

# **UNIVERSITY OF HAWAI'I SYSTEM**

Legislative Testimony

Written Testimony Presented to the House Committee on Finance February 17, 2010 10:00 a.m. Conference Room 308

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Aloha, Chair Oshiro and members of the House Committee on Finance. Thank you for this opportunity to testify in support of House Bill 2887, which among other things would clarify the sunset date on tobacco master settlement agreement monies for continued use of funds by the John A. Burns School of Medicine.

This coming May, we will graduate 62 physicians, twelve of whom are Native Hawaiians. That gives us a great sense of pride, because we know those students – and really, all our graduates – understand the critical health care needs of Hawai'i's diverse people. Our state's Native Hawaiian citizens, in particular, are five times more likely to die from diabetes than Caucasians in Hawai'i. Other disparities exist among our citizens of Japanese and Filipino ancestry.

The legislature's investment in JABSOM is allowing us to grow MORE physicians. This year, in fact, despite a more than \$3 million dollar reduction in our state general funding, we will – without new state appropriations – increase the size of our incoming class from 62 to 64 students. This is a modest increase, to be sure, but one that required commitment from our faculty, staff and administrators, and something we would not be able to consider without the support you have given us in the tobacco settlement monies.

It is important to understand that although we graduate 62 (and soon to be 64) students per year, the school of medicine educates and trains a total of 250 medical students year-round. Through partnering with our major local hospitals, we simultaneously train another 240 medical "residents": men and women with their medical degrees who are treating patients while mastering their skills in fields including primary care, pediatrics, obstetrics and family medicine. We have another ten students who are from disadvantaged backgrounds whom we are training for a fifth year of college study, so that they may become medical students. Additionally, we have another 120 or so undergraduate and graduate students studying health sciences, including Public Health, Medical Technology and Communication Science Disorders.

We need to keep JABSOM on a course to success because we face a rapidly growing physician shortage, because <u>we attract major funding into the community – 42 million dollars last year – that supports jobs in Hawai'i</u> providing research and outreach to benefit our community, and because we treat Hawai'i's people for tobacco-related disease and strive to reduce the tobacco

addiction that costs our state more than 350 million dollars a year and destroys the quality of our citizens' lives.

Briefly, on workforce, our latest research shows that 40% of Hawai'i's current practicing physicians are expected to reach retirement age within 10 years. According to national standards, we are already more than 500 physicians short, based on our population. Just maintaining that underserved status will require us to graduate or recruit into the state more than 150 physicians each year.

When JABSOM's Kaka'ako campus was built, the medical school also had to assume its own expenses for electricity, security and custodial services – costs that were previously absorbed by UH Mānoa. The tobacco settlement funding allows us to meet those expenses.

We are making every effort to reduce the amount of general fund support required for JABSOM. In addition to the state-imposed budget cuts this past year, we have instituted a "green initiative" that is projected to save one million dollars this year by shortening hours of operation – and at times shutting down completely – our medical education building. As you know, that is on top of the fact that our facility already is more efficient than many other state buildings because of features, including the energy saving seawater cooling system, which allowed JABSOM to be awarded a LEED (Leadership in Energy and Environmental Design) certification in 2008.

Finally, tobacco cessation and tobacco dependence treatment for the people of Hawai'i are prominent throughout the medical school's curriculum.

Our JABSOM faculty, residents, medical students, and related healthcare professionals provide daily care for patients who smoke, and routinely offer them help in quitting through interventional counseling.

Tobacco dependence and its management are taught throughout all four years of our medical school curriculum. They are integrated with patient care responsibilities in the post-graduate residency training programs. And our faculty and students are actively involved in community education, including a variety of programs that benefit Kindergarten through 12<sup>th</sup> grade students and through hospital-based services that benefit the people of Hawai'i. Our students also voluntarily treat Hawai'i's homeless families at four state-sponsored shelters, twice per week.

Because it is well-reported in the medical literature that <u>smokers are almost 30% more likely to</u> <u>quit after being counseled by their physician</u>, it should be recognized that JABSOM provides the State with an invaluable resource that reinforces key tobacco cessation messages and contributes significantly towards helping Hawai'i smokers quit: Simply put, we *are* Hawai'i's doctors:

- JABSOM clinical faculty members (paid and volunteer) represent more than onethird of the practicing physicians in Hawai'i.
- Nearly half of all physicians practicing in Hawai'i treating Hawai'i's people right now -- are graduates of JABSOM or its post-graduate residency training program.

In setting aside a portion of the tobacco settlement to pay construction debt, the legislature allowed the medical school's new campus to be built. In allowing us to use tobacco settlement monies for some of our operating expenses, you have allowed the medical school to survive. And we are committed to treating and training Hawai'i's people today and for the future.

Mahalo for this opportunity to testify.

#### **Tobacco Dependence and Tobacco Dependence Management**

A Summary of the Educational Programs and Their Impact at The John A. Burns School of Medicine University of Hawai'i Mānoa January 2010

#### Overview

In Hawai'i, tobacco use accounts for 16% of deaths and annually costs the state over \$300 million in health care costs.<sup>1</sup> It is estimated that over 40,000 children in our state are exposed to cigarette smoke, representing almost 14% of Hawai'i's children.<sup>2</sup> Although the prevalence of smoking is only 17% in our state, our John A. Burns School of Medicine (JABSOM) faculty, residents, medical students, and healthcare professionals provide daily care for patients who smoke, and routinely offer them help in quitting through brief interventional counseling. As described in the following report, tobacco dependence and its management is taught throughout all four years of our medical school curriculum, integrated with patient care responsibilities in the post-graduate residency training programs, and continues to be taught as part of faculty development activities in our Continuing Medical Education programs.

This past academic year, an estimated 600 healthcare providers received smoking cessation counseling training, resulting in an estimated 438,000 counseling sessions provided to smokers as a result of JABSOM training (see attached tables and charts). Because it is well-reported in the medical literature that smokers are almost 30% more likely to quit after being counseled by their physician,<sup>3</sup> it should be recognized that JABSOM provides the State with an invaluable resource that contributes significantly towards helping Hawai'i smokers quit.

# Summary of Educational Programs at JABSOM Office of Medical Education

Tobacco dependence, tobacco dependence management, and the impact of tobacco dependence as a risk factor for other medical conditions are covered throughout the JABSOM curriculum. These topics are covered in the following ways:

- PBL cases
- Lectures
- Standardized patient exercises
- Clinical training (clerkships, introduction to medicine preceptorships, etc.)

While inclusion of this content into the curriculum is critical, JABSOM goes further by evaluating student knowledge of this material and their ability to realistically apply this knowledge to patient care. Evaluations are conducted using a variety of methods including:

- Written exams
- Observed standardized patient exams

# Tobacco-related medical student education at JABSOM

MSI	MD 1	MD 2	MD 3	MD 4		
	Smoking as a risk factor for poor health	Smoking and heart and lung disease. Smoking and cancer. Smoking cessation counseling.	Smoking and diseases of the kidney.	Smoking and gastrointestinal illness		
MS2		MD 6	MD 7			
	Smoking as a risk factor for neurological diseases including stroke.		Smoking and reproductive and developmental disorders.			
MS3	Clerkships					
	Direct patient evaluation and treatment of tobacco-related ailments including myocardial infarction emphysema, asthma, pneumonia, lung cancer, peripheral vascular disease, and others.					
MS4	Electives					
	Electives on addi including nicotine	ction medicine addiction.				
John A. Burns School of Medicine						

Besides medical student education, JABSOM has initiated programs for resident education including:

- Didactic lectures
- Smoking Cessation Counseling Workshops
- Clinical rotations in Pulmonology Clinics

Finally, JABSOM students and faculty are actively involved educating outside groups on the dangers of cigarette smoking. Examples of this include:

- Tar Wars (visits to schools to "engage" students about the dangers of smoking.)
- School Health Education Program (SHEP)
- High School Summer Medical Problem Solving Course

Some selected detail is provided below...

#### A. Medical Student Curriculum

#### PBL (Problem-Based Learning) Cases

The JABSOM Curriculum contains PBL cases that stimulate student learning about the dangers of tobacco use; the complications of smoking, such as coronary artery disease,

emphysema, chronic bronchitis, and lung cancer; and both behavioral and pharmacological considerations in the management of tobacco dependence. JABSOM's unique PBL curriculum provides an opportunity to introduce these topics within the context of a patient story. Excerpts from selected PBL cases are provided below to give you a sense of how these topics are presented to students for discussion and study.

## **Excerpted Relevant Information from Selected PBL Cases**

#### "Henry Huang"

Content Areas:

- The relationship of cigarette smoking to cardiovascular disease
- Smoking cessation strategies

Sample passage from the PBL case:

You also remind him of the relationship between smoking and vascular disease and recommend other behavioral therapies and quit-smoking programs.

#### "Edna Ota"

Content Areas:

- Pathophysiology of COPD
- Smoking cessation strategies
- Relationship of smoking to lung cancer

Sample passages from the PBL case:

You notice a pack of cigarettes in her shirt pocket. "What should I be worrying about?" she asks, so cheerfully that she seems not to have any worries.

She admits to smoking one to two packs of cigarettes per day since the age of 15.

When discussing smoking, Mrs. Ota mentions that she feels nervous and fidgety when she goes without cigarettes and has to "light one up" first thing each morning. You discuss the use of nicotine gum or nicotine patches with her. You perform a literature search at the library after clinic to look up the effectiveness of bupropion as a quitsmoking aid. You share the information with her, but Mrs. Ota politely refuses any new medications and promises she'll try to quit on her own.

*Mrs.* Ota presents for her follow-up visit to discuss the results of her biopsy. She comes with her son as you suggested. Walking to the exam room you pause before entering. You wonder how to deliver the news sensitively and compassionately. You look at the

biopsy report again. A few phrases stand out. "Small cell lung cancer, malignant pleural effusion." You enter the room.

#### "Bob Coffman"

Content Areas:

- Pathophysiology of Chronic Bronchitis
- Smoking cessation strategies
- Relationship of smoking to Chronic Bronchitis

Sample passages from the PBL case:

*Mr.* Coffman reports his cough is productive of large amounts of yellowish-green sputum. He has had a morning cough productive of sputum for many years that he attributes to his smoking, but this current illness represents a change from his baseline symptoms.

He smokes two packs of cigarettes/day and has done so since the age of 15.

Eventually, his fever resolves and his shortness of breath improves. He no longer requires oxygen. As you prepare to discharge him you discuss his need to stop smoking because of chronic bronchitis.

*"I'm looking forward to seeing you in my office next week Mr. Coffman. I hope we can talk about your smoking at that time." Mr. Coffman nods.* 

#### "Charles Browning"

Content Areas:

- Smoking as a risk factor for coronary artery disease.
- Educating patients about healthier lifestyles.

Sample passages from the PBL case:

*Mr.* Browning's patient profile is significant as well. He gets no regular exercise, and eats a lot of "fast food" and "plate lunches." He drinks moderately, drinking 6-12 beers each week. He finds that his smoking and drinking help him unwind from the stress of his work as a warehouse foreman. He has HMSA insurance through his employer.

*"I don't have anything against doctors," he tells you. "I just hate to see them. They're always telling me to do things, and never explain why."* 

#### Lectures

In addition to PBL cases and direct clinical learning experiences, JABSOM provided 6-12 hours per week of lectures throughout the first two years of the curriculum, with additional lecture series' provided throughout the third year. Here are a few examples of lectures related to tobacco dependence and the impact of cigarettes as a risk factor for other disease processes:

"Smoking Cessation" (slide presentation attached FYI)

"Pathophysiology, Clinical and Psychosocial Aspects of Addiction"

"Basic Science Correlation: Pulmonary Diseases"

"Pathology of Cancer"

"Endothelial Function & Mechanisms of Vascular Injury"



# Standardized Patient Experiences

The standardized patient center (Center for Clinical Skills) has a bank of over 20 scenarios related to smoking and smoking cessation. Some of these cases are used for standardized patient examinations that are held throughout the curriculum. Standardized patients are also used for learning (vs. testing). One example of this asks first-year students to counsel a patient about lifestyle modifications as the patient recovers from a recent myocardial infarction. As part of this exercise, the patient requires advice about remaining abstinent from smoking cigarettes. In another example, students see a child with a fever and an ear infection. They are evaluated on whether or not they ask the child's mother whether or not there is a smoker at home and whether they point out to the mother that smoking around the child increases the risk of recurrent ear infections.

#### Clerkships

Elements related to smoking and smoking cessation are covered across the various clerkships. As one prominent example, the Family Medicine clerkship requires students to counsel at least two patients on smoking cessation by the end of their rotation. They are also provided with reading and must complete and interactive web module on smoking cessation.

The Psychiatry clerkships includes a learning module dedicated to smoking cessation based on a chapter in a behavioral science textbook written by a JABSOM faculty member.

The Surgery clerkship routinely instructs students on the role of smoking in both peripheral vascular disease and lung cancer.

The internal Medicine Clerkship requires all students to see at least two patient smokers per rotation. In order to pass this rotation, they are observed by a faculty member who rates student performance using a standardized checklist. Smoking Cessation Counseling is considered a core competency that needs to be achieved in order to pass this course.

#### **Evaluating Student Knowledge**

Written examinations are used to assess student knowledge. Four test items are described below followed by a graphical representation of student performance on those test items. Students demonstrate that they have learned the knowledge associated with smoking and smoking cessation.

Sample questions four JABSOM examinations.

Item 6: The learning objective is to state the pulmonary function abnormalities associated with long-term smoking.

Item 12: The learning objective is to be able to explain the pharmacological therapies for tobacco addiction.

Item 9: The learning objective is to be explain the mechanism of action of medications used to treat smoking related ailments.

Item 11: The learning objective is to list behavioral methods that aid in smoking cessation.

Student performance on these items are shown below. Between 96-99% of students answered each question correctly.





Student application of knowledge to patient care situations are evaluated by assessing their competence at identifying smokers and providing cessation counseling using standardized patients.

In one such evaluation, students see a young male who presents to an outpatient clinic for "help with quitting smoking." Each student's ability to counsel the patient on smoking cessation is evaluated based on a 9 item checklist which included 3 data collection items and 6 counseling items. The average scores on this checklist are shown below:

Graduating Class	Ν	AVERAGE (Max	STANDARD	RANGE
		=9)	DEV	
2006	64	7.8	1.1	5 - 9
2007	55	7.5	1.1	4 - 9
2008	50	8.3	0.9	5 - 9
2009	60	7.6	1.2	4 - 9



# **B. Residency Education**

JABSOM faculty members spend a great deal of time teaching residents (graduate MDs in post-MD training) how to screen, counsel, and provide guidance and treatment for all patients who are smokers. Residents are graduate medical students seeking discipline-specific training in one of the following core disciplines: Internal Medicine, Family Medicine, Surgery, Pediatrics, Psychiatry, and Obstetrics and Gynecology. There are an estimated 180 residents in JABSOM's affiliated residency programs. Training within these programs are discipline-specific, to meet the needs of the patient population served by each specialty. The various teaching methods include:

- Didactic Lectures
- Web-based teaching modules
- Smoking Cessation Counseling workshops
- Seminars on Nicotine Addiction, Management, and Treatment
- Direct Observation of resident performance with feedback
- Standardized patient encounters

Below are a few articles describing the impact of smoking cessation programs on residents in the University of Hawai'i Residency Programs:

Lee MT. "Tobacco reduction advocacy and education for Hawaii's physicians-intraining." Hawaii Med J. 2003 May;62(5):107-8.

Lee MT, Hishinuma ES, Derauf C, Guerrero AP, Iwaishi LK, Kasuya RT. "Smoking cessation counseling training for pediatric residents in the continuity clinic setting." Ambul Pediatr. 2004 Jul-Aug;4(4):289-94.

Steinemann, S, Roytman T, Chang J, Holzman J, Hishinuma E, Nagoshi M, Tam E, Murakami S, Wong J. "Impact of Education on Smoking Cessation Counseling by Surgical Residents." *Am J Surgery,* 189(1):44-46, January 2005.

# C. Community Outreach

#### Hospital-based Smoking Cessation Program

The Kapi'olani Medical Center for Women and Children (KMCWC) is a women and children's hospital that serves as Hawai'i's only referral center for high-risk pregnancies and seriously ill children. JABSOM faculty recently initiated a hospital-based smoking cessation program at this site by establishing a comprehensive "quit program" for parents and smokers living in households with children. This past year, over 170 medical providers have been trained on how to provide smoking cessation counseling to parent and household smokers who put children at serious risk for illness. Physicians, residents, medical students, nurses, social workers, psychologists, and counselors were trained through this program. During this period, over 1,100 smokers were referred to

this program, 200 smokers enrolled, resulting in a 40% quit rate at 2 weeks, 4 weeks, and 6 months.

# Tar Wars

Tar Wars is a national smoking prevention program that is sponsored by the American Academy of Family Physicians (AAFP). In Hawai'i, the JABSOM Family Medicine Student Interest Group has assumed responsibility for organizing and implementing this program. To support and recognize the value of these activities, students can receive academic credit for their participation in this program. The students (and faculty advisors) organize delivery this educational program to 5th grade students at various schools across O'ahu. With the financial support of the local chapter of the AAFP, the JABSOM Family Medicine Interest Group also coordinates a state poster contest for elementary school children and sends the winner to the national competition in Washington, D.C.

# School Health Education Program (SHEP)

Another educational outreach/service-learning program for medical students is the School Health Education Program. In existence for almost 10 years, this program pairs medical students and premedical students (under the supervision of OME faculty) with high school health education and health careers classes at three public high schools. The medical students and premedical students regularly deliver health education content in these classrooms over the course of a year. One of the popular sessions focuses on the importance of not smoking and the serious consequences of smoking.

# High School Summer Medical Problem Solving Course

In the Medical Problem Solving Course offered by JABSOM to select high school students, these students actually learn how to counsel others about smoking cessation and counsel a standardized patient at the Center for Clinical Skills. This encounter is recorded and reviewed with them by faculty.



## Summary

Tobacco dependence and tobacco dependence treatment are prominent throughout the JABSOM curriculum. In addition to traditional lectures and in the context of supervised patient care, JABSOM utilizes innovative approaches to the teaching and learning of these important content areas. These methods include problem-based learning case discussions, standardized patient learning experiences, computer-assisted instruction and meaningful service-learning community education opportunities. JABSOM faculty and students are also actively and directly involved in community education, including a variety of programs that benefit K-12 students and hospital-based services that benefit the people of Hawai'i.

#### References

- 1. CDC. Smoking caused health expenditures, productivity losses, tax burdens. In: http://www.cdc.gov/tobacco/datahighlights/index.htm
- 2. Salvail. Hawaii Behavioral Risk Factor Surveillance System: Exposure to Second Hand Smoke at Home. Health Hawaii State Department of Health 2003.
- Fiore et al. Treating tobacco use and dependence: 2008 update. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service; 2008 May.

For your additional information: specific departments within JABSOM also emphasize smoking cessation and treatment. They include:

#### **Department of Geriatrics:**

Curriculum for fellows in training includes- includes tobacco cessation counseling under various sections of our board review and book review series in Prevention (tobacco use and cessation counseling), Osteoporosis, Alcohol and Drug Use, Respiratory Diseases and Disorders, Cardiovascular Diseases and Disorders, Diabetes Mellitus, "Five A's approach to smoking cessation" from the Agency for Health Care Policy and Research ("Ask, Advise, Assess, Assist, and Arrange").

In training our fellows, we offer:

- Primary care clinics (once a week for each first year fellow) at various sites where the curriculum includes preventive care and smoking cessation counseling for all patients.
- Graduate Entry Medical Clinics at the Veteran's Administration, where we routinely include evaluation of tobacco abuse and counseling for cessation (seven clinics per week) and providing the quit line phone number
- Every geriatric consult and admission physical we perform with our partners at Kapi'olani Medical Center, The Queen's Medical Center and Kaiser Medicine Center includes evaluation of tobacco abuse and counseling for cessation if indicated.
- Medical Student (All 4<sup>th</sup>-year students are required to undergo a rotation in geriatric medicine). Smoking cessation is discussed during the "Preventive Health" didactic session.
- Continuing Education (physicians + allied health workers) we have invited the COPD Coalition to speak about chronic obstructive pulmonary disease care and smoking cessation during a lunch breakout session for our Long-Term Care Conference on April 16, 2010.
- Kalihi-Palama Clinic one of our clinical faculty (Dr. Ritabelle Fernandes) runs the Asthma/Emphysema Group Visit once a month which is closely linked with tobacco cessation. The Asthma Educator is a tobacco cessation specialist. (See the colorful questionnaire we have attached.)
- Research The Honolulu Heart Program and Honolulu-Asia Aging Study and Women's Health Initiative have compiled information on smoking and papers have been written about various negative outcomes of smoking by our faculty.

#### Kalihi-Palama Health Center COMPLICATIONS OF SMOKING

Complication	Me	Someone I know
1. Cancer		
2. Breathing problems		
3. Skin problems – early aging		
4. Stomach problems – acidity		
5. Heart problems		
6. Stroke		
7. Circulation problems – amputation		

I or someone I know has the following complications of smoking:

- 1. Which one are you? Smoker Smoke Sometimes Former Smoker Never Smoked
- 2. If smoker or smoke sometimes: How many cigarettes per day do you smoke?\_\_\_\_\_

How soon after awake do you smoke 1st cigarette? \_\_\_Mins\_\_\_Hours

- 3. Do you know health effects from secondhand smoke? YES NO
- 4. Choose who you feel wants information about quitting tobacco (Circle all that apply.)? Myself Family Member Friend

#### **Department of Medicine:**

Smoking cessation is a line item in the pulmonary level-specific curriculum. The department partners with a specialty rotation at the Veteran's Administration, which is very aggressive about tobacco cessation. At least two Grand Rounds per year address different aspects about tobacco.

٠ The Center for Cardiovascular Research (CCR) has studied the effects of tobacco smoke on the lining of blood vessels in order to understand the toxic effects (published in a leading journal of the field, Maresh JG, Xu H, Jiang N, Gairola CG, Shohet RV. Environmental tobacco smoke dysregulates endothelial vasoregulatory transcripts in vivo. Physiological Genomics, 21:308-313, 2005). It continues to investigate the effects of other environmental toxins and diseases that synergistically affect the vascular system with smoking (these include air pollution, diabetes, and high cholesterol). CCR Director Ralph Shohet, President of the local affiliate of the American Heart Association (AHA), is active in supporting or approving the activities that the AHA pursues in this regard (for example speaking at the "healthy Keiki" day about the dangers of smoking at the Bishop Museum this past year). In his clinical role at The Queen's Medical Center, supervising exercising testing, Dr. Shohet has the opportunity to directly encourage patients to stop smoking, and also provided Grand Rounds to the Medicine Department in 2009 on the cardiovascular hazards of air pollution and emphasized the role of concomitant smoking in this presentation.

#### Department of Obstetrics, Gynecology and Women's Health:

The PATH (Perinatal Addiction Treatment of Hawai'i) Clinic, founded by OB-GYN Professor Tricia Wright, exists to help pregnant women become drug free. An important aspect of its work is freeing the women from addiction to tobacco because of its harmful affects on both mother and baby. Research has shown smoking affects women in ways that may be more adverse than the use of illegal drugs. Dr. Wright is researching the role of genetics in smoking addiction.

#### **Department of Pediatrics:**

Through a grant from The Hawai'i Tobacco Settlement and Control Trust Fund, a professor of Pediatrics put a team together to teach residents, faculty, nurses and social workers about brief interventional counseling and the importance of eliminating second-hand smoke exposure in households. As of December 2009, the program trained over 130 of these health care workers at Kapi'olani Medical Center. The department also started a new hospital-based smoking cessation program targeted at parent smokers and pregnant women. This intervention involves an initial in-house counseling session with a Certified Tobacco Cessation Treatment Specialist and 2 follow-up telephone counseling sessions. To date, we have almost 150 enrolled smokers, and recorded a two-week quit rate of 61%, four-week quit rate of 57% and a six-month quit rate of 62%.

#### **Department of Psychiatry:**

The Department of Psychiatry is engaging in ground-breaking research (with several publications) that looks at risk factors for tobacco use and other substance use disorders among Hawai'i's youth. In addition, the Department of Psychiatry has integrated teaching modules on tobacco use and other addictions into medical student, resident, and continuing medical education curricula; of interest, a student-oriented textbook co-edited and authored by various Department of Psychiatry faculty (Guerrero and M Piasecki, Problem-based Behavioral Science and Psychiatry. New York: Springer) includes a problem-based learning case that includes smoking cessation and covers other relevant supplemental issues.