Public Health Practice

Stories from the Field
Student Practicum Experiences
Summer 2010
The University of Texas School of Public Health
The practicum experience is an integral part of the MPH curriculum. Public health students are provided with the opportunity to apply their classroom knowledge to real world settings through which they make a meaningful contribution to a public health organization.

Under the guidance of a community preceptor and faculty sponsor, students from all divisions gain a deeper understanding of public health practice, interact with professionals in the field, and expand their repertoire of professional skills.

This first-edition e-magazine showcases student practicum experiences throughout the Spring 2010 semester. (Prior semesters may be accessed through the e-book, a collection of student abstracts describing their experiences.)
# Practicum Topics

**Serving Size:** 1 Practicum  
**Servings per e-Magazine:** 67

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Childhood Asthma Attack Prevention

Public Health Significance

According to CDC report in 2004, nearly 1 in 8 school-aged children had asthma. This rate was rising most rapidly in pre-school aged children. Every year, asthma accounted for 14 million lost days of school and ranked the leading cause of school absenteeism. Asthma was the third leading cause of hospitalization among children 15-year or younger. The estimated cost of treating asthma in children 18-year or younger was $3.2 billion per year (CDC, 2004). Low-income populations, minorities, and children living in inner-cities experienced higher morbidity and mortality due to asthma attack (CDC, 2004). To control and manage asthma and let asthmatic children live better lives, conducting analysis on exist data, revealing underline causalities, and finding the best preventive medication treatment will be great help. My data analysis project on TCHP asthma clients in the practicum addressed the essential public health services on “diagnose and investigate health problems and health hazards in the community (of asthma children)” and “evaluate effectiveness, accessibility, and quality of personal and population based health services (medication treatments)!”. 

The Three Lines of Defense in Asthma
• Manage the environment (control the asthma triggers)
• Manage the breathing tubes (make breathing tubes less likely to develop asthma reactions)
• Manage flare-ups (take action to stop before causing big problems)

“Preventive medications are the best way to control asthma symptoms and head off long-term damage to your child’s lungs.”

--- Dr. Farber

Childhood Asthma Risk Stratification & Quality Measures
By: Wensheng Sun

My practicum was at Texas Children Health Plan Inc (TCHP) Medical Affairs. My duty was using STATA software to conduct data analysis on TCHP asthma claim, emergency department visit, and hospitalization files from 2005 to 2008. My progressive approaches were 1) determine asthma clients within target age group of 2 to 18 years 2) find out asthma medications and dosages patients were taking and classify the medications 3) set up a asthma cohort with asthma clients’ demographic information, outpatient treatments, medications, and adverse asthma outcomes, such as ER visits and hospitalizations 4) conducting data analysis using regression analysis. My hypothesis were that 1) children of Hispanic and African American ethnic groups and economic disadvantage encounter more frequent asthma attacks 2) comparing to symptom relieve medicines, preventive medicines were associate with decreased adverse asthma outcomes. My final products were data analysis reports.

Public Health Significance

A Boy in Asthma Attack (http://www.fotosearch.com/CSP043/k0434700/)
Environmental Health and Safety and Renewable Energy

By: Cleveland Allen

This summer I was able to intern with Waste Management renewable energy Environmental Health and safety department. I had the opportunity to learn first-hand how everyday trash is actually turned into energy. I had the opportunity to perform safety and environmental audits for a few of the 110 plants Waste Management has in the U.S. and Canada. My practicum was unique in the fact that I did not work on one project for the summer. I was required to travel extensively to some of the plants to ensure the safety protocol was being followed. I also was given the opportunity to participate in Waste Management efforts to be included in OSHA’s Voluntary Protection Program. This was a great opportunity for me to receive real world experience in the field.

Public Health Significance

In the environmental health and safety department, we enforced laws and regulations that protect health and ensure safety to the many employees that work for Waste Management Renewable Energy. We also had to ensure the plant sites were not breaking any environmental laws by performing environmental assessments in and around the plant sites.

I had the opportunity to participate in a variety of projects dealing with Environmental Health and Safety. I received the opportunity to come up with a standard safety signage for every plant in Waste Management Renewable Energy system. I was also responsible for collecting the chemical inventory for the 110 plants in the system. In all this internship was very rewarding and solidified my reasoning in wanting to go into Environmental Health and Safety.

One of WM’s trucks responsible for trash pick-up
Source: biofuelsdigest.com

“Before we can start saving the planet, we must all start to THINK GREEN!”

Source: www.7gen.com/blog/david-herron/technosanity-3...
Public Health Significance

C. diff-associated diarrhea (CDAD) is an increasing problem in hospitals all over the U.S. The risk for C. diff infection increases in patients with advanced age, antibiotic exposure, and immunocompromising conditions. CDAD can result in extended length of stay in healthcare settings and in severe cases fatality.

The C. diff research team consists of public health professionals who conduct studies regarding C. diff pathogenesis and alternative treatment methods to find solutions to this health problem. The C. diff researchers, infection control practitioners, pharmacists, doctors, and other members of the C. diff team provide several of the Public Health Essential Services including: monitoring the health status of C. diff patients, diagnosing and investigating C. diff infection, and informing, educating, and empowering patients and healthcare workers on how to control and prevent the spread of C. diff infection.
Public Health Significance

The anesthetic gas project most closely related to the “monitor” Public Health Essential Service. The purpose of the anesthetic gas research project was based around the monitoring of exposure levels of anesthetic gases and addressing potential health concerns of the researchers.

This project related to public health since participants learned more about the safe use of anesthetic gas and benefited from monitoring results and correction of any safety issues noted.

There are many different experiments taking place and the ways of administering anesthetic gas can vary greatly. By gathering this data and completing the project, we have a better understanding of how individuals are performing procedures, when are they getting high exposure levels and what personal protective equipment, changes in work practices and engineering controls could be utilized to limit exposure.

Anesthetic Gas Usage and Implementation of Best Management Practices in Animal Research

By: Rebecca Luke

Principal Investigators (PI’s) using anesthetic gas were contacted and appointments were set up to discuss the project, provide informed consent and determine when monitoring could be performed.

We returned to the lab during the agreed upon time and personal monitoring during anesthetic gas procedures was measured using a Miran 1BX portable IR spectrophotometer ambient air analyzer.

Results were calculated for each individual and a report was created. If exposures were above recommended levels, personal protective equipment, changes in work practices and use of engineering controls such as biological safety cabinets and fume hoods were recommended.

“The exactly am I breathing in the research laboratories?”

Practicum Duties

• Recruit volunteers to participate in the study
• Obtain informed consent, answer questions and schedule monitoring sessions
• Perform anesthetic gas monitoring and write summary reports of findings

Anesthetic Gas Monitoring

Summer 2010 • Rebecca Luke • Baylor College of Medicine • Anesthetic Gas Monitoring
A Quality Assurance Review of UTHSC-H Animal Care & Use Safety Surveillance Data Compared to Reported Injury and Exposure Outcome Data

By: Kristen Maddux

Environmental Health & Safety (EH&S) is a department at University of Texas Health Science Center-Houston dedicated to safety. Within this department is a division called Biological Safety whose goal is to provide support to “students and personnel concerning the recognition, evaluation, and control of chemical, biological, and physical hazards”.

One of the responsibilities carried out twice a year by Biological Safety is to team up with the Animal Welfare Committee and Center for Laboratory Animal Medicine and Care (CLAMC) to conduct surveys of the animal laboratory and animal housing locations to ensure that the proper precautions and procedures are taken to keep all personnel and animals safe.

The project conducted was a review of 5 years (2005-2009) of data covering deficiencies noted on the semi-annual inspections as well as reviewing the data over the animal care injury reports that occurred within the same 5 year period. An analysis was conducted to see if there was a relationship between the most common identifiable deficiencies and the most common identifiable reported injuries.

The results showed most injuries occur during animal manipulations and handling. In contrast, our most common deficiencies seemed to be unrelated to these injuries. This has many implications on possible areas of improvement for providing a safer work environment due to the fact that our surveillance does not occur while animal manipulation and handling procedures are carried out.

The conclusion of this project resulted in a presentation to the executive director of CLAMC explaining the results of the project and recommendations for possible solutions and/or better surveillance techniques.

Public Health Significance

This practicum dealt mostly with the public health essential service of assuring a competent public health and personal healthcare workforce.

The main goal of this project was to determine if our current surveillance system was an adequate way to identify and prevent future injuries to those working within the animal care sector. Potentially we were missing opportunities to recognize what causes our most common injuries, and thus have not adequately given recommendations to personnel for the prevention of future safety related incidents.
Elders in the Emergency Department

Creation of an Evaluation Tool for Emergency Department Treatment of Older Adults

I performed a thorough literature search to find process recommendations and practice guidelines for treatment of elderly adults in the emergency department.

I found that emergency department staff are most likely to treat only the most acute problem presented by the elderly patient, rather than addressing the underlying problems that send the individual to the ED.

Public Health Significance

Evaluate effectiveness, accessibility, and quality of personal and population-based health services.

As the population ages, healthcare processes must be reevaluated and modified to better serve patients. Emergency departments are not made with the elderly patient in mind. They are loud and rushed places which tend to cause older adults to feel scared or confused.

My final product was a tool for evaluation of the processes and environments which older adults encounter in EDs, and whether or not they match up with recommendations from experts.

In the interest of better serving a large and growing segment of the population, emergency departments can use the tool I created to evaluate their treatment processes and environments.

Literature search findings

- Older adults use Emergency Departments at a higher rate than other segments of the population.
- Despite their importance, functional status and psychosocial conditions are often not assessed, poorly documented, and inadequately addressed.

“Emergency departments are not made with the elderly patient in mind.”

Elderly patients require additional medical expertise.
previously on massage therapy were either not randomized control trials or they were very small trials. In the past several years larger studies have been conducted, which indicate massage can help reduce stress and anxiety, nausea, pain and can improve quality of life measures such as sleep in cancer patients.

I was able to participate in part of the 3-day massage therapy conference, which aimed to educate massage therapists on how to safely provide massage for cancer patients.

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Public Health Significance

MD Anderson’s mission is to make cancer history by providing cutting edge treatments through research and integrative programs that treat the whole patient. With a focus on prevention and prevention of reoccurrence, the integrative medicine department helps integrate scientifically proven methods to help treat the whole patient. More than ever, our population is interested in and using complementary and alternative medicine (CAM) and often times this information is not shared with their provider. It is important to know which therapies work, which don’t and which could cause harm to patients. The integrative medicine department at MD Anderson is devoted to providing the latest information about CAM to its patients and physicians.

“We don’t treat cancer, but we treat PEOPLE with cancer”.


http://www.mdanderson.org/education-and-research/resources-for-professionals/clinical-tools-and-resources/cimer/index.html

Adult Glioma Follow-Up Study

Predictors of Survival in Adult Glioma Patients

By: Lacey McQuinn

During the Summer of 2010, I completed my practicum experience in the Department of Epidemiology at the University of Texas MD Anderson Cancer Center under Michael Scheurer, PhD, Assistant Professor at Baylor College of Medicine.

For my practicum experience, I contributed to a study conducted by Dr. Michael Scheurer, which investigates markers of infection and inflammation as predictors of risk and survival in adult glioma patients. His research integrates epidemiology, genetics, and molecular biology in order to assess glioma etiology and patient survival.

To evaluate predictors of survival in glioma patients, detailed medical histories including surgery, chemotherapy, radiation, and progression were abstracted from patient medical records.

My primary task in this practicum experience was to perform data abstractions of patient medical records. I also assisted in the pilot testing of the database.

I completed over 100 data abstractions of glioma patient medical records for the ongoing study.

My Practicum Experience

• Attended weekly meetings with the research group
• Completed detailed medical abstractions on glioma patients
• Learned about the various glioma diagnostic tools and treatments

Public Health Significance

My practicum experience most closely relates to the Research service, as included in the Public Health Essential Services of the American Public Health Association (APHA). This practicum experience provided me with the opportunity to become more familiar with how research is conducted and its importance in public health. As a member of a research team, I learned the importance of collecting data in a systematic way in order to eliminate study bias and sustain study validity. Furthermore, this practicum experience has allowed me to apply epidemiologic methods outside the classroom.

In addition, the aims of Dr. Scheurer’s research study relate to the APHA Diagnosis and Investigative service. The study hypothesizes that common infections may interact with the immune system, thus creating an environment which favors tumor development. The ultimate research goal is to assess the treatment and predict the survival of previously diagnosed glioma patients.

Gliomas can initially be detected using magnetic resonance imaging (MRI), computed tomography (CT) scan, or positron emission tomography (PET). A PET scan of a glioma is pictured above.

http://www.mayoclinic.org/glioma/diagnosis.html

The scan shows a patient with a glioma (Figure A). The histology represents the center of the circle showing both microvascular proliferation (m.p.) and necrosis (nec) (Figure B).

http://www.erasmusmc.nl/pathologie/research/kras/1624

This practicum experience has allowed me to apply epidemiologic methods outside the classroom.
My practicum assignment was done at the Center for Infectious Diseases at the School of Public Health. I worked with a team on a research project that studied the relationship between the presence or absence of fecal lactoferrin and type of *Clostridium difficile* toxin in patients with *Clostridium difficile* Infection.

The approach taken by the research team comprised collecting stool samples from patients at the St. Luke’s Episcopal Hospital, identifying each sample with a laboratory number and date, and culturing the bacteria on *C. difficile* agar base plates. The plates were incubated anaerobically for 48 hours. The DNA was extracted and used to run several tests. A polymerase chain reaction was then performed in order to detect the binary toxins and the genes for the toxins.

As part of my duties in the project, I assisted in the thorough labeling of collected samples as well as storage of unused samples for future use in other clinical and laboratory research. I also took part in the preparation of the *C. difficile* agar base and other bacteria culture media. During my practicum experience, I had the opportunity to observe researchers perform a minimum inhibitory concentration to study the reaction of *C. difficile* to different concentrations of different antibiotics.

The major finding from the study was that the various toxin types of C. diff did not show a relationship with the presence or absence of lactoferrin; however, this is an ongoing study, and so the researchers are currently looking at other fecal inflammatory markers.

### Public Health Significance

*Clostridium difficile* is one of the most important causes of hospital acquired diarrhea in adults. Due to the increasing incidence of the disease, there is an increased need for effective evaluation of the sources and modes of transmission of the infection.

Regarding essential services of public health, the team carried out research for new insights and innovative solutions to health problems caused by *Clostridium difficile*. They also assisted in the diagnosis and investigation of *C. difficile* associated diarrhea infection, and the results obtained would be used to inform and educate patients on the mechanism of transmission of the disease, as well as the treatment options available to them.
FOOD-BORNE DISEASE SURVEILLANCE

Protecting Houstonians from diseases acquired by consumption of contaminated foods.

By: Anthony Nwatarali.

As an investigator, I was assigned some cases of food borne diseases reported by clinics, hospitals, and microbiologic laboratories in the Houston area. I would then conduct a telephone interviews to determine the likely source of contamination, and the risk of spread to other persons in the Houston jurisdiction. Etiological diagnosis was confirmed from the laboratory, and a report sent to Texas state health department, department of state health services, and the CDC if necessary. Data for common causes of food-borne diseases were collected and analyzed for trend changes.

I participated in meetings on food-borne diseases at 3 regional health departments; Fort Bend, Harris counties, and the Houston health department where I worked.

Hand washing is an important part of food-borne disease prevention.

Image source: http://www.co.mchenry.il.us/department/s/health/Pages/EHFoodEduPosters.aspx

Simple steps can be taken to avoid food-borne illnesses.

Image source: http://www.uen.org/utahlink/activities/view_activity.cgi?activity_id=17293

My final product was presentation of descriptive epidemiology and data analysis of reported cases of food-borne diseases due to Salmonella bacteria infection in 2009 in the Houston area.
Indicators of risk for HIV/AIDS Infection in the Houston area

By: Tejal Patel

I did my internship with the Ryan White HIV/AIDS planning Council in Houston Texas during the summer of 2010. My project involved accessing the indicators of risk for HIV/AIDS infection in the Houston area.

I gathered data from the Houston Department of Health and Human Services and Texas Department of State Health Services on the direct and indirect risk factors for HIV/AIDS infection as well as testing and counseling data for HIV infection. Data was gathered from the year 2000 to 2009 for the following counties in the Houston area; Austin, Chambers, Colorado, Fort Bend, Harris, Liberty, Montgomery, Walker, Waller, and Wharton. The indirect risk factors included; Chlamydia, syphilis, gonorrhea, Hepatitis A, B, and C, and TB. The direct risk factors for HIV infection included; condom use, men who have sex with men, heterosexuals, injection drug users, and other risk factors.

My final product was an epidemiological profile/report consisting of tables, charts, and graphs along with a summary of all my findings.

Public Health Significance

Data obtained on risk factors for HIV infection can provide useful information that can help determine which populations need prevention activities. Data on HIV testing patterns can provide information that is useful for HIV counseling and testing programs and campaigns. Sexually transmitted disease (STD) surveillance data, such as that for Gonorrhea, Syphilis and Chlamydia, can be used as surrogate markers for HIV infection indicating risky sexual behavior, and can serve as a marker of recent unsafe sexual practices.

The Ryan White HIV/AIDS Planning council contributes to public health by improving the quality of life for those infected and affected with HIV/AIDS. They assess, plan and deliver high quality cost effective care to populations hit by the epidemic, especially those who are underserved. The Organization also promotes the dissemination of information on HIV prevention, treatment and resources.

Special duties during my practicum

* Gaining experience with surveillance data from the Texas Department of State Health Services and Houston Department of Health and Human Services.

* Putting all the data together into tables and charts and looking at the overall trends and patterns of the risk factors for HIV/AIDS infection from 2000 to 2009 in the Houston area.

Source for the graph on the right: HIV/STD/TB Epidemiology and Surveillance Branch, Texas Department of State Health Services
Diet and Smoking

A Literary Journey in the World of Diet and Smoking

By: Myphuong Theresa Phan

For my practicum with Dr. Michele Forman, I did a literature review on dietary intake in never, former, and current smokers.

Dr. Forman guided me how to use PubMed where I searched for articles on diet and smoking. Reading several articles on diet and smoking, I observed I could go in many directions with this topic: how diet and smoking affect certain cancers as well as how diet affects smoking and vice versa.

As my final project for the practicum, I had a meeting with Dr. Forman where I presented what I learned about diet and smoking with an evidence table of all the information I collected.

The most interesting finding that I discovered during my literature review is there seems to be a preference for sweet foods during acute smoking cessation. It is an avenue that I was to look further into and how it relates to the caloric increase present during smoking cessation.

Public Health Significance

Research is the Public Health Essential Service that most closely relates to my practicum experience.

As defined by the American Public Health Association, research, the tenth essential service, is looking “for new insights and innovative solutions to health problems.”

As noted above, my practicum experience was conducting a literature review that looked into diet and smoking. This is essentially the start of building a research project. The health problem is smoking and I am looking at smoking using the lens of diet. From the literature review, I can build hypotheses to develop new insights and innovative solutions in this area.

Dr. Forman’s nutritional epidemiological research involves looking at how diet affects women during pregnancy as well as analyze the way people eat when they have a specific cancer like lung cancer. She is also currently involved in the creation of a food frequency questionnaire catered to Mexican Americans. A creation of a food frequency questionnaire takes a lot of work!
Maternal and Fetal Care

Assessment and Implementation of Pharmacy Services within a Tertiary Care Maternity Center

By: Jeffrey L. Wagner, Pharm.D., BCPS

Texas Children’s Hospital is building a Maternity Center to support maternal and fetal care needs of the Houston metropolitan area and seeks to draw national and international referrals.

The practicum involved the assessment of pharmacy service needs within this new hospital and development of a project plan for implementation of a pharmacy department and system to support the identified needs. The practicum required the shadowing of frontline staff in inpatient care areas within an established hospital including antepartum, labor and delivery, and postpartum units. Hospital leadership and administration, OB/GYNs, reproductive endocrinologists, neonatologists, fetal surgeons, anesthesiologists, nurses, and pharmacists comprised the people with whom interviews were conducted to determine pharmacy needs, issues with the current system and processes, and planning for the ideal. With this information, an action plan for implementation of comprehensive pharmacy services and support was created.

Public Health Significance

This practicum focused on two of the Essential Services of Public Health: development of policies and plans that support individual and community health efforts; and evaluation of the effectiveness, accessibility, and quality of personal and population-based health services.

Texas Children’s identified the need for excellence in maternal and fetal care and sought to fill the void in this realm of public health. The practicum allowed development of plans for pharmacy service support for this initiative as well as an evaluation of the current effectiveness, accessibility and quality of health care to women and their babies.

For more information about Texas Children’s Hospital Maternity Center, visit:

http://vision2010.texaschildrens.org/maternity_center.html
Water System Vulnerability Assessments

Water System Vulnerability Assessments in U.S. Army Garrisons
By: CPT Sean P. Beeman, R.E.H.S.

During the practicum, I conducted water system vulnerability assessments of U.S. Army Garrisons in the southwest United States for the U.S. Army Public Health Command Region West (formerly the U.S. Army Center for Health Promotion and Preventive Medicine – West). These assessments are required by federal law (Public Health Security and Bioterrorism Preparedness and Response Act of 2002).

These assessments required extensive on-site evaluation of all water system components and operations. Standard Operating Procedures and emergency response plans are also reviewed.

The final products are an outbrief and a written report outlining each of the water system vulnerabilities with a grade of very-high, high, moderate, or low. Recommendations for risk reduction are provided. The outbrief and the report are classified secret.

Practicum Highlights

• Conducted missions throughout the southwest United States
• Attended the 13th Annual Force Health Protection Conference.

Public Health Significance

The work conducted during my practicum helps to ensure that the public served by the water systems I evaluate are provided safe drinking water. Furthermore, it ensures that any vulnerabilities identified can be mitigated to reduce the chance of an accidental contamination event or an intentional attack on water system components.

The mission of the U.S. Army Public Health Command is to promote health and prevent disease, injury and disability of Soldiers and military retirees, their families, and Army civilian employees; and to assure effective execution of full-spectrum veterinary service for Army and DOD.

“Our responsibility to those we serve requires that the water industry take steps to review and revise, as needed, those security measures applied to protect this vital commodity. It must maintain an ongoing effort to assure that this necessity of life cannot be turned into a weapon of terrorism.” - Robert E. Hebert, Vice Chairman, ECO Resources, Inc.
Comparing the National Birth Defects Prevention Study to the Pregnancy Risk Assessment Monitoring System

By: Valerie Clark

My practicum site, the Texas Department of State Health Services, Birth Defects Epidemiology and Surveillance Branch (BDES), afforded me the opportunity to gain hands-on experience in a state agency and expand my public health expertise. I primarily worked to create a table that would present the similarities and differences between two interview datasets so that a researcher might have a point of reference when deciding which dataset is most likely to meet the needs of his/her research question.

Other tasks and activities that I was involved in include updating slides that reflect the most recent data pertaining to birth defects prevalence statewide, attending weekly epidemiology meetings, and responding to requests from the public for materials related to specific birth defects.

Public Health Significance

The BDES branch manages an active, statewide surveillance system to monitor the prevalence of birth defects, identifies areas in which prevalence of birth defects is significantly higher, conducts cluster investigations, connects families to services, and works to discover risk factors as well as protective factors that might reduce the occurrence of birth defects.

The Public Health Essential Service that most closely relates to my experience in the Birth Defects Epidemiology and Surveillance Branch is Research. The comparison of NBDPS to PRAMS is the first study to categorize the questions within each questionnaire.

Eventually, the table that I have created will aid authors on this paper in publishing an article that researchers in the future can cite and reference when determining why one questionnaire should be used over the other and what the strengths and weaknesses of each are.

Meetings, Meetings, Meetings

• July 16: Meeting to discuss the additional questions that may be added to the YRBS
• July 6: Webinar over public access to federally funded published research articles
• August 3: BDES welcomes a new EIS officer from the CDC!

“The timely and effective dissemination of information gained through public health surveillance is crucial.”
My summer in the Sindh...

Public Health in Karachi, Pakistan

By: Andrew Codlin

In May, I flew to Karachi to start working at the Indus Hospital Research Center (IHRC). Indus Hospital serves 2.5 million people in a poor part of Karachi called Korangi; the hospital has just 150 beds, yet it is the only source of high quality medical care in the area. The hospital budget is totally donor funded and all patient treatment is free of charge!

I joined a team of junior researchers that were in the process of establishing a community cohort in the hospital’s immediate catchment population; I coordinated specimen collection and processing as well as management and analysis of lab data. I also worked with the hospital’s internationally recognized TB and MDRTB treatment program doing data analysis and manuscript preparation.

In the middle of my trip, I was invited to attend a mHealth course at the Bergen Summer Research School. The team at Indus Hospital (IRD) are pioneers at developing and implementing open source, low cost technology in large scale public health projects. In the Fall, I will work on a project to track blood glucose using this mobile technology.

In my short time in Pakistan, we found that diabetes is a huge problem in the community (with prevalence reaching >25% in some age groups). Hepatitis C is another disease of great concern; in MDRTB patients, Hepatitis C prevalence reaches 17%.

Public Health Significance

The work at IHRC covers a number of Essential Services of Public Health. The most important during my stay was without a doubt ‘Diagnose and Investigate.’ The first goal of the community cohort was to establish baseline rates for certain diseases and to determine where we will focus our energy in the future.

The Korangi population is poorly studied and serviced, so IHRC of great benefit to the community. Cohort members are invited to Indus Hospital to receive free treatment for their diseases and in the future, there are plans to start community based education and intervention campaigns around nutrition/physical activity (to combat DM) and injection safety (to combat Hepatitis C).
Improving Community Clinic Services

West Dallas CHC strives to provide best service possible

By: Clare Frey

Community Health Clinics (CHCs) fill a valuable gap in services available to low resource communities. CHCs are the medical home to 20 million Americans and form a key component of the medical safety net system.¹

For my practicum I helped a local CHC - Los Barrios Unidos Community Clinic - analyze the needs of the community, determine the satisfaction level of current patients and conduct focus groups to help guide future growth and service development.

Although Los Barrios already fulfills a huge need in the West Dallas community, over 75% of its patients are uninsured - they want to ensure that they are providing the best care possible. To that end, I helped analyze demographic, live birth and hospitalization data to determine gaps in service. I assisted the mostly Spanish-speaking patient population in the completion of satisfaction surveys and helped to organize and conduct a focus group.

Findings from the focus group and surveys are currently being analyzed. I will have the opportunity to share some of these findings as well as the salient issues identified by the needs assessment to the clinic Board of Directors in September.

PUBLIC HEALTH SIGNIFICANCE

One of the Essential Public Health Service is to evaluate effectiveness, accessibility, and quality of personal and population-based health services.

Through my work on patient satisfaction surveys and focus groups, I was able to assist the clinic in evaluating the current quality of services and cultural sensitivity of staff.

Also significant to public health is the monitoring of health status to identify community health problems.

By synthesizing demographic information and ED use data as well as records from the Texas DSHS, I developed charts and graphs that clearly depicted community needs.

I hope my contribution allows Los Barrios to continue to improve health promotion and medical services.

Practicum Highlights

- Close to 300 satisfaction surveys completed and collected.
- Garnering input from community members regarding health needs and perceived gaps in services.
- Focusing limited resources to areas where they are most needed.

Los Barrios Unidos Community Clinic sees close to 30,000 patients each year in over 70,000 medical and dental visits.


For more information about Los Barrios visit www.losbarriosunidos.org
Public Health Significance

The particular community we worked with has the highest pregnancy rates, obesity rates, and dropout rates in Bexar County. My practicum experience was most related to informing, educating, and empowering people in the community.

One example of informing the teens about nutrition was our activity on how to read food labels. Food labels of both healthy and unhealthy foods were provided so that they could compare the nutritional contents of the food and beverage items. Afterwards, they were asked to get in line from healthiest to unhealthiest.

Another activity we did was to teach them about the importance of physical activity for at least 30 minutes a day, how to take their pulse, and the level their heart rate should be at during physical activity.

Good Samaritan provides social services in the San Antonio area. These programs include child/youth development, get2work program, asset building for clients, and family development.

Healthy Choices for Kids Goes to Good Samaritan Center

By: Aidee Alejandra Garza

I worked with UTHSC-San Antonio with the Center of Medical Ethics and Humanities. The program is called Healthy Choices for Kids. The center pairs up with Good Samaritan Community Services to teach adolescents to make healthy choices.

During my practicum, I (along with 25 other volunteers) attended a 3 week didactic course on health topics relevant to the adolescent population of this particular community.

Based on the community health assessment surveys from local parents, we created the curriculum.

The implemented curriculum at Good Samaritan Day Camp covered violence and healthy relationships, alcohol and drug use, fitness, nutrition and internet safety which were covered during a 6 week period, 3 times a week.

“"We were able to create and implement a health education curriculum. It has been really rewarding seeing that come into fruition.""
Public Health Significance

Of the 10 Essential Services of Public Health I believe my practicum experience fits under the Inform, Educate, and Empower people about health issues umbrella. The department of State Health Services in Texas has found that every 10 minutes a teen in Texas gets pregnant and every 10 minutes a teen gives birth. Teenage parenting often averts or postpones education for both girls and boys; while children of teenage parents are more likely to experience behavioral and educational problems, drop out of high school, be incarcerated, and become teen parents themselves (http://www.dshs.state.tx.us/famplan/tpp.shtm). For these reasons and more, I believe it’s important to spend time talking with teens about sex and its potential consequences. I strive to help students make healthy, educated choices rather than unhealthy choices that will affect them negatively in the long run. When the campaign is presented during the 2010-2011 fiscal school year I hope the students respond well so the program is successful.

“Know More-Know How”
Pregnancy Prevention Campaign

Tackling Adolescent Pregnancy One School at a Time

By: Kimberly Geters

Austin ISD was looking to tackle 2 major issues plaguing their schools: obesity and teen pregnancy. So I partnered with AISD to help tackle the latter, teen pregnancy prevention. My advisor and I came up with the idea to try and develop a student driven pregnancy prevention campaign that would encourage students to delay sexual intercourse until marriage. I was allowed to work with about 12 bright students at Akins High School to come up with a plan of action for our campaign. The campaign was titled “Know More – Know How” because we don’t want students to just know more about sex, how to protect themselves, and reasons they should wait but also know how to use and implement the strategies they will be taught into their lives. During my time working with AISD, I created deliverables to be given to students which include: t-shirts, pens, wristbands, games, and more.

Public Health Significance

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Pharmacy $4.00 Programs Research

A Pharmacy for ALL of your needs

Pharmacy $4.00 Rx Programs are they effective?

By: Christina Green

At my practicum site I was responsible for researching prescription habits of populations and from there developing a survey that would assess the effectiveness of the $4.00 prescription program of pharmacies that offered monthly medications at this price.

After the survey was developed it was pilot tested on a small subset of the population, about 50 people, that used a specific pharmacy.

Public Health Significance

The public health significance of the research conducted during my practicum experience allowed us to gain understanding on the demographics of those using pharmacy $4.00 prescription programs, such as age, gender, insurance status, and disease/illnesses treated, as well as if people are aware that this program exists in pharmacies and frequency of usage by the public.

From the pilot testing conducted we were able to gain good information to present to pharmacies about how effective their programs are and what possible changes could be made to it.

Special events/duties during your practicum

• Getting to interact with our patients on a more personal level
• Integrating my classroom experience with real world situations.

“My practicum experience allowed me to see who was using the program and if it was beneficial to them”
Health for the Homeless

Haven for Hope in San Antonio, Texas is a newly opened transformational homeless shelter that utilizes best practices from homeless shelters across the country.

Medical Needs Assessment for San Antonio Homeless Population

By: STEFANI HAWBAKER

When individuals move onto Haven for Hope’s campus, they commit to a transformational program that will help with job placement, transportation, housing and more. Prospect Courtyard is an outdoor haven within Haven for Hope for chronically homeless individuals who are not yet ready to commit to the program offered within the main campus.

I conducted a medical needs assessment survey for the homeless persons in Prospect Courtyard. The survey addressed questions concerning reasons for homelessness, screening tests assessment, current health conditions, medications and access to health care, vision needs, dental problems, foot problems, skin problems, smoking, substance abuse and illicit drug abuse issues, and safety concerns.

Public Health Significance

Providing the Haven for Hope agency and employees with data showing medical needs of the homeless population in San Antonio is vital to the continued success of Haven for Hope’s transformational services.

To account for medical needs and to attempt to provide for such needs will continue to aid these homeless persons on their quests to finding permanent housing and a “life after homelessness.”

Haven for Hope is committed to transforming homeless persons’ lives. The shelter has on campus a bank, a gym, levels of housing (depending on individual’s level in the transformational services program), legal professionals, a barber shop, vision care center, free health clinic, and free dental clinic.

The vision, medical, and dental clinics have limited hours and many homeless persons are still flooding the University Hospital emergency room. Hopefully, after addressing proven medical needs from the survey, Haven for Hope will continue to be equipt at providing health care to Haven for Hope members.

Medical Needs Assessment

• I interviewed 120 homeless persons at Haven for Hope.
• I learned how to screen for common skin disorders in the homeless population.
• I observed the health needs of the homeless community. Majority of homeless persons had dental problems and mental health issues.

“At any given time today in America, there are about half a million people who are “homeless” -- they don’t have a "permanent, safe, decent, affordable place to live."

Around the world there are about 100 million homeless people, and many of them are women and children.”

Robert Alan
Heart House diagnoses and investigates health problems and hazards in their community. For example, obesity has a higher incidence among low-income communities; because of this, Heart House focuses on teaching the children healthy eating habits, how to live an active life, and promotes personal development.

In addition, they mobilize community partnerships to identify and solve health problems. They have partnered with such organizations as the Girl Scouts, Austin Safeplace, and teen groups to address health issues for the children of their center.

In my role, I had to inform, educate, and empower the children about health issues and concerns. My goal was to show them that any person, no matter how young, has the power to make healthy choices. Furthermore, I had to monitor the health status of the children in order to ensure that my classes weren’t too challenging or difficult to understand.

Heart House: After school, before home

By: Ashley Hickson

My practicum was completed in Austin at Heart House North. Heart House is a free after school program that offers a safe outlet and academic support to low-income children. During the summer, Heart House offers Camp House Heart, which is where the majority of my practicum experience took place.

The camp began on June 4th and will end on August 6th. Prior to the start of camp, I participated in the after school program to familiarize myself with the children, since I was going to be teaching for the first time I wanted to be comfortable. I taught two different classes three times week! The first topic I focused on was physical activity. In my active life course, we incorporated many different types of active play. The second course I led was a health and safety course, which dealt with various issues from fire safety to diversity and healthy relationships.

Public Health Significance

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S.P.A.R.K.S. Active Life Curriculum

- Sports, Play, and Active Recreation for Kids
- Introducing organized team sports
- Creatively making an active lifestyle fun!!!
Worksite Health Promotion

Worksite Wellness Initiatives Improve Employee Health and Reduce Healthcare Costs

By Allison Horan

During the summer of 2010 I worked with a contracted company, Health & Lifestyles, Inc., to promote healthy behaviors, address lifestyle-based disease risk factors, and decrease health costs incurred by the 1300 employees of Capitol Metro Transportation Authority in Austin.

Worksite Health Promotion is a growing field in public health as more and more companies become overburdened by the increasing costs associated with preventable, chronic health concerns such as diabetes, cardiovascular disease, and obesity.

Public Health Significance

The Public Health Essential Services most specific to my practicum:

Inform, educate, and empower people about health issues.

The H&L team provided educational material, workshops, biometric assessments, nutritional counseling, and physical training to the workforce. I was also able to spend time discussing the health impact of diet and lifestyle with employees. The presentations I put together are also intended to educate and inform about health issues.

Monitor health status to identify community health problems.

The H&L team worked closely with Capitol Metro’s insurance provider to assess health risks and determine priorities.

Mobilize community partnerships to identify and solve health problems.

Capital Metro has been recognized by the CDC for their model employee wellness program which includes an onsite fitness center, nutritional programs, smoking cessation and incentive programs for participation.

My duties involved reaching out to employees to engage participation and survey individual needs. I also evaluated the effectiveness of current and past programs and developed strategies for future interventions.

My final products included 3 PPT presentations, a design for a nutrition and fitness oriented employee challenge program, and an employee stress survey.

Participants in the wellness program reported improvements in physical activity, healthy food consumption, weight loss, and blood pressure.

Studies show a positive return on investment for workplace wellness programs.

Nutrition, physical activity, stress reduction, team building, and incentives are all important aspects to successful workplace wellness programs.

Public Health Significance

With health care costs on the rise and the population’s health on the decline, more and more companies are turning to corporate wellness programs to reduce health care costs, insurance claims, and absenteeism and to increase productivity and retention.

Although corporate wellness programs perform several of the 10 Essential Public Health Services, their primary function is that of essential service #3 (Inform, Educate, and Empower People about Health Issues).

Through companywide campaigns, Triumph’s wellness program educates its employees on health issues such as proper nutrition, exercise, and the harmful effects of stress. It also uses proven behavioral modification techniques such as daily food and exercise logs and financial incentives as well as environmental modifications such as an onsite fitness center and walking track and healthy cafeteria options.

Worksite Wellness Works!

By: Denton Jones

I spent the summer working full time for Cooper Corporate Solutions’ wellness program at Triumph Aerostructures located in Grand Prairie, TX.

Working with the on-site Wellness Coordinator in Grand Prairie and the Wellness Director, who oversees the wellness programs at several Triumph factories nationwide, I performed a wide range of tasks to implement numerous health promotion programs.

The two largest programs were a health screening and a health risk assessment survey. These two tools are used to not only raise awareness in individuals, but also to assess the health of the entire employee population. Year over year comparisons are made to track performance and return on investment. The data is also used to ascertain the most pressing health problems and to design appropriate interventions.

Aside from working on these and several other health promotion programs, my main contribution was the development of a cardiovascular exercise promotion program designed to not only increase exercise participation but also to raise awareness and understanding of the CDC’s minimum recommended amount of weekly moderate and vigorous physical activity. The Wellness Director was so impressed that she wants to implement this program at all of the Triumph facilities nationwide.

Special Event/Duties during My Practicum

- Designed a cardiovascular exercise promotion program
- Designed flyers, newsletters, and banners advertising various health promotion programs
- Organized a health screening event and conducted individual screenings
- Designed and led pre-shift stretching routines
- Developed tracking systems for participation and performance of programs
- Collaborated with Occupational Health & Safety and Ergonomics Departments to advance employee health
- Communicated with management to gain support for wellness programs

According to the Wellness Council of America, to offset rising health care costs, 81% of companies with 50 or more employees have a wellness program.

Photo courtesy of http://www.cooperaerobics.com/For-Companies/Wellness-Programs.aspx
Injury Prevention Safety Advocate Program

By: Jaspreet Kaur

According to CDC, unintentional injury is the number one cause of death in children and adolescents in U.S. Some of these injuries are due to drowning, motor-vehicle accidents, falls, poisoning, fires or burns. It has been recognized that these injuries are preventable and controllable.

Trauma and Injury Prevention Center in Children’s Medical Center, Dallas has recognized this public health problem and came forward in

Public Health Significance

Following are the essential public health services that closely relate to my practicum:

1. Inform, educate and empower people about the health issues- TIPP sheets were developed with the intentions to educate parents about how to prevent nonfatal injuries among their children.

2. Mobilize community partnerships to identify and solve health problems. Educate them on research done to solve these problems. In this regard Children’s medical center and YMCA gave swimming lessons to children’s residing in local apartment complexes in high risk drowning areas of Dallas.

“Most children who drown in swimming pools have been missing from sight for less than five minutes and were in the care of one or both parents at the time of the drowning.”

Resources:
www.usa.safekids.org

Special events/ duties during my practicum

• “Know before you go”- Water Safety Fair
• Participated in study titled”Apartment Complex water safety program”
• Participated in”Car seat inspection” events

Child’s Injury Prevention & Safety Program

Know before you go- Water Safety
Source: www.accessclarkcounty.com

Source: www.accessclarkcounty.com

Car Seat inspection
(Source: safekids.org)

Summer 2010 ● Jaspreet Kaur ● Children’s Medical Center ● Injury Prevention
Outbreak Investigation

A Large Tuberculosis Exposure Outbreak in a Hospital Setting:
Steps Taken to Identify the Source

By: Belinda A. Medrano

My practicum experience consisted of investigating the cause of an increase in tuberculin skin test (TST) conversions occurring among staff in a local general hospital. We determined that a true outbreak had occurred by comparing the number of positives seen during the first two months of 2010 versus previous yearly totals. In past years, the facility experienced one staff TST conversion, on average, per year while 36 converters were identified during the first two months of 2010. As part of the investigation we reviewed PPD lot numbers, conducted staff interviews, checked staff work schedules, reviewed patient records, and checked the nurse PPD solution application technique in an attempt to identify the source of the outbreak.

Findings
After further review of patient hospital admissions, the investigation team identified a patient with undiagnosed active tuberculosis. In addition, this individual had an extensive stay in the hospital that resulted in the TB exposure of dozens of employees that were in contact with this patient.

Public Health Significance
My practicum experience addressed three essential public health services (EPHES). First, the purpose of the investigation was to Diagnose and Investigate the health hazards that potentially existed while the source of the conversions was unknown. Secondly, human resources in the form of local health department, regional health department, Centers for Disease Control investigators, and hospital staff were mobilized to solve the health problem affecting hospital employees. Lastly, inform, educate, and empower came into play at the conclusion of the investigation. The staff was provided information on the risks of developing active TB and the benefits of prophylactic treatment.

Special events/ duties
- Conducted staff interviews
- Summarized and presented findings
- Collaborated with regional and federal partners

“In past years, the facility experienced one staff TST conversion, on average, per year while 36 converters were identified during the first two months of 2010.”

A positive tuberculin skin test is read above. Greater then 5mm is considered positive in an outbreak investigation.
The Health Research Training Program at the NYC DOHMH hosted various seminars and workshops to facilitate professional development among the interns. Here are some of the events I attended:

- How to Run an Effective Public Health Campaign
- Grant Writing Workshop
- Scientific Communications
- Survey/Focus Groups
- Career Development Panel

Public Health Significance

The following essential public health services most closely related to my practicum experience:

- Monitor health status to identify community health problems.
- Diagnose and investigate health problems and health hazards in the community.
- Inform, educate, and empower people about health issues.
- Mobilize community partnerships to identify and solve health problems.
- Develop policies and plans that support individual and community health efforts.

Since there was no previous data available on the prevalence of lead poisoning in the South Asian population in New York City, a community health need was identified to assess blood lead levels and identify lead hazards in this NYC sub-population. The final stage of this project deals with communicating the study findings and developing and implementing prevention activities in the community.

In addition to this study, I’ve also worked on a variety of different projects ranging from field work related to mercury contaminated consumer products, to conducting research on regulations and policies related to Bisphenol A in consumer products, and pedestrian safety regulations for injury prevention.

Preventing Lead Poisoning in New York City

By: Dhara Patel

Lead poisoning in New York City is a serious but preventable public health issue. Exposure to lead hazards in homes and at workplaces can result in elevated blood lead levels and other negative health outcomes in adults and children. The Lead Poisoning Prevention Program helps prevent lead poisoning by reducing lead hazards in homes and communities, engaging in surveillance and research, conducting environmental investigations and enforcing regulations, and engaging in community outreach and education efforts.

My specific project in the Risk Assessment Unit of the Bureau of Environmental Disease Prevention deals with examining blood lead levels and the use of imported, lead contaminated herbal products among South Asian adults and children in New York City. An EPA pilot lead poisoning screening program has been implemented to identify elevated blood

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My internship at the New York City Department of Health and Mental Hygiene has been an invaluable learning experience in public health practice.
Child Abuse, Seasonality and Temperature

**Seasonality and Outside Temperature Variations and Their Association with Child Abuse Cases Identified by the Child Assessment Team at Children’s Hospital (CATCH)**

By: BEATRIZ PÉREZ

In my practicum in Trauma Services Research at Dell Children’s Medical Center (DCMC), I explored the topic of child abuse and its association with season of year and outside temperature.

The approach was a basic epidemiologic one, designing a retrospective cohort study based on existing hospital databases and publicly available temperature data. I first conducted an extensive literature review. Next, we presented the details of the protocol in a research proposal, which was submitted to Seton’s Institutional Review Board and its Clinical Research Steering Committee. While awaiting IRB and CRSC approval, we began to construct the research database and clean the data. This involved creating a cohort, using well-defined criteria, of approximately 40,000 children. Within this cohort, children deemed victims of child abuse by the CATCH team were identified as cases.

The final products of the practicum were a literature review matrix, an approved research protocol, and a partially cleaned database. Once the database is completely compiled and cleaned, data analysis may begin.

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Research Scientist
Dr. Karla Lawson stays abreast of trends in child maltreatment surveillance.
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Public Health Significance

Child abuse and neglect continue to be pervasive societal problems. Season and temperature may be associated with child abuse by their direct and indirect effects on caregiver and child stress, but these relationships are not well understood. This study will help gauge the extent of abuse among DCMC’s patient population and help elucidate patterns in, and thus improve recognition of, abuse, in turn improving quality of care of patients. Its findings will be also help injury prevention staff in planning effective interventions.

This practicum experience was most closely related to the Essential Services of 1) researching health problems and 2) linking people to needed health services. The first is by definition the mission of Trauma Services Research and the impetus behind this project. The study’s contribution to (2) is also described above. In addition, as Central Texas’s only pediatric level 1 trauma center, and part of a non-profit organization dedicated to serving the poor and vulnerable, DCMC contributes greatly to this essential public health service.

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Some Practicum Highlights:

- Attended Travis County’s bi-monthly Child Fatality Review meeting
- Attended Trauma Rounds and Trauma Council meetings
- Led a Journal Club discussion
- Research proposal was approved without stipulation on initial submission
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“Trauma Services are well-poised to intervene on behalf of vulnerable children, and its research activities serve to inform and innovate in its prevention programs, treatment, and post-traumatic psychological interventions.”
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Dr. Lawson and Research Coordinator Sarah Duzinski, MPH, consult on a protocol. Trauma Services research often begins with patients arriving at an ED trauma bay, pictured above.

Summer 2010 ● Beatriz Pérez ● Dell Children’s Medical Center Trauma Services ● Child Abuse
CPR Training Attitudes & Beliefs

By: Mamata Raj

My practice was at the Austin/Travis County EMS, Office of the Medical Director.

Sudden cardiac arrest is the leading cause of death in the United States. A sudden cardiac arrest victim is almost 2 times more likely to survive if bystander CPR is provided early. Current bystander CPR rates are low, with most communities reporting less than 20%.

To address this issue, research will be conducted to gain a better understanding of the attitudes and beliefs of a community regarding bystander CPR training and action. The research will also explore the barriers to CPR training and action.

As the primary investigator of this research project, I was involved in creating a proposal, a consent form, and a survey questionnaire for IRB review.

The proposal was approved by the IRB and the research will commence within the next two months.

According to the American Heart Association, CPR when initiated immediately increases the chance of survival. “The value of early CPR is that it can buy time for the cardiac arrest patient by producing enough blood flow to the central nervous system and the myocardium to maintain temporary viability.”

Research has been conducted to understand the unwillingness to perform CPR but little has been done to study the behaviors inhibiting CPR training. Thus, our research seeks to provide insight into the behaviors that may inhibit community members from learning and/or performing CPR.

The most important: Essential Services of Public Health addressed by my practice is research. The goal of the research project is to understand the barriers to CPR training and the beliefs and attitudes of people regarding CPR training and action.

The organization also monitors the number of cardiac arrests and deaths in the Austin/Travis County area.

Research will eventually help inform, educate, and empower people regarding the importance of CPR training.

We anticipate that this research will provide a baseline assessment for future research that assesses the use of CPR training techniques targeted by community.

“IT IS NEVER TOO LATE TO LEARN CPR. IT IS EASY AND FUN”

LEARN CPR AND SAVE A LIFE!
Public Health Significance

This practicum encompassed several essentials to public health. First, it mobilized different entities such as Arizona Department of Environmental Quality, watershed groups, and citizen volunteers throughout the state of Arizona to collect surface water samples. Many of these locations have been placed on the 303d list. The 303d list contains locations that may be impaired due to E. coli levels that exceed the water quality standards. Second, we diagnose and investigate these samples for E. coli presence and try to identify the levels of contamination as well as the source contributing to the contamination. This is done by conducting a series of experiments such as Bacteriophage plaque assay, ColiNet, and PCR. Lastly, the results are used to inform, educate, and empower the citizens and the watersheds collaborating with the study. We inform them on what the data is showing, we educate them on the possible sources of contamination and ways to reduce them, and teach methods these watersheds can use to analyze the water. The long term goal is reducing E. coli levels in the water to protect human health.

Microbial Source Tracking

What is the source of surface water contamination?

By: Berenise Rivera

The ability to discriminate between sources of fecal contamination is necessary for the accurate evaluation of human health risks and to make waters safe for human use. The Water Quality Laboratory at the Maricopa Agricultural Center, in partnership with watersheds throughout the state of Arizona, is trying to determine the source of Escherichia coli (E. coli) bacteria in surface water. This is done by using microbial source tracking methods such as PCR and quantitative PCR. To aid in MST, total DNA was extracted from contaminated surface water samples and underwent genetic typing for Bacteroides, a bacteria in normal gut flora of human and many animals. The purpose is to determine the source of fecal contamination by differentiating between the three categories of Bacteroides: human, bovine, and total. The end goal is to support targeted watershed groups towards E. coli reductions.

Public Health Significance

This practicum encompassed several essentials to public health. First, it mobilized different entities such as Arizona Department of Environmental Quality, watershed groups, and citizen volunteers throughout the state of Arizona to collect surface water samples. Many of these locations have been placed on the 303d list. The 303d list contains locations that may be impaired due to E. coli levels that exceed the water quality standards. Second, we diagnose and investigate these samples for E. coli presence and try to identify the levels of contamination as well as the source contributing to the contamination. This is done by conducting a series of experiments such as Bacteriophage plaque assay, ColiNet, and PCR. Lastly, the results are used to inform, educate, and empower the citizens and the watersheds collaborating with the study. We inform them on what the data is showing, we educate them on the possible sources of contamination and ways to reduce them, and teach methods these watersheds can use to analyze the water. The long term goal is reducing E. coli levels in the water to protect human health.
Low Back Pain in the Community

By: Adelle Safo

My practicum site was a family clinic in Duncanville Texas. This family clinic served a mostly minority and low income population. These individuals had a variety of problems but I was mostly interested in their low back pain issues.

I was interested in how low back pain is related to health disparities. My main task was to interview patients and ask them questions about their low back pain. I also went through various charts to gain more information about their low back pain.

My final product is going to be a research poster that will be displayed at the UTHSCSA Student Research day.

Public Health Significance

My practicum relates to public health in that it deals with the problems relating to health disparities. Low back pain is a problem that affects many Americans. Therefore, it is important to understand the issues surrounding low back pain in order to find better treatments for individuals.

My project contributes to public health because it explores the different disparities relating to low back pain. This will play a small role in determining whether certain treatments work more effectively than others when given to specific groups of people.
Infection Control & Occupational Safety in Dentistry

Public Health Significance

Patients with HIV, Hepatitis B and TB should be treated with high standards of infection control procedures when they are symptomatic or asymptomatic.

Dentistry is a surgical field where the dentist is always exposed to potentially infectious materials from patients like saliva and blood. Infectious diseases are transmissible through multiple routes like direct contact with blood and saliva, indirect contact with contaminated materials like instruments and equipments, droplet infection like splatter and inhalation of contaminated air with airborne microorganisms.

There are roughly around 2.3 million people living in India with AIDS. So, dentists must be very cautious when treating patients with blood borne illnesses.

Information obtained from the study may be used improve dental infection control and occupational safety procedures in India.

Survey on Infection Control and Occupational Safety Procedures

Followed in Dentistry By: Deepthi Shetty

My practicum consisted of understanding infection control and occupational safety procedures followed in dentistry and building up a survey which consisted of questions and answer options pertaining to the same.

I did my practicum at Baylor College of Dentistry Dallas.

Blood-borne infection like HIV and TB are on a rise in India. So, it is very important for dental health professionals to use infection control procedures to prevent transmission of blood-borne infectious diseases in a dental setting.

The survey is ready to be launched to about 6000 dental health professionals practicing in Northern parts of India (subscribers of World Journal of General Dentistry)

“Infection Control:
Learning to reduce transmission of infectious diseases in a dental setting”

References:
www.safetypriorities.co.uk
www.uow.edu.au

Use of protective barriers (gloves, mouth mask, and suction tips and eye wear during dental treatment

Summer 2010 • Deepthi Shetty • Baylor College of Dentistry, Dallas • Survey on Dental Infection Control
Child Safety

Better be safe than Sorry!!!

Pediatric Injury Prevention by implementing Child Safety Programs
By: Chitra Sundara Babu

Safe Kids programs and initiatives deliver hands-on education to families around the country. Each safety program focuses on protecting children and families from a specific injury risk.

I worked on child passenger safety, pedestrian safety, and drowning prevention. I was actively involved in “Know before you go” campaign.

Child Safety programs were organized and implemented in the high risk communities.

Public Health Significance

According to the Safe Kids Dallas Area Coalition, 90% of unintentional injuries to children are preventable.

Car crashes are the No. 1 killer of children less than 14 years old in the United States. Drowning is the second leading cause of unintentional death among children ages 1 to 4 and 10 to 14.

The Safe Kids Dallas Area Coalition’s recommendations for effectively reducing childhood injury and death include parent education, environmental improvements, and enactment and enforcement of legislation and regulations. Investments in child safety seats, booster seats, bicycle helmets, life jackets and poison control centers save enormous amounts in direct medical costs.

This Practicum informs, educates, and empowers people to prevent the injuries happening. Safe Kids monitors community injury status and mobilizes solution for future prevention.

“Prevention is better than cure.”
- Desiderius Erasmus

Seat belts saves lives.

Special events/duties during your practicum

• Car Seat Safety Inspection
• Pedestrian Safety Initiative
• Water Safety Fair
• “Know before you go” Campaign
• Media Events

Summer 2010 ● Chitra Sundara Babu ● Childrens’ Medical Center, Dallas, TX ● Child Safety
Lethal Ovitrap will progress to Peru in the Fall of 2010.

We also conducted triatomine surveillance in several locations. The lab has been involved in Chagas’ disease research to better understand the nidality of the disease in the New Orleans area and how it compares to that in other parts of the Americas where it is a tremendous health burden.

This practicum experience involved a combination of lab and fieldwork on several different vectors

- Mosquitoes
- Triatoma sanguisuga

Public Health Significance

The work that is being done by the Wesson Lab Team under the direction of Dawn Wesson, PhD, of Tulane University, and of which I was a member, involves research on novel methods of vector control, particularly species of mosquitoes that are major carriers of Dengue Fever both domestically and globally.

This work is intended to provide an innovative solution that will likely limit the ability of the Aedes aegypti mosquito to spread Dengue Fever domestically but especially in other areas, globally. The team is continuing to investigate specific characteristics of several mosquito species and triatomine bugs to impact research with other diseases and methods of vector control.

The team is contributing to the education of both local and global communities with information about the vectors and the potential they have for carrying a variety of diseases. Our team partners with several other local community partners – particularly the New Orleans Mosquito and Termite Control board - to continue education and consult in management of disease-carrying vectors in the New Orleans area.

Cemeteries are an ideal site in which to monitor the balance of mosquito species.
Improving Child Nutrition by Educating Care Providers

By: Matt Turner

In order to measure the effectiveness of workshops intended to give state-funded child care providers more knowledge, participants responded to pre- and post-workshop tests. Using these tests, it was determined that both the Menu Planning (MP) and Planning Nutritious Snacks (PNS) workshops were effective in presenting information to participants. The Menu Planning workshop in particular proved to be helpful increasing knowledge.

Analysis specific to the topics covered by these workshops and geographical differences in performance are ongoing.

All results will be presented to nutrition specialist in charge of the program in the form of a report, database, and codebook.

Public Health Significance

This practicum experience and the program that it evaluates is a part of the public health service of educating and empowering people about health issues. In this particular case those being educated have the opportunity to use this information to better the dietary habits of the many children in their care.

The analysis that served as my practicum not only confirms program success to-date, but may help convince policymakers of the utility of these workshops. Secondly, my analysis identifies topical and geographic areas that may need greater attention during future workshops. This has the potential to create even more knowledgeable child care providers and healthier children.
Public Health Significance

SPRIM and Dr. Miller, my preceptor, provided me the practicum opportunity to learn the importance of data assessment evaluation in clinical trial, which is related to the last category of Public Health Essential Service[s] (PHES)—evaluates effectiveness, accessibility, and quality of personal and population-based health services. For example, one of my jobs is to assess the relationship between the participants’ symptoms and the different groups they assigned to, which may relate to different treatments they got. By evaluating the biostatistics theories, understanding and interpretation the results, as well as to practice how to write a manuscript to address the findings without misunderstanding.

Final products:
1. Conduct a statistical report about the relationship between different groups of patients and their symptoms
2. Formulate a template for RCTs in future manuscripts writing.
3. Create a module for sample size estimation.

RCT biostatistics practice and peer-review manuscript formulation in SPRIM to improve health diagnosis and innovative service

My practicum is mostly focus on providing statistical support in clinical randomized control trial and to be familiar with the format and guidelines about peer-review manuscript related to RCTs. Before the practicum, I only know the basic theory taught in the textbooks and solutions for the questions. During the practicum, I earned the experience to operate and be more familiar with the statistical software in real data analysis, application of biostatistics theories, understanding and interpretation the results, as well as to practice how to write a manuscript to address the findings without misunderstanding.

Final products:
1. Conduct a statistical report about the relationship between different groups of patients and their symptoms
2. Formulate a template for RCTs in future manuscripts writing.
3. Create a module for sample size estimation.

“Today’s breakthroughs in the field of science and current health trends are providing continuous new opportunities for our clients.” Mr. Olivier Shleifer, Founder, Managing Partner, SPRIM, Madrid

Biostatistics is a key for future clinical study of design, evaluation and examination

Resource:
http://urbantitan.com/10-most-stupid-predictions-and-statements-in-history/
Sexual behaviors among Latinas aged 15-44 years by Hispanic origin in the United States

By: Elizabeth Dominguez

This CDC project was with the Division of STD Prevention’s (DSTDP) Health Services Research and Evaluation Branch (HSREB). I conducted a literature review on health disparities among Hispanic subgroups and then did a data analysis using the 2002 National Survey of Family Growth (NSFG). I examined sexual behavior variables among Latina respondents. These variables included rates of oral, anal, and vaginal sex, condom use, and STD rates. I also explored variable differences by incorporating acculturation measures (language and place of birth) to further explain possible disparities in sexual behavior. Finally, I also helped create a preliminary manuscript to eventually submit for publication in a journal.

Public Health Significance

This project closely followed the third essential public health service: inform, educate, and empower people about health issues. Many of the articles found in the literature review focused either on health disparities and/or behavioral differences between Hispanics and whites rather than comparing Hispanic subgroups. These studies have also mainly focused on acculturation as a model to explain behavioral patterns. The primary objective of this project was to explore differences in sexual behavior within Hispanic populations in order to reiterate that these target groups are not homogenous. Any current or future STD/HIV prevention programs need to understand that differences in culture, health beliefs, migration patterns, and language exist within these groups. This project lead to a more comprehensive understanding of health patterns and disparities across more than one main Latino group. This research could further promote changes in current interventions in order to target these groups more effectively.

Practicum highlights

- Weekly Summer Fellows Forums with CDC leaders as guest lecturers
- Bimonthly meetings with the STD Health Disparities Workgroup
- Seminars, lectures, and workshops highlighting current research in different CDC divisions

“The DSTDP’s specific disease prevention goals are contextualized within the broader framework of the social determinants of health, the promotion of sexual health, and the primary prevention of STDs.”

Guoyu Tao, PhD (project mentor); Elizabeth Dominguez; Karen Hoover, MD, MPH (project mentor) and Charlotte Kent, PhD (HSREB Branch Chief)
Active Texas 2020 State Plan

Physical Activity State Plan in Texas

By: Karla Granado

During my practicum, I worked with Dr. Kohl at the School of Public Health Austin Regional Campus to create a dissemination strategy for Active Texas 2020.

Active Texas 2020 is a state plan for physical activity which Dr. Kohl, along with others, drafted this past year. There is currently no state plan for physical activity in Texas which is why Dr. Kohl and his team chose to create Active Texas 2020.

Public Health Significance

My practicum fulfilled many of the ten Essential Public Health Services (EPHS) outlined by the APHA. There were three EPHS that related to the Active Texas 2020 Plan:

- **Inform, educate, and empower** people about health issues.
- **Mobilize** community partnerships to identify and solve health problems.
- **Develop policies and plans** that support individual and community health efforts.

The goal of the planning team was to disseminate the plan for feedback and gain support. We hope to have the plan adopted in the upcoming legislature as the official state plan for physical activity in Texas.

My duties were to help create a dissemination strategy by setting up a timeline of what and when everything must be done to successfully disseminate the plan. I also helped plan a partnership meeting to be hosted on August 20th.

August 20th Active Texas 2020 Partnership Meeting

- Various stakeholders from across the state will be attendance.
- Participants range from business leaders to community leaders and advocacy organizations.
- Active Texas 2020 will be revealed to stakeholders for the first time during the meeting.

“Partnerships are essential to making a change in the health of others.”
Summer Practicum One goal of the Gusto Program is to increase physical activity. Increasing the resident’s overall physical activity was my specific aim. During the practicum I worked closely with my preceptor, advisor and fellow interns. We worked together to gather information. I conducted a literature review, needs assessment and a focus group. These are the three initial processes in intervention mapping and are crucial for gathering data on the target population.

The physical activity focus group I facilitated included twelve of the residents and lasted for roughly an hour. Preparation for the focus group included scripts, demographic sheets, and recruitment of participants. Incentives for participation and attendance included watermelon, Subway sandwich bites, water bottles, and Whole Foods gift cards. Types of appealing physical activity, barriers to physical activity and benefits of physical activity were some of the items discussed. Overall it was a successful meeting and much information was gathered.

Public Health Significance The essential service of public health my practicum and the Women’s Home provides is linking people to needed personal health services and assuring the provision of health care when otherwise unavailable.

The Women’s Home provides residents with a variety of services—mental health counseling, career planning, addiction treatment, etc. My practicum gathered information for the future development of a physical activity program for the ladies. The physical activity focus group was particularly informative for finding out what will succeed in that setting.
Camp Rainbow Practicum

Camp Rainbow: Diabetes Camp for Children

By: Larissa M. Loufman

My public health practicum experience focused on proper medical care for individuals with diabetes mellitus. In particular, I volunteered as a medical staff worker at Camp Rainbow, a week-long day camp for children with diabetes. At the camp, I was responsible for regularly checking and recording blood glucose levels and taking care of campers when they felt sick. Prior to attending Camp Rainbow, I was required to attend several lectures and training sessions so that I could be prepared to take care of the 10-12 year old campers. The organization’s supervisors took a multi-disciplinary approach to diabetes care by involving medical and non-medical staff from a variety of backgrounds to encourage diabetes self-management practices. The final product that I helped create was a nutrition-related game to help campers achieve this goal.

Public Health Significance

My practicum experience relates to the Essential Services of Public Health because diabetes mellitus is a major health problem that is often misunderstood and contributes greatly to America’s health care expenses.

The Public Health Essential Service that most closely relates to my practicum experience is “Inform, educate, and empower people about health issues” because diabetes self-management is the key to preventing health complications that often occur for individual’s with diabetes later in life.

Volunteering as a medical staff worker gave me the opportunity to gain knowledge and further my professional development by encouraging me to explore a public health issue with which I was not very familiar. Fellow Camp Rainbow staff contributed to public health goals by confirming my decisions when taking care of campers.

Duties completed during my practicum:

• Attended intensive lectures on diabetes from several health professionals
• Completed three case studies pertaining to care of patients with diabetes mellitus
• Participated in training sessions to prepare for Camp Rainbow
• Provided medical care for 10-12 year old campers while at a week-long day camp

“I learned that it is important to educate newly diagnosed individuals with diabetes in order to prevent future health complications.”

Campers at Camp Rainbow were encouraged to be physically active and participated in activities including swimming, canoeing, fishing, and arts and crafts.

Medical staff workers, including myself, were responsible for checking camper’s blood glucose levels before snacks and meals.
Fighting for Healthy Children

Clinical-based approach to childhood obesity management

By: Jennifer O’Rear

I worked with Ben Taub Hospital this summer in their Pediatric Weight Management Clinic. We met with overweight/obese children and their parents every week, providing education on physical activity, nutrition, and behavior modification in order to address the child’s needs. My role in the clinic was to create educational handouts for the children to take home; I focused on nutrition mostly, as this was the greatest barrier for the children obtaining a healthy weight. I was also involved in educating the children and their parents one-on-one about things such as portion size and ways to shop for healthier foods. My final product for the practicum was a food journal that is given to the children in their second visit. I will continue with this clinic to conduct a focus group for my extended practicum.

Public Health Significance

The Essential Service of Public Health that was used in my practicum was informing, educating and empowering people about health issues. The parents and children were sometimes ignorant to what healthy habits looked like; many of the families drank Tampico, a sugary beverage that looks similar to orange juice, but with very little juice content. So, teaching the families to read labels was a huge lesson for many. Information such as this empowered the parents and gave them encouragement in their role of helping their child to lose weight.

My practicum contributed to public health through education. The families I saw in the clinic were there because a loved one was suffering from obesity, and a huge reason for this was because of the lack of knowledge. One eye-opening situation occurred when I taught a 10-year-old female patient about fast food. She was consuming all of her calories for the day in one ice cream shake but didn’t realize it. When we talked about this, and she realized how much she was really eating, it clicked. So, education is essential for this public health issue.

Highlights at Ben Taub

- Working with amazing doctors, physical therapists and dietitians who really care about their patients
- Working one-on-one with the families and counseling them on healthy choices

“You’ve got to meet the patient where they’re at. No matter how good your program is, it won’t work if the patient isn’t ready”.

We educated the children on healthy eating habits.
The Midwife Training Project

Honduran Midwives learn the basic standards of a clean labor

This May, I travelled to Colomoncagua, Honduras with the Baylor Shoulder to Shoulder medical brigade. As part of their public health efforts to improve the lives of the people in this region, I helped carry out a training session to teach midwives in this region about basic standards in the care of a clean labor.

In this rural, underdeveloped and unserved area, midwives attend most of all the labors in the region. Therefore, educating them about proper hand washing, proper labor settings, and procedures in case of labor complications are all essential skills to achieve a safe and successful labor and delivery.

Since many of the midwives are illiterate, all the activities were interactive. These include handwashing demonstrations, group activities on proper labor settings, and group plays illustrating proper midwife’s steps for a proper labor and delivery.

To continue this public health effort in educating these midwives, I developed a training manual and recommendations for future facilitators to continue midwife trainings in the future.

Public Health Significance

Baylor Shoulder to Shoulder provides both medical and public health services to improve the lives of Colomoncagua village people. One of their public health efforts is to inform, educate, and empower the traditional midwives in this region.

The training allows the midwives to learn knowledge and skills about labor and delivery so they can apply it in their own settings.

The ultimate public health goal is to improve maternal health and to reduce child mortality by educating traditional midwives on basic standards of clean labor.

However, more training sessions are needed to teach them more skills and to refresh their acquired skills. Thus, continued education is the key to achieve the ultimate goal.

With the Baylor Shoulder to Shoulder efforts to educate midwives as well of the rest of the village community about the importance of midwives and their role in public health will help reduce child mortality in underdeveloped, unserved rural areas such as Colomoncagua, Honduras.

Special Thanks to all the midwives that were so enthusiastic to teach me about their profession and their culture.
Identifying Human Trafficking Victims in the Health Care Setting

By: YANNETH RIVERA

My practicum at Houston Rescue and Restore Coalition (HRRC) entailed working on a new training program that educates health professionals in the identification of human trafficking victims in the clinical setting. I learned substantially about human trafficking as a major, global public health issue and also about its local impact. As a new program that was recently developed by another UTSPH student as their thesis, the program materials were still in need of development. My tasks included editing, reviewing, and designing presentation materials. This included everything from PowerPoints to pocket cards, flowcharts, a facilitator manual, and pre- and post-tests. I also tested out these products by working with community contacts to gain feedback and by conducting trial runs of the materials with groups of health professionals. As a result, this intervention is now ready to be pilot-tested with health professionals in the Houston area with the goal of more widespread dissemination in the future.

A day as an intern at HRRC...

• Participated in a Coaster Crawl to spread awareness at area restaurant/bars
• Attended coalition meetings with numerous community agencies
• Assisted with trainings at Texas Children’s Hospital

Public Health Significance

HRRC is a non-profit organization dedicated to increasing awareness about human trafficking, a major issue in the Houston metropolitan area. The organization focuses on educating the public and training professionals on human trafficking issues to empower the community to take action. Health professionals are viewed as key stakeholders in the identification process of human trafficking victims because of their likelihood of encountering victims. However many health professionals are unaware of this issue. Thus, it is essential to disseminate an effective training program among health professionals to make gains in securing the safety of victims. The Essential Services of Public Health that were addressed in my practicum experience include assuring a competent public health and personal health care workforce and informing, educating, and empowering people about health issues.

“it was rewarding and exciting to use my MPH training for human trafficking work, a fairly new topic in the public health field.”
A nearby community garden will provide space for residents of The Women’s Home to start gardening.

Gusto Nutrition Practicum – Gardening at The Women’s Home

By: Cerissa Wagner

Healthy nutrition, and physical activity improve quality of life and reduce risk for almost every chronic disease. With a team, I helped initiate a wellness program, called Gusto, at The Women’s Home, leading the gardening component of the project. We began by observing and learning about the residents and systems in place as part of a needs assessment.

I led a focus group on the topic of gardening. We learned that many residents are interested in, and have experience with gardening.

Networking with a nearby community garden project organizer, I am assisting with getting residents involved.

I plan to form a gardening club at the site who will regularly participate in community garden work and potentially garden education classes.

Public Health Significance

The mission of The Women’s Home is to help women in crisis regain their self-esteem and dignity, empowering them to return to society as productive, self-sufficient individuals.

This is related to the Public Health Essential Services of empowering people about health issues, developing plans that support individual health efforts, and linking people to needed personal health services.

My project was related to investigating health problems in the community, which was demonstrated by gathering the residents’ opinions at focus groups.

I also mobilized community partnerships by connecting with outside organizations, including AgriLife Extension, Urban Harvest, and local community gardeners.

The plan is to educate and empower residents, and ultimately influence healthy eating, increased physical activity and improve the community capacity at The Women’s Home.

“Taking care of plants, watching birds and butterflies, enjoying the outdoors and getting exercise are all good for body and spirit.”

– Urban Harvest

www.urbanharvest.org

Basil pots were given to focus group participants who came to discuss gardening with us.
Photo retrieved from: http://goorganicgardening.com
Promoting Sexual Health Education to Those In Need

By: I. Sonali Weerasinghe

This summer I worked with the UTHSC Prevention Research Center (PRC) as well as Planned Parenthood of Houston and Southeast Texas (PPHSET) to help promote sexual health education to both Texas adults and teens.

While working for PRC, I helped create materials and partake in the Summer Sexual Health course activities. My handouts were used in discussions regarding personal values and adolescent development related to sexuality. As a final project, I worked on creating a design document for the department’s teen section website.

As a PPHSET volunteer I worked on community outreach through phone-banking to promote upcoming legislative bills, block-walking to support House Representative Ellen Cohen, and fundraising for the “Party Like a Rockstar” event.

Public Health Significance

My practicum mainly focused with objective #3: “Inform, educate, and empower people about health issues.”

Through PPHSET I talked to people on the phone about the benefits of sexual education in reducing teen pregnancy and STI infection. PPHSET is an organization that is committed to providing clinical services as well as education to the community regarding sexual health and wellbeing.

As a practicum student, I worked on a project where we are creating a tool for district/school staff and parents to use in order to choose the most appropriate evidence-based sexual health curriculum for their area. I helped to create the intervention matrices that would aid sexual health teachers and principles. This tool is really important because it simplifies the choosing process of an education program and ensures that teens get the accurate information that they need to make healthful, informed decisions that will affect them and society.

It’s bad enough people are dying of AIDS. No one should die of ignorance.
- Elizabeth Taylor

Photo Source: http://www.herdaily.com/health/tag/teen

This is a photo of me working on a presentation for my practicum class.
Child Abuse and Neglect

The ad hoc Houston Committee of the Texas Blue Ribbon Task Force (SB 2080)

By: Bussma Bugis, MPA

Working with Houston Committee of the Blue Ribbon Task Force for summer 2010 was great experience. Our strategy was set for reducing child abuse and neglect, and improving child welfare in Texas. I was given two issues to evaluate: the use of alcohol and drugs during pregnancy, and home visitation programs in Texas. BRTF Legislated task is to generate a report by August 2011 on Child Abuse and Neglect in Texas. However, we plan to have our recommendations by early winter 2010. BRTF members meet monthly throughout Texas with different parties at all levels.

During my practicum, I reviewed prevention strategies, DFPS data, and literatures on child abuse. I also created two descriptive reports suitable for submission for publication that will contribute to the final Blue Ribbon Task Force Final document.

Public Health Significance

Child abuse and neglect is of public health significance. About eleven children per 1,000 children in Texas judges as maltreated (2008 rate) with average of 3 child fatalities due to abuse or neglect.

In addition to evaluate effectiveness, accessibility and quality of Texas current policies and plans to prevent child abuse and neglect. The purpose of my practicum was to conduct specific recommendation to decrease the child abuse rates in Texas.

For example, I did full assessments of two current TX home visitation programs that have shown positive effects in the domain of child abuse and neglect: Nurse-Family Partnership, and Healthy Families America.

Our committee recommended that all home visitation programs should be regularly monitored and assessed for effectiveness, model fidelity, impact, outcomes and return on investments.
Texas Children’s Risk Management

At Texas Children’s, We Are All Risk Managers

By: Erin Ferris

During my practicum at Texas Children’s Hospital, we worked on managing the level of risk in the hospital setting. This includes a wide range of risk issues varying from maintenance workers cleaning up spills in a timely manner to clinical staff verifying that patients receive the right medication and dose before administering them. These seemingly small or obvious acts that one can take responsibility for drastically decreases the risk of any situation, and can save the hospital thousands or millions of dollars and prevent patients and visitors from injuring themselves.

Texas Children’s takes a very aggressive, proactive approach to risk management and engages in education campaigns frequently to make all employees realize that they are risk managers. Every employee is responsible for managing the level of risk in a responsible manner, and following hospital protocol in their various positions.

Practicum Highlights

- Risk Management Week
- Risk Assessment of the Texas Children’s Neurological Institute
- Texas Children’s Bioethics Retreat
- Texas Children’s Child Protection Team Meeting

Public Health Significance

*Develop policies and plans that support individual and community health efforts.*

During my practicum with the Risk Management division of Texas Children’s Hospital, I worked on a Risk Assessment of the Texas Children’s Neurological Institute. This is significant to public health because this facility will not only be utilized by the public, but will contribute research and evidence-based practices to the public health community.

Risk Assessment of Texas Children’s Neurological Institute

Picture taken during hard hat walk-through of the Texas Children’s Neurological Institute at construction and architecture headquarters inside the building.
The objective of this practicum has been to create a functional and simple, user friendly, database used to track patient volume referred by individual physicians. The desire was to track these physicians across multiple clinic sites and gage the impact any given physician has upon the patient volume of individual clinics and the department as a whole.

**Why track**

This data can be extrapolated to numerous ends. A new physician outside of the network begins to regularly refer a large volume of patients to one clinic site; this physician becomes a priority and management should become alarmed if the volume suddenly drops. Such information and management techniques only become available when actively tracked and monitored.

**Significance to Public Health**

And how does this impact public health? Every hospital has a mission. The Methodist Hospital states “To provide high quality, cost-effective health care that delivers the best value to the people we serve in a spiritual environment of caring in association with internationally recognized teaching and research.” To achieve this mission, Methodist must, not only remain open, it must remain effective, efficient, relevant and, at the very least, operate in the black. To be glib, no money, no mission. No mission, no service to public health.

—Jeffery Glover
Clinical Risk Rating at a Glance

The 4-1-1 of Clinical Risk Groupers
By: Lenetta Hogue

Who: Worked with public health researchers and IT programming staff at DHS
What: Assigned to research and recommend the most appropriate clinical risk rating process for DHS and then assist with implementation.
When: Summer 2010
Where: Practicum experience conducted on site in Houston.

Public Health Significance
Dynamic Health Strategies, Inc. (DHS) most closely exemplifies the Public Health Essential Service (PHES) area of evaluating effectiveness, accessibility, and quality of personal and population-based health services. DHS’ key feature to contributing to the area of public health is through the design and development of health care databases. This then becomes a vehicle for DHS to provide comprehensive data management, analytics, and reporting services to their clients. The clients in turn are able to monitor healthcare costs and utilization, improve healthcare effectiveness, design quality benefit programs, and improve outcomes.

Via my project of evaluating the most appropriate clinical risk grouper and assisting with its implementation, DHS will be able to provide their clients with more accurate information about future costs and utilization. There are many steps involved with this process from initial data gathering to analysis of the client’s risk score.

Examine individual risk scores assists in determining a companywide risk score based upon episodes of care.

- Research to determine the best “Risk Grouping” approach for DHS’ database
- Participated in webinar training sessions provided by Ingenix-Symmetry
- Development of a corporate “Risk Group” workbook for DHS
- Mapping episodes to risk groups

“Accurate Clinical Risk Groupers assists in predicting current and future health care usage and costs”

Clinical risk scores allow cross company comparison of healthcare costs and utilization.
Memory Care Program Evaluation

Assessing the Impact of Memory Care Programs on the Quality of Life of Nursing Home Residents

By: Jamecca Jones

During my practicum at Lexington Place Nursing & Rehabilitation Center, I was charged with completing an evaluation of the center’s Memory Care Program involving several activities meant to improve not only memory but also quality of life of the home’s Alzheimer’s and Dementia residents.

Assessment Tools included: The Geriatric Depression Scale, The Mini-Mental State Examination, and the Alzheimer Disease Related Quality of Life Scale. Together the tools provided a measurement of mood, cognitive functioning, and quality of life.

Practicum Duties included: resident tracking in group activities, recording daily participation rates, administration of assessment tools to residents and staff, analyzing data obtained, compiling an article summarizing findings, and presenting data to center staff.

Mental State Examination, and the Alzheimer Disease Related Quality of Life Scale. Together the tools provided a measurement of mood, cognitive functioning, and quality of life.

Practicum Duties included: resident tracking in group activities, recording daily participation rates, administration of assessment tools to residents and staff, analyzing data obtained, compiling an article summarizing findings, and presenting data to center staff.

implemented by Lexington Place during this evaluation were to monitor the health status of residents, diagnose & investigate health problems in their community, and to develop policies and plans that support individual and community health efforts. The center’s memory care program not only seeks to improve mood but also the quality of life of the elderly population affected by Alzheimer’s and Dementia. This study has shown that daily activities foster independence, retain dignity, improve cognitive functioning, and enhance mood among the elderly population.

Public Health Significance

Public Health Essential Services

This project focused on evaluating the effectiveness and quality of health services provided to elderly Alzheimer’s and Dementia residents at Lexington Place Nursing & Rehabilitation Center.

At the population level, research completed will help mobilize community partners to identify & solve health problems affecting the elderly population in nursing home settings.

Public Health Essential Services

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Other core public health services

activities foster independence, retain dignity, improve cognitive functioning, and enhance mood among the elderly population.

“I am so thankful to be with you all here. All the activities are just wonderful and keep us really busy.” – nursing home resident, L.M.

Activities that encourage socialization and hand & eye coordination not only enhance mood but foster cognitive development as well.

(Images obtained from MS word Clip Art Bank)

Memory Care Program Activities

• Stretch & Strengthen
• Cooking Club
• Poetry
• Garden Club
• Jubilee Choir
• Bible Study
• Fix-It Club
• Jazz
• Daily Gratitude & Reflection
• Birding by Ear
• Group Socials
• Praise & Worship

Gardening is the Memory Care Unit’s most popular activity.
Waging War against the Greatest Humanitarian Crisis

By: Chad Niemeyer

From June 5- July 3, 2010 I had the opportunity to participate in a service learning experience with Child Family Health International in Durban, South Africa. The aim of CFHI is to engage students of all health disciplines in service abroad. Throughout the month we rotated through clinics and hospitals, participating in patient care at times, and witnessing first-hand how HIV has affected the population and how the healthcare system is fighting to curb its spread. We attended lectures once/week and the tangible product of the trip was a paper on HIV and the South African healthcare system. But the intangible product was far more valuable, as I left with a new perspective and heart for serving abroad and promoting global health.

Public Health Significance

Through my experience with the program in Durban, I witnessed each of the Essential Public Health Services applied. In particular, monitoring and diagnosing/investigating were applied through a widespread HIV testing campaign at clinics funded by PEPFAR and various NGOs. Additionally, information and empowerment was evident as you drive through various districts and see billboards promoting HIV awareness and healthy habits as well as through brochures and counseling that took place at the clinics. Overall, the public health approach to fighting HIV in South Africa has been very multidisciplinary and comprehensive. It is a big problem but the people involved are pulling out all of the stops.

For years, South Africa has been seeing a rise in its HIV-positive population and a decline in physicians to care for them.
Nutrition Policy Advocacy

From Science to Policy: Public Health Advocacy in Washington, DC

Mike Pomeroy

This summer, I worked with the Center for Science in the Public Interest in Washington, DC. I assisted the Nutrition Policy group of the center, and learned about how advocacy works in the nation’s capital.

I was given exposure to a broad range of advocacy activities. I attended strategy meetings, congressional hearings, press conferences and meetings with regulatory bodies. I lobbied members of Congress directly, as well as encouraging “grass-roots” lobbying from their constituents.

One of my main focuses was junk food marketing to children. I investigated research about the effects of marketing to children, and drew up letters of petition to regulatory bodies encouraging placing limitations on this marketing. I also lobbied members of Congress in relation to bills that could affect this issue.

“My job isn’t to tell American’s what to eat. My job is to make it easier for Americans to make healthy choices.”

-Margo Wootan, director of Nutrition Policy, CSPI

Public Health Significance

This practicum experience ties into at least two different Public Health Essential Services as defined by the APHA.

First is “Develop policies and plans that support individual and community health efforts.” CSPI and its staff not only encourage lawmakers to develop policies that encourage healthy behaviors, they often use their expertise to actually write up drafts of bills.

Also, CSPI “enforce[s] laws and regulations that protect health and ensure safety.” They do this through petitioning the FDA or the FTC to “crack down” on deceptive or unsafe corporate health-related practices, and also through litigation.

One example of this that I was involved in was CSPI’s threat to sue McDonald’s over the use of Happy Meal toys. Because these toys lure children to eating unhealthy foods, CSPI feels that McDonald’s violates consumer protection laws in several states, and threatened to sue. This suit is still pending.

Nutrition Policy in All Three Branches of Government:

• Lobby Legislative Branch members to write sensible nutrition-related laws
• Petition federal agencies of the Executive Branch to enforce laws
• Bring suits before the Judicial Branch when corporations violate consumer protection laws

Much of CSPI’s work is done through direct lobbying of the Legislative Branch, as well as encouraging local constituents to contact their representatives about an issue.

Child Abuse: The Advocacy centers role in outcomes

Kwabena Sarpong

My practicum was at the Brazoria County Alliance for Children. The center is a non for profit organization that coordinates the activities of agencies that are involved in the protection and management of children who have been abused or maltreated. During my practicum I worked to get a better understanding of the operations of the center and also sought to find out some of the outcomes of the children seen at the center. I used a database to randomly select cases and reviewed the status of the cases. I then placed calls to CPS workers and law enforcement workers to find the status of the case. The project enabled me to know where the children were placed. Children were either returned back to their homes, placed in foster care or in family based services. I also sought to see if the children had received resources they need. I also looked at the relation of the perpetrators to the victims and the characteristics of the perpetrators.

Public Health Significance

Child abuse is an important public health issue with short and long term effects on victims. Every year it is estimated that the victimization rate is about 10.3 per 1000 in the population with a mortality rate of about 2.35 per 100,000. The cost of managing victims and the resources needed to handle cases is woefully inadequate. This normally causes an outcome that might not be favorable to the already victimized child. Child victims if not properly rehabilitated may grow to be perpetrators themselves or become a burden on society.

My practicum experience involved the mobilization of community partnerships to identify and solve health problems. It also dealt with the development of policies and plans that support individual and community health effort. These are components of the Public Health Essential Service. At my practicum site the multidisciplinary approach to care involving, forensic interviewers, CPS workers and law enforcement agencies results in a solid collaboration that seeks the well being of the child.

My project sought to find the outcomes of the children who had been seen in the center and thus involved talking to various agencies about the status of cases in terms of the child and the perpetrator.

Special events/ duties/highlights during your practicum

• I made a presentation at a meeting of law enforcement officers to highlight the functions and role of the Child Advocacy Center.

“We can prevent child abuse and maltreatment, help break the cycle now.”

Picture source: www.dominica-weekly.com

PUT A SMILE ON THE FACE OF A VICTIM
Public Health Significance

My internship covered many of the essential services that Public Health provides, but the one I worked most closely on was with enforcement of the laws and regulations and the development of policies at the department and hospital level that protect patients.

I worked with another intern, Keela Jackson (MHA, Texas A&M) to analyze laboratory occurrence data stored in a database where every error relating to a laboratory specimen, whether laboratory caused or not. This record keeping is essential in maintaining the laboratory’s accreditation.

Through deep analysis, we were able to find patterns in the data that had not been found before. The recommendations we suggested were implemented department wide, hopefully leading to enhanced reporting and a decrease in the number of laboratory errors and increasing patient safety at Methodist.

“The Methodist administrative internship was the place where I learned how to integrate the practice of management with my UTSPH classes.”

I gave support to mock Joint Commission and College of American Pathologist inspections (CAP), done to keep staff in a state of continual readiness. Along with other interns, we also were mock patients in simulated surgeries and appointments in order to improve patient process flow in the new Outpatient Center (OPC).

Finally, I was able to create an automated variance dashboard for the department that allowed the director to see financial performance data quicker.

The Methodist Hospital, a U.S. News and World Reports Honor Roll Hospital, opened the nation’s largest outpatient center this summer, the Outpatient Center (OPC). Administrative interns were on hand to assist with its opening.
Support of Nanotechnology in Medicine

An impact evaluation of the Alliance for NanoHealth (ANH)
By: Andrea Zuniga

My practicum site afforded a lot of independent work and also the opportunity to collaborate with stakeholders. For my practicum, I developed an evaluation proposal for the impact of the ANH and performed the evaluation through data collection and producing a written report. I was also able to develop a satisfaction survey for administration to ANH participants. At the beginning of my practicum, I elicited stakeholder input for the development of my project. I spent the majority of the summer developing my method for my evaluation and data collection tools. I also was the person that administered the surveys and tools to the participants, which enabled me to learn about survey methods.

For this practicum my final product was a report developed from my evaluation proposal and stakeholder input. The report included the tools developed to collect data and the satisfaction survey. The impact evaluation found that the ANH has been successful in achieving its evaluation objectives and achieving a satisfactory performance.

Public Health Significance
One Essential Service of Public Health is research for new insights and innovative solutions to health problems. The ANH supports local investigators that are researching for new insights and innovation solutions to health problems such as heart disease, diabetes and cancer using nanotechnology.

Support for research from the ANH is in the form of Pre-Center and See grants to develop initial data needed to apply for NIH and other governmental grants, which require preliminary data for successful applications. Additionally, the ANH strives to foster a collaborative environment for researchers to promote multi-disciplinary research in the topic of nanotechnology in medicine.

With additional support for nanotechnology in medicine research, it may be possible to develop innovative and effective medicines and treatments for top ten diseases in the U.S. with the hope of lessening their burden, including their economic burden.

“ANH investigators have been successful in producing notable publications.”

Opportunity for independent work on a large project!!!
• Good Collaboration with Stakeholders.
• Supportive Preceptor.
South Texas Environmental Education and Research (STEER) immerses health professions students and faculty in the unique culture and environment of the Texas-Mexico Border. Our purpose is to reunite Medicine and Public Health (STEER, 2011).

Each summer, MD/MPH students from San Antonio head to Laredo and Harlingen to experience first-hand the intersection of public health and medicine through a real world study in environmental health. Read the summaries below to learn about the STEER program through the experiences of UTSPH students.

http://steer.uthscsa.edu/index.aspx
The South Texas Environmental Education and Research Program

By: Lee Anderson

During the STEER practicum, we had a unique opportunity to learn about the cultural and environmental issues in the Texas-Mexico border region. This program provided lectures and community visit to experience some of the public health problems in the border region. The STEER program coordinated various lectures and trips to community sites and areas of environmental concern.

This program highlighted several of the public health issues facing the area, and the ongoing responses to meet these needs. Students presented recently published articles related to the environment and health during practicum. The final product for the practicum included student presentations based on a topic discussed during STEER and a reflection paper reviewing our experiences.

Experiences include:
- Visit and learn about colonias.
- Interact with environmental and public health experts in the border region.
- Gain firsthand experience of some of the public health issues facing the border region.

Public Health Significance

This program allowed students to experience a wide spectrum of public health services. Students learned and experienced firsthand environmental monitoring and of the community health status. The faculty is actively involved in the community working to educate and empower the citizens. Students learned about the unique communities in the region, and culturally competency was a major learning topic in this experience. Students got to learn about and meet ‘promotoras’ and learn how they are used to improve health outcomes in ‘colonias’ and other areas. Visits to community health centers (CHCs) also provided insight into the infrastructure for provision of healthcare to underserved populations in this area. The STEER program does an excellent job of educating medical and public health students about environmental and public health issues facing the border region.

“I thoroughly enjoyed STEER and have gained considerable practical knowledge from this practicum.”

Preparing to take water samples in Laredo

Summer 2010 • Lee Anderson • Laredo/Harlingen • South Texas Environmental Education and Research
“Why are you working on an MPH?” is what people usually ask me when I let them know that I’m working on a dual MD/MPH program. It’s interesting to see their reactions to this because they look at me cockeyed and confused wondering why on earth I would decide to work on Masters in Public Health if I’m fortunate enough to get accepted into medical school. In essence, they place public in health in the backseat and negate its importance. I really wish people would stop and instead say, “that is incredible! Public health is the future of medicine and necessary to understand!” In theory, I’ve always known why I wanted to get an MPH: to make a difference in the community and not just an individual and I still do. Unfortunately, I was little naïve about what exactly helping the community meant. See, I always thought that by having both and MD and MPH, I would be able to emphasize prevention and help establish prevention programs to prevent disease from occurring. I figured that as a physician, I would be given a great opportunity to set an example to my patients by helping and encouraging them to live a healthy lifestyle. Fortunately, STEER has taught me that you don’t need an MD or an MPH to help out the community. In fact, you don’t even need a college degree. Public health is impacted by everyday people such as trappers, promotoras, and community leaders - not just professionals. In fact, it’s the very people within a community that influence the course of public health today and tomorrow.

STEER has been the missing link in my education. Although I may sit in class and learn about the chemicals in pesticides, or the reasons we get congenital malformations, I would never get an experience like STEER in the classroom. STEER in Harlingen and Laredo was able to integrate my culture, my passion of medicine, and my love for people in four weeks which can never be taught in any classroom. To be frank, sometimes at the end our fourteen hour study days I would go home and ask myself if it was all worth it. I wondered how I would survive another year of books without seeing any patients. Well, STEER reassured me that every single minute invested in school is absolutely worth it. It is integral to keep my drive and keep moving forward because it’s not about me – it’s about people like the Mike Trevino who go the distance to provide access to healthcare to people who need it the most at no cost. It’s about people like Tony Ramirez who understand that medicine doesn’t come in bottles but instead integrate modern medicine with traditional healing and culture. Above all, it’s about people like Castro’s; hardworking families trying their best to get by with whatever resources are available. They rely on us, their future physicians to look at more than their socioeconomic status and see them for who they are – people. Although I learned about the essence of teamwork, I learned so much more about compassion, understanding, and patience while at STEER. If there’s anything I’m going to come away with the most it’s this: people have feelings. They hurt, cry, and get sick and it’s in these times that they need our help the most. Medicine isn’t about quotas or seeing as many patients as we can. If we look at our number of charts as quotas, we might as well be salesmen. I chose to obtain a degree in medicine and public health because I want to be a healer and a friend. If it takes me thirty minutes to break through barriers with one patient and listen to them, then so be it. We don’t all have sinusitis. It’s imperative we return to the backbone of medicine when doctors cared about the individual and not the profit. STEER solidified my future in public health and my return to these areas which have essentially made me who I am today. And for that, I’m eternally grateful.
A STEER Experience: Lessons in Building from the Ground Up

By: Alisha Jiwani

Arrival in the colonias was like entering a small town in a third-world country: simultaneous feelings of shock, sadness and inadequacy washed over me. Over the course of STEER, these feelings dissipated and were replaced with understanding, encouragement and empowerment.

Community leaders reinforced the principles of neighborhood development and advocacy. The promotoras showed a model relationship between community leaders, those fortunate enough to offer help, and those identified as needing assistance.

Private initiatives, government programs and academic institutions worked to support community leaders in providing a long-standing influence. The synergistic relationship of these three parties strengthens my resolve to use these resources in supporting grassroots efforts in similar global health problems.

Public Health Significance

The educational component of the STEER program allowed students to become informed about prominent health issues in South Texas through interactions with Gateway Community Health Center CEO Mike Trevino, Sister Phyllis Peters at Proyecto Juan Diego in Cameron park, and Sister Rosemary Welsh at Sister Ministries.

Unique perspectives on how to monitor community health status through the use of Promotoras and develop policies and plans to support individual and community developments (Border 2012) demonstrates the inward to outward change that is so critical to progress in public health.

Additionally, STEER empowered us to identify and connect with individuals with whom we can create partnerships in order to assure the provision of health care as well as gain new insights and innovative solutions to health problems.

“There are those ... who enter the world in such poverty that they are deprived of both the means and the motivation to improve their lot. Unless these unfortunates can be touched with the spark which ignites the spirit of individual enterprise and determination, they will only sink back into renewed apathy, degradation and despair. It is for us, who are more fortunate, to provide that spark.”

- The Aga Khan IV

Rio Grande water quality research project: students collected water samples at various points along the river to monitor the level of contaminants.

STEER Highlights

- Victor Oliveros’ insights into the history, life and progress of the Colonias
- House Visit with the Promotoras
- Santa Ana Refuge: Overview of environmental challenges
- Sister Ministries and Community Work
- Introduction to ICE
Without hesitation, I can say that the most important aspect of the STEER program was the diversity of thought provoked. The first year of medical school is fairly homogenous in terms of the overall category and presentation of material. Although enormously educational, I sometimes felt as if I was falling into a mental rut with study of basic sciences. I believe that the quality of education lies less in the amount of data digested as the way in which information and experiences gained catalyze the formation of new pathways of thought. The first example that comes to mind is the presentation we attended at the USDA on biological control. I thoroughly enjoyed hearing the ecologist’s approach to combating a devastating environmental threat. While earlier presenters certainly provided interesting, albeit limited perspectives on the river cane, the latter scientist showed a greater appreciation of all the variables that must be taken into account to address a complex problem. Although I found the subject related only tangentially to environmental health and essential public health services, the opportunity to hear a completely different way of thinking was invaluable and emblematic of many of the other events within STEER.

Another aspect unique to the STEER mode of hands-on learning was the ability to form permanent, vivid memories of the health topic of interest. In contrast with medical school, in which information is rapidly absorbed and almost immediately lost from conscious recall, many of the experiences at STEER will undoubtedly remain burned into my memory. The clearest examples were the visits to the colonias. I could read about the history and living condition of the colonias for a month, but never have more than a vague and fictional appreciation of the reality. Sitting on the floor of a piecemeal constructed shack and swatting flies from my face while listening to a first person account of the trials of raising a family in that environment provided a level of understanding much deeper than could be gained from coursework and readings. If I had to pick only one memory to take away, the choice would be easy. I, by no means, would suggest that I know what it is like to live like that, but I certainly know that there are those that do—and can more fully comprehend the direct effect of adequate public health measures. Although almost all essential public health services are employed within various health and social programs targeting colonias, our personal experience falls in the realm of investigating problems and health hazards in the community.

Overall, I am very satisfied with my completion of STEER and extremely impressed with and grateful for all of the hard work that the staff and presenters put into its execution.
Public Health Changing Lives

STEER: Bringing Public Health to Life

By: Shelby Kerbow

The South Texas Environmental Education and Research Program (STEER) program was a unique way to see the essentials of public health be put to use to change peoples lives. We took part in field research, educational classes, and community envolvment.

Public Health Significance

The STEER program is a well developed program to see the ten essential public health services put into action. Both Harlingen and Laredo are associated with areas of abject poverty, such as in the colonias. Learning about policy and management came to life as you see how a public health worker was able to bring about substantial change for a growing population of people in the Texas border. Victor, although at times got lost in telling war stories, helped me to understand how public health policies, and their enforcement, can have a long lasting effect, and change the course of many people’s lives for the better. Simple policies such as water purity control can have such a profound effect on the health of the community. When monitoring an area it is necessary to go out and meet the people to get a firsthand look at what challenges they face that affects their health. I enjoyed seeing the living conditions of both the Arcinega, and Castro family. The question and answer session helped to gain a better feel for the struggles they face, and to see how these struggles are still a backdrop to daily lives that on the surface may seem like any other person. These interactions help to identify the possible health risks that people in this community face. It is through monitoring the situation like this that public health officials become aware of what to do next. We learned different techniques in diagnosing and investigating potential health problems in a community. As stated above, going into the community and talking with the individuals is a priceless way to get an idea of what they may see as their biggest health challenges. We did field work as well such as water quality testing in the Rio Grande, the water source of much of the South Texas Border Region. We took part in vector control investigation, by looking at a tremendous problem in Laredo, tire dumping, and seeing how mosquitoes can easily be bread in such conditions. The promotoras and the Community Health Clinic are demonstrations of how using community leaders can help to link people with needed health professionals. Gateway CHC who has a board of these community leaders, is able to adjust their services to meet the demands of the community they serve. The promotoras of both Gateway in Laredo, and Mano-a-Mano in Harlingen helped to inform, and educate their communities on healthier living, and empowering them to take charge of their own health. We were able to meet with a great success story in Harlingen. A single mother, who after only one year of meeting with the promotoras was able to control her diabetes, and weight, get a job, new house, and get out of a harmful relationship. Finally, the time spent in Brownsville, with Dr. McCormick and his faculty was a great insight into the current front of public health research currently going on in those areas. The TB monitoring, which is incorporating new techniques, to combat infectious disease in the area, and the methods for evaluating current techniques to ensure their effectiveness? STEER took the 10 essential public health services from talking points, and bullets on a page, and demonstrated how when put to use can change lives.

“STEER took the 10 essential public health services from talking points, and bullets on a page, and demonstrated how when put to use can change lives.”

Promotoras Changing Lives in Harlingen

Special events/duties during your practicum
- Vector Monitoring for Dengue Fever
- Meeting with the Castro Family to discuss their challenges
- Dr. McCormick’s Public Health adventures around the Globe

The Castro Family
Getting ready for Big Brother’s Graduation

Spring 2010 ● Shelby Kerbow ● Harlingen/Laredo ● Environmental and General Public Health
Considering Border Medicine

STEER has a very unique mission statement in that the goal is to highlight the connection between environment and public health to future health care professionals. It certainly is true that there are things that you will just never learn in medical school and the interaction of environment and public health is one of them. However, based on my experience with the dedicated individuals promoting and facilitating the STEER experience, the goal statement can be expanded to include encouraging medical professionals to gain an interest in medically underserved communities. There are several things that facilitate this interest but concepts addressed that stood out to me were the variety and severity of illness observed and the community support. The valley is unique in that many of the illnesses that can be seen are only rarely or never seen in other settings. There are a few epic microorganisms endemic to the area that cause diseases that will always garner attention including dengue fever and the bubonic plague. Even the mention of these “exotic” diseases is practically enough to make an epidemiologist come running, which makes me feel that physicians afraid to take the step into primary care could be encouraged if they knew a place like the valley existed. In addition, while the epidemic of obesity and diabetes in the United States is alive and well, the valley seems to be a settled example demonstrating how extreme this epidemic can become if action isn’t taken. Complications are ubiquitous so innovative solutions and creativity is required of those physicians who practice in the valley. After experiencing the STEER program it is clear that the physicians practicing there may experience a different dynamic. During nearly every session the diabetes epidemic in the valley was mentioned. Even when I was in Houston I did not see the massive effort for intervention and education that I have seen in Harlingen and Laredo. Physicians who repeatedly treat chronic diseases like diabetes often report fatigue when they fail to control the illness. This breakdown between the doctor’s efforts to get the illness under control can be bridged by patient education and social support. The large amount of resources that are dedicated to education in the valley provide a viable support network for the physicians and the patients in this area. Another area of community support was observed any time the discussion of uninsured or underinsured individuals came up. As with diabetes there wasn’t a single institution that we went to where there weren’t aware of this problem or didn’t have a plan of action to care for the uninsured individuals. The inability to obtain services for a patient is also reported as being a source of fatigue for physicians; by choosing to practice in the valley while physicians may not have the resources to treat the patient themselves, they do have community sources to reach out to when needed.

Before coming to the valley I never considered it as an area where I would practice in the future. From the outside I was concerned that the valley wouldn’t provide enough variety to keep me interested in medicine, the violence would be damaging to my family, and I would be isolated from the rest of the medical community as a physician. My time at the STEER program helped to alleviate my fears and have allowed me to be more open to the possibility of practicing in a medically underserved area.
The South Texas Education and Environmental Research (STEER) program gave me a personal insight into different public health issues affecting the South Texas region. During my time in Laredo, Harlingen and surrounding areas I was able to expand my knowledge in a number of public health concerns such as the monitoring of water quality, air pollution, childhood obesity, diabetes, and infectious diseases such as rabies and dengue. I was able to observe the collaborative effort made by multiple organizations and public health agencies to address these issues via the design and implementation of innovative health interventions and programs. Laredo, for example, faces many different and similar issues from the rest of the state of Texas. Like all the other border cities, Laredo has to address its public health issues in a bi-national and bicultural manner, which has many implications in the monitoring and control of disease as well as associated public policy and law enforcement. This is demonstrated in the surveillance and containment of Tuberculosis since it’s an infectious disease that should be addressed on both sides of the border. The biological agent does not follow political borders; therefore, a joint effort between Mexican and U.S. public health authorities is required.

Furthermore, during this summer experience, I also able to explore the public health issues in the Lower Rio Grande Valley, which includes the areas of Harlingen, Brownsville and San Benito cities. During our time here we learned how public health professionals addressed the issue of chronic diseases, such as the rising diabetes epidemic, and the lack of physical activity amongst children. For example, in the School of Public Health at Brownsville childhood health living is being addressed via the development of the Coordinated Approach to Child Health (CATCH) program. This innovative program promotes physical activity and healthy eating by intervening at both school and home. In this way, education on healthy behaviors and positive lifestyle modification is being transmitted at both an individual and community level.

Although Laredo and the Lower Rio Grande Valley differ in location, they nonetheless face many similar issues. One of them being the careful monitoring of safe drinking and potable water since they share a common source, the Rio Grande. In Laredo, we actually had the opportunity to do some water quality testing and measure coliform bacteria, pH levels, among others. Another common issue the South Texas Region faces is the presence of the Las Colonias, which are low-income settlements that faced many issues such as constant flooding, unsafe drinking water, and chronic diseases such as asthma and diabetes. Nonetheless, public health agencies such as Community Health Clinics and the local health departments have been able to provide support and aid to these vulnerable populations.

Overall it was very enlightening to see the different limitations these agencies and organizations encountered and how they were able to overcome them. The lessons learned from each program is valuable information than can be applied to our future careers in public health. Most of all, it expanded my perspectives and knowledge in the interesting and unique public health issues affecting the South Texas region.
The South Texas Environmental Education and Research (STEER) program was an unforgettable practicum that gave me hands-on experience and taught me the essential services of public health. During a month on the Texas border with Mexico, I met with members of the community, local leaders, scientists, public health professionals, doctors, promotoras, and even a wildlife trapper to discuss border issues. Through morning lectures I learned about many of the issues facing the border communities of Laredo and Harlingen, several of which included: illegal immigration, colonias lacking access to electricity or running water, sky-high rates of diabetes and obesity, spread of infectious diseases, low high-school graduation rates, and the fact that more than 25% of the population does not have health insurance. In the afternoons, I gained first-hand experience regarding many of these problems: a visit to a US Immigration and Customs Enforcement prison, conversations with citizens of colonias like Rio Bravo and Green Valley Farms, a trip to the Laredo Health Department, field work collecting mosquito larvae, and a fascinating discussion with the CEO of a Community Health Center. These are just a few examples of the many issues and experts that the STEER program exposed me to over the course of a month in South Texas. Overall, the program provided a broad overview of public health and the vital roles that public health professionals play in the everyday lives of citizens and the health of the community. In addition to specific public health concerns, I also learned about the customs and culture that shape life in South Texas. Before travelling to the border, I had never heard of curanderismo, or the local practice of using faith healers and herbs to treat medical maladies. I enjoyed learning about these customs and beliefs, and think this exposure will be invaluable in future endeavors to practice medicine and affect change in this region of the United States. The STEER program impressed upon me the value of cooperation between individuals and agencies, the importance of sensitivity to local culture, and respect for the environment when implementing changes for the benefit of public health. The border region is an especially underserved and neglected part of our country, and the STEER program was an amazing opportunity to learn about the practice of public health in a setting where it is most desperately needed. The issues affecting the border are unique, complicated, and in need of the careful attention of policymakers, public health professionals, and physicians alike. The final point that the STEER program impressed upon me was the necessity of cooperation on the level of individuals, organizations, and even countries to affect change in this vulnerable population. This was especially evident at a Border 2012 meeting, where health officials from the United States and Mexico met and discussed the progress that their respective projects had made in addressing the health of the region. Through cooperation, patience, public health programs, and increased awareness through programs like STEER, I hope health disparities in South Texas begin to improve.
The average cost of a four-year college education in America is $68,000. The cost of just one medical school application is approximately $100 (not including interview travel expenses). And the total cost through the course of medical school totals to over $100,000. The bottom line is, most physicians come from at least middle-class backgrounds, growing up in American suburbs shielded from the realities of poverty. Professors, the media, and celebrities propagate the problem by focusing mostly on the inadequacies of developing countries, and their need for aid. While these issues are significant and should be acknowledged they often overshadow the domestic issues in our own backyard. The most shocking thing I realized through STEER was not the issues present at the border, but the issue present away from the border, the issue of the public’s mass ignorance.

“Colonia” was one of many terms my peers and I were never exposed to before the STEER program, despite most of us being Texas residents for over twenty years. Upon learning that Colonias were areas known to have no running water, paved roads, or electricity, I remember thinking, “Oh, they must be areas on the other side of the border, there’s no way organized neighborhoods such as these could exist in America.” And this was just the first of such naïve thoughts or comments. As we learned more and more, we began making ignorant statements such as, “They must be illegal immigrants!”, “Why don’t we enter them in HGTV’s Holmes on Homes?”, “Somebody should inform the government officials.” If young adults such as us with at least 17 years of formal schooling could be so uninformed, how ignorant of these issues must the rest of the US population be?

Overall the STEER program was amazing and impactful, it gave me the opportunity to leave my comfort zone and discover an area I never would have on my own. It was amazing to see how passionate and dedicated our instructors were to their field, and how willing they were to take the time to share their experiences and knowledge with us. While I do not personally see myself permanently settling down at the border area in the future, I do envision myself coming back to volunteer at some point. The STEER program helped me realize how important it is to understand America’s diverse population, the border is just one of hundreds of different American cultures and communities, that as a future physician it is my responsibility to be aware of and understand. Just because a majority of American physicians come from a middle class background, does not mean our patient population will. It is time we start reducing the lack of knowledge about the conditions and issues within our own borders. Returning to medical school from STEER it will be my goal to help decrease the unfortunate “educated ignorance” by informing my peers of what I have learned and incorporate what I have learned in my future career.
Of the essential services of public health, STEER focused on diagnosing and investigating health problems in the community. This approach was broad-based, and was meant to expose us to the wide variety of health issues along the border. During STEER, we worked on a variety of public health issues and topics, including border health, environmental health, zoonotic diseases, and cultural sensitivity. Regarding border health, we learned about community health centers, immigration, and poor living conditions along the border, and visited the Laredo Public Health Department. Regarding environmental health, we learned about water conservation and treatment, waste treatment and disposal, pesticide and household chemical use, and air pollution. Regarding zoonotic diseases, we learned about rabies, dengue fever, West Nile virus, and malaria, and also learned about animal and pest control. Regarding cultural sensitivity, we learned about traditional medicines and treatments, curanderos, promotoras, binational programs (such as Border 2012), and took part in an herbal medicine tour.

STEER also provided insight into how different programs in Harlingen and Laredo inform, educate, and empower people about health issues. A prime example of this essential public health service is seen through the promotoras program, in which local members of the community provide door-to-door health education services on topics like Home Safety and Safe Drinking Water. The promotoras we met with were based out of the Brownsville Community Health Center, from which they received their training and support. We also learned about a health education program (Proyecto Juan Diego) in a colonia that provided a variety of health education services to members of the colonia, including English classes, GED classes, exercise classes, cooking classes, citizenship classes, and more. Another program in Laredo focused on providing power tools and training to members of the surrounding colonias, leading to improved living conditions and better health.

STEER also took part in mobilizing community partnerships to identify and solve health problems. This could be seen in the promotoras program, which utilized lay health workers to identify problems, but was also evident from the partnerships within STEER itself. Despite working in distinct fields, many of our presenters collaborated with each other in addressing the needs of their community.

STEER also examined programs that link people to needed personal health services and assure the provision of health care when otherwise unavailable. These programs were both governmental (community health centers and public health departments), and non-governmental (Mercy Health Ministries of Laredo). Each had various methods of providing care, including both free services and (small fixed and sliding-scale) fee-for-service care. Each program also focused on improving access through methods that included altered operating hours, optimally located sites, and even travel assistance.

After working along the border for a month, I became very interested in the dynamics between the United States and Mexico regarding laws, trade, and public health. With this in mind, the final product that I created for my practicum site was a presentation on the North American Free Trade Agreement and the La Paz Agreement. These agreements have had an enormous economic and environmental impact since their enactment (in 1994 and 1983, respectively), and learning about them provided insight into much of what I saw along the border.
Learning the Essential Services of Public Health through STEER

The STEER program allowed me to better comprehend and experience the essential services of public health firsthand.

Investigating health hazards in the community is an important aspect of public health provisions. While at the Laredo site, we went into the field, the Rio Grande, with a STEER lecturer and sampled the water at various sites along the river for fecal coliform. In the lab, we analyzed the data for levels of coliform from various gathering sites in relation to location of drainage sites upstream or downstream. We also had the opportunity to listen to a lecture on global warming and the mechanisms behind this issue - the paradoxical nature of particulate matter in global cooling and respiratory health problems. Afterwards, we were able to see the Continuous Air Monitoring system, also known CAM stations, in the community and learn how air quality is monitored there. Data from both water sampling and air monitoring were used to identify any correlations between health deterioration of the community and poor water or air quality.

Informing, educating, and empowering people about health issues is another invaluable essential service of public health. The HEAL initiative (Healthy Eating and Active Living) was presented to us by a CDC fellow. He explained how he as well as other community leaders had begun the program in Laredo in hopes of improving the poor health and nutrition of Laredo community residents. The program informed residents of nearby playgrounds and parks and appealed to the city council to install more sidewalks for recreation. It also educated the community on the importance of healthy living through fliers dispersed throughout neighborhoods and educational sessions at the recreational center. There was also a push for farmer’s markets, where local growers could sell fresh fruits and vegetables to the community. Sadly, many of the local grocery stores sold only what products were most popular among residents- this meant that healthy foods might not be an option for individuals who did desire to eat healthier. The initiative also spoke to local restaurants and requested that they provide healthier options at reasonable prices. By providing Laredo residents all of these new avenues to maintaining a healthy lifestyle, the HEAL initiative is empowering individuals.

Finally, we had the opportunity to learn how the Community Health Center in Laredo was able to link people to needed personal health services and assure the provision of health care when otherwise unavailable. CEO Mike Trevino assured us that only quality care was delivered by physicians- each doctor spent about twenty minutes on average with each patient to ensure all needs were met. Also, payment was based on income of the individual or family, so patients were only required to pay how much they could afford.

Observing and experiencing the essential public health services enhanced my understanding of the nature of public health and how well it molds with providing quality healthcare. I can appreciate the investigation of health hazards, education and empowerment of a community, and the provision of quality healthcare to less fortunate individuals.
STEER Reflection

STEER was an amazing opportunity to further educate myself on a range of topics concerning the public’s health, especially as it relates to members of the Hispanic, South Texas, and border populations. The program focused on a variety of issues that these populations face such as vector-born illnesses endemic to the area, how pollution and lack of public education on the issues help spread these diseases, water contamination and how our nation and our neighbor Mexico are working alongside one-another to progress the issue, and many others. Important to all professionals in the field of public health are the essential public health services. STEER also helped educate us in several of these. For instance, one essential service is the act of monitoring the population to identify community health problems. While in STEER we learned the importance of this. We saw that in order to be effective health care providers for a population, one must know what the area is facing. And STEER as a whole was geared towards teaching us what were important health factors being faced by these South Texas populations. Also, issues somewhat unique to the area are those found in colonias and other communities of typically low socio-economic status. We learned how members of the communities act as promotoras to help people in these communities keep illnesses prominent in the area under check, diabetes being not the least of these. These help satisfy the essential services of diagnosing and investigating health problems of a community, and then informing, educating, and empowering members of the community. Programs in at least one of the colonias we visited were geared towards educating community members of controlling their diabetes, how to become citizens, basically empowering them to take charge of their lives and their communities. The promotoras themselves were just average members of the community, who gained the knowledge necessary and rose to the challenge to help their community. I could go on for pages discussing all of my experiences while in STEER, but all of the words combined could never adequately express the wonderful exposures STEER provided for me. I felt I learned a great deal in those four weeks that I will carry with me for the rest of my life, and surely make me a better doctor and public health professional.
For more information regarding
The University of Texas School of Public Health,
Office of Public Health Practice
and the practicum program:

http://www.sph.uth.tmc.edu/academics/practicum/