PBL system rather than the lecture-directed, faculty-motivated methods of a traditional curriculum the chance of significant deficiencies in the knowledge of PBL students is high. Students running the tutorial groups are not doctors, and therefore not experts, themselves and may miss important facts while preparing their learning issues. This may cause students to have a lack of self-esteem and anxiety when preparing for examinations and the USMLE.

Maastricht Medical School in the Netherlands conducted a study of n=424 fourth year medical students from across the country and compared PBL versus non-PBL students on the basis of perceived and actual performance in anatomy (Katinka 2003).⁵⁰ The students were given a 50 question anatomy test and asked to complete a short survey before the test, which asked the following questions:

- 1) If the total amount of anatomy knowledge that you could have acquired at this point in the medical curriculum is 100 percent, how much of that knowledge do you think you have actually mastered?
- 2) If the total amount of anatomy knowledge you must have mastered upon graduation is 100 percent, how much of that knowledge do you think you have mastered at this point in the curriculum? (Katinka 2003, 16)

Although the resulted showed that PBL students had significantly lower levels of perceived knowledge than non-PBL students their actual performance on the anatomy test showed no significant differences (Katinka 2003, 19). This study suggests that while the PBL system teaches students an adequate amount of information they may lack the

⁵⁰ Dutch medical students attend 6 years of medical school because they are able to matriculate immediately after high school.

self-confidence and higher level of perceived knowledge that students in a traditional curriculum enjoy.

Assessing students' performance on the USMLE is another method of PBL evaluation. In another study in 2000, faculty at the University of Missouri-Columbia School of Medicine (UMCSOM) compared the USMLE Step 1 and Step 2 performance of four classes of medical students who had participated in a PBL system with the USMLE Step 1 and Step 2 performance of the last two classes to participate in a traditional curriculum at the UMCSOM (Blake 2000). Results analysis showed that PBL students actually scored higher on both Step 1 and Step 2 than traditional curriculum students (Blake 2000, 69). This indicates that the PBL system may have contributed to the higher scores of the participating students and supports the higher anatomy test scores of Dutch PBL medical students in the Maastricht Medical School study.

The positive results of both of these studies show that problem-based learning is both highly innovative and successful. However, such creative teaching strategies may require evaluation methods that are equally creative and, often times, even more rigorous than traditional models. In 1992, 58 members of the first year class at JABSOM were evaluated based on a Triple-jump examination that was adapted from a similar system from the McMaster School of Medicine in California (Smith 1993, 366). The Triple-jump (TJ) examination in a three-hour long one-on-one oral exam that can be broken into three parts: Step 1 is 30 minutes long and consists of the students being given a case and having to form hypotheses based on the factual information given to them, Step 2 is a two-hour long self-directed learning session where the student is allowed to research the learning issues developed during Step 1, in Step 3 the student and faculty member come

back together and in 30 minutes the student is required to present their findings from Step 2 to the faculty member and give conclusions based on those findings (Smith 1993, 366).

The TJ is designed to evaluate knowledge of disease pathways, self-learning, communication, clinical evaluation, problem-solving, and analysis in a comprehensive, well-rounded way that is analogous to how this knowledge is presented and learned in the PBL tutorial group. In addition to the Triple-jump, student evaluation at JABSOM is supplemented by three other types of evaluation: written tests with multiple choice questions (MCQs), modified essay questions (MEQs), and laboratory practicums (Smith 1993, 366). These other tests are more traditional in nature, but still require problem-solving and analysis skills, intense memory recollection and utilization, and clinical evaluation and are complementary to the PBL curriculum. The PBL curriculum and the TJ examination method ensures that students at JABSOM are exposed to hands-on, community-based learning that is conducive to problem-solving and analysis and is more similar to a traditional Hawaiian way of learning than the mainstream lecture-based curricula of most American medical schools.

Financial concerns

Although money is a concern for most graduate and professional students, the situation is compounded for some Kanaka Maoli students. Kanaka Maolis consistently have the worst socioeconomic status in Hawai'i and make up the largest percent of people living with incomes that are 200 percent the above the designated poverty line, which is commonly used as an indicator of low socioeconomic status (Office of Hawaiian

Affairs 2006, 114). It is sometimes impossible for Kanaka Maoli families to provide as much financial assistance to their child as they would like, which is unfortunate for the student because just applying to medical school can cost thousands of dollars.

*M2: But the financial part was the limiting factor, in my experience, just because it's so expensive. I mean, you gotta pay for primaries, then you pay for secondaries, then you pay to fly yourself to the place, to the interviews, then you have to pay for lodging and food and you're paying for the time you're not working. I applied to 15 schools and I did 5 secondaries and I only went on 3 interviews and that was all. And if I didn't get into any schools, then oh well!*⁵¹

First, a student must be able to afford a college education, this is made easy enough with the wealth of scholarships and loans available to Kanaka Maoli students, especially those attending the University of Hawai'i who qualify for the Kua'ana Native Hawaiian Student Services tuition cost award. However, as a student gets closer to matriculation, the unsubsidized expenses begin to pile up. MCAT preparation courses such as those offered at Kaplan or Princeton Review cost well over \$1,000. The fee for taking the MCAT test alone is over \$200. Next, is the American Medical College Application Service (AMCAS) application, also known as the "primary," which is a common application for all schools in the Association of American Medical Colleges (AAMC). With an initial fee of \$160 for the first three schools and \$30 for each additional school, it is not difficult to end up paying \$500 for the AMCAS application.

As schools receive a student's primary application they send the student a request to complete a secondary application form. Some schools are selective about who receives a secondary application, most are not. This is unfortunate for the student since "secondaries," as they are called, come with an application fee of somewhere between \$50 and \$150 with \$100 being the average cost of application. After schools review the

⁵¹ Interview with M2. January 9, 2006. Honolulu, Hawai'i.

secondary application, competitive students receive interview requests. Depending on the number of schools applied to and the competitiveness of their application, a student may expect no more than a handful of interviews.

P3: It's very costly to apply to medical school and I had no idea. Maybe I did have some idea, but now that I'm actually going through it, I had no idea that it was going to be so expensive. On the slim chance that you'll get into somewhere, you have to reach out and apply to all these [schools] and with them, so many different fees and then you take these MCAT prep courses and what not and [the courses are] over a grand and now I'm in the interview phase and I still have to decide whether I want to fly out for these trips that will cost me about \$800 plus or so just to fly out there and then to get around and do lodging and transportation on the ground. So just a lot of financial challenges that I wasn't fully prepared for in the beginning of the game, but slowly trying to pick up on those ques and trying to learn from those who just went through the process.⁵²

This is the stage of the application process where cost becomes a major limiting factor and students sometimes must turn down interviews due to financial difficulties. After all of this, it would not be surprising for a student to spend \$5,000 simply to *apply* to medical school. While loans and numerous scholarships, especially those exclusively for Kanaka Maoli students, make medical school itself more or less affordable, the cost of applying to medical school can be a deterrent.

Challenges of standardized test taking

Test taking seems to be difficult for Kanaka Maoli medical and pre-medical students. Faculty members at the Department of Native Hawaiian Health have expressed concern over the low scores of Kanaka Maoli students. From talking with the students themselves, it seems that lack of test taking skills, test anxiety, and time management skills make test taking difficult, forcing them to take the MCAT two or more times as I, myself, had to do. Personally, test anxiety was the major reason I chose to take the

⁵² Interview with P3. January 8, 2006. Honolulu, Hawai'i.

MCAT twice. It took nearly four extra months of daily study, weekly eight-hour long practice tests on Saturdays, and constant reassuring and coaching from my friends and mentors until I was able to overcome my anxiety and achieve a higher, competitive score.

As a faculty member at the Department of Native Hawaiian Health, K4, is knowledgeable about the difficulties Kanaka Maoli students have on the MCAT and the USMLE.

K4: I think the biggest problem that our medical students, and Native Hawaiians, just from a retention side, a big challenge seems to be the boards and testing and the MCAT's on trying to get in. And part of it, I know that sometimes we kind of learn differently and I know that there are some people at UH who are kind of researching that and I think that if we could find out how to help people with those standardized tests-because I know our students are smart, because I've had them in the clinic with me and they do a great job, when they get in there and they talk to the patients, they can do all that stuff, but when they get to these standardized tests it really throws a lot of them for a loop. And I don't know if it's our schools that aren't preparing them well enough to take the test or if their learning is different.

To me, another one of the things that if we could, because I know that right now there's nothing to help support the Native Hawaiian pre-meds and MCAT prep-and I think that I may have talked to you about this years ago-there's nothing. Once you're in med school then there's resources for USMLE prep, but there's nothing for pre-meds. And if I remember from talking to people on the admissions committee one of the places where the Native Hawaiian students all get hurt is on the MCAT's. Their MCAT's are really low. So if we could find something out about that and start working with them early. I don't think you can teach someone how to do standardized testing like that in three months. You gotta get them early and have them practicing, practice because there's little tricks, y'know, the more you do them there's little tricks you learn on how to read the questions and the wording that they do to throw you off and to catch that before you fall for the trap and that kind of thing.

So if we could start with the pre-meds a couple of years, like two years at least and have you just practice, you go, "Okay, I've been through this before," you sit down at the test and you go, "I've been doing this over and over again I don't need to be nervous." And if your test anxiety is too high you make stupid mistakes. You don't read it thoroughly or you miss the key trick work or you rush, so that's one thing. The other thing I think to get our numbers up to let the students know that it's an option, that it's a career option that we need physicians, we're short Native Hawaiian physicians. I'm really disappointed

*that we don't get more Native Hawaiian applicants, even from the private schools. I think that we should be getting a ton and we're not!*⁵³

Research opportunities

The opportunities afforded to students through research projects were important in giving many of them the experiences and connections they needed to be accepted into medical school or the 'Imi Hō'ola Post-Baccalaureate Program. In fact, three out of the four pre-medical students interviewed were working for the Department of Native Hawaiian Health at the time of their interviews. The fourth, P3, had previously worked in the Native Hawaiian Health field for Papa Ola Lōkahi, a Native Hawaiian health research agency that is involved in community research and information dissemination. However, pre-medical students do not always know that research opportunities are available and never had the chance to experience being part of a real project before medical school. K3 explains how her failed attempt at a research experience with Kanaka Maoli healer, Papa Auwae, led her to help facilitate a program at JABSOM to help students participate in research projects within the Hawaiian community.

*K3: And I had the opportunity...to go work with Papa Auwae before he passed away and it was funny, as a fourth year student, they said, "Sure...you want to go to the Big Island and work with Papa, that's fine. What I need for you to do is write up your curriculum, write up your objectives and write up your evaluation and then, sure we'll send you there." And I thought, "My God, I'm a fourth year student, no one's gonna help me do it, I can't do it. And there's no way. So I didn't do it." So now, I have an elective that Kekuni started that is similar to that, where if you wanted to do that, I, as a faculty can help you, as the student do that. Because no one was there for me and I feel that this is something that's needed and it's something I will strive to help that student get because I couldn't get it.*⁵⁴

⁵³ Interview with K4. December 23, 2005. Honolulu, Hawai'i.

⁵⁴ Interview with K3. December 23, 2005. Honolulu, Hawai'i.

This lack of research experience is detrimental to students and greatly decreases their chances of being accepted to medical school, as being part of a research project often allows for opportunities to write articles for publication, learn how to conduct a clinical or community research project, and present data at conferences—all desirable skills for medical school acceptance. M1 discusses how her research on the effects of vog⁵⁵ on children's lungs helped her gain experience and the help of a valuable mentor.

M1: I've been really fortunate, actually. I graduated from UH in December 2002 and I was already working with Dr. Elizabeth Tam on her lung research. So that actually allowed me to go back to the Big Island because she was working with the vog, how vog affects children's lungs. So I got into research that way and she was a really good mentor that way. She's a faculty here, she's really strong in research, she's a Native Hawaiian woman, strong woman who's now the chair of Internal Medicine, which is awesome. So I worked with her for two years and when I graduated I increased my hours and I just worked with her.⁵⁶

Hawaiian knowledge and healing techniques in the JABSOM curriculum

While only a few interview participants thought that the inclusion of Native Hawaiian knowledge and healing techniques would help the recruitment and retention of Native Hawaiian students, nearly all of the participants indicated that they thought it would be useful to help students begin to think about cultural competence as well as how to treat Hawai'i's indigenous population with a certain degree of sensitivity.

M1: Maybe not a whole course because I don't think that's really feasible, but we can have that in our basic science foundation or something like that or a colloquia which is a required part of our [curriculum]...or maybe just a couple of lectures because we didn't even get that and I think...I heard of some of the speakers that went and talked with Dr. Hirose-Wong's students and I think that would've been really great to be offered to everyone. Especially in the first year, just a little introduction so that they can think about it in the back of their minds.⁵⁷

⁵⁵ "Vog" is volcanic fog, which contains high levels of toxic gases and causes respiratory distress.

⁵⁶ Interview with M1. March 20, 2006. Honolulu, Hawai'i.

⁵⁷ Interview with M1. March 20, 2006. Honolulu, Hawai'i.

P3: I think it's important especially coming from my motivations for becoming a doctor. I think it's important to include both sides of medicine, like treating the person as a whole [versus] treating the person with specific problems. So seeing both sides of the point in medical school would be really helpful, not only to Native Hawaiians, but to a lot of the future doctors who are going to school and who will actually end up here in Hawaii and give them some basis of knowledge or at least some basis or appreciation or respect when dealing with a patient population that is quite different from the mainland, quite different from Western, traditional, or your Western medicine as you say. So putting a little tweak on what Western medicine is can also apply to what we could probably do best for our people here. Because they are different, they have different needs, they have different modes of connecting...⁵⁸

K4: I think it would be helpful as far as increasing the cultural sensitivity of students because it would raise what I would hope, is that kind of exposure. When they go into practice that they would be comfortable talking to their patients about it and if their patients did say that they did some traditional Hawaiian healing that they would encourage it or bring it up as a possibility. Say they have a Native Hawaiian patient that's having a lot of problems and has an ulcer or hypertension because they're not getting along with their sister-that you could sit down and say, "Have you guys ever done ho'oponopono?" Y'know what I mean? I would love to see it incorporated and I think that the med school would be fairly open to it, really, except for the fact that because of the way it's designed right now with PBL it's so hard to get a chunk of time out of the curriculum because every minute is accounted for and the biggest challenge is, how do you kind of work with that and sneak that in because there's a lot of other people who have other good ideas on how to make the curriculum better that can't get in either."⁵⁹

As a faculty member who actively works on the recruitment and retention of Kanaka Maoli students at JABSOM, K3's comments on this issue are especially worth noting. She points out that while the PBL system at JABSOM allows for the discussion of cultural issues within each case study, the amount of discussion is largely dependent on the individuals within a particular group as well as the tutor themselves. Since no standard curriculum for cultural competence exists at JABSOM, students' understanding of this issue can vary widely. K3 also notes that cultural competency education is especially important for those students who enter medical school without exposure to a wide variety of cultures and communities.

⁵⁸ Interview with P3. January 8, 2006. Honolulu, Hawai'i.

⁵⁹ Interview with K4. December 23, 2005. Honolulu, Hawai'i.

NKB: The next question is, thinking about the inclusion of traditional Native Hawaiian medical knowledge in the current curriculum, do you think that increasing the amount of Hawaiian knowledge or epistemology in the curriculum would be an effective recruitment or retention tool for Native Hawaiian students?

K3: I definitely think so. We have a lot of student who actually have a lapa'au background who are interested in joining that Western and traditional medicine. And y'know, it's funny, we always talk about Western medicine, we're really a take-off of traditional medicine, it's not the other way around. And I definitely think so, we do not have enough stuff in our curriculum...It's actually already quite understood that there needs to be more in the curriculum. Why? Because we're in Hawai'i and there's Native Hawaiians in Hawai'i, that's why! And even though the curriculum is run mainly by non-Native Hawaiians, they are certainly aware of this. So in the problem-based learning curriculum, in the problems they've put together they've tried to be very culturally appropriate or culturally aware to have the students learn how to do things and how to put things together so that they can understand that this patient is from this particular community. Then [the students] need to think about this or maybe there are some social/economic concerns or some cultural concerns that would be different if the patient was from somewhere else. But it's some times hit or miss because it depends who your moderator is or your group...Then they may not say anything and the students may then actually miss the point. So that's why they actually have tutor notes so the tutor then actually brings up certain things and they have a lot of information on professionalism, but a lot of it is about cultural aspects, definitely with Native Hawaiians.

But I always get a number of students who are saying, "Y'know, are we learning more traditional stuff?" And I think they're trying to make it as an elective thing, I don't know if they would really put it in as a "you need to learn all this stuff." I don't think everybody needs to learn every single cultural whatever, you need to be aware of it. I think if you're studying in Hawai'i you need to know about the Native Hawaiian culture, period. So that's what I think and I think it'll work out very good. But y'know, things move very slowly in the world of academia so by the time you get in and you get out maybe we'll...So you can help us putting some things into action by saying, "Hey, this is missing." Because we also need people to say, "Hey, we didn't learn about this." Or what happens is that the Native Hawaiians, they already know it, it's the other guys who say, "Oh, was I supposed to know that?" And you, as a Native Hawaiian says, "Uh, didn't you know that already?"⁶⁰

Another question pertaining to the inclusion of Native Hawaiian cultural knowledge into the medical school's curriculum was whether this knowledge should be required or optional. Most interview participants indicated that they would like to see such

⁶⁰ Interview with K3. December 23, 2005. Honolulu, Hawai'i.

knowledge included as required learning, but many felt that it would be difficult considering how full the curriculum already is.

P3: I think it would be useful as a requirement. I know in some medical schools they do have it, they call it their “fluffy” class because it’s dealing with non-hard core science material, but I think it’s equally important to talk about the softer side of medicine, the ethical issues, the humanist perspective, the issues about cultural competency. As far as it being an elective or a requirement, that’s a tricky one. I would like to say that it should be a requirement, especially if you’re going to work in the Hawaiian community, but not everyone who goes to JABSOM will work in the Hawaiian community, ultimately. So, I guess, just to be safe, maybe we could start it off as an elective and I think it would be really helpful, helping students who want to work with Native Hawaiians to learn more about the proper methods of dealing medicine and dealing with cultural issues as well.

...I think it could be an incentive for students who are passionate about working with people from Hawaii and Native Hawaiians to see that the school is supportive of and even promoting of this kind of cultural awareness that we sometimes lose while practicing medicine because it’s so hard science, it’s so cut and cold, to the point. I think it would be useful to trying to recruit and even to retain students who are particularly interested in that kind of field.⁶¹

P2: I don’t know. I guess it would be good for it to be required, but I know that there’s so much material other than maybe wanting to learn the Hawaiian culture that is essential to administering good medicine in the future so I think that if they can fit it in, if they can find a way to fit cultural classes into the medical school education, I’m all for it.⁶²

There are a variety of barriers that face Kanaka Maoli students as they work to matriculate and graduate from medical school. Learning how to balance family and school, test preparation, mentoring, and financial assistance are all critical to the success of a Kanaka Maoli student. The next chapter will focus on current and past ways JABSOM has attempted to increase recruitment and retention of Kanaka Maoli students. I will also look at examples of recruitment programs for minority and indigenous students at other schools throughout the nation and in the Pacific before concluding this paper with recommendations for JABSOM’s recruitment and retention efforts.

⁶¹ Interview with P3. January 8, 2006. Honolulu, Hawai‘i.

⁶² Interview with P2. January 9, 2006. Honolulu, Hawai‘i.

CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS

He pūko‘a kani ‘āina.

A coral reef that grows into an island.

**A person beginning in a small way gains steadily until
he becomes firmly established.**

-‘Ōlelo No‘eau

Past programs focusing on recruitment and retention of Kanaka Maoli students at JABSOM

If increasing Kanaka Maoli patient trust, satisfaction, and compliance means making more Kanaka Maoli physicians available to the community then the recruitment and retention of Kanaka Maoli medical students must be a top priority for JABSOM. There have been several past and current attempts at JABSOM to address the lack of Native Hawaiians in medical school such as the ‘Imi Hō‘ola program, the Department of Native Hawaiian Health, and the Native Hawaiian Center of Excellence. There are also community organizations such as ‘Ahahui o Nā Kauka, Kua‘ana Native Hawaiian Student Services, and Papa Ola Lokahi, which can offer emotional support, volunteer and work experience, and financial assistance to Kanaka Maoli students.

One not-so-obvious way in which the medical school has tried to integrate a Native Hawaiian “presence” in the medical school is through the PBL curriculum (Little 1996, 227). Many PBL cases deal explicitly with diseases and conditions that disproportionately affect Kanaka Maoli people such as cardiovascular disease, diabetes, obesity, asthma, bipolar disorder, and substance abuse (Little 1996, 227). In 1996 36 out of a total of 65 cases studied during the first two years in medical school feature Kanaka Maoli patients (Little 1996, 227). As previously explained, the PBL system supports intimate, hands-on learning that relies on students’ problem solving and analysis skills. Tutorial groups are small and family-like; each student is responsible to help teach and support their classmates. This methodology is conducive to the formation of strong social, academic, and professional bonds, much like the bonds formed between members of a hula hālau, canoe club, or lua pā. However, the medical school has made other efforts to support Kanaka Maoli students in more ways than the PBL system.

The cornerstone of Kanaka Maoli presence at the medical school is the Department of Native Hawaiian Health, which was founded by a grant from the National Institutes of Health in 2002. Headed by Dr. Marjorie Mau, the DNHH houses both academic programs and research projects concerned with Native Hawaiian health such as the Native Hawaiian Center of Excellence (NHCOE), the 'Imi Hō'ola Post-Baccalaureate Program, and the Hawai'i EXPORT Center. Because the DNHH is associated with so many aspects of Native Hawaiian health through research projects in Native Hawaiian Health, community health agencies, the Native Hawaiian Health Systems (NHHS), and professional associations such as 'Ahahui o Nā Kauka, Hawai'i Primary Care Association, and the Hawai'i Medical Association, an association with the DNHH can offer Kanaka Maoli students a wealth of opportunity, knowledge, and support throughout college and medical school.

The largest and most visible component of the DNHH is the Native Hawaiian Center of Excellence. Funded by a Health Resources Services Administration grant since 1991, the purpose of the NHCOE is to engage in activities that will actively help the Native Hawaiian community in addressing its serious health concerns. Under this grant NHCOE must meet six criteria: faculty development, recruitment, retention, research, rural services placement, and information resources/cultural competency⁶³.

In 1998 Dr. Benjamin Young, the first Native Hawaiian psychiatrist, began as the director of the NHCOE. Prior to this, the Center had gone through a series of directors, each of whom had a different vision for where it should go. Some wanted to focus on research, some on recruitment and retention, and still others who felt that faculty

⁶³ Interview with Dr. Martina Kamaka. April 25, 2005. Honolulu, Hawai'i.

development was the most important factor in helping Native Hawaiian students through medical school. With Dr. Young's new position as director he felt that the NHCOE should focus on faculty development, research, and cultural competency as ways to help increase the number of Kanaka Maoli medical students applying to and graduating from medical school. In order to achieve this he started a database clearinghouse to collect all of the information that has been written on Native Hawaiian health. Under Dr. Young's leadership, the NHCOE also runs conferences to increase cultural competency, both for Native Hawaiian as well as non-Native physicians.

The Center of Excellence is housed in the Medical Education Building at the new medical school in Kaka'ako and the employs several members of 'Ahahui o Nā Kauka who can provide critical mentoring services to future Kauka. Also, links to Native Hawaiian scholarships, an event calendar, and databases on Native Hawaiian health are maintained on their website⁶⁴ which is used to further assist and engage Kanaka Maoli students. NHCOE has now become a "home base" for Native Hawaiian students entering into the medical profession and should be taken advantage of as much as possible.

One of the most important projects within the NHCOE is the Native Hawaiian Center of Excellence Research Program (NHCOERP), which is offered to first year medical students as an option to fulfill their community health elective (Hirose-Wong 2004, 52-53). One of the research advisors, Dr. Shannon Hirose-Wong states that the NHCOERP has four main objectives:

- 1) provide interested students with a basic introduction to scientific research;
- 2) increase awareness of Native Hawaiian health issues and research opportunities in Native Hawaiian health;
- 3) provide students with

⁶⁴ NHCOE's website can be found at <http://www.hawaii.edu/nhcoe/>.

opportunities to conduct original research or work with a research mentor; and 4) expose students to lapa'au...(Hirose-Wong 2004, 52).

Students learn, not only how to conduct scientific research, but also are taught to be sensitive to their research subjects and learn the proper protocol that needs to be followed while working with Kanaka Maoli communities. Although this research program is available to students of any ethnic background, it provides Kanaka Maoli students the opportunity to conduct culturally sensitive research on topics that directly benefit Kanaka Maoli health.

Some of the projects recently completed by students in the NHCOERP include: Examining Native Hawaiian Health Care: Taking a Closer look at Native Hawaiian Physicians; Indigenous Pōpolo (*Solanum americanum*) an investigation of Solanine Content; Evaluating the Effectiveness of Kukui Nut Oil in the Treatment of Psoriasis, Improving Morbidity and Mortality in Extremely Obese Native Hawaiians Through A Culturally-Based Exercise, Diet, and Behavioral Modification Program; Cultural Variations in Cancer Pain Expression; and Ethnicity and Psychiatric Admissions, Diagnoses, and Treatment Outcomes (Hirose-Wong 2004, 53). Students work closely with research mentors to employ hands-on, community-based learning at community health clinics and community hospitals and some students concluded their research by presenting the results of their projects at conferences and submitting their research for publication (Hirose-Wong 2004, 53).

The next most visible program at the Department of Native Hawaiian Health is the 'Imi Hō'ola Post-Baccalaureate Program. Prior to the inception of any programs aimed at assisting Native Hawaiian students, Dr. Windsor Cutting, the first Dean of the medical school, was concerned that Native Hawaiian students were not applying to medical

school at the University of Hawai‘i and the rare few who did were immediately turned away due to low GPA and MCAT scores or because they were not the “typical” candidate for medical education (Young 1998, 375). This prompted Dean Cutting to start a guest program with spaces for Kanaka Maoli students where the students would complete the first two years of medical school in three years.

A federal grant was obtained and a new program, named ‘Imi Hō‘ola by Mary Kawena Pukui, was started to increase the number of disadvantaged minorities in the medical field.⁶⁵ While the program is open to all ethnicities, Native Hawaiians are, by far, the most represented ethnic group in the program and it has contributed to the education of prominent several prominent Native Hawaiian doctors.⁶⁶

The “Imi Program” is conducted in three “Phases”. Phase I is an initial assessment of each student’s strengths and weaknesses in the basic science areas as well as in critical thinking and reading (Judd 2001, 448). Phase II focuses on a review of the science classes that all pre-medical students must take such as biochemistry, organic chemistry, biology, while learning some basic medical problem solving skills (Judd 2001, 448). Phase III is the transition into medical school by receiving first hand experience practicing the clinical skills that will be taught to them during their first year of medical school (Judd 2001, 448). Like the PBL curriculum in the M.D. program at JABSOM, the ‘Imi Hō‘ola Program uses small group learning and hands-on experience to teach basic science, clinical skills, and cultural competence. Once students have successfully completed their training in the ‘Imi Program they are automatically accepted to JABSOM for the following school year.

⁶⁵ Interview with Dr. Benjamin Young. December 13, 2004. Honolulu, Hawai‘i.

⁶⁶ Interview with Dr. Benjamin Young. December 13, 2004. Honolulu, Hawai‘i.

In addition to the NHCOE and the 'Imi Hō'ola Program, the DNHH also houses the Hawai'i EXPORT Center (HEC), which is focused on community-based research and eliminating health disparities in Kanaka Maoli and other Pacific Peoples and has been funded through a 2002 grant from the National Center on Minority Health and Health Disparities. The DNHH also works with the Hawai'i and Pacific Basin Area Health Education Center to provide outreach and recruitment to junior high and high school students across Hawai'i as well as a garden for traditional healing plants located next to the Bioscience Research Building on the Kaka'ako campus. Faculty members are also currently working on a new cultural competency curriculum to expose students to Native Hawaiian Health through hands-on experiences in the community.

Recruitment and retention programs at medical schools on the continental United States and in the Pacific

The task of recruitment and retention of minority and indigenous medical students has been explored in many medical schools throughout America. Schools have implemented many types of programs to attract Native American, Alaska Native, African-American, Mexican-American, and Asian-American medical students. Similar to Kanaka Maoli students, other underrepresented minorities (URM) face the medical school application process with low GPAs, low MCAT scores, inadequate preparation in the basic sciences, financial hardship, and a lack of guidance or mentorship from family or teachers (Girotti 1999, 370). One of the main objectives of these programs is to develop a competent and competitive pool of minority applicants who will, hopefully, one day serve underrepresented minority populations in both rural and urban settings.

Summer enrichment programs for high school students or pre-medical college students are popular choices for recruitment and retention techniques. Southern Illinois University School of Medicine offers a two summer programs for high school students: the Health/Science Careers Pathway Program and the Summer Research Apprenticeship Program (Jackson 2003). Both programs aim at preparing URM students for a successful college career and eventual entry into a health profession.

The University of North Carolina Chapel Hill School of Medicine and the East Carolina University School of Medicine both offer summer enrichment programs for URM pre-medical college students: the Medical Education and Development Program and the Summer Program for Future Doctors, respectively (Hardy 1999; Strayhorn 1999). Both programs attempt to develop student's academic performance and increase readiness for medical school through test preparation, a basic science curriculum, and learning strategies (Hardy 1999; Strayhorn 1999).

The Medical/Dental Education Preparatory Program (MEDPREP) at the Southern Illinois University School of Medicine and the post-baccalaureate program at the University of California Davis School of Medicine are both academic development programs for URM students who have not yet been accepted into medical school (Blakely 2003, 437; Jackson 2003, 449). Similar to the 'Imi Hō'ola Program students who show promise as future doctors, but simply do not have the MCAT scores or GPAs to be competitive applicants. These intensive programs focus on building a student's knowledge of basic science, clinical skills, and interviewing and interpersonal skills (Blakely 2003; Jackson 2003).

Although these programs proved to be of great benefit to both the students and the universities through increased MCAT scores and GPAs for the students and an increased number of URM applicants and matriculants to the universities, these programs would not be suitable models for a Kanaka Maoli recruitment and retention program. None of these programs offer a cultural component in their curriculum and are largely based on a traditional lecture-based curriculum. In addition, none offer any long term mentoring, which is critical to Kanaka Maoli student development. These deficiencies may be due to the fact that these programs are not just geared to one specific ethnic group, but rather all under represented minorities and it would be difficult to be create a curriculum that has cultural components that represent each ethnic group. The lack of long term mentoring may be attributed to the fact that these programs are not meant to follow students, but are simply a means to an end: to prepare a student for medical school.

The University of Washington School of Medicine (UWSOM), however, stood out in their efforts as they specifically target Native American and Alaska Native students through methods that are almost identical to those used at JABSOM. In 1992 the UWSOM, which serves students from Washington, Wyoming, Alaska, Montana, and Idaho, established a Native American Center of Excellence that is charged with the task of recruitment and retention of indigenous medical students (Acosta 2006, 864). Funded by the same national grant as the Native Hawaiian Center of Excellence at JABSOM, the NACOE offers several programs aimed at Native students: a summer enrichment program for undergraduates; a pre-matriculation program for accepted medical students; culturally relevant mentoring; the Indian Pathway curriculum that exposes students to Native practitioners; and opportunities for community-based, culturally appropriate

research (Acosta 2006, 885-886). Out of the 447 students that have participated in one (or more) of UWSOM's enrichment programs 102, or 22.8 percent, have been accepted into medical school, which is a success for both the students and the university (Acosta 2006, 868).

This problem has been addressed by the Auckland Medical School through a program called Vision 2020 in which 10 percent of all medical students trained in Aotearoa will be Māori by the year 2018 (Durie 1998, 205). Part of this vision is a program that gives preferential acceptance to Māori and Pacific Islander students (Durie 1998, 205). Since the socioeconomic and health statuses of the Māori people mirror those of the Kanaka Maoli, the lack of Māori physicians in Aotearoa has become a significant concern. Schools such as the Auckland Medical School also recognize the fact that a Māori healthcare workforce must be developed and that health workers must take a team approach that features physicians, community health workers, allied health workers, and traditional healers (Durie 1998, 203).

After a brief examination of JABSOM's current recruitment and retention techniques along with some of the more popular methods from other schools throughout the United States and the Pacific, we can have a clear picture of what Kanaka Maoli students need to prepare themselves for medical school. In this last section, I will outline a program that I believe would greatly benefit Kanaka Maoli students, of all ages, who are interested in a medical career.

Recommendations and Concluding Remarks

Mentoring can help achieve balance, which is an essential Hawaiian value. Many Kanaka Maoli students have a difficult time achieving balance between family, work, and

school and a relationship with an older student and physician who they can count on would help with this problem. Through my own personal experiences and conversations I've had with many of the Kanaka Maoli students at JABSOM I have found that even without the help of official mentors, Kanaka Maoli students form deep bonds as friends, classmates, and future colleagues. The bonds that form before medical school begins, during college, MCAT preparation classes, and orientation last for years to come and often remain strong as is seen with the first four Kanaka Maoli JABSOM graduates. However, before these bonds can begin to form, the students must be introduced to one another and the older Kauka as members of their future academic and professional 'ohana.

While JABSOM currently recruits Kanaka Maoli students through the efforts of the Department of Native Hawaiian Health and mentoring is available through individual members of 'Ahahui o Nā Kauka and Department of Native Hawaiian Health faculty members, current programs and opportunities are fragmented or unstable and more needs to be done. I propose that a formal, comprehensive mentoring program be established that can take a student from initial contact with the Department of Native Hawaiian Health through medical school graduation and possibly even into residency. While this type of program may not be beneficial to those Kanaka Maoli students who already have close family members in the medical profession, it will greatly benefit those who lack any sort of family guidance. In essence, a mentor will become like their "medical parent" and other students will become "medical siblings."

Initial contact with a student can occur at nearly any time in the student's academic career. Some interested students seek out assistance while they are still in high school,

others are not “discovered” until college or while they are completing post-baccalaureate work. Since high school students and graduate level post-baccalaureate students have vastly different needs, this program should be able to accommodate students of all ages. For example, a younger student might need help choosing a hospital to begin volunteer work or help in deciding which college to attend; college students usually look for tutoring in science classes and shadowing or research opportunities. Older students, in graduate school or completing post-baccalaureate classes often have different concerns than younger, traditional aged college students. They may have children, spouses, or ailing parents or grandparents to care for; balancing school with caring for children, a spouse, or other family member while working to pay for household expenses can be an enormous drain and having someone who has already lived through it available, even just to talk, can be a great help.

Current programs at JABSOM and other schools are also very fragmented and do not provide longitudinal support for students. While students must be proactive about their education and the support they receive throughout their schooling, it is easy for them to “slip through the cracks” and become lost in the system. This may be especially true for Kanaka Maoli students who are often less aggressive and less willing to extend themselves to ask for help than their non-Hawaiian peers. Speaking on behalf of myself and several other Kanaka Maoli students, we are sometimes afraid to ask for help so as not to inconvenience anyone else and will quietly attempt to figure things out on our own. This method does not work to the student’s advantage. One barrier that held me back from formally shadowing a physician until I was in graduate school was my lack of self-confidence to ask. I kept thinking to myself, “Why would a busy doctor want to go out of

their way and help me when they don't even know me?" Many of my other friends had already been shadowing for years, but gained those contacts through family members who are in the medical profession. I didn't have those kind of connections and had no idea who to ask for help or how.

It wasn't until a faculty member at the Department of Native Hawaiian Health offered to look at my AMCAS application that I had an official chance to shadow someone. Sitting in her office in Kaka'ako, she held my application in her right hand and, looking up from it, slapped my arm and declared, "You haven't done any shadowing yet!" I replied, "No, I haven't." After I had explained to her why, she asked, "Well, is Wahiawā okay?" I was delighted and couldn't wait to start. Looking back, I wish I had just had the courage to simply pick up a phone and ask someone for an opportunity, but I also have to remember the reality that I didn't have the slightest clue who to call.

This places a responsibility on JABSOM and the Department of Native Hawaiian Health to extend their hand toward students. Recruitment efforts must be intensive and persistent; even if a student seems hesitant at first, keep on them! Don't let them fall through the cracks. As I commented in a recent Department of Native Hawaiian Health Recruitment and Retention Task Force meeting, "Students need harassing!" Mentors need to stay in contact with their students, even if it is only a phone call or e-mail one or twice a month. There may be times when the students will not reply, but still appreciate the contact. This can also help a student's morale. To know that someone is thinking about your academic progress and knows how to help, especially when family is even more unsure about the process than the student, is very comforting.

A database should be set up to store student's information and periodic "check-ins" should be made to keep contact information current and to monitor the student's progress. If students know that someone, preferably the same person consistently, is keeping up with their progress the student will be more willing to ask questions or seek help. If the student does not have a friendly face or voice to connect with the Department of Native Hawaiian Health and contact is lost, all of the wonderful resources housed at JABSOM are of no use to the student. At this point, it may be years before the student renews contact with the Department of Native Hawaiian Health or another health agency such as Papa Ola Lōkahi or 'Ahahui o Nā Kauka. In other cases, it may be too late and the student continues on another path.

Ideally, this mentoring program would connect physicians, older students, and younger students together as a family. Physicians can be paired with multiple students (if they wish) and students would get the added benefit of meeting fellow Kanaka Maoli medical or pre-medical students. Meeting other Kanaka Maoli students was a highlight during the 10 months I shadowed K3 at her rural clinic. As previously explained in Chapter 4, K3 is an active mentor and faculty member at the Department of Native Hawaiian Health and constantly has a stream of students flowing in and out of her office. Her students run the gamut of age and experiences from pre-medical students such as myself and interview participant P2, 'Imi Hō'ola students, third and fourth year medical students completing their internal medicine rotations, to residents. There were many times when I would sit and talk with older students about medical school or the MCATs or the application process while waiting for K3 to arrive for the morning or finish with a patient. I was also able to observe the active learning process of taking a patient's history

and presenting that information to the physician that upper-class medical students participate in. This was very helpful in my understanding of how a medical education operates; it was as if I was getting my own private PBL demonstration. Now, as a staff member at the Department of Native Hawaiian Health I often see these older students at the medical school and enjoy catching up with them outside of the clinic. Hopefully, these bonds of friendship will remain in place in the future.

Although academics should clearly be the focus of a medical education, social bonds such as those described in the previous paragraph, are also of extreme importance. For Kanaka Maoli, family and personal connections are some of the most important things in life. As explained in Chapter 2, these bonds extend far beyond the family in Kanaka Maoli culture and are present in school, work, and social life. K3 once explained to me that the world of physicians is quite different from the world of non-physicians and medical students must go through a process of socialization in order to assimilate to this new world. This transition is difficult for many students, especially Kanaka Maoli. Having an 'ohana-like support system can ease this transition, just as a parent raises a child and eases the transition to adulthood.

Considering many Department of Native Hawaiian Health faculty members are already members of 'Ahahui o Nā Kauka, the Kauka's social and community service activities are the perfect venue for culturally supportive medical socialization. The Kauka often participate in fun and exciting cultural events such as a trip to Pu'u Koholā in August 2005, the Kū I Ka Pono fun run in January 2006, the 'Aha Kāne in June 2006, and a trip to Kaho'olawe in August 2006. By interacting with the Kauka during social events or trips students are able to get to know the Kauka as more than just doctors and

teachers. It is important for Kanaka Maoli students to know that once they receive their M.D. they don't have to turn over the rest of their identity: you can still be a spouse, parent, child, and a Kanaka Maoli even though you are a physician. Inviting students to attend events as volunteers or just as "junior members" gives the student important networking opportunities, but more importantly, makes the student feel welcomed in the Hawaiian medical community.

Some of the most rewarding moments in my journey toward medical school have been the times spent with Kauka outside of working at the Department of Native Hawaiian Health or at a clinic. Various scenes pass through my mind and I remember them fondly: sitting in the old Native Hawaiian Center of Excellence office at the Biomedical building at the University of Hawai'i's Mānoa campus working with K3 and K4 on my post-baccalaureate class schedule; discussing sovereignty over poi and poke with K1 at his comfortable Nu'uaniu home; manning the Kauka table at the January 2006 Kū I Ka Pono Fun Run with a fourth year student, about to embark on his residency training. However, the memories of the Kauka that I cherish most have all occurred on the island of Kaho'olawe. Twice now I have trekked across the blood red terrain of the island with K3; the first time which was in 2001, we watched in awe as K1 sped ahead and simply left us in his dust. This July, I was able to talk with one of the original four Kanaka Maoli JABSOM graduates about how he balanced his activist work with completing his intern year of residency at the Queen's E.R. *and* passed Step 3 of the USMLE. In August of 2006 I returned to the island with the 'Ahahui o Nā Kauka and once again, laughed and learned with my medical 'ohana.

Even though no one in my family has ever attempted to attend medical school, I have been fortunate enough to find a few additional “family members”: members of ‘Ahahui o Nā Kauka, faculty members at the Department of Native Hawaiian Health, and fellow students have become a surrogate medical ‘ohana. It is this ‘ohana system that I wish was available to every Kanaka Maoli student who aspires to be a doctor. Although I know that ‘ohana cannot be quantified in a curriculum or formal mentoring program, this is what recruitment and retention efforts at the Department of Native Hawaiian Health should strive towards. Students should feel that they have a family to rely on when they need academic help, assistance in finding scholarships, shadowing or research opportunities, or simply a listening ear and a hug. Creating and maintaining this ‘ohana environment can only enhance our Kanaka Maoli physician workforce.

The very survival of the Kanaka Maoli people rests in the hands of Hawai‘i’s physicians. Studies on physician-patient concordance and stories of non-compliance from the field show that their chance of survival increases as the number of Kanaka Maoli physicians increases. Unfortunately, Kanaka Maoli students are typically more economically, financially, and educationally disadvantaged than students of any other ethnic group in Hawai‘i and therefore need special assistance. Mentoring, financial assistance, test preparation, research opportunities, and maintenance of an indigenous identity are all challenges faced by Kanaka Maoli students.

A few students are lucky enough to have parents, grandparents, or aunts and uncles who have paved the way and have already completed medical school. Although these students still may need some assistance, they already have a supportive, helping hand that has connections in place and can guide the student toward a support system such as the

Department of Native Hawaiian Health or 'Ahahui o Nā Kauka. Other students who lack the knowledge and guidance of a close family member in the medical profession would greatly benefit from a formal mentoring program that would create an 'ohana-like support system that will remain stable throughout the student's career and will eventually ease their transition into the working world of a doctor where they will eventually have the opportunity to take on a student of their own and complete the cycle.

APPENDIX

Original Interview Questions

1. Can you tell me a little about your background?
 - a. Where does your family come from?
 - b. Where did you go to school?
2. How did you become interested in medicine?
 - a. Was there anyone or anything that was especially inspiring?
3. What has your journey through the medical field been like so far?
 - a. What did you particularly enjoy?
 - b. What was especially difficult?
4. Do you think Native Hawaiians have a different experience while studying or working in the medical field than people of other backgrounds do?
 - a. What has been your experience?
5. Is there anything that can be done to make the process of entering and finishing medical school easier for Native Hawaiian students (i.e. more scholarships, mentoring, application workshops, study programs, tutoring)?
6. What piece of advice would you give to a Native Hawaiian high school student who wants to go into medicine?

Revised questions for Kauka

1. Can you tell me a little about your background?
 - a. Where does your family come from?
 - b. Where did you go to school?
2. How did you become interested in medicine?
 - a. Was there anyone or anything that was especially inspiring?
3. What has your journey through the medical field been like so far?
 - a. What did you particularly enjoy?
 - b. What was especially difficult?
4. What is your “medical philosophy”?
 - a. What kind of medicine do you strive to practice?
5. Do you think Native Hawaiians have a different experience while studying or working in the medical field than people of other backgrounds do?
 - a. What has been your experience?
 - b. How do Native Hawaiian physicians/students handle their different experiences, especially if those experiences are difficult or trying?
6. What is it like being a Native Hawaiian who is currently working in the medical field?
 - a. Are Native Hawaiian doctors fairly integrated into the wider medical community or is there a tighter bond between Hawaiian physicians?
7. Can you tell me a little about ‘Ahahui o Na Kauka?
8. Is there anything that can be done to make the process of entering and finishing medical school easier for Native Hawaiian students (i.e. more scholarships, mentoring, application workshops, study programs, tutoring)?
9. How would you feel about the inclusion or blending in of traditional Native Hawaiian medical knowledge in the medical school’s curriculum?
 - a. Do you think that increasing the presence Native Hawaiian knowledge or epistemology in the medical school could be an effective recruitment tool for Native Hawaiian students?
10. What piece of advice would you give to a Native Hawaiian high school student who wants to go into medicine?

Revised questions for medical students

1. Can you tell me a little about your background?
 - c. Where does your family come from?
 - d. Where did you go to school?
2. How did you become interested in medicine?
 - a. Was there anyone or anything that was especially inspiring?
3. What has your journey of getting into and attending medical school been like so far?
 - a. What did you particularly enjoy?
 - b. What was especially difficult?
4. What is your “medical philosophy”?
 - a. What kind of medicine do you strive to practice?
5. Do you think Native Hawaiians have a different experience while studying or working in the medical field than people of other backgrounds do?
 - a. What has been your experience?
 - b. How do Native Hawaiian students handle their different experiences, especially if those experiences are difficult or trying?
6. Is there anything that can be done to make the process of entering and finishing medical school easier for Native Hawaiian students (i.e. more scholarships, mentoring, application workshops, study programs, tutoring)?
 - a. What kind of help did you receive while applying to medical school?
7. How would you feel about the inclusion or blending in of traditional Native Hawaiian medical knowledge in the medical school’s curriculum?
 - a. To your knowledge how has Native Hawaiian knowledge been included in the medical school?
 - b. Do you think that increasing the presence Native Hawaiian knowledge or epistemology in the medical school could be an effective recruitment tool for Native Hawaiian students?
8. What piece of advice would you give to a Native Hawaiian high school student who wants to go into medicine?

Revised questions for pre-medical students

1. Can you tell me a little about your background?
 - e. Where does your family come from?
 - f. Where did you go to school?
2. How did you become interested in medicine?
 - a. Was there anyone or anything that was especially inspiring?
3. What has your journey toward medical school been like so far?
 - a. What did you particularly enjoy?
 - b. What was especially difficult?
4. What is your “medical philosophy”?
 - a. What kind of medicine do you strive to practice?
5. Do you think Native Hawaiians have a different experience while studying or working in the medical field than people of other backgrounds do?
 - a. What has been your experience?
 - b. How do Native Hawaiian students handle their different experiences, especially if those experiences are difficult or trying?
6. Is there anything that can be done to make the process of entering and finishing medical school easier for Native Hawaiian students (i.e. more scholarships, mentoring, application workshops, study programs, tutoring)?
 - a. What kind of help have you received while applying for medical school?
7. How would you feel about the inclusion or blending in of traditional Native Hawaiian medical knowledge in the medical school’s curriculum?
 - a. To your knowledge how has Native Hawaiian knowledge been included in the medical school?
 - b. Do you think that increasing the presence Native Hawaiian knowledge or epistemology in the medical school could be an effective recruitment tool for Native Hawaiian students?
8. What piece of advice would you give to a Native Hawaiian high school student who wants to go into medicine?

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