Public Health Practice

Stories from the Field

The University of Texas School of Public Health
Student Practicum Experiences
Fall 2012 – Epidemiology
The practicum experience is an integral part of the MPH and DrPH curricula. 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 ninth-edition e-magazine showcases student practicum experiences throughout the Fall 2012 semester. (Prior semesters may be accessed through the e-book, a collection of student abstracts and e-magazines describing their experiences.)
## Practicum Topics

**Serving Size:** 1 Practicum per Student  
**Servings per e-Magazine:** 20

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PROTECTING CONSUMER HEALTH

By: Verem Akem

I worked with the Bureau of Consumer Health Services of Houston Department of Health and Human Services (HDHHS). Within the bureau I worked with the Food Inspection and Safety team and the Swimming pool and spas inspection team.

My duties were assisting with inspections at commercial food services, public pools and spas by observing, documenting violations and carrying out field tests. My final product will be a report summarizing my activities with the bureau, my findings, and suggestions for improvement.

Public Health Significance

The HDHHS Bureau of Consumer Health prevents disease, disability and death from food borne and water borne illness and swimming pool drowning through enforcement and education.

The Public Health Essential Service that most closely relates to my practicum experience is the enforcement of laws and regulations that protect health and ensure safety. By making sure that commercial food services, public pools and spas meet the public health ordinance of the City of Houston and the State of Texas, consumers are protected from disease, disability and death.

In enforcing laws and regulations, the HDHHS Bureau of Consumer Health also informs, educates, and empowers people about issues that may affect their health and the health of others.

Special events/ duties during your practicum

• Investigating a complaint of a possible food borne illness.
• Assisting in a consultation on how to rebuild a swimming pool that is safe and meets the City’s safety requirements.

Advice for Future Students

Keep an open mind and you will DEFINITELY learn something!

Improperly handled food can be deadly. www.keepingitkleen.com

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Preventing Food Borne and Water Borne Illness

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Baylor College of Medicine: Prevention and Population Sciences Program

Case study on the progress of the Prevention and Population Sciences Program according to Strategic Plan set forth in 2003 By: Rachel Atkinson

A number of events, decisions, and leadership changes have contributed to the productivity and development of the Prevention and Population Sciences Program at Baylor College of Medicine (BCM). The Prevention and Population Sciences Program is part of the Dan L. Duncan Cancer Center, recognized as a National Cancer Institute Cancer Center. BCM has a long history of exceptional basic and translational research and made a move to strengthen their cancer research and treatment programs in the late 1990’s. This practicum described the background, development, and preliminary assessment of this program and may provide insights to other similar programs that may facilitate their development.

Public Health Significance

Actions in the President’s Office at Baylor College of Medicine involves all 10 categories of essential public health services and I have experienced all of them during my practicum. Baylor College of Medicine has large medical, graduate, and allied health schools known for excellence in education, research, and patient care. The President’s Office is the central command for everything that goes on and for future strategic planning involving community outreach.

The category of essential public health services that most closely describes my practicum project is Evaluate. This is because my project involved investigating several measures of effectiveness, productivity, and quality of Baylor College of Medicine’s Prevention and Population Sciences Program.

It was very interesting to learn about the progression from the planning stages of a prevention program to what the program has develop into now.
Effect of obesity on treatment outcome following HIPEC treatment of peritoneal malignancies

By: Oluwatosin Badejoko

In view of obesity as a public health challenge, I reviewed obesity as a prognostic indicator of survival in patients who took HIPEC chemotherapy for peritoneal malignancies over 16 years at MD Anderson.

HIPEC - Hyperthermic Intra-peritoneal Chemotherapy

The final product is a paper which is still being written on the findings.

Major Finding

There was actually no significant statistical difference in the survival outcome between obese and non-obese patients. However, in view of other co-morbidities such as cardiovascular disease and diabetes that arise from obesity, people are still encouraged to reduce weight.

Public Health Significance

I evaluated the effectiveness of HIPEC as a treatment option for peritoneal malignancies. In addition, the practice policy for care is expected to develop following this exercise.

This is bringing a new dimension to research as regards provision of care to patients and creating insights to secondary as well as tertiary prevention of peritoneal cancers.

It is hoped that the findings in this study will help formulate policies that ensure non-exclusion of obese patients from HIPEC chemotherapy.

Practicum Highlights

- Reviewed papers written on HIPEC treatment of peritoneal malignancies
- Evaluated prognostic indicators of survival in post-chemotherapy patients
- Participated in various departmental activities involved in clinical care

Be open to new ideas while fulfilling your practicum requirement.
Tissue Oxygen Saturation (StO₂) as a Prognostic Tool in Cancer Patients Seen in the Emergency Center at MD Anderson Cancer Center

By: Hadil Bazerbashi, MD

Research question: Does StO₂ measurement enhance the accuracy of vital signs and lactic acid in predicting short term clinical outcomes (ICU admission and in-hospital mortality) in cancer patients seen in the EC.

Methods: Data was abstracted from the electronic medical records of cancer patients seen in the EC at MD Anderson and had StO₂ measurement performed during triage. Descriptive analysis was performed to construct the initial tables. Chi², t test, and logistic regression models were used to examine the correlation between StO₂ and other vital signs measurements that are usually used in triage; and to determine their association with the outcomes.

Public Health Significance

MD Anderson Cancer Center is a world class center with scientific contributions that have impacted the lives of millions of cancer patients.

Cancer patients are prone to a variety of medical emergencies and MD Anderson Emergency Center provides these patients with a high standard medical care.

StO₂ monitors were recently introduced to the EC and have been used in triage with other vital signs to guide the overall assessment of these patients. While StO₂ is often used in ICUs, limited data is available about its use in EC triage. This project aims to ascertain the clinical impact of StO₂ measurement in the EC.

Judicious use of resources is essential to deliver care to the increasing number of patients with chronic illnesses including cancer patients. New diagnostic tools need proper evaluation in different clinical settings prior to wide spread use.
Congenital Heart Disease and Cardiomyopathy Bio repository

Framing the ICRs, forms and questionnaires for development of Cardiomyopathy and Congenital Heart Disease Bio-repository
By: Heli Bhatt

Congenital Heart diseases (CHD) and cardiomyopathies form a significantly large public health problem.

My practicum was at UT-Medical School where I worked with the Pediatric Cardiology department on Congenital Heart Disease and Cardiomyopathy Bio-repository project. I reviewed the epidemiology, genetics, types and risk factors of various CHDs and cardiomyopathies and learnt to translate all this information into questionnaires and ICRs to collect data for a clinic-based study.

We worked on forms created from access database and converted them into a more practically acceptable layout. We designed aesthetically presentable forms and questionnaires to be used to collect and record information for the bio-repositories.

Public Health Significance

CHDs are:

- The most commonly occurring birth defects in children (1/3rd of all congenital anomalies)
- The largest proportion of all heart diseases in children
- Single largest contributor to infant mortality attributable to birth defects

Hence, CHDs pose a significantly large public health problem in today’s world.

My work during the practicum addressed
- ‘Assessment’ part of the Core Functions.
- ‘Investigating health problems in the community’ part of the Essential Services of Public Health.

The department and the project specifically focus on investigating CHDs & cardiomyopathies in children and analyzing their determinants. Measures to control the modifiable risk-factors for CHDs can be taken after adequate knowledge has been gained.
Sexual health and Drug Use

HIV/AIDS in a High-Risk Urban YBMSM Population

By: NOLAN BROUSSAD

During the practicum, I went into a number of clubs in Houston that cater to young black men who have sex with men (YBMSM). I walked around the club or waiting near the entrance to recruit men to participate in a study through the University of Texas School of Public Health and the University of California in San Francisco. The two universities are trying to develop an intervention to prevent the spread of HIV/AIDS, and the survey given to Houston men served as a tool to develop the intervention. After recruiting men, I would administer a screening tool to ensure that they were eligible (between the ages of 18 and 29, having had sex with a man in past 12 months, identify as male), consent them and allow them to complete the anonymous survey on a handheld device so that I was unaware of their answers. The survey was quite intense and lasted about 20 minutes, but was geared toward addressing a wide-range of issues.

Highlights!!
- Working in an environment as unique as gay clubs between hours of 11pm and 2am.
- Interacting with such an interesting group of people. The men all had interesting life stories and were really interesting and fun to talk to.

Advice for Future Practicum Students

Start the practicum search early. It not only gives you more options, but it gives you enough time to find a practicum about which you are actually passionate.

Public Health Significance

The practicum this semester involved many of the PHES’s, as follows:

1) Monitor: the study monitored the HIV status of individuals and the risky behavior in which individuals were partaking.

2) Inform, educate, empower: the practicum supported the men to take responsibility and behave responsibly. We provided them with ways to feel empowered in relationships.

3) Mobilize: the practicum sites (clubs) and the researchers encouraged the community to become upwardly mobile in their live and relationships.

4) Develop policies and plans: their responses and thoughts are bing used to develop the intervention. Essentially, they are given all the power to create the intervention.

5) Link: as a part of our work, we linked the men at the clubs, whether or not they participated in the study, to community health services and locations for testing, counseling, and treatment.

I constantly reminded all of the men in the clubs that they can tackle the fight against HIV/AIDS.

Courtes of:
http://www.123tagged.com/Tags/1/rugby.html
Public Health Significance

My practicum experience most closely relates to Items 2 & 10 of the Public Health Essential Services (PHES).

We aim to generate results that will not only help us in analyzing trends among the patients from the minority population seen at the clinic, but will also provide us the chance to introspect and evaluate the effectiveness of the standards of patient care followed by our clinic.

I work in the department of General Oncology at the University of Texas MD Anderson Cancer Center. However the oncologists in our department see patients (mostly who belong to the minority) at LBJ Hospital and provide the same standard of care that patients at the MD Anderson Cancer Center receive, albeit, at a very feasible cost. We are constantly trying to maximize our efficiency and the database will help us evaluate our clinic standards and address new research questions.
Effectiveness of Antifibrinolytics

Practicum Highlights

- Seeing what types of events lead to the most serious ER visits for trauma in Houston.
- Seeing what trauma surgeons do for these patients and how their coagulopathy gets managed.
- Attended a national conference where I met the experts in this field.

TEG (www.hemonaetics.com)

Lessons Learned

- Learned to read and interpret TEG tracings.
- Learned the value of early antifibrinolytic therapy.
- Learned how to submit an IRB.

Ben Taub’s new treatment for bleeding trauma patients.

By: Zachary Franco MD PhD

In my transfusion medicine fellowship, I worked at the Baylor College of Medicine affiliated blood banks including the Ben Taub General Hospital. Ben Taub General Hospital is a level I trauma center with 100,000 emergency room visits annually. Every week several trauma patients arrive with massive bleeds requiring massive transfusions. The use of TEG (thromboelastography) helps physicians decide which blood products patients need.

A new policy now gives these patients antifibrinolytic therapy at the door. As part of quality control, I looked at the charts, TEG tracings and outcomes of patient’s requiring massive transfusions both before and after this policy to evaluate the policy’s effectiveness. Pending IRB approval, an official study with statistical analysis will be performed. Results of this study will be submitted for publication in 2013.

Public Health Significance

This practicum tied in well with Essential Public Health Services number 9 (evaluating effectiveness) and 10 (research). Results of the CRASH2 trial suggest that early administration of antifibrinolitics can save lives of trauma patients. Based on this study, many institutions have new policies in place to ensure that these patients receive antifibrinolytic therapy as soon as they are admitted. Thromboelastography is widely available and used, so patients’ fibrinolysis can be measured.

Evaluating the effectiveness of the antifibrinolytic policy and its timing has public health significance because little is known regarding best policies.

The coagulopathy of trauma patients is very complex and their mortality risks can switch from bleeding to death to clotting to death in less than a day. Best strategies for handling these risks are currently unknown. The use of antifibrinolytics is thought to be harmful if administered late (even a few hours).
The Texas Cancer Registry noted a large spike in the incidence of Hepatocellular Carcinoma around the year 2000 that was significantly higher than the national trend. The primary focus of this project was to do an intense literature search to assess if there are findings that could provide possible explanations for this observed trend and determine possible next steps.

My duties involved creating an End Note library of all relevant articles that documented this spike. The databases used to conduct this search included among others Pub Med, Ovid, Scopus. The deliverable of the project is an excel spreadsheet that categorizes all studies collected by design and documents the conclusion reached by each principal investigator. I am also expected to prepare a report of the findings.

Hepatocellular carcinoma despite being one of the leading causes of liver cancer worldwide was historically rare in the United States. Unfortunately, over the last decade or so this trend has reversed. The age adjusted incidence rates have doubled. The mortality rates have increased faster than other leading causes of cancer. As such it is of paramount importance that we investigate the reasons for this rise. Also much of the etiology of the cancer is reversible and can be caught early.

The essential public health services addressed by the Texas Cancer Registries include among others monitoring cancer status in the population so as to identify etiology, educating the general public about these issues, developing policies and plans to support individual and community health efforts, evaluate effectiveness of population based health services and research to identify solutions to emerging problems.

The biggest highlight of this practicum for me was the smooth progress achieved in the project despite having never met my preceptor in person.

The vast body of literature on the issue clearly suggests that a multidisciplinary approach is needed to tackle the issue. It truly is enriching to be able to contribute at this level at such a fledgling stage.
Clostridium difficile Diarrhea – An emerging public health concern

Host inflammatory and immune response to C. difficile diarrhea – St. Luke’s Episcopal Hospital (SLEH)

By: NUTAN HEBBALLI

This was a hospital based practicum on Host inflammatory and immune response to C. difficile diarrhea under the mentorship of Dr Herbert DuPont. The purpose of this research is to understand as to how the host inflammatory and immune response to Clostridium difficile-associated diarrhea is related to recurrent infections.

As a research volunteer, I was involved in recruiting patients from intensive care units who were prescribed broad spectrum antibiotics and were hospitalized for various ailments for the ongoing prospective cohort study. I also performed patient’s follow up, data entry and data analysis. During one of our journal clubs, I presented two research articles related to C. Diff. At the end of my practicum, I had an oral assessment with my preceptor.

Public Health Significance

Clostridium difficile diarrhea is one of the common hospital acquired infections. It is emerging as a public health concern which has significant morbidity and mortality. According to CDC, about 25% of C. difficile infections symptoms are seen first in hospital patients; 75% in nursing home patients or in people recently cared for in doctors' offices and clinics. (http://www.cdc.gov/vitalsigns/hai/).

It is important to understand as to how the C Diff infection spreads and only then we can address this emerging public health concern. As many people have recurrences shortly their first episode in spite of receiving the treatment at the hospital, our research team is working hard to identify the possible risk factors related to recurrence and help identify innovative treatment options like fecal transplant to control and treat recurrence cases by enrolling the susceptible hospital patients.
My practicum was part of the Shape Up Houston Texas Medical Center (TMC) Evaluation Study.

The five TMC hospitals taking part in the study were MD Anderson Cancer Center, The Methodist Hospital, Texas Children’s Hospital, St. Luke’s Episcopal Hospital - TMC and Memorial Hermann.

I collected baseline data by administering an Environmental Assessment Tool (EAT) survey to the hospitals. The EAT survey assesses the environment of the participating hospitals for healthy eating and active living support.

I designed a database in Microsoft Access and entered data collected with the 200 item EAT survey.

I also did participant recruitment and data collection at the Methodist Hospital for the part of the Shape Up Houston study that evaluated individual employees.

My practicum experience relates to many items in the Essential Services of Public Health. They are:

The Shape Up Houston campaign mobilized TMC hospitals in an attempt to address the issue of obesity in the community.

The baseline data collected using the EAT survey will be compared to the data that will be collected after the implementation of the Shape up campaign. This will help hospitals in the TMC to develop policies and plans to further address obesity among its employees.

The Shape Up Houston study is an independent evaluation of the effect of the Shape Up campaign in addressing obesity among hospital employees.

This study is part of ongoing research to identify new insights and innovative solutions to prevent obesity.

- Collected hospital environmental data for nutrition and physical activity support
- Designed and managed a Microsoft Access database for the study
- Start thinking about the practicum and looking at projects in your area of interest from your first semester itself
HIV and Incarceration

Practicum Highlights

- Joining Serving the Incarcerated and Recently Released (SIRR) meetings.
- Developing survey instruments for use in the field.

Lessons Learned

[OR]

Advice for Future Practicum Students

- Try to get into your job as quick as possible since your practicum will not last so long. Don’t leave any pity.

Evaluating the HIV Care System for HIV+ Post-Release Offenders

By: Bingjie Li

During my practicum, I joined several meetings. From the meetings I understand the purpose of the Serving the Incarcerated and Recently Released (SIRR) Partnership. This is an organization which is focused on expand knowledge of resources to serve the incarcerated and recently released, work with the participating stakeholders refine or create streamlined systems that better serve the incarcerated and recently released and provide a consumer perspective to what is working and offer suggestions of further improvements.

With the help of my kind supervisor, two questionnaires had been designed to evaluate post-release linkage and referrals systems for HIV+ individuals. During the process of this work, I have realized HIV related needs, gaps, and barriers for the Houston Area.

Public Health Significance

Monitor Health to Identify and Solve Community Health Problems
Mobilize Community Partnerships to Identify and Solve Health Problems
Link to/Provide Care for Needed Personal Health Services and Assure the Provision of Health Care when Otherwise Unavailable
Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-based Health Services

Research for New Insights and Innovative Solutions to Health Problems.
This project helps me Identify key findings on current early intervention and re-entry services for incarcerated and recently released HIV+ individuals. Also, I am able to list key stakeholders involved in early intervention and re-entry services to HIV+ post-release offenders.
Risk Scores Prediction

Practicum Highlights

- Working through the process of study formulation and development.
- Received approval to analyze ARIC Cohort data for a research paper.

Lessons Learned

Great research projects usually arise from small ideas, and get developed with the support and guidance of dedicated teachers. Beyond ideas however, time is the most valuable element. Great research takes time to mature.

Non-sitting BP recordings and the impact on CHD, stroke, and heart failure risk prediction in the ARIC study. By Abayomi Ogunwale

I worked with two of my mentors on developing and submitting a proposal to the Atherosclerosis Risk in Communities Research committee on the effects of non-sitting Blood Pressure recordings on Risk scores prediction. Briefly, our hypothesis is that, posture increases Risk scores; and presently we are at the data analysis stage.

My duties were twofold: to develop and submit the research proposal, and analyze the ARIC data, both, under supervision.

Public Health Significance

My research proposal seeks to understand how posture affects risk scores prediction, and how this understanding can help physicians better manage patients with stroke, CHD and heart failure.

Thus the experience satisfies specifically that essential service of Public Health which seeks to Inform, educate, and empower people about health issues.

In twenty five years, the ARIC study has helped us understand how atherosclerosis affects the American population, and provided novel solutions to the challenges posed by cardiovascular diseases and their complications.

To date, the ARIC project has published nearly one thousand articles in peer-reviewed journals.

ARIC office, basement level of the Professional Arts Building, Hagerstown, Maryland. Source: The ARIC website. http://aricnews.net/p_washington.php
Prevalence of bile duct cancer in patients admitted at the M. D. Anderson Cancer Center

I am completing my practicum at the Gastrointestinal Medical Oncology department M.D. Anderson Cancer Center. Aim of my practicum opportunity is to learn research skill by data collection and management of the sorted data. I, also, plan to write a manuscript as our study grows. Under guidance of Dr. Shroff, I learned about Bile Duct and Gall Bladder cancer. Gall bladder and / bile duct cancer is a rare and lethal form of cancer. This research aims at understanding the exact etiology and best possible treatment modality to treat the cancer. Successful completion of this project will lead us to a better understand this rare form of cancer.

Prevalence of bile duct cancer

Significant improvement in 5-year survival rate of bile duct cancer patients will be evident with success of this project.

Public Health Significance

Research of the 10 PHES core constructs matches my public health practicum experience the most. It is defined as new insights and innovative solutions to health problems. Bile duct cancer is not studied extensively. Physicians still don’t have a cure of this disease. This form of cancer generally affect individuals more than 65 years of age. Bile duct research project conducted at the M.D Anderson Cancer Center will make doctors understand the disease process better and thus treat it better. By understanding accurate etiology, doctors and epidemiologists will try to prevent it from happening. As it is aptly said “prevention is better than cure”. I see this saying hold strongly for my practicum opportunity.

Lessons Learned [OR] Advice for Future Practicum Students

Experience is the best way of learning. Mere application of what you have learnt in the class will not work. You will have to do it again and again to master it.

Help elder people suffering from rare type of cancer.

Source: http://www.guardian.co.uk/money/2011/apr/14/older-people-struggling-rising-cost-of-living
Ganglioglioma in children

By: SHEKHAR PATIL

I did my practicum in Department of Pediatric Neuro-oncology, MD Anderson Cancer Center, which is number one cancer hospital in the USA. I worked with my mentor Dr. Khatua on a project on brain tumor Ganglioglioma in children. The main objectives of my project was to study 17 prognostic indicators to 4 outcome variables and to see if there is any statistical difference between different treatments for overall survival, progression free survival and local control of the disease.

My duties in the project involved the following:

- Systematic literature review, finding gaps in knowledge and finding variables for our study
- Writing the protocol and submission through PDOL to the IRB review
- Data collection and data analysis
- Writing an abstract

Public Health Significance

- This project may help in evaluating effectiveness, accessibility, and quality of personal and population-based health services. The study of prognostic indicators will help children with Ganglioglioma have better quality of life.
- Findings of the study might help in further research and new insights about the brain tumors in children. It is especially important in Ganglioglioma because it has high rates of recurrence and progression with children having to multiple brain surgeries (craniotomies), radiation therapy and chemotherapy.
- If we can find the factors related to this high recurrence/progression of tumor, then we can make a significant difference in the lives of children and their families.

Special events/duties during your practicum

- Working with my Community preceptor, Dr. Soumen Khatua, one of the best doctors in Pediatrics
- Learned to write the protocol
- Got training to use Protocol Development Online (PDOL)
- Writing an abstract

Advice for Future students

- It's one of your first steps in the field of research that will make a difference
Secondary Immunodeficiency in Lymphoma Survivors

Practicum Highlights

- Gained in depth knowledge on Lymphoma and its subtypes
- Developed a better understanding of the pitfalls involved in conducting retrospective studies

Advice for Future Practicum Students

- Keep in mind that research is a complex field especially in cancer patients
- Plan ahead of time
- Set objectives and try to follow the timeline as far as possible

Factors Associated with Secondary Immunodeficiency in Lymphoma Survivors

By: Xerxes Pundole

The primary goal of my project was to determine the factors associated with the development of secondary immunodeficiency in patients that have received treatment for Lymphoma and have been documented as survivors. Treatment in Lymphoma consists of chemotherapy or stem cell transplant or radiation or any combination of the above. This study was conducted at The University of Texas MD Anderson Cancer Center in the department of General Internal Medicine. Approximately 1000 patients are diagnosed with Lymphoma at MD Anderson in any given year, making it an ideal place to conduct this study.

My duties were to conduct the literature search, formulate a proposal, obtain IRB approval, abstract the data and analyze the data. The greatest challenge in this study is to appropriately classify the diagnoses into the relevant WHO categories of pathological diagnoses. Due to the large patient volume and inherent complexities of conducting a retrospective study the data abstraction is ongoing. Thus far the impression is that more complex treatment strategies may lead to more pronounced immunodeficiency, but this has to be confirmed in the final analysis.

Public Health Significance

Monitor, Research, Diagnose and Investigate - are the essential public health services addressed in this practicum.

In addition The UTMD Anderson Cancer Center provides many fundamental public health services such as informing and educating, assurance of a competent public health and personal health workforce as well as mobilization of community partnerships to identify and solve health problems.
ENSURING QUALITY HEALTH CARE

Practicum Highlights

- Conducted extensive literature review, drafted protocol, prepared database for two years of surgical cases.
- Submitted an abstract for the American Head & Neck Society (AHNS) 2013 Annual Meeting.

Advice for Future Practicum Students

- Practicum offers us a great opportunity to work outside in the real world and thus apply the knowledge gained in classroom setting.

"Longitudinal Analysis of the Morbidity & Mortality Conference Data" by Richa Rashmi

This project aimed towards finding the causes, incidence of morbidity and mortality as well as the trends in the rates of overall and specific types of complications in relation to specific procedures as well as surgeons in patients receiving surgical care from both Head and Neck Surgery Department and Plastic Surgery Department. I conducted literature review, prepared protocol, collected data, generated database and analyzed it.

Public Health Significance

The traditional surgical morbidity and mortality conference has been aptly described as the ‘golden hour’ of surgical training. It has been a critical aspect of quality assurance and education in surgery departments. The objectives of the surgical morbidity and mortality conference are to learn from complications, to incorporate changes in surgical intervention and decisions based on past experiences and to prevent recurrence of the problems causing complications. Most closely related public health services to my practicum experience was to evaluate effectiveness and quality of health services, inform, educate, and empower people about health issues and research for innovative solutions to health problems. Through this project, we aimed towards finding the incidence of morbidity and mortality as well as the trends in the rates of overall and specific types of complications in relation to specific procedures as well as surgeons.

The final product was the generation of an abstract “Ensuring Quality of Care for Head and Neck Cancer Patients: Longitudinal Analysis of Morbidity and Mortality Conference Data” for American Head & Neck Society (AHNS) 2013 Annual Meeting.

Postoperative time is the period with high susceptibility of complications, thus warranting close monitoring and quality care.

GIS mapping of Project Saving Smiles, City of Houston

By: Nisarg Shah

- Project Saving Smiles (PSS) is a collaborative and evidence and community-based primary preventive oral health initiative.
- The PSS provides a three-prong strategy, sealants, fluoride varnish, and oral health education, targeting 2nd graders. Since its inception in 2008, PSS has served 12,292 students and placed 38,090 sealants.
- I worked as a project intern in PSS. I entered the data of previous years and analyze them which were required for GIS mapping and assist Ms. Slentz- Senior GIS analyst at COH for GIS mapping.
- GIS mapping enabled us to see the caries rate in different areas and also to assess if PSS is serving the high risk population or not.

Significance of the practicum experience

- Project saving smiles of Houston Department of Health and Human Services is an exemplary dental preventive project serving the 2nd graders of Houston.
- Sealant and fluoride varnish help to reduce decay rate significantly. Apart from the treatment part, PSS also provides the dental education which helps the children to develop good oral habits.
- During my practicum I also attended the Texas Oral Health Coalition Houston regional meeting. I also gave a presentation about GIS mapping of PSS at this meeting held at UT Houston Dental School. I met many dentists and dental hygienists working for the benefit of public health and got to know about their projects.

- The 2001 Dental Needs Assessment in Harris County revealed that 45.9% of 2nd graders have untreated decay.
- PSS cost effectiveness per child is $20.
- PSS also refers the children who need dental care to UT Dental school and other dental care providers as well.

[Giving presentation at UT Dental School about GIS mapping of PSS in Texas Oral Health Coalition Meeting]
Gene Polymorphism and Diarrheal Diseases

Practicum Highlights

- Preparing summary tables that describe the epidemiology and microbiology of severe diarrhea in a large cohort of African children.
- Identifying individual genes that can be associated with increased susceptibility to diarrheal disease.

Advice for Future Practicum Students

Practicum is a great learning experience as you get to apply the public health concepts in a real world setting. It also helps in deciding your specific career interests.

“Host Gene Polymorphisms and Susceptibility to Gastroenteritis.”

By: Jitesh Baban Shewale

I was working on candidate gene association study to determine the relative contribution of host genetics to susceptibility as well as severity of diarrheal disease. It was based on a large cohort of children in Gambia and Kenya.

The major study finding was that the contribution of individual SNPs to infectious diarrhea is modest for individual genes.

My duties involved preparing summary tables that describe the epidemiology and microbiology of severe diarrhea. Also to describe genotype distribution, patterns of inheritance, genetic equilibrium as it relates to the diarrheal disease.

The final product was a summary report of the study finding.

Public Health Significance

Diarrhea-related deaths have decreased globally; diarrheal diseases remain the second-leading cause of childhood deaths. The key solution lies in finding innovative intervention to prevent and treat these diarrheal diseases.

The Public Health Essential Service(s) (PHES) that most closely relates to my practicum experience were to monitor health status, diagnose and investigate health problems and research for new insights and innovative solutions for health problem.

The contribution of my project to public health would be to decrease the burden of diarrheal disease by:

- Identifying children at risk who may benefit from interventions.
- Define individuals/populations at risk for vaccine reactogenicity or decreased efficacy.
- Assist in the design of vaccine studies.
- Develop regionally adapted interventions based on host-pathogen interactions.

Mother's waiting outside a local health center to receive deworming medicine for their children in Kenya.

(Source: http://www.worldvision.org/sites/default/files/kenya-deworming)
U.S-Mexico Border: Maternal & Child Health

Practicum Highlights

- Became familiar with Mexico’s Encuesta Nacional de Salud y Nutricion (ENSANUT) and the CDC’s Pregnancy Risk Assessment Monitoring System (PRAMS) datasets.
- Gained valuable experience using the statistical software SAS.

Relevant Statistics

- In the U.S, approximately 49% of all pregnancies are unintended.
- Of these unintended pregnancies, an estimated 43% are not carried to term.

Unintended Pregnancies along the Texas-Mexico Border

By: Denise Vasquez

The U.S-Mexico Border Health Commission (BHC) provides international leadership to develop and coordinate bi-national activities aimed to improve the health and quality of life along the border. As part of my practicum, I worked under the guidance of Senior Epidemiologist, Dr. Jill A. McDonald, assigned to the BHC from the Center for Disease Control and Prevention (CDC). I collaborated on activities focused on various reproductive health issues under investigation in the border region.

I am currently conducting primary research on the prevalence of unintended pregnancy in the Texas border region. My key activities have included a thorough literature review, the development of an analysis plan based on the gaps in the literature, and a descriptive analysis using the Texas PRAMS dataset and SAS software.

Public Health Significance

My practicum will help meet two of the core public health functions. The statistical study I am currently working on will help diagnose and investigate health issues among the border population. Information gathered in my study may help guide the design of family planning programs that seek to target women who are at high risk of having an unintended pregnancy in the border region as it will provide a demographic and behavioral profile of these women. The study will, therefore, also help inform, educate, and empower people about a health issue.

As it works to address the unique health issues that the border region faces, the U.S-Mexico BHC performs various essential public health functions. Among other objectives, the commission monitors the health status of border communities and works to mobilize bi-national partnerships to address health issues identified through research.
For more information regarding The University of Texas School of Public Health, Office of Public Health Practice and the practicum program, please visit: https://sph.uth.tmc.edu/practicum/