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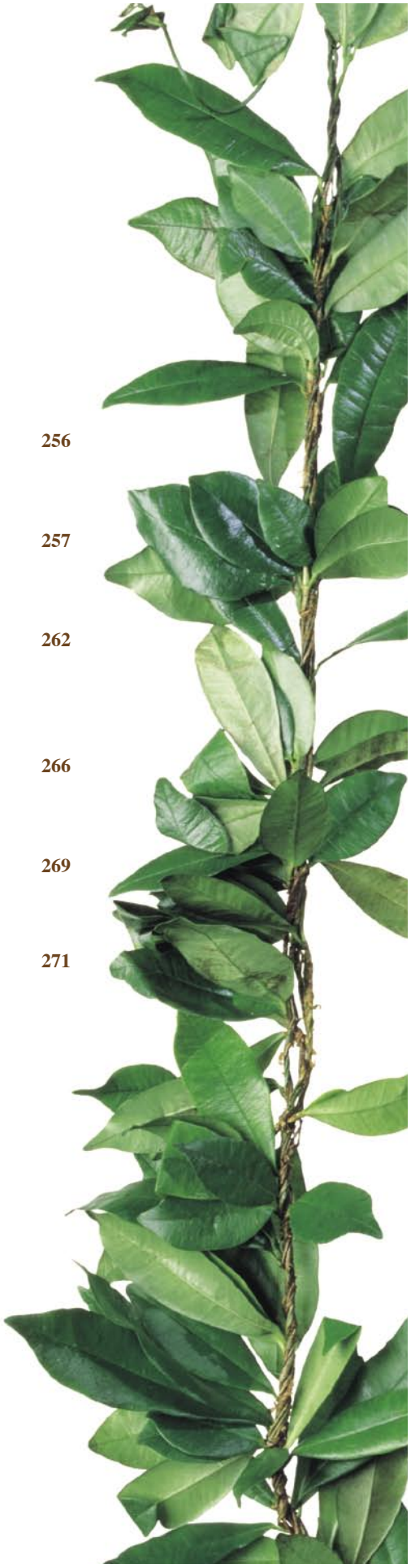

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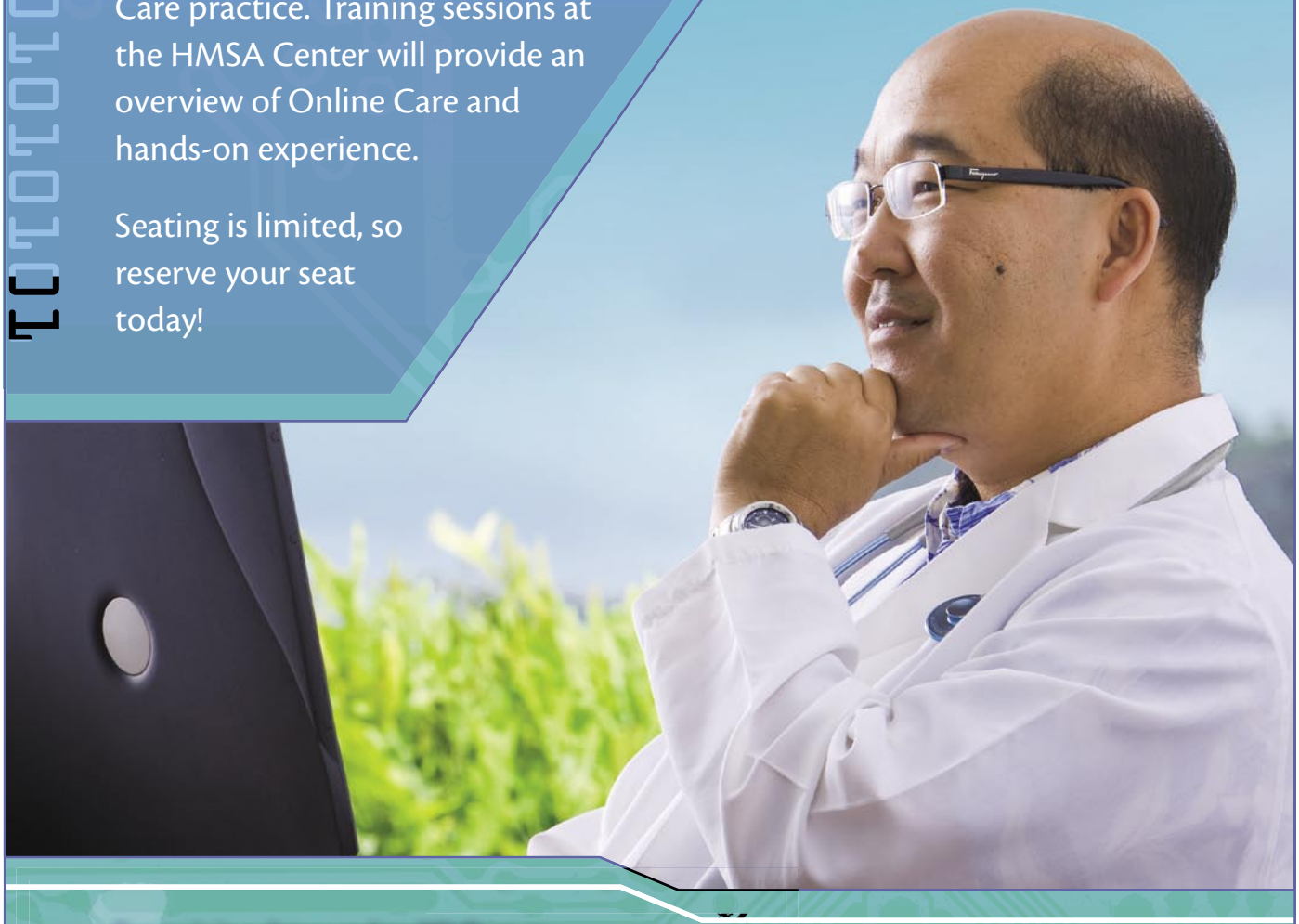

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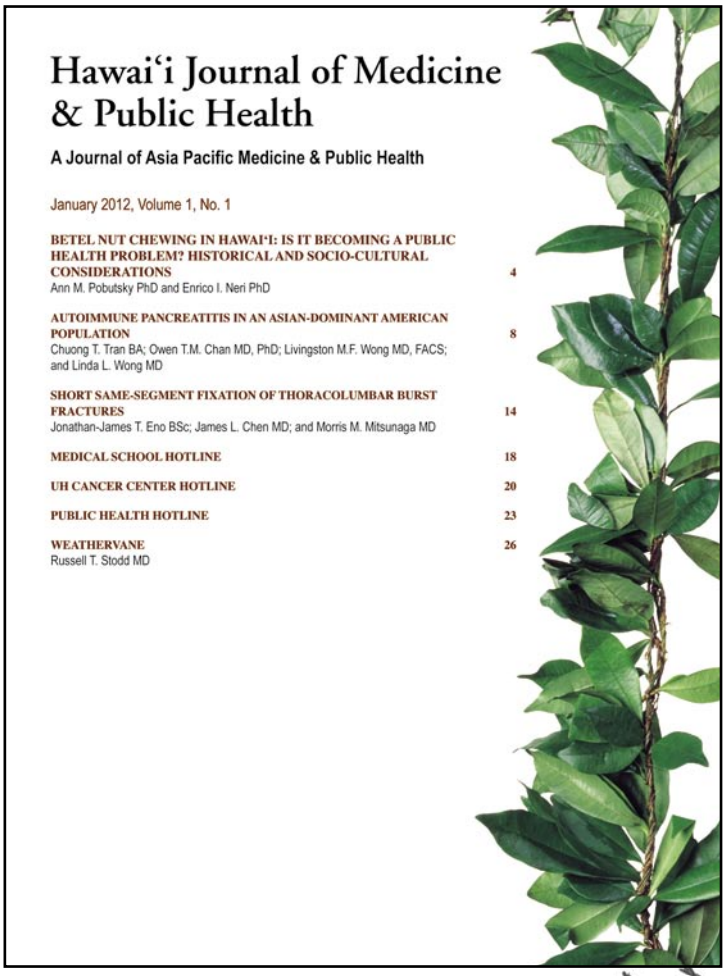
Editorial Commentary

It is with pleasure that the Editorial Board and staff announce the melding of the Hawai'i Medical Journal and the Hawai'i Journal of Public Health to form the Hawai'i Journal of Medicine & Public Health, effective 1 January, 2012

This new entity will improve communication among the medicine and public health communities, increase readership, and advance our expertise in areas of significant community interest.

S. Kalani Brady MD, FACP and Michael J. Meagher MD, FACR; Co-Editors



Cancer Patient Navigation Case Studies in Hawai'i: The Complimentary Role of Clinical and Community Navigators

Jermy B. Domingo MPH; Elise L. Davis MPH; Amanda L. Allison MA; and Kathryn L. Braun DrPH

Abstract

This article describes the activities performed by cancer patient navigators in community-based and hospital settings. The case study demonstrates the depth and breadth of navigation activities and illustrates how hospital-based and community-based navigators work together to help individuals access cancer care and complete cancer treatment.

Keywords

access to health care, cancer patient navigation, case management, health disparities, barriers to cancer care, oncology, Native Hawaiian

Introduction

Since Dr. Harold Freeman started his breast cancer navigation program at Harlem Medical Center, New York in 1990,[1,2] multiple cancer patient navigation programs have been established across the country, including in Hawai'i.[3-7] These programs are designed to help people complete cancer screening and/or treatment.

Most programs are based in clinical settings, especially hospitals that offer navigation to patients with a suspicious cancer-screening finding, to assure they obtain a definitive diagnosis and treatment when appropriate.[8-11] Navigation guides cancer patients through the fragmented health care system and between the myriad of cancer care providers, or issues often referred to as "systems" barriers. In addition to systems barriers, minority and underserved communities may also experience "access" barriers, such as a limited understanding of cancer and limited access to cancer screening or treatment services due to lack of insurance, lack of providers, or lack of transportation. Community-based navigators can serve a critical role in helping minority and underserved communities overcome access barriers.[13-15]

Although all navigators want to help patients through the cancer care continuum (from screening, suspicious finding, diagnosis, treatment, post-treatment, and survivorship), generally hospital-based navigators accrue clients at the point of suspicious finding or cancer diagnosis and discharge them after treatment, unless they have specific screening or survivorship navigation programs. Community-based navigators, on the other hand, may work with clients to get them to screening, work in concert with hospital-based navigators through diagnosis and treatment, and then follow through with the clients and their families post-treatment (Figure 1). Both clinic and community-centered navigation programs operate in Hawai'i. The purpose of this article is to describe and illustrate through case studies the complementary roles of clinical and community-based cancer patient navigation.

Cancer Patient Navigation in Hawai'i

'Imi Hale Native Hawaiian Cancer Network ('Imi Hale) started a cancer patient navigation training program in response to requests from the Native Hawaiian Health Care Systems (NHHCS) to help their community outreach staff (also known as, community outreach workers) better support their clients who were diagnosed with cancer. Using community-based participatory research (CBPR) methods, 'Imi Hale developed a patient navigation curriculum by reviewing existing curricula, conducting surveys and interviews with physicians and other providers, and conducting focus groups with Native Hawaiian cancer survivors, their families, and outreach workers that serve them.[12] 'Imi Hale offered its first *Ho'okele i ke Ola* (Navigating to Health) training in 2006. Since then, 130 individuals on 5 islands have been trained to provide navigation, including personnel now associated with navigation programs at The Queen's Medical Center, Moloka'i General Hospital, Maui Memorial Medical Center, Hilo Medical Center, the Pacific Cancer Foundation (Maui) and the Native Hawaiian Health Care Systems. In all, about 14 individuals in Hawai'i hold positions with the job title "Patient Navigator," while about 42 others use cancer patient navigation skills in their jobs as outreach workers, social workers, nurses, supervisors, etc.

'Imi Hale's 48-hour *Ho'okele i ke Ola* (*Ho'okele)* training curriculum focuses on cancer knowledge, resources, patient advocacy, and communications and has been offered to lay health workers.

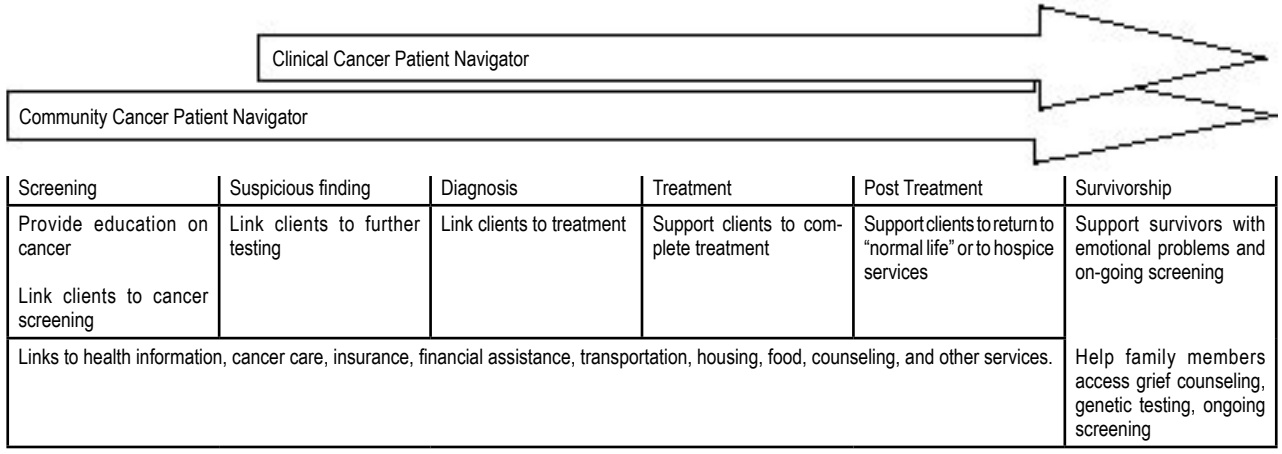


Figure 1. Cancer Navigation Through the Cancer-care Continuum

Mastery of the material is assessed through pre- and post-tests, and the curriculum is evaluated by trainees and *Ho'okele* graduates. Information is added, clarified, or otherwise improved as indicated through these tests and evaluations.[12]

Trainees master 14 learning objectives, with information provided through lectures by oncologists and other providers, tours of cancer care facilities, web-based training on cancer resources, "talk story" sessions with patients and their families, interactive sessions with practicing navigators and primary care physicians, role playing, and quizzes.[12] Faculty are experts in their fields and volunteer their time. For example, the section on Palliative Care has been taught by a palliative care advanced practice nurse and, another time, by a radiation oncologist promoting the healing effect of symptom palliation. Meeting the state's cancer-care experts and touring facilities also help trainees develop relationships and a network of people to contact in their work. Over the *Ho'okele* training, each trainee builds a resource binder to help them navigate cancer patients to and through care. While trainees come from different settings (community-based settings and clinical settings) and come into the training with different health-related skills (nursing, allied health, community outreach), the curriculum has proven to be well received by all and applicable in all settings.

The first two hospitals to offer cancer patient navigation were The Queen's Medical Center (Queen's) and Moloka'i General Hospital (MGH). Queen's started its program in 2006 with two navigators. Now there are five, and in the past year (July 2010 through June 2011), they reported navigating 845 patients. MGH began its program in 2006, called *Kukui Ahi,* a Hawaiian phrase meaning *to show the way*. *Kukui Ahi* initially was funded as a 4-year demonstration project of the Center for Medicare and Medicaid Services (CMS), and during the project, navigators assisted 154 Medicare-eligible Moloka'i residents to cancer screening and 88 cancer patients with diagnosis, treatment, survivorship, and end-of-life care. In 2010, Queen's received a 3-year demonstration grant from the Health Resources and Services Administration (HRSA) to expand cancer patient navigation to all cancer patients at Moloka'i General and to start similar programs at the Hilo Medical Center and Maui Memorial Medical Center. Cancer patient navigation also is offered in the community to clients of several of the Native Hawaiian Health Care Systems (NHHCS), established under the Native Hawaiian Health Care Improvement Act and funded by HRSA, Bureau of Primary Health Care.

Methods

To describe and illustrate the complementary roles of clinic-based (in hospitals) and community-based (in enabling agencies like the NHHCS) navigation, we collected case studies from Cancer Patient Navigators in both settings. As a qualitative research methodology, the case study is an important tool: "(1) to *explore* new areas and issues where little theory is available or measurement is unclear; (2) to *describe* a process or the effects of an event or an intervention, especially when such events affect many different parties; and (3) to *explain* a complex phenomenon."[16] For a new service like Cancer Patient Navigation, case studies can help us analyze what is happening in the absence of a significant body of quantitative information. Case studies also can help suggest which quantitative data should be collected to document the impact of this new service. The case study method is used not only to describe the process and effect of patient navigation, but also to look at how navigation in different realms–clinical and community–weave together for a more seamless continuum of care for cancer patients and their families, especially those from rural islands and/or health disparities populations.

Case study contributors were identified through 'Imi Hale's 2010 annual survey of *Ho'okele* graduates, to which 72 individuals responded. Of these, 56 (78%) indicated that they were actively practicing navigation skills in their current jobs, and 18 (34.6%) indicated they could provide a case study. These 18 were contacted, and 9 of them provided 18 case studies between November 2010 and June 2011. Four of the navigators practiced in hospital settings and five worked in community settings.

Navigators provided case studies either in writing or though an interview by 'Imi Hale staff following an outline to prompt navigators to describe a patient, the patient's barriers to cancer care, actions taken to overcome these barriers, and patient outcomes. Once transcribed, case study analysis was used to identify common barriers faced by patients, common activities of cancer patient navigators, and the extent to which the navigator was able to reduce access and system barriers faced by patients. Findings are summarized, and then 3 cases are provided to illustrate the different, yet complementary functions of hospital-based and community-based navigators.

Results

Case Study Demographics

The patients described in the 18 case studies ranged in age from under 20 to over 80 years, with a mean age of 54 years. Twelve of the patients were female, and 6 were male. Eleven were of Native Hawaiian ancestry, 3 were Filipino, 3 were Caucasian, and 1 was Japanese. Seventeen lived on neighbor islands (not O'ahu, where the majority of cancer care services are located), and 16 lived in a rural (vs urban) community. Cancer types included lung, breast, colon, lymphoma, neck and throat, osteosarcoma, prostate, and thyroid cancers. Despite use of convenience sampling, the cases include a diversity of cancer types, ages, ethnic groups, and residences.

Actions Taken by Navigators to Overcome Access and Systems Barrier

Among the 18 cases, a total of 68 barriers were identified by the cancer patient navigators; 51 (75%) were categorized as access barriers and 17 (25%) as system barriers (Table 1). On average, each patient presented with 3 to 4 barriers. The most common barriers related to finances (61%), insurance (44%), transportation between islands (44%), transportation to on-island to care facilities (56%), and lack of social support (39%).

On average, the navigator provided six actions per case to help patients resolve the barriers they confronted. Almost all of the patients (16 of 18) needed referrals to appropriate services, for example financial resources, physicians, hospice and palliative care services, and emotional support services (Table 2). In 8 cases, the navigator scheduled appointments for screening, diagnosis, or treatment, and navigators accompanied 7 of the 18 patients to at least one appointment. At the appointment, the navigator often took notes and then reviewed information with the patient to assure understanding.

Ten patients received help in finding financial resources to assist with payments for treatment and living expenses (eg, rent and

Table 1. Barriers Confronted by Patients	
	Cases (N=18)
Access Barriers	
Financial issues	11 (61.1%)
Difficulties arranging on-island transport	10 (55.6%)
Difficulties arranging or affording off-island travel	8 (44.4%)
Lack of social supports	7 (38.9%)
Poor attitudes toward cancer, treatment, or providers	6 (33.3%)
Housing issues	5 (27.8%)
Limited knowledge of cancer	2 (11.1%)
Language	1 (5.6%)
Mental status	1 (5.6%)
Systems Barriers	
Insurance issues	8 (44.4%)
Poor communication between patient and provider	4 (22.2%)
Lack of providers on-island	2 (11.1%)
Poor attitudes of providers and staff	1 (5.6%)
Dropped referrals/transfers	1 (5.6%)
Late/lost paperwork	1 (5.6%)

Table 2. Actions Taken by the Navigator			
Navigator actions to address barriers	**Clinical navigator**	**Community navigator**	**Cases (N=18)**
Refer and link to other services	8	8	16 (88.8%)
Provide emotional support	5	9	13 (72.2%)
Link to sources of financial assistance	3	7	10 (55.6%)
Assist with getting insurance and/or coverage	2	7	9 (50.0%)
Link to food assistance	4	4	8 (44.4%)
Schedule appointments	6	2	8 (44.4%)
Arrange travel between islands	4	3	7 (38.9%)
Arrange transport on-island	3	4	7 (38.9%)
Arrange lodging or housing	4	3	7 (38.9%)
Accompany to appointments	2	5	7 (38.9%)
Provide cancer education	2	5	7 (38.9%)
Facilitate communication with providers and/or staff	4	3	7 (38.9%)

utilities), and 8 received assistance with getting and/or buying food. Navigators also found funds to help patients pay for temporary residence while visiting O'ahu for treatment, neighbor island travel, on-island transport, personal care, counseling, nutritional supplements, assistive devices, cancer treatment, and pharmaceuticals. In one case, a clinical navigator helped an elderly patient reduce her out-of-pocket cost for cancer treatment medicine from $600 a month to $17 a month.

Nine patients were linked to, or assisted with health insurance. Navigators are familiar with the insurance application process and are often able to assists patients to apply for emergency medical insurance through MedQuest (Hawai'i's Medicaid program), getting approved in 2 to 3 weeks and allowing patient to receive timely care. In one case, a community navigator believed that the patient would have given up early in the cancer journey after being overwhelmed with the amount of paperwork and coordination required to qualify for insurance and to obtain services. In another case, a patient's MedQuest application was denied, but the navigator worked with the MedQuest eligibility worker to determine reasons for denial and to obtain appropriate paperwork to support a reversal of the denial.

In 13 cases, the navigator provided the patient with emotional support, and in the majority of cases this support was provided over several months of treatment and post-treatment. Navigators are trained to support the patient by listening to and validating his/her concerns and helping the patient identify and get answers to his/her questions from the physician or other providers. In 3 cases, the navigator was the patient's sole support at the time of diagnosis because the patient did not want to "burden" family members. In these cases, navigators encouraged patients to share their diagnosis with their family and friends, who were then enlisted to help the patient schedule and get to appointments, and to help the patient with childcare, shopping, cooking, and housework. In 3 cases, the navigator also provided emotional support to caregivers and referred them to counseling services. After one of the patients died, the community navigator comforted grieving family members and encouraged surviving family members to participate in cancer screening.

Patient Outcomes

The reported outcomes of each case were grouped into 3 categories: (1) improved access to care; (2) improved timeliness and completion of care; and (3) improved feelings of control and confidence (Table 3). In all 18 cases, the navigator linked patients to services that improved their access to cancer care, most importantly insurance, financial assistance, and transportation. Without these linkages, individuals would not have been able to access the cancer care system.

In all cases, navigation helped improve the timeliness and completion of cancer care. This is because navigators helped patients coordinate medical appointments, track their paperwork, arrange support services to assure the patient had transport to and time to participate in treatment, and provide emotional support. Both clinical and community navigators noted that, without their help, patients would not have afforded, started, continued, or completed care.

Seventeen cases indicated that the navigator's assistance resulted in more control and confidence in health care choices. By providing education and encouragement, and by helping patients and their family supporters identify and get answers to their questions, the navigators empowered patients and family to make informed treatment choices. In several cases, the navigator reported that patients initially were fearful about seeking screening or treatment for fear of being diagnosed with cancer or fear of treatment side-effects. However, the support received from navigation services empowered them to get answers to their questions, overcome their doubts, and successfully start and complete treatment.

A Case from a Clinic-based Navigator

This case illustrates how a hospital-based navigator helped a middle-aged Japanese man living on a neighbor island diagnosed with lung cancer. The navigator assigned to the patient assisted with transportation to and from O'ahu. To reduce patient burden and travel costs, the navigator coordinated same-day appointments with the radiation oncologist, medical oncologist, and surgeon. She also worked closely with the patient's wife, answering her questions and

Table 3. Case Outcomes			
Case Outcome	**Clinical navigator**	**Community navigator**	**Cases (N = 18)**
Navigation helped improve access to care	8	10	18 (100%)
Navigation helped improve the timeliness and completion of care	8	10	18 (100%)
Navigation improved patients' feelings of control over and confidence in their health care choices	7	10	17 (83.3%)

empowering her to help and advocate for her husband. The navigator also obtained travel assistance so the patient's wife could accompany him to appointments and arranged accommodations for the patient's wife while he was hospitalized for surgery and post-surgical care. After treatment was completed, the navigator also helped schedule the patient's follow-up appointments with physicians for the same day to continue to minimize travel burden and cost, and referred the patient to a survivorship program.

A Case from a Community-based Navigator

This case illustrates how a community-based navigator helped a young (<45) Caucasian woman living on a neighbor island who was concerned about her risk for breast cancer because of her family history of breast cancer. Unfortunately, she had no health insurance, was not financially stable, and was undergoing foreclosure proceedings. The woman learned about the community navigator through the Susan G. Komen website. After hearing the woman's concerns, the navigator referred her to a grant-funded breast program for free screening. She was diagnosed with ductal carcinoma, in situ, and referred for surgery. The navigator provided educational materials, referred her to the local hospital's patient assistance program, and helped her with an application to MedQuest. Once coverage was approved, the navigator provided emotional support to and through surgery, even loaning her a meditation CD. Two months after a lumpectomy, the patient noticed bloody discharge from the nipple. The navigator supported her through another surgery. After further testing, her doctors discovered a papilloma and suggested removing the duct. The navigator accompanied the patient to appointments, helped the patient weigh each treatment option and supported her in seeking a second opinion. The navigator continues to be in contact with the patient to support her participation in regularly scheduled mammograms.

A Clinical and Community Navigator Collaboration

This case illustrates how a hospital-based and a community-based navigator helped a middle-aged Native Hawaiian woman who found a lump in her breast. The patient and her family were not financially stable and were without health insurance. By searching the internet, the patient located a breast cancer survivor who referred her to a community-based cancer navigator on her island. The community navigator connected the patient with a clinical navigator who coordinated the Breast and Cervical Cancer Control Program (BCCCP) on the same island. The clinical navigator enrolled the patient in BCCCP, which provides free screening and treatment to uninsured women. At the same time, the two navigators worked together to help the patient complete a MedQuest application, which was approved. After a diagnosis of Stage IV breast cancer, the clinical navigator helped the patient find appropriate physicians, make sure she understood her treatment schedule, and was available to make sure the patient got help managing side-effects. The community navigator continued to provide emotional support to the patient, accompanied her to appointments, helped her identify and get answers to her questions, and reviewed provider explanations and recommendations after each appointment to affirm her understanding. The navigators relied on each other to help the patient overcome a variety of barriers. The patient expressed that she would not have pursued screening or treatment (because she could not afford it) and would not have completed treatment (because of the length, complexity, and side effects of the treatment) if it was not for their help.

Discussion

Activities performed by cancer patient navigators in community-based and hospital settings have been described. The case study methodology demonstrates the depth and breadth of navigation activities and illustrates how hospital-based and community-based navigators can work together to help individuals access cancer care and complete cancer treatment.

Advocates and supporters of cancer patient navigation argue that navigation services help patients overcome barriers to cancer care and promote early diagnosis, timely initiation of treatment, and treatment completion. Findings from several research studies, including randomized control trials of cancer patient navigation, support this hypothesis.[6-11] For example, findings from nine controlled trials suggest that navigation improved women's adherence to breast cancer screening, follow-up of diagnostic abnormalities, initiation of breast cancer treatment, and quality of life.[6] Another review of controlled trials found that navigation improved adherence to screening by 11%-17% and adherence to diagnostic follow-up care by 21%-29%.[7]

Despite positive research findings, there is currently no reimbursement for navigation services. Most often, navigators are funded through grants and demonstration projects, although The Queen's Medical Center and Moloka'i General Hospital now support some navigator positions without grant funds. As navigation services become more common and move beyond the innovation stage, grant and demonstration funds may cease to be available. Will hospitals and community-based programs be expected to fund these positions themselves, or will navigation become a reimbursable service?

To further efforts towards reimbursement for this service, more proof is needed that cancer patient navigation reduces cancer health disparities and improves outcomes for cancer patients. Thus, projects both locally and nationally are stepping up efforts to evaluate navigation programs. Fortunately, demonstration projects supported by CMS and HRSA are developing ways to capture the activities performed by cancer patient navigators and their effects on improving outcomes for individual patients.

Another group of investigators has worked to further articulate the range of tasks provided by navigators across the cancer care continuum. This group organized tasks by their ability to make cancer services understandable, available, accessible, affordable,

appropriate, and accountable. Thus, lists of navigator activities by phase of the cancer care continuum are now available to help community groups and clinical settings develop navigation programs, to craft job descriptions, and to build training programs. These task lists also may be useful in efforts to certify navigators, a necessary step on the path toward federal reimbursement for navigator services.[7]

In conclusion, more research is needed to objectively prove what has been shown through our case study analysis, that Cancer Patient Navigation helps individuals access and negotiate needed cancer care. Hawai'i's Cancer Patient Navigation programs are working to prove the benefits of, and argue for reimbursement of, this critical cancer care service.

Disclosure Statement

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Conflict of Interest

None of the authors identify any conflict of interest.

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Authors' Affiliations:
- 'Imi Hale Native Hawaiian Cancer Network, Papa Ola Lokahi, Honolulu, HI (JBD, ELD, KLB)
- The Queen's Medical Center, Honolulu, HI (ALA)
- Office of Public Health Studies, John A. Burns School of Medicine, University of Hawai'i at Manoa, Honolulu, HI (KLB)

Correspondence to:
Jermy Domingo MPH; 'Imi Hale Native Hawaiian Cancer Network; 894 Queen Street, Honolulu, HI 96813; Ph: (808) 526-1700; Email: jdomingo@papaolalokahi.org

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Ocular Findings in Volcanic Fog Induced Conjunctivitis

Jorge G. Camara MD and John Kenneth D. Lagunzad MD

Abstract

Objective: To describe the ocular signs and symptoms of patients complaining of eye irritation due to volcanic fog (vog).

Methods: The study utilized a non-comparative, retrospective chart review of 30 patients who had a chief complaint of eye irritation, which the subjects attributed to vog. Ocular signs and symptoms are described and related to the ambient concentration of sulfur dioxide (SO_2), particulate matter sized 2.5 microns ($PM_{2.5}$), and vog visibility in O'ahu during the period of the study.

Results: Ocular signs noted were conjunctival injection (100%), clear mucous discharge (100%), papillary reaction (100%), punctal edema (80%), eyelid swelling (73.3%) and chemosis (63.3%). Ocular symptoms were itchiness (100%), foreign body sensation (100%), tearing (96.6%) and burning sensation (90%). All patients had concurrent respiratory symptoms. During the period of study, the highest 24-hour average concentration of particulate matter sized 2.5 microns ($PM_{2.5}$) was 49.04 $\mu g/m^3$ and vog was visually present.

Conclusions: Patients complaining of eye irritation due to vog have observable ocular signs and symptoms.

Keywords

Vog induced conjunctivitis (VIC), Sulfur dioxide (SO_2), Particulate matter sized 2.5 microns ($PM_{2.5}$)

Introduction

The word "vog" is a portmanteau of the words "volcanic" and "fog". Vog is composed of a variety of chemical species including sulfur compounds and particulate matter. The chemicals in vog that cause respiratory and eye irritation are sulfuric oxide gases, sulfate aerosols such as H_2SO_4, NH_4HSO_4, and $(NH_4)_2SO_4$.[1-3] Vog is also composed of finely sized particles ($PM_{2.5}$) of sulfuric acid aerosols, sodium sulfate, and ammonium sulfate.[4,5] Concerns have been expressed regarding the possible health effects of long-term exposure to vog.[6] Mount Kilauea, currently the world's most active volcano, is the largest source of sulfur dioxide gas (SO_2) in the United States. It has been continuously erupting for 28 years with SO_2 emissions as high as 3000-5000 tons per day.[7] Most reported health effects attributed to vog are respiratory illnesses.[8] Its ambient concentration is associated with increased emergency room visits.[9] Vog has also been shown to statistically increase the odds of developing cardiorespiratory health problems.[10] To the author's knowledge, no reports of the eye findings due to vog exposure have been published.

Methods

In this non-comparative case series, the investigators reviewed charts of 45 consecutive patients seen between January 3, 2011 and March 31, 2011. All patients had a chief complaint of eye irritation attributed to vog and had resided on the island of O'ahu in Hawai'i for at least 7 years. Patients who had infectious conjunctivitis, allergies, nasolacrimal duct obstruction, and other ocular conditions (including blepharitis, pterygium, subconjunctival hemorrhage, anterior uveitis, and dry eye) were excluded. Patients on topical eye medications were also excluded. Thirty patients (20 women and 10 men) qualified to be included in the study. Ages of patients ranged from 18 to 85 years (mean 62.8 years). With slit lamp examination, ocular surface findings for both eyes of each patient were tabulated along with the presenting eye symptoms.

Ambient concentrations of sulfur dioxide (SO_2) and particulate matter ($PM_{2.5}$) on the island O'ahu were obtained from the Clean Air Branch of the Department of Health of Hawai'i. Twenty-four-hour average levels of SO_2 and $PM_{2.5}$ were computed and compared to the US Environmental Protection Agency's (EPA) Federal Primary Standard. The University of Hawai'i Committee on Human Studies approved the research proposal prior to the conduction of the study (CHS- 19283).

Results

All patients (100%) had bilateral conjunctival injection and clear mucous discharge. Papillae, a collection of lymphocytes and plasma cells on the conjunctiva, were noted in all patients (100%). The punctum, which is the opening of the lacrimal drainage system, was found to be edematous in 24 patients (80%). Eyelid swelling was found in 22 patients (73.3%). Nineteen patients (63.3%) had bilateral chemosis, which is the accumulation of fluid beneath the conjunctiva. These ocular signs are listed in Table 1. The ocular symptoms are listed in Table 2. All 30 patients (100%) had eye itchiness and foreign body sensation, while 29 patients (96.6%) complained of tearing and 27 patients (90%) had an ocular burning sensation.

Figure 1a shows conjunctival injection while Figure 1b shows excessive tearing, made evident with fluorescein dye. Figure 2a shows an everted upper eyelid with papillae on the palpebral conjunctiva while figure 2b shows papillae and punctal edema of the lower eyelid.

Ambient levels of $PM_{2.5}$ recorded for January (Figure 3a), February (Figure 3b) and March (Figure 3c) from the Honolulu, Pearl City, Kapolei and Sand Island monitoring stations were tabulated. The 24-hour average concentration of $PM_{2.5}$ measured had a high of 49.04 $\mu g/m^3$ and a low of 1.5 $\mu g/m^3$. Vog visibility was frequent during the study period (Figure 5). Ambient levels of SO_2 recorded for January (Figure 4a), February (Figure 4b), and March (Figure 4c) from the Honolulu, Kapolei, and West Beach monitoring stations showed a 24-hour average concentration high of 0.005 ppm and a low of 0.001 ppm.

Discussion

Factors affecting deposition of vog on the eyes are airborne concentration, dispersion of aerosols into the atmosphere, and duration of exposure. Vog from Mount Kilauea has been released environmentally in Hawai'i for more than 28 years, with SO_2 emissions as high as 3000-5000 tons per day.[7] These emissions are blown from Mount Kilauea to the island of O'ahu by southwest (Kona) winds, which travel counter to the northeast trade winds. National Oceanic and Atmospheric Administration data show that trade winds are low during the months January to March, which corresponds to the period of the study (Figure 6).[11] During these months, the unopposed Kona winds bring vog from Mount Kilauea to other islands like Maui and O'ahu. Monitoring stations from Pearl City and Kapolei recorded $PM_{2.5}$ levels above the 35 $\mu g/m^3$ 24-hour average standard (Figure 3a). In addition, recorded vog visibility in O'ahu was high

Table 1. Ocular signs in Vog Induced Conjunctivitis (VIC)			
Signs	**N (patients)/30**	**N (eyes)/60**	**(%)**
Conjunctival injection	30	60	100%
Papillary reaction	30	60	100%
Clear mucous discharge	30	60	100%
Punctal edema	24	48	80%
Lid swelling	22	44	73.3%
Chemosis	19	38	63.3%

Table 2. Ocular symptoms in Vog Induced Conjunctivitis (VIC)			
Symptoms	**N (patients)/30**	**N (eyes)/60**	**(%)**
Itchiness	30	60	100%
Foreign body sensation	30	60	100%
Tearing	29	58	96.6%
Burning sensation	27	54	90%

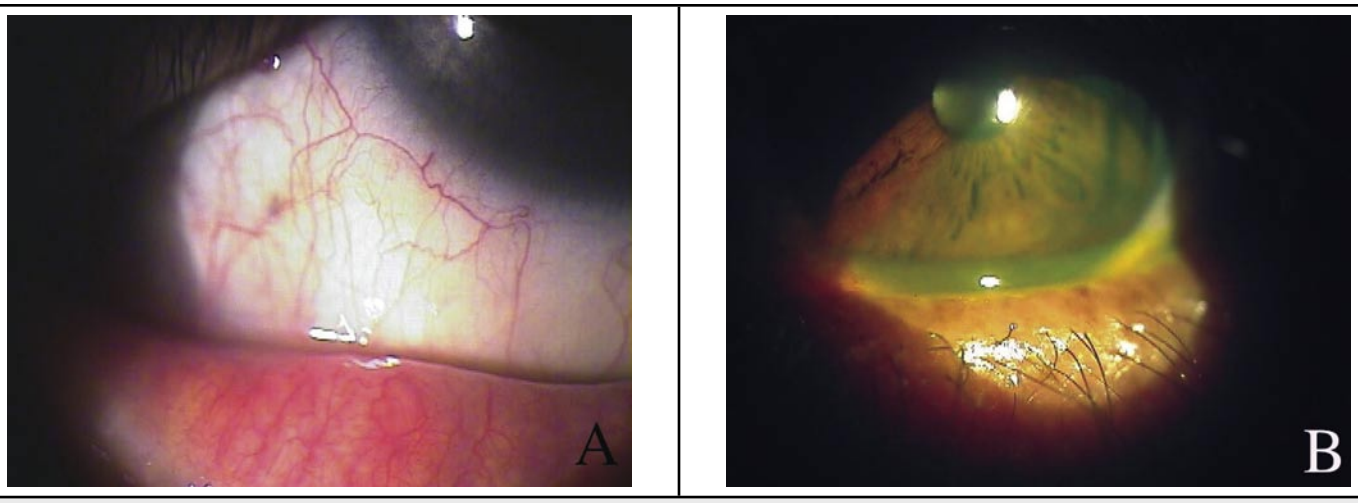

Figure 1. Conjunctival injection (A). Excessive tearing made evident with fluorescein dye (B).

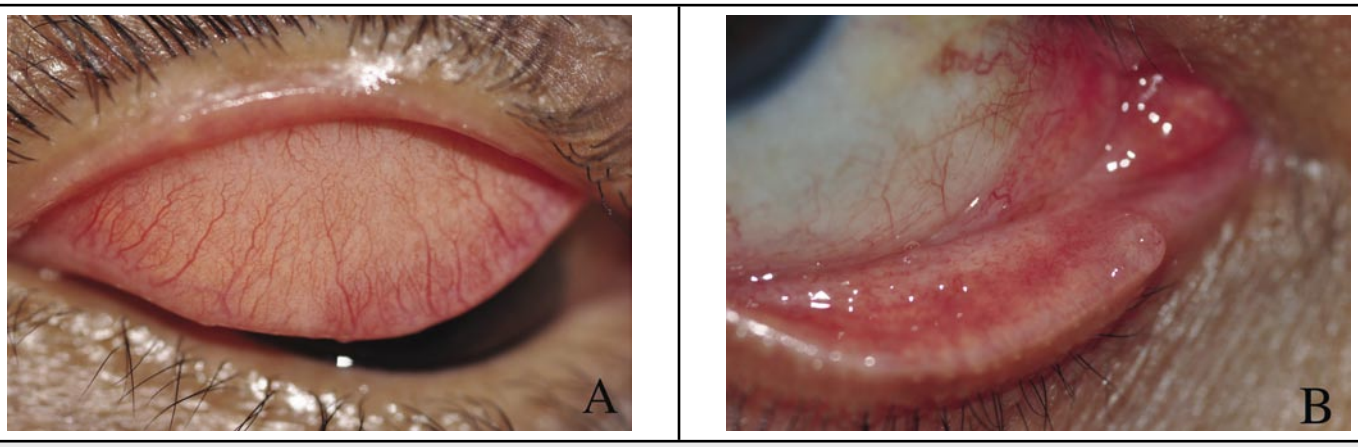

Figure 2. Papillary reaction on upper palpebral conjunctiva (A). Papillary reaction on lower palpebral conjunctiva with punctal edema (B).

during the period of study (Figure 5). Chronic exposure to environmental toxins is defined as multiple exposures occurring over 7 years, which was the standard used in this study. Since 100% of the patients in the study complained that their eye symptoms were due to vog exposure, and all of the common eye conditions that could cause similar signs and symptoms were excluded, the postulate of this study was that the documented significant levels of vog in the atmosphere were responsible for them.

The investigators hypothesize that the ocular signs and symptoms described are caused by an amalgam of toxic and allergic reactions. Sulfur dioxide oxidizes to aerosols of sulfuric acid and sulfate compounds forming finely sized particulate matter ($PM_{2.5}$).[12] These aerosols irritate the nerves and mucosa of the ocular surface causing tearing and irritation. Particulate matter may also trigger an allergic cascade, stimulating release of histamine. Eye redness and conjunctival injection result from vasodilation and increased blood flow. Chemosis, which is a build up of fluid underneath the bulbar conjunctiva, results from extravasation of plasma. Conjunctival inflammation gives rise to a papillary reaction, which is a fine mosaic pattern of dilated, telangiectatic blood vessels. Papillae are usually seen on the upper palpebral conjunctiva and predispose the eye to a foreign body sensation. Eyelid swelling results as the inflammation becomes more diffuse. Accumulation of particulate matter in the punctum contributes to punctal edema and exacerbates tearing. Itchiness results from the histamine released after the allergic cascade has been triggered. The toxic irritation of sulfuric acid aerosols on

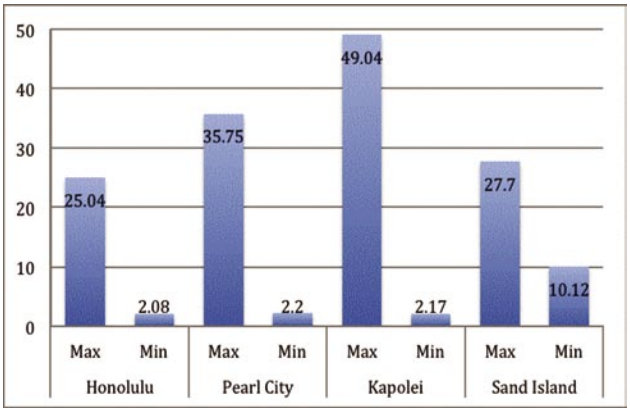

Figure 3a. 24-hour average of $PM_{2.5}$ levels (μg/m3) measured from O'ahu monitoring stations, January 2011.
(Data from the Clean Air Branch, Department of Health, Hawai'i)

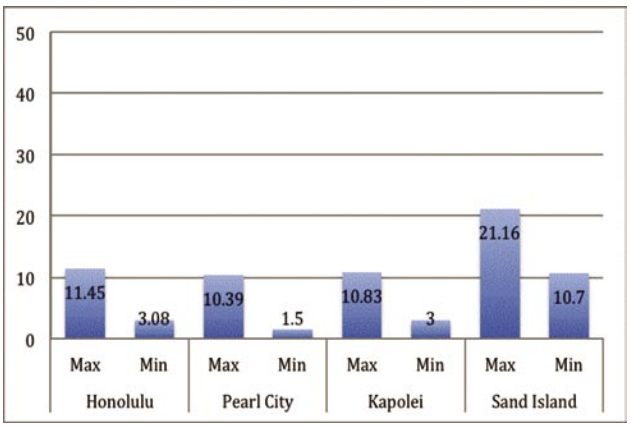

Figure 3b. 24-hour average of $PM_{2.5}$ levels (μg/m3) measured from O'ahu monitoring stations, February 2011.
(Data from the Clean Air Branch, Department of Health, Hawai'i)

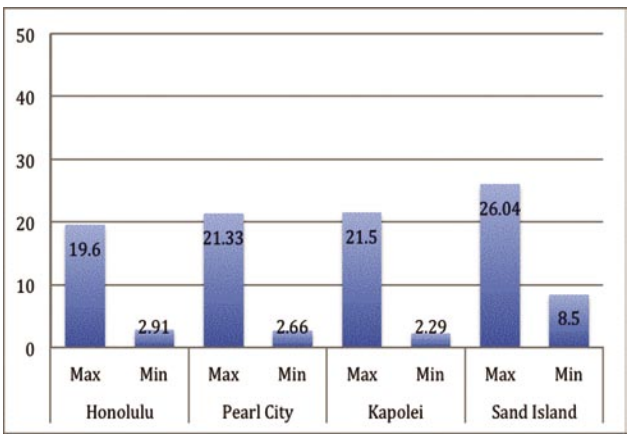

Figure 3c. 24-hour average of $PM_{2.5}$ levels (μg/m3) measured from O'ahu monitoring stations, March 2011.
(Data from the Clean Air Branch, Department of Health, Hawai'i)

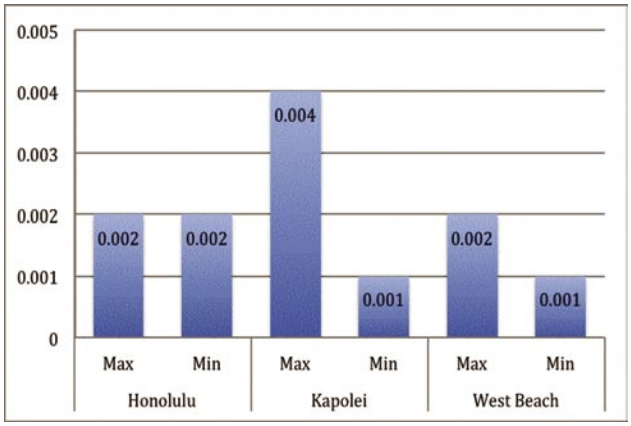

Figure 4a. 24-hour average of SO_2 levels (ppm) measured from O'ahu monitoring stations, January 2011.
(Data from the Clean Air Branch, Department of Health, Hawai'i)

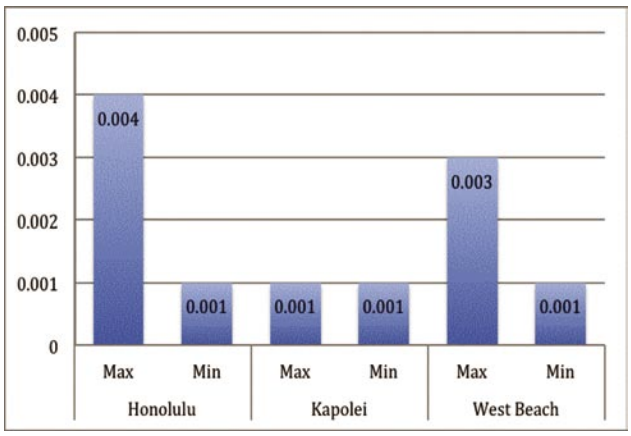

Figure 4b. 24-hour average of SO_2 levels (ppm) measured from O'ahu monitoring stations, February 2011.
(Data from the Clean Air Branch, Department of Health, Hawai'i)

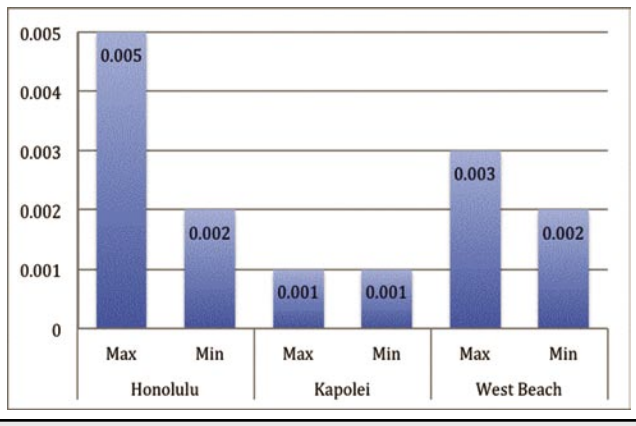

Figure 4c. 24-hour average of SO_2 levels (ppm) measured from O'ahu monitoring stations, March 2011.
(Data from the Clean Air Branch, Department of Health, Hawai'i)

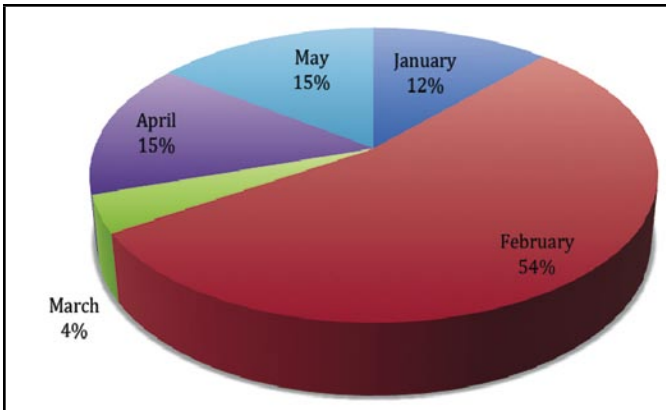

Figure 5. Monthly vog visibility data (January-May 2011).
(Data from the Clean Air Brach, Department of Health, Hawai'i)

Month	Percentage
January	42
February	55
March	61
April	74
May	86
June	91
July	95
August	94
September	83
October	71
November	64
December	57

Figure 6. Mean monthly frequency of the Trade winds over Hawaiian waters. (Data from the National Weather Service of the National Oceanic and Atmospheric Administration)

the cornea leads to an ocular burning sensation. All of the patients in the study complained of respiratory symptoms consistent with the described allergic manifestations of this condition. Treatment was mainly supportive. Patients were instructed to use ice compresses for ten minutes, 3-4 times a day, and prescribed topical anti-histamine eye drops until symptoms receded. More severe cases were treated with topical steroid eye drops for one week and then switched to topical anti-histamine eye drops.

The investigators propose the term "Vog Induced Conjunctivitis" (VIC) for the constellation of signs and symptoms described in this ocular condition. The description of the signs and symptoms of VIC in this study should allow for the prompt diagnosis of the condition and referral to an eye specialist.

Disclosure Statement

The Authors have no propriety or commercial interest in any materials discussed in this article.

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Authors' Affiliation:
- Department of Surgery, University of Hawai'i, John A. Burns School of Medicine, Honolulu, HI

Correspondence to:
Jorge G. Camara MD; Ph: (808) 533-0177; Email: jorgecam@hawaii.edu; jordegcam@yahoo.com

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Antibiotic Desensitization Therapy in Secondary Syphilis and *Listeria* Infection: Case Reports and Review of Desensitization Therapy

Gil Magpantay MD; Anthony P. Cardile DO; Cristian S. Madar MD; Gunther Hsue MD; and Conrad Belnap MD

Abstract

Two adult cases, one of secondary syphilis and one of Listeria monocytogenes bacteremia, in which antibiotic desensitization therapy was utilized to assist treatment of active infection in the face of severe penicillin allergy. Clinical considerations are discussed that led to the decision to employ a formal desensitization procedure. Antibiotic desensitization protocols can facilitate optimal and safe antibiotic therapy in the appropriate clinical setting.

Introduction

Penicillin is the most common cause of drug induced anaphylaxis and medication allergy.[1] About 75% of all anaphylactic deaths are caused by penicillin, estimated at about 500-1000 deaths per year.[2,3] Penicillin can cause any of the four types of hypersensitivity reactions. The two most common are IgE mediated and T-cell mediated reactions resulting in a morbilliform rash.

Penicillin is a hapten and only becomes immunogenic when it binds to another tissue macromolecule, usually a protein.[4] The penicilloyl group accounts for 85%-90% of penicillin breakdown products.[5] Penicilloyl constitutes the major determinant, and when complexed with polylysine is called penicilloyl-polylysine (PPL).[6] Depending on the population studied, about 75% of penicillin skin test-positive patients react only to the PPL group.[6]

The minor determinant is composed of penicillin metabolites that form disulfide bonds with sulfhydryl groups of cysteine and are produced in relatively small quantities.[5] These compounds include benzylpenicillin (penicillin G), benzylpenicilloate, and benzylpenilloate. In large studies, about 10-20% of penicillin skin test positive patients react only to the benzylpenicilloate and benzylpenilloate groups.[7] One small study suggests that these patients have a higher risk of severe allergic reactions.[8]

Two adult cases are described in which antibiotic desensitization therapy was utilized to assist treatment of active infection in the face of antibiotic allergy. Our first case involves a patient with secondary syphilis who had a prior severe reaction to penicillin and failed alternative therapy. Our second case involves a patient with *Listeria monocytogenes* bacteremia who had a documented anaphylactic reaction to penicillin. Physicians should be aware of the indications for referral for antibiotic desensitization. If utilized appropriately, antibiotic desensitization protocols can optimize patient therapy thereby allowing use of specific "drugs of choice."

Case 1

A 45-year-old male presented with a two month history of an erythematous, pruritic, maculo-papular rash initially involving the truncal area and then spreading to the genital area and extremities, including both palmar and plantar surfaces. The lesions varied in size from 0.5 to 2.5 cm and gradually became hyperpigmented with superficial desquamation. Secondary syphilis was suspected and confirmed with Rapid Plasma Reagin (RPR) positivity (1:64) and Fluorescent Treponemal Antibody (FTA) reactivity. The patient admitted to having two recent sexual contacts, one casual contact and another with a commercial sex worker.

Past medical history was significant for reaction to penicillin with hives, dyspnea, loss of consciousness, and hypotension requiring hospitalization at age fourteen. He also had a remote history of treated gonococcal and chlamydial genital infections.

Due to his previous severe reaction to penicillin, the patient was initially started on alternative therapy with a fourteen day course of doxycycline with no resolution of his disseminated rash. The infectious disease consultant recommended that the patient undergo penicillin desensitization for optimal therapy.

He was admitted to the hospital for antibiotic desensitization followed by penicillin therapy under unit-level observation (Figure 1). He tolerated the procedure well with no hypersensitivity reaction and was discharged the following day. The patient subsequently had complete resolution of his rash and negative RPR testing at follow-up.

Case 2

A 72-year-old female with multiple medical problems including chronic kidney disease, congestive heart failure, and systemic lupus erythematosus was admitted for altered mental status. Lumbar puncture was aborted due to the patient's acute delirium and inability to cooperate with the procedure. Two sets of blood cultures grew *Listeria monocytogenes*. She had a reported history of anaphylactic reaction resulting in shortness of breath with prior penicillin exposure. The infectious disease consultant recommended therapy with ampicillin in combination with either trimethoprim sulfamethoxazole (TMP/SMX) or aminoglycosides. Ampicillin desensitization was recommended for optimal therapy.

An ampicillin desensitization protocol was initiated based on recommendations from the Allergy and Immunology service. After completion of the protocol, ampicillin was added to her antibiotic regimen in addition to TMP/SMX. She was able to achieve clinical resolution with return to her baseline mental function.

Discussion

It is commonly advised that patients with any prior history of adverse penicillin reaction undergo skin testing before re-administration.[9] Currently, penicillin skin testing kits include *Pre-Pen*® or PPL which consists of penicilloyl, a major determinant complexed to polylysine.[10] *Pre-Pen*® was commercially available from 1974 to 2004 and returned to the market in 2009. Of the minor determinants, only Penicillin G is available.[10] Specialized medical centers synthesize other minor determinants such as penicilloate and penilloate for local use.[10] Penicillin challenges on patients with a negative response to *Pre-Pen*® and Penicillin G have similar reaction rates when compared to patients with a negative response to the full set of major and minor determinants.[11] Penicillin skin testing has a very high negative predictive value (97%-99%).[12] Approximately 1%-3% of patients who test negative had mild and self limiting reactions when challenged with penicillin.[10] Patients with a negative skin test should be considered for re-challenging with penicillin. Individuals

Figure 1. Sample Penicillin Desensitization Protocol

1. Patient must be admitted to a high acuity unit during the desensitization
2. Obtain consent from the patient explaining the risks of desensitization
3. Appropriate emergency drugs and equipment should be at hand, especially epinephrine
4. Methylprednisolone 125mg q 8 hours (first dose 1 hour prior to desensitization)
5. Diphenhydramine 50mg IV q6 hours (first dose 1 hour prior to desensitization)
6. Discharge after observation with two epinephrine pens

Pharmacy Preparation

1. Prepare Penicillin G to 1,000,000 U/ml (Stock Solution)
2. Prepare six log dilutions of 100,000, 10,000, 1000,100,10,1 U/ml
3. Add 1ml of stock solution to 49ml of saline (50ml total)
4. It is acceptable to add other approved dilutents in order to make the pumps work at the correct rate.

Nursing Procedure

5. Infuse each 50 ml solution over 20 minutes (starting at lowest concentration)
6. Record Vitals between each dose
7. After completion of each 20 minute infusion, start higher concentration within 10 minutes
8. Within 10 minutes of completion of last IV dose in protocol give
   a. Benzathine PCN 1.2 million units IM, after 20 minutes give another 1.2 million units (total of 2.4 million units)

Dose number	Stock solution U/ml	Infused solution U/ml	PEN G units	Cumulative dose in Units
1	1	0.02	1	1
2	10	0.2	10	11
3	100	2	100	111
4	1000	20	1000	1,111
5	10,000	200	10,000	11,111
6	100,000	2000	100,00	111,111
7	1,000,000	20,000	1,000,000	1,111,111

who test positive should receive penicillin only through an induction of drug tolerance procedure.[10]

Antibiotic desensitization therapy is recommended when the patient has an indication for a specific antibiotic and no acceptable alternate therapy is available. However, desensitization therapy confers only transient tolerance to IgE mediated reactions, resulting in temporary inhibition of mast cell activity.[11] It is hypothesized that the immune response is altered, which temporarily results in tolerance to the antibiotic.[6] Absolute contraindications include patients with a history of Stevens-Johnson syndrome or exfoliative dermatitis.[13]

Desensitization protocols are relatively straightforward and safe with appropriate precautions, but should be performed in a hospital setting by clinicians trained in the technique.[13] A number of detailed protocols for desensitization have been published and we present a sample protocol in Figure 1.[14-18] A stock solution of the antibiotic to be administered is prepared by the pharmacist, and then serial log dilutions are made. Each solution is administered in increasing concentration until the desired dosage is administered, followed by routine dosing. Once a patient with confirmed allergy has been desensitized and treated, the allergic sensitivity to the drug will return shortly after the medication is cleared from the bloodstream. Thus, after desensitization it is important that no doses are missed or late, and repeat desensitization must be performed if the same drug is required in the future. Of note, desensitization therapy has also been safely and successfully performed during pregnancy.[13]

Elective penicillin skin testing should be considered in patients who may need penicillin but have a prior reaction history.[10] It is considered safe to challenge healthy patients with a history of a vague reaction and a negative skin test. Conversely, individuals with prior history consistent with anaphylaxis and cardiovascular insufficiency should probably undergo desensitization as anaphylaxis due to drug rechallenge could be catastrophic. In between both extremes, clinical judgment should be exercised regarding which patient should be challenged and who should undergo desensitization. In both our cases, the two patients reported a severe anaphylactic response with penicillin exposure. Our second patient also had multiple co-morbidities including congestive heart failure. Antibiotic desensitization was recommended in both patients due to concern for anaphylaxis risk with penicillin challenge.

These two cases illustrate the utility of drug desensitization therapy in helping to safely treat actively infected patients with reported sensitivities to penicillin. In an era of ever increasing bacterial resistance, avoidance of beta-lactams or other antibiotics based solely on history may result in the excess use of broader spectrum or potentially less effective therapy. In cases of suspected severe penicillin allergy, allergy consultation with appropriate immunologic testing may be able to clarify the clinical hypersensitivity risk. In cases where a true drug allergy is identified, a formal drug desensitization protocol can help mitigate these factors by transiently permitting use of targeted antimicrobial regimens.

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Declaration of Interest

The authors have no disclosures.

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Authors' Affiliations:
- Department of Internal Medicine, Tripler Army Medical Center, Honolulu, HI (GM, APC, CSM, GH, CB)
- Department of Infectious Disease, Tripler Army Medical Center, Honolulu, HI (GH)
- Department of Allergy and Immunology, Tripler Army Medical Center, Honolulu, HI (CB)

Correspondence to:
CPT Anthony P. Cardile DO; 1 Jarrett White Road, Tripler Army Medical Center, Honolulu, HI 96859; Ph: (808) 433-4923; Email: Anthony.cardile@us.army.mil

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John A. Burns School of Medicine (JABSOM) Class of 2015 Profile

Satoru Izutsu PhD, Vice Dean and Director of Admissions and Marilyn Nishiki, Registrar; John A. Burns School of Medicine, University of Hawai'i

Dr Alson S. Inaba, recipient of the 2011 Leonard Tow Humanism in Medicine Award at John A. Burns School of Medicine (JABSOM) addressed the Class of 2015 on the occasion of the White Coat Ceremony on July 15, 2011. He greeted the students with an enthusiastic, "Alright you made it! Congratulations and welcome to medical school."[1]

This year marks the largest number of students admitted since Problem Based Learning (PBL) was implemented in 1989, women 32 and men 34. They were selected from a total of 1653 applicants of whom 1438 were non-residents and 215 were Hawai'i residents. Two hundred fifty, 87 non-residents and 163 residents qualified to be interviewed.

The final class of 66 first year students represented 58 residents (88%) and 8 non-residents (12%). Residency for application purposes is determined by examining six issues: legal resident, birthplace, parent's legal residents, high school attended, professional or college degree, and legacy (a dependent of an alumna/alumnus or a faculty member who has at least 50% appointment in JABSOM). To be considered a resident of the State of Hawai'i for application purposes, a candidate must have three of the six.

JABSOM continues to describe itself as the most ethnically diverse student body among all medical schools in the United States. Self-identified ethnic origins are: Japanese, Other, 18; Mixed Asian, 13; White, 11; Filipino, Other, 6; Native Hawaiian, Other, 5; Chinese, Other, 4; Vietnamese, Other, 3; American Indian (Cherokee), Chinese, Filipino, Native Hawaiian, White, 1; American Indian (Choctaw), Black or African American, White, 1; Asian Indian, 1; Guamanian or Chamorro, 1.

Forty-seven are new applicants, 13 reapplicants, and 6 from Imi Ho'ola (Post Baccalaureate Program at JABSOM). Ages ranged from 20-34 with a median of 23. Fifty-four attended Hawai'i high schools – 37 private, 16 public, and 1 home schooled. Seven attended mainland high schools, 1 came from high school in the Pacific Basin, 4 from foreign schools, 1 home schooled.

All accepted have a baccalaureate degree. In addition, 15 have Masters degrees. Forty-nine graduated from colleges on the mainland, 16 from the University of Hawai'i, and one from University of Victoria (Canada). The Universities on the mainland United States represented were: University of Southern California, Creighton University, University of California-Los Angeles, Loyola Marymount University, Stanford University, University of Washington, Boston College, California Polytechnic State University, Case Western Reserve University, Claremont McKenna College, Columbia University, Eckerd College, Massachusetts Institute of Technology, Mount Holyoke College, Northwestern University, Occidental College, Pomono College, Santa Clara University, Seattle University, Trinity University, University of California-Berkeley, University of California-Davis, University of California-Irvine, University of California-San Diego, University of Chicago, University of Miami, University of Michigan, University of Portland, University of Wisconsin, Vanderbilt University, Washington University in St. Louis, Wellesley College, Westmont College, Williams College, Georgetown University, Oregon Health & Science University, Stanford University, and Tufts University.

College majors included: 27 Biology, Other; 3 Biology, Public Health; 3 Biomedical Engineering; 3 Psychology; 2 Biochemistry; 2 Biological Science/Business Administration; 2 Chemistry; 1 Biochemistry and Molecular Biology, Business; 1 Biochemistry and Molecular Biology, Epidemiology; 1 Biochemistry; 1 Biological Sciences; 1 Biology, Physiology & Biophysics; 1 Biomedical Engineering, Global Medicine; 1 Biotechnology; 1 Brain and Cognitive Sciences; 1 Chemistry, Biomedical Science; 1 Chemistry, Cell, and Molecular Biology; 1 Comparative History of Ideas, Molecular Bioscience & Bioengineering; 1 Earth Systems; 1 Economics; 1 Health Promotion & Disease Prevention; 1 Health Promotion & Disease Prevention, Developmental & Reproductive Biology; 1 History, Athletic Training; 1 Human Biology; 1 Japanese; 1 Microbiology/Bacteriology; 1 Neuroscience, Physiology; 1 Neuroscience; 1 Philosophy; 1 Physics; 1 Psychobiology.

The academic credentials for the entire entering class are: Median Cumulative Grade Point Average (GPA), 3.65; and, median Science GPA, 3.64. Medical College Admissions Test (MCAT) median scores are: Verbal Reasoning-10; Physical Sciences-11; Writing Sample-P; and, Biological Sciences-11. Median Total Score is: 31.

The criteria used in gaining admission into the John A. Burns School of Medicine are similar to those used by many US medical schools acknowledged by the Liaison Committee on Medical Education of the American Association of Medical Colleges. All applicants must take the Medical College Admissions Test (MCAT) and apply through the American Medical College Admissions Service (AMCAS). This service compiles transcripts, academic data, personal histories, and letters of recommendations that are sent to the medical schools designated by the applicants.

All applicants who pass an academic screen met with two, assigned interviewers. The interviewers (faculty, regular and clinical, and fourth year medical students) were interested in learning about the applicant as a person. MCAT and GPA scores were not transmitted to the interviewers. Interviewers received three essays written by the applicants: the "personal comments essay" for AMCAS and two for JABSOM that: (1) "Describe succinctly the important experience(s) in your life which began the process that motivated you to enter the career of medicine" and (2) "Please explain why you are applying to the University of Hawai'i John A. Burns School of Medicine." The interviewers are interested in assessing an applicant's leadership skills, interpersonal skills, quality of compassion to help people, and stamina and motivation to pursue at least eight years of medical education.

There were eleven members on the Admissions Committee: 6 clinicians, 4 basic scientists (2 clinicians are also basic scientists), and 1 psychologist. There were 6 men and 5 women who represented the major ethnic groups in Hawai'i and the various age levels. The committee convened 18 times, beginning in September and ending in March. The activities of the Committee were as follows: a few days prior to a meeting, the completed dossier of the applicant to be discussed was assigned randomly to a member of the Committee. The member went "on-line" with a designated password to examine the applicant's folder that consists of: MCAT scores, academic transcripts, and the personal history statements. In addition, the members reviewed the applicant's interview reports, letters of recommendations, and the applicant's JABSOM essays. A committee member, at the meeting, reported in a pre-determined sequence the highlights of each section of the dossier. Queries about the applicant being presented came from members of the Admissions Committee. When the Chair of the Admissions Committee determined that there was an understanding of the "whom" and "what" of the candidate, he called for a secret ballot. An individual, confidential ballot was cast by rating the candidate from 1-10. The ratings were not discussed and were submitted to the Registrar who averaged the ratings. These ratings were ranked when all applicants had been evaluated. Sixty six were notified of acceptances. The "wait list" was determined by the first natural "cut-off" of the rank order. Six graduated from the Imi Ho'ola (post-baccalaureate) Program and joined the incoming class.

Considered were eight out-of-state candidates. The 8 matriculants are those non-residents who had risen to the top 58. All non-residents from this group were separated from the top 58 with their correspondent ratings. The top eight were selected, followed by a waiting list.

Sixty-six eager and academically qualified young men and women began their journey on July 15, 2011 on becoming physicians to serve humankind.

Dr Inaba concluded his memorable White Coat Ceremony keynote address with,

> "In medicine, always remember…FIRST treat the PERSON…and THEN…treat the disease.
>
> …And to the Class of 2015 *(The entire Class of 2015 then stood up.)* From day one of medical school and throughout your entire careers, please remember to embrace the concept of **'TEAMWORK'** *(The entire class then held their hands up and interlaced their fingers to symbolize 'teamwork')* and always remember **to CARE for your patients as a PERSON** and to **CARE for them** *with (The class then each made a shape of a heart with their hands to symbolize 'CARING and COMPASSION'):*[1] COMPASSION, ACTION, RESPECT, EMPATHY."

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THE WEATHERVANE

RUSSELL T. STODD MD, CONTRIBUTING EDITOR

OLD HUNTERS NEVER DIE, THEY JUST STAY LOADED.

Following some hard lobbying by the National Rifle Association (NRA), the Florida Legislature passed a law which directly intrudes into the physician-patient relationship. This unprecedented action states that the physician "should refrain from making a written inquiry or asking questions concerning the ownership of a firearm or ammunition by the patient or by a family member of the patient, or the presence of a firearm in a private home or other domicile of the patient or a family member of the patient." Called the "Privacy of Firearm Owners" law, it is a form of censorship that directly undermines patient care. Violation of Florida Statute 456.072 (2) may include suspension or revocation of license or an administrative fine of up to $10,000. If this law is allowed to stand what will come next to forbid physicians from asking their patients? Effective primary care requires asking patients about their decisions that can place themselves or others at risk of injury or disease. Was the Florida Medical Association asleep on this issue, or overwhelmed by the gun-toters?

TURN OUT THE LIGHT. THE STUDY'S OVER.

A serious development of the aging heart is stenosis of the aortic valve. The result can be cardiac failure or arrhythmia and sometimes death. In the Unites States open heart surgery can fix the problem, but in Europe the problem is more simply solved without opening the heart. A catheter is inserted through the femoral artery and a new valve can be placed within the aorta. The procedure hit the European market four years ago, but is still struggling through the Food and Drug Administration (FDA) approval process. This story is all too familiar. U.S. entrepreneurs are forced to test promising medical devices in costly animal studies for years before they can be moved into clinical trials. Americans who create new medical tools are moving their business overseas. In 2004, 87% of all medical device studies were carried out in the U.S. By 2009, that number had dropped to 45% of clinical trials. Between 2004 and 2010 more than half of all innovative devices were first approved in Europe. As a consequence, manufacturing is also moving across the water. Companies know they will get European approval long before they get the FDA's okay. Venture capital is departing also. According to Price Waterhouse, the number of newly started medical-device companies dropped to 60 in 2010 from 118 in 2008. Congress is aware and both the House and Senate show bipartisan efforts to accelerate FDA action. The regulatory process is harming innovation, job creation and patient care. Do the bureaucrats care?

GOODBYE, GOMER. THREE STRIKES AND YOU'RE OUT.

Legislators in Washington state passed a ruling that Medicaid patients could not visit the hospital emergency room more than three times a year for any of 700 complaints defined as not true emergencies. The medical community is upset and angry, stating that the ruling is unscientific, and the intended participation of doctors and hospitals in preparing the list, did not happen. The local chapter of the American College of Emergency Physicians (ACEP) filed a lawsuit with the support of the Washington State Medical Association and the Washington Hospital Association. A spokesman for the ACEP stated that abdominal pain, chest pain, and bleeding with early pregnancy must be evaluated. "This list is not based on science. It is based on which line items will save the most money." Dr. Jeff Thompson, director of the state medical Medicaid program, stated that he was forced to cut $35 million from the ER-visits tab. The lawsuit is of great interest because more than a dozen states are watching this decision. If it is allowed to stand, those states will surely follow suit, and perhaps private insurers as well.

MORALS AND ETHICS ARE NOBLE, BUT GREED IS MORE POPULAR. PHYSICIAN, HEAL THYSELF.

About 600,000 angioplasties are performed in the U.S. each year. According to a study in the Journal of the American Medical Association (JAMA), many of these are done on patients who are stable or have no symptoms. In Clearlake, Lake County, California, between the years 2005 and 2009, residents underwent angioplasty at five times the rate of San Francisco, and fifteen times the rate of nearby Sonoma County. In Maryland, the State Board of Physicians charged a cardiologist, Mark Midel, with unprofessional conduct for performing unnecessary angioplasties on hundred of patients. He was suspended from his hospital, St. Joseph Medical Center. The JAMA study included 1091 hospitals and examined data from 500,164 procedures. Of these, 50% were deemed appropriate, 38% uncertain and 12% not indicated. Moreover, the "Courage" study done in Buffalo, New York, followed 2,287 patients for five years, and found that patients with chromic stable chest pain did just as well on oral medications as patients with stents. At a cost of $20,000 per procedure, third parties cannot afford to tolerate physician greed. It is past time for hospitals and physicians to get busy self-policing. Interesting to note that Abbott Labs, a big-time maker of stents, hired Dr. Midel as a sales consultant after he lost his hospital privileges.

SPEAK SOFTLY AND CARRY A BIG MESSAGE.

College football was facing a possible ban and the future of the game was in serious doubt. At the same time, the game was extremely popular and powerhouse Harvard had just built a 22,000 seat stadium. It was over one hundred years ago and the game had become horribly brutal. In the 1904 football season eighteen players died from injuries on the field. Opponents threw punches, jammed their fingers in rivals' eyes, drove their knees into players on the ground, and ignored calls for a fair catch. Frederick Jackson Turner, professor of history at University of Wisconsin, wanted his school to drop the game. Charles Eliot, the most influential educator in the country, stated that football "requires of the players this habitual disregard for the safety of opponents." A conference of colleges had been formed and was eager to abolish or overhaul the game. John Miller, author of "The Big Scrum" describes how President Theodore Roosevelt saved the game which he loved. He summoned the coaches of Harvard, Yale and Princeton to the White House in October 1905, telling them college football was "on trial." They pledged to tone down the violence, but TR was not satisfied. He engineered a new rules committee with intent on reform. The next year, on-field changes revolutionized the game. The committee added the forward pass, made ten yards for a first down, and included personal foul penalties. Meantime, Teddy was building the Panama Canal and trust-busting.

WHAT THE WORLD NEEDS – A WELL ADJUSTED HOT DOG.

Researchers at Kassell University in Germany have developed a polyurethane (PU) toy for pigs to play with to help release their aggression. The Wuhikegel (rooting cone) is a PU ball on a string designed to relieve boredom and inactivity among captive pigs in order to improve animal welfare. Researchers at the University carried out the $226,000 project along with the German federal ministry of food, agriculture and consumer protection. Porcine behavior is being monitored on video. The research team is optimistic that the program will be successful. The Germans need a local Senator William Proxmire for a golden fleece award.

DON'T CHALLENGE 'AN EYE FOR AN EYE' WITH A NEWT.

Shakespeare's witches stirred their cauldron of evil and added "eye of newt." The bard did not know that it was a renewable resource. The newt's ability to regenerate the lens of the eye is not hampered by aging or repeated injury. Mammals, including humans, lose the ability to renew body parts with age. An international team of researchers reporting in "Nature Communications" found that newts regrew lenses 18 times in 16 years with no loss of crystalline quality. Determining how newts regenerate body parts may help improve anti-aging therapies for people.

REMEMBER THE VULGAR PHRASE, "I DON'T GIVE A FLYING _____?" NO LONGER FANTASY BUT A REALITY.

High over the city of Bakersfield, California, a creative (!) pair took a video of themselves having sex in an aircraft. This is not rare; there are legions claiming membership in the Mile High Club. However, in this variation, the episode was continued into the wild blue yonder outside the airplane while sky-diving earthward on camera. The Federal Aviation Administration (FAA) is investigating the flight to determine if any regulations were violated or if safety was compromised. It might be interesting to know the couple's position on landing.

ADDENDA

— Between 1990 and 2005, thirty percent of trauma centers in the United States were closed. Primary reason for closure is financial losses in caring for uninsured patients while maintaining 24 hour coverage.

— According to a Progressive Insurance poll, 73% of drivers talk to their cars.

— Elizabeth Taylor changed her costume 85 times for the film Cleopatra.

— Intelligence tests are biased toward the literate.

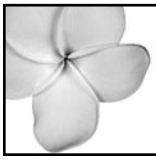
— I always take life with a grain of salt, ... and a slice of lemon, ... and a shot of tequila.

ALOHA AND KEEP THE FAITH **rts**■ *(Editorial comment is strictly that of the writer.)*

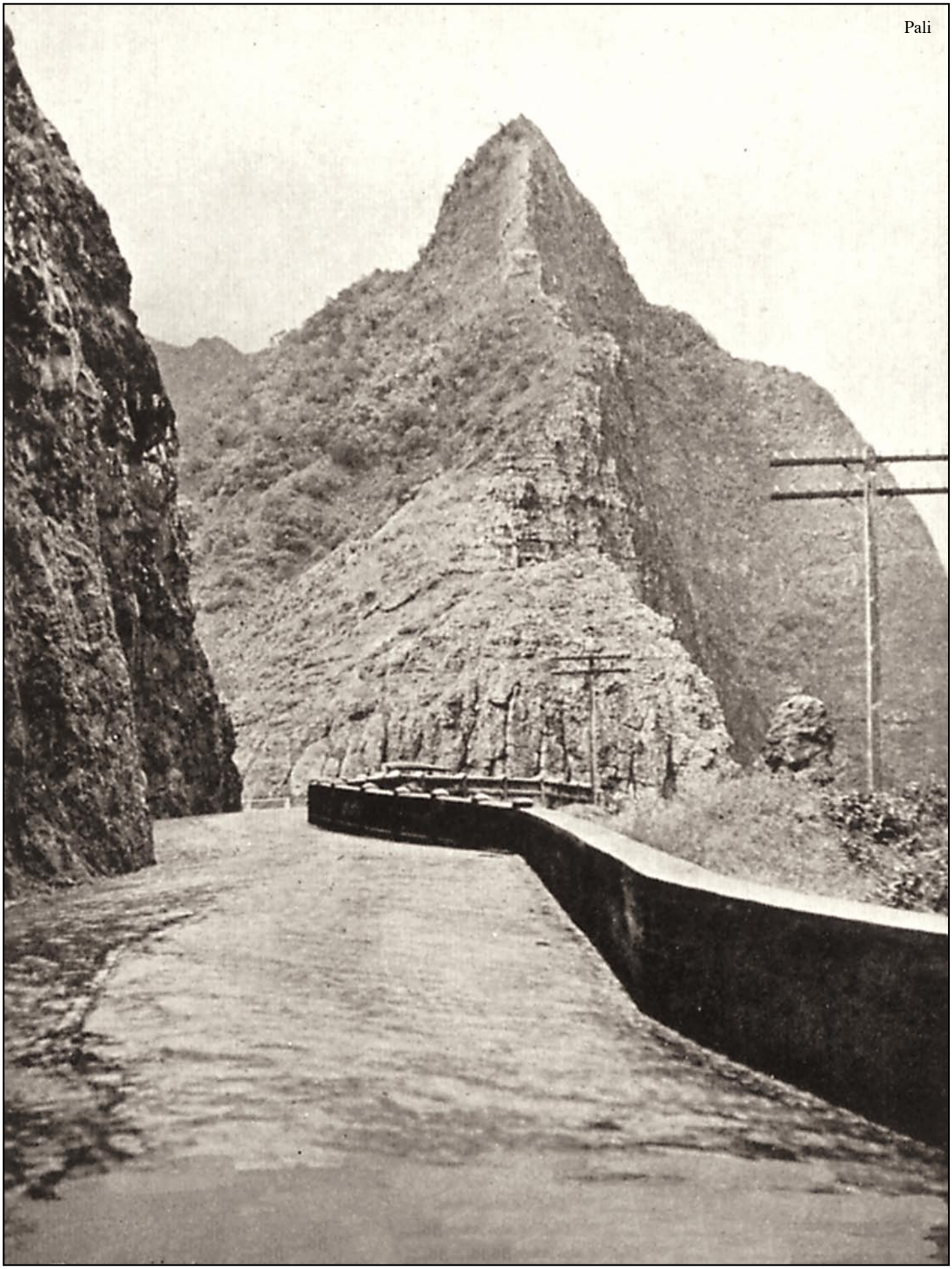
UPCOMING CME EVENTS

Interested in having your upcoming CME Conference listed? Please contact Brenda Wong at (808) 536-7702 x103 for information.

Date	Specialty	Sponsor	Location	Meeting Topic	Contact
January 2012					
1/8-1/13	R	University of California San Francisco School of Medicine	Fairmont Orchid, Kona, Hawai'i	A Practical Approach to Breast Imaging	Web: www.cme.ucsf.edu/cme
1/16-1/20	CD	Mayo Clinic	Mauna Lani Hotel, Hawai'i	Hawai'i Heart 2012: Case-Based Clinical Decision Making Using Echocardiography & Multimodality Imaging	Web: www.mayo.edu/cme
1/15-1/20	R	University of California San Francisco School of Medicine	Fairmont Orchid, Kona, Hawai'i	Body Imaging: Hot Topics in the Tropics	Web: www.cme.ucsf.edu/cme
1/23-1/27	IM	Mayo Clinic	Ritz Carlton Kapalua, Maui	24th Annual Selected Topics in Internal Medicine	Web: www.mayo.edu/cme
1/23-1/27	AN	California Society of Anesthesiologists	Hyatt Regency Maui, Ka'anapali Beach, Maui	2012 CSA Winter Hawaiian Seminar	Web: www.csahq.org
1/30-2/3	CD	Mayo Clinic	Grand Hyatt Kaua'i, Kaua'i	19th Annual Arrhythmias & the Heart: A Cardiovascuar Update	Web: www.mayo.edu/cme
February 2012					
2/5-2/10	GS	Mayo Clinic	Grand Hyatt Kaua'i, Kaua'i	Mayo Clinic Interactive Surgery Symposium 2012	Web: www.mayo.edu/cme
2/13-2/18	IM	University of California San Francisco School of Medicine	Grand Hyatt Kaua'i, Kaua'i	Infectious Diseases in Clinical Practice: Update on Inpatient and Outpatient Infectious Diseases	Web: www.cme.ucsf.edu/cme
2/18-2/21	OTO, FPS, OMF	University of California San Francisco School of Medicine	Moana Surfrider Hotel, O'ahu	Pacific Rim Otolaryngology Head and Neck Surgery Update Conference	Web: www.cme.ucsf.edu/cme
2/19-2/24	D	Skin Disease Education Foundation	Hilton Waikoloa Village, Kohala, Hawai'i	36th Hawaii Dermatology Seminar	Web: www.scientificsmposiums.com
2/20-2/24	ON	Scientific Symposiums	Mauna Kea Resort, Hawai'i	Women's Cancers: Surgical Pathologic, Cytologic, IHC, and Molecular Diagnosis of Breast & Genital Tumors	Web: www.scientificsmposiums.com
March 2012					
3/25-3/28	GS	University of California San Francisco School of Medicine	JW Marriott Ihilani, O'ahu	The Postgraduate Course in General Surgery	Web: www.cme.ucsf.edu/cme
April 2012					
4/2-4/7	IM	University of California San Francisco School of Medicine	Wailea Beach Marriott, Maui	Primary Care Medicine: Update 2012	Web: www.cme.ucsf.edu/cme
June 2012					
6/13-6/16	OPH		Hilton Waikoloa Village, Kohala, Hawai'i	35th Annual Ophthalmology Symposium	Web: www.ucdmc.ucdavis.edu/cme



Did you know that full text articles of the HMJ are available on PubMed Central?



Pali