Public Health Practice

Stories from the Field
The University of Texas School of Public Health
Student Practicum Experiences
Spring 2014 – 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 thirteenth-edition e-magazine showcases student practicum experiences throughout the Spring 2014 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:** 18

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### Epidemiology

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Reducing morbidity in terminally ill lung cancer patients

By: Pratibha Agarwal

I was working on a clinical trial in Symptoms Research department at MDACC under guidance of Dr Charles Cleeland. It focused on understanding the effect of drugs available for reducing the debilitating symptoms that develop during the therapy and several weeks afterward. Before I could start my work, I had to take some applicable research training. My duties included, data collection and database management. I also got an opportunity to interact with the patients and gather information about their symptoms over the phone. This honed my communication skills in a much-refined manner.

Public Health Significance

Many barriers have hindered the development of evidence-based methods for controlling treatment-related symptom burden, despite availability of the adequate symptom-measurement methods. Management of such symptoms involves amalgamation of various treatment modalities, which makes it difficult to assess using traditional methods. So this clinical trial was testing the efficacy of a single drug in reducing these symptoms.
**Brighter Bites**

By: Lani Alcazar

Brighter Bites is a collaborative effort of the University of Texas School of Public Health, Houston Food Bank, Texas Children’s Hospital and Kipp charter schools. The main purpose of the project is to influence the eating patterns among low-income living in identified food deserts in Houston. For a period of 16 weeks, Brighter Bites distributed on a weekly basis, fresh fruits and vegetables in recyclable bags to families living in identified food deserts.

For a period of 8 weeks, every Wednesday I aided the UT and Houston Food Bank teams to coordinate the distribution at KIPP Intrepid. Additionally, I volunteered packing bags at Kashmere Gardens and Peace. Last but not least helped in the translation of the nutritional education to Spanish.

In total, Brighter Bites distributed about 50 servings of fruits and vegetables per week paired with nutritional education. Parents mentioned their kids are more excited to eat fresh produce from Brighter Bites instead of the produce bought in the grocery store.

**Public Health Significance**

In Houston, Hispanics account for almost half of the total population. Most of the members in this population live in areas that lack easy access to grocery stores and fresh produce. The mission of Brighter Bites is to “empower underserved families to choose better, brighter foods by providing fresh produce and nutrition education for greater health.”

Brighter Bites intends to increase the demand of healthier produce choices in low-income communities. Resulting in a decrease in demand for unhealthy options. The program uses the established infrastructure of school to facilitate parents their access to fresh produce and encourage the healthier behavior.

**Lessons Learned**

- Establishing a successful communication with members from other cultures by addressing them with honesty and respect.
- Using communication and leadership skills to guide volunteers clearly and efficiently.
- Acknowledged my affinity to work with Hispanic communities in Houston.

**Duties during your practicum**

- Assist the UT and Brighter Bites teams distribute fresh produce into the hands of inner-city Houston families for 8 weeks during the semester.
- Help in tracking the primary objectives of the project, such as number of families served and fidelity of program delivery.

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*Top: Student volunteers at Intrepid and me. Bottom: Parent Volunteers at Peace and me.*
Public Health Significance

The following Essential Services of Public Health were integrated in my practicum:

1. Inform, educate, and empower people about health issues
2. Research for new insights and innovative solutions to health problems

My experience has allowed me to be creative and find ways to inform, and educate people about tobacco use and physical inactivity.

These strategies include using an internet-based tracking component, integrating videos, games, pictures, and different languages to empower and provide new insights to tobacco use solutions in Uruguay.

Part of my practicum components include tips and advice on physical activities the teenagers could do, based on cultural aspects of the destinations that are part of Muuvit!

Projects like this are important since finding motivation for people to be physically active is hard. By creating engaging content students might want to become more active to unlock new destinations in the Muuvit map.

Adaptation of a physical activity-tracking component for tobacco use prevention, and physical activity promotion program: Activate Ya!

By: NIANESETALERS

During my practicum I was in charge of creating content for the Uruguayan version of Muuvit! which will provide support for the project Activate Ya! in Uruguay. Activate Ya! is a tobacco use prevention and physical activity promotion project, a collaboration of the UTSPH with CIET (Tobacco Epidemic Investigation Center) in Uruguay. My topic was tobacco use prevention and physical activity promotion.

The Activate ya! program planners decided to use a group tracking and goal setting approach to increase and monitor physical activity in teenagers. For every 10 minutes of activity they will get 1km to travel to different Muuvit destinations. I searched different websites and tourism sites to collect information on geography, culture, weather, tobacco law regulations and physical activity programs. The final product was a website placeholder with information on different destinations of The Americas, and the type of work cities in these destinations are doing to decrease tobacco use.

Practicum Duties

- Create content for the Uruguayan version of Muuvit!
- Integrate implementation strategies for Muuvit’s administration in schools and classrooms

Lessons Learned

- The process of creating content takes longer than expected, especially when it needs different steps for approval
- Communication and flexibility is key!
- Organize yourself and create a plan early in the process.
- Document your processes in a notebook, and reflect on your mistakes

Muuvit! is a Finnish school program design to track and motivate school-aged children to be physically active

Photo courtesy of http://www.muuvit.com

Students track their physical activity minutes to unlock adventures

Photo courtesy of http://www.muuvit.com
Epidemiologic surveillance is extremely important to the health of a population. Without disease surveillance we would not be able to identify clusters and implement control and prevention measures.

The Essential Public Health Services primarily addressed by my practicum are to monitor health status, diagnose and investigate health problems, and inform, educate and empower people about health issues.

I was able to perform epidemiologic case investigations for a variety of disease agents, including campylobacter, varicella, salmonella, streptococcus pneumonia, and viral hepatitis. My duties during case investigations included gathering data from healthcare facilities, interviewing patients, identifying sick contacts and providing basic education related to the illness if necessary.

I was also involved with a special Hepatitis C Virus (HCV) investigation designed to explore risk factors related to an increased prevalence of chronic HCV cases in a particular county.

Local health departments are an integral part of our health system and responsible for being the first group to recognize a potential outbreak. For instance, if we have a case where a child is sick from a fecal-oral transmitted agent, we must follow-up with the child’s school or day care to see if the child is part of a cluster of ill children whose sicknesses were not reported. If so, we can educate the parents and staff on best practices for control and monitor until no further cases are identified.

Advice for Future Students

• This is a terrific learning opportunity and you should gain as much knowledge as possible.
• Don’t be afraid to ask questions! They will help you learn and be a stronger leader in your public health career.
• Patient interviews on sensitive topics can be nerve racking, but usually people are grateful and just happy to know someone cares about their health.
Evaluating Tuberculosis Tests

Comparing Interferon-Gamma Release Assays (IGRAs) vs. Standard Mantoux Tuberculin Skin Test for Screening of Latent Tuberculosis Infection among U.S. Health Care Workers.

By: Benedict Emesowum

This was a field epidemiology practicum that allowed me the opportunity for a real-time and practical experience of the issues that epidemiologists deal with. It was a multi-site research study around the U.S. targeting Health care workers (HCW). My practicum site was The Methodist Hospital Research Institute and the target population was HCW here at the Texas Medical Center.

Public Health Significance

Health care workers (HCW) are at the frontline in the war against both new and old diseases. Unfortunately this also makes them very susceptible and at high risk for contracting highly contagious infectious diseases like tuberculosis (TB). TB is a highly infectious air-borne disease that kills millions of people around the world globally. In the U.S., the annual incidence of TB cases is about 4-9/100,000 persons (Dorman et. al. 2013).

U.S. policy requires periodic testing of HCW in order to monitor the incidence and manage the potential outbreak or spread of the highly contagious disease and to ensure a safe and healthy health care workforce. Given that little is known about the performance (in terms of variability, and conversion rates) of IGRAs. It was important that this study be conducted to evaluate and obtain new insights into the reliability of IGRAs for periodic testing of HCW.

Special duties/Experiences

- Opportunity to also work in the lab and experience performing the IGRAs myself.
- Meeting with various doctors, nurses, researchers, medical students, etc. in their working/school environments

Lessons Learned

- Use the opportunity to meet the different healthcare workers (leaders in their respective fields) as an avenue for building your network of various healthcare professionals. No social networking site will offer the same level of one-on-one private interaction with these professionals. One could also use this practicum to get an inside knowledge about specific fields of study.

Source: http://www.kpf.com/project.asp?T=5&id=72
Uncovering the Secrets of a Human Pathogen

Epidemiology and GWAS of Staphylococcus aureus Nasal Carriage in a Large Cohort from Starr County Texas.

By: Heather Essigmann

I had the great privilege of working on a study that has been describing the carriage rates and antibiotic resistance profiles of Staphylococcus aureus samples isolated from a cohort of several thousand study subjects from Starr County, Texas for the last 5 years.

Each week we received and processed ~60 nasal swabs, cultured and isolated them for Staph aureus, tested for various phenotypic traits and methicillin resistance, and extracted their DNA for typing. With this data and the previously generated genotypic data from the study subjects, we have begun looking for a genetic basis for both persistent and intermittent Staph aureus nasal carriage.

Although this work is in the earliest, most formative stages, there appear to be several promising gene candidates that may be associated with nasal carriage of Staph aureus in a human host!

(Source: http://cid.oxfordjournals.org/content/48/Supplement_4/S231.full)

Public Health Significance

The primary Essentials of Public Health my practicum addressed were to:

1. **Diagnose and investigate** health problems and health hazards in the community.
2. **Research** for new insights and innovative solutions to health problems.

Staphylococcus aureus is a common, but dangerous human pathogen associated with higher morbidity and mortality than other bacteremia causing pathogens. Furthermore, a substantial percentage of community-associated strains are antibiotic resistant. The study I worked on both investigated the prevalence and antibiotic resistance of nasally carried Staph aureus strains in members of a South Texas cohort and began researching the genetic traits of both bacterial strains and their human hosts that may influence human nasal carriage.

Practicum Highlights!

In addition to working with Staph aureus samples from the Starr Co. cohort...

- I had the opportunity of researching an emerging Texas parasite: *Trypanosoma cruzi*.
- And explored the effects of quorum sensing molecules on various mutants and strains of Staph aureus.
- And began learning the computer programs and languages used for GWA studies.

Advice for Future Practicum Students:

- Take the time to find & choose a practicum that suits both your academic and personal interests so that you’ll be fully vested in the work.
- It will make all the difference!

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Latent TB Infection Control
By Ana M. Gomez–Rubio

Tuberculosis is a bacterial infection that affects millions of people worldwide. Although it is sometimes thought to be a disease that only affects third world countries, the reality is that it is a real Public Health Problem here in Houston as well. This is why National and State Public Health Offices have programs whose goal is the elimination and control of Tuberculosis. One of the most effective ways to control for Tuberculosis is by avoiding the development of the disease. A person who is infected with the bacteria that causes TB does not always develop the disease right away, and this person is said to have LTBI or Latent Tuberculosis Infection, meaning they don’t have symptoms and are not contagious. The goal of the TB Elimination Program at the Texas Department of Health and Human Services (DSHS) is to treat LTBI patients and therefore break the chain of transmission.

People who have LTBI have a positive TB skin test but normal chest x-rays. When a person with LTBI is discovered by a doctor then the case is reported to the DSHS via a form, which is then entered into a database. My principal responsibility at the DSHS was to enter the paper forms into a database, making sure that the information was entered correctly and with great attention to details. Proper data entry is important because the DSHS must prepare a report every year with the exact number of LTBI patients treated. This report is essential for future funding of the project and this is why my work here was so important.

Lessons Learned:
• Importance of proper data entry
• Importance of proper control of infections before patients become contagious
• Importance of proper reporting for funding purposes.

Public Health Significance
The control of LTBI is effective not only because it stops the chain of transmission but also because it is the most cost effective way to control for Tuberculosis. As Public Health Officials we want to look for the most efficient way to control and prevent diseases but also the one that will save the most amount of dollars. This is what Control of LTBI does, and this is why funding agencies like to see that proper control of LTBI is being managed in all TB Eliminations programs in the Nation.
Working towards development of treatment for KCNQ2 related epileptic encephalopathy children

I worked as project intern at Baylor College of Medicine in the department of Neurology in “The Cooper Lab”.

My community preceptor works on a gene called “KCNQ2”, which is significantly associated with early childhood epilepsy. My practicum project was to contribute to the research efforts in the lab like website management and budgeting. I also worked on three parallel IRB applications for the same research project.

We got IRB approval for paper publication using KCNQ-2 data collected by Colorado research group. We also got approval for studying brain tissue samples for better understanding of brain physiology which will help understanding the effect of trial drug.

I am planning to continue my practicum during summers and hopefully I can share the results after summers.

Public Health Significance

The Public Health Essential Service(s) (PHES) that most closely related to my practicum experience included informing, educating, and empowering individuals, their families and broader communities about the causes and impact of epilepsy (especially KCNQ2 related), and how these can be mitigated.

The Cooper Lab is committed to developing treatment of this rare and severe form of pediatric epilepsy. Hence, researching about new insights and innovative solutions to the health problems is another important PHES that I addressed during my practicum.

My work was specifically contributive towards development of research plan along with networking with interdisciplinary research team and website management. Due to the severity, rarity, novelty, and medically refractive nature of this type of neonatal epilepsy, this research project is very significant public health work for all the families struggling for diagnosis and treatment for their children.

Advice for Future Students

• Be open to take responsibilities of opportunities that interest you.
• Be sure to ask questions.
• Make the most of your time by developing new skills and networking.

Special events/ duties during your practicum

• Successfully submitted three IRB applications and got approval for two.
• Family visit to The Cooper Lab covered by NBC. http://www.click2houston.com/news/families-tour-houston-doctors-lab-in-search-for-kcnq2-cure/24976618

KCNQ2 related Epileptic Encephalopathy
FACTORS INFLUENCING PHYSICAL ACTIVITY

Factors affecting Physical activity among sedentary minority adults
By: Pooja Palaksha

My practicum was at MD Anderson Cancer center at the department of Health Disparities under Dr. Lorna McNeil and her team. It was a great experience to get involved in the project, 'iMove'. All that I learnt during my courses of Epi 1 and Epi 2 was coming back to me. I learnt to apply the theoretical concepts out in the field. The smooth transition was only possible because of the guidance of my research manager and the research co-ordinators.

iMove is a longitudinal cohort study examining the influence of social and contextual factors on physical activity among African American and Latino Adults. My duties included data collection at the BRTC clinics, data entry and qualitative analysis of the data, working on patient retention factors and finally working on the regulatory items. At the end I submitted a report of all the duties I carried out during my practicum. The study is ongoing and we should be getting the initial results in the next 6 months.

Public Health Significance

WHO states that physical inactivity is one of the key risk factor for major noncommunicable diseases such as cardiovascular diseases, cancer and diabetes. It is also identified as the fourth leading risk factor for global mortality (6% of deaths globally).

Apart from the benefits related to physical health, physical activity also improves your mental health and mood.

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Get moving: Be active!!
Source: http://paandhealth.blogspot.com/
A phase II study of Minocycline vs. placebo for prevention of neuropathy and reduction of symptom burden in patients receiving chemotherapy

By: Seema Prasad

I worked on two phase II randomized clinical trials testing the efficacy of minocycline vs. placebo in symptom reduction among Multiple Myeloma (MM) and colorectal cancer (CRC) patients at M D Anderson cancer center (MDA).

These trials are designed for prevention of neuropathy and reduction of symptom burden occurring secondary to Revlimid therapy in MM patients and Oxaliplatin therapy in CRC patients.

The responses to minocycline vs. placebo therapy were recorded through patient reported symptom and neuropathy assessment questioners completed by study participants.

I am involved in screening & recruiting eligible patients, completing study assessments, maintaining drug accountability and drug safety logs for patients on the clinical study.

The clinical trials are introduced to patients free of cost where patient participation is voluntary.

Public Health Significance

Neurotoxicity is the most dose-limiting toxicity of Oxaliplatin and Revlimid.

Clinical and research teams at MDA, work towards diagnosis and prevention of side effects from chemotherapeutic drugs. Patients are educated about primary and secondary side effects from chemotherapy prior to its initiation.

The clinical trials are introduced to patients free of cost where patient participation is voluntary.

Participants are monitored for safety and efficacy of investigational agent at regular intervals.

Patients developing peripheral neuropathy and other symptom while on study drug will continue to receive standard of care as per the treating physician’s advices.

The investigation drug (minocycline) is intended to improve quality of life by possibly preventing neuropathy & reducing symptom burden in susceptible cancer population.
SEASONAL STREAMS OF HEALTHIER BITES APPEAR IN FOOD DESERTS OF SUNNY HOUSTON BY DAVID SALAKO

The Brighter Bites™ (BB) practicum focuses on nutritional education to elementary school aged children and their families in the low-income areas of the East End and Fifth Ward, designated as food deserts, located adjacent to downtown Houston.

Via a fiduciary arrangement with the Houston Food Bank™, truck loads of fresh fruits and vegetables are delivered to the participating elementary schools and offloaded and bagged by BB employees, volunteers and myself. 2 bags of fresh produce each week, over 8 weeks per semester for a yearly total of 16 weeks (Spring and Fall).

The number of bags hand packed and hand distributed, ranged from 50 pairs to over 500 pairs at different participating elementary school sites. Duties also involved handing out healthy recipes to parents and volunteers, food sample preparation and serving as well as generating excitement for nutritious foods with the children and interested adults.

Memorable tasks
- Explaining the ingredients that made up the prepared healthy food sample snacks for and served to the curious and excited elementary school aged children.
- Devising straightforward and healthy recipes to impart to the BB program participating families.
- Motivating and educating the adult volunteers about unfamiliar foods and healthy snacks.

Advice for Future Students
- This is a worthwhile public health practicum experience, it exposes the public health student to the frontline realities of implementing and executing an outreach program. It also presents the hard work involved in designing, collecting and collating the statistical data required to prove the efficacy of the overall program.

Pairs of grocery bags filled with fresh fruits and vegetables, ready for distribution. Source: David Salako

Produce each week, over 8 weeks per semester for a yearly total of 16 weeks (Spring and Fall).

A noticeable scarcity or total lack of grocery stores offering fresh healthy foods within a reasonable commuting distance has a direct correlation with the disproportionately high obesity rates within the neighborhoods designated as food deserts. Other related health issues are diabetes, high blood pressure and cardiovascular conditions such as high cholesterol.

Informing, educating and empowering the targeted families with high quality fresh produce as well as food preparation, nutrition knowledge and cooking ideas serves to animate the young minds of the children as well as stimulate their parents and caretakers to prepare and eat healthier meals and snacks. Healthier food choices should have a direct impact on general health and well-being as well as improved focus in academics and intellectual pursuits.

There are realities and challenges involved with a targeted population being in a receptive frame of mind, or not, to receive the message of a particular public health promotion issue.

Advice for Future Students
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Pairs of grocery bags filled with fresh fruits and vegetables, ready for distribution. Source: David Salako

Healthier Nutrition in Urban Houston
Public Health Significance

The TWITCH (TCD with Transfusions Changing to Hydroxyurea) trial is phase III multicenter randomized controlled trial which is investigating the efficacy of Hydroxyurea compared to blood transfusion therapy in reducing the incidence of stroke in pediatric patients with sickle cell disease who are at high risk of stroke.

CCCT has 40 years' experience in conducting multicenter clinical trials. CCCT is comprised of faculty members from the School of Public Health who have expertise in the fields of Biostatistics, Epidemiology and Management of large epidemiological studies. These experts help Principle Investigators of trials like the TWITCH trial in developing protocols, implementing trial management and data gathering systems, monitoring recruitment of study participants and providing safety and regulatory oversight including adverse event monitoring and reporting and, finally, analyzing and interpreting data and publishing.

This is a fine example of how public health professionals and medical professionals can collaborate in designing and conducting epidemiologically sound studies in an efficient manner.

By: Kanav Sharma

Safety Monitoring in Clinical Trials

Since many clinical trials investigate new drugs, the adverse events related to many of these drugs are not well known. Safety monitoring is therefore an essential component of clinical trials of new drugs. As patients are enrolled into clinical trials, study subjects are closely monitored for adverse event which may or may not be related to the investigational drug. These events are then accumulated, coded and analyzed periodically to ensure that investigational drug has an acceptable side-effect profile.

In CCCT (the Coordinating Center for Clinical Trials), I was part of Dr. Linda Piller’s team and among other things, worked on safety monitoring and reporting aspects of the TWITCH trial.

As a part of the team, I learnt about the process of adverse events accumulation from various clinical centers, coding these events using a system called MedDRA and reporting the analysis of these adverse events to relevant authorities including the FDA.

Based on my experience at CCCT, I am creating an orientation material for the new staff hires for the TWITCH trial.

Lessons Learned

- Multi-center randomized clinical trials are complex epidemiological studies.
- Collaboration of multiple institutions is essential for quick recruitment of study subjects and decreasing enrollment time.
- Collaboration also helps with pooling of knowledge, expertise and resources.

Special events/duties during your practicum

- Participated in various clinical trial management activities.
- Prepared orientation material for new hires.
- Understood various aspects of safety monitoring.

TWITCH logo and the sponsor of TWITCH trial, National Heart, Lung and Blood Institute. (from CCCT website)
Insulin resistance in non-alcoholic fatty liver disease patients.

By: Yi-Ting Shen

I have been working with a hepatologist and an endocrinologist at Houston Methodist Hospital, collecting metabolic data for patients with non-alcoholic fatty liver disease (NAFLD). Many patients with NAFLD do not know they have it until abnormal liver enzymes shown or developing steatohepatitis (NASH). The best way to prevent the worsening of NAFLD is to lose weight and diet. Follow-up with the physician is necessary.

I was collecting data from the patient’s chart and electronic medical records, and I also helped writing the proposal and submitting to IRB for a new prospective study.

From the retrospective chart review, we’ve found that insulin resistance and hyperinsulinemia are very common in NAFLD patients in the absence of diabetes.

Public Health Significance

The prevalence of NAFLD is approximately 30% in the United States, and 69-100% of NAFLD patients are obese. Non-diabetic patients with NAFLD usually have signs of hyperinsulinemia (pre-diabetes). Therefore, one of the ten Public Health Essential Services mostly relates to my practicum experience is “Research for new insights and innovative solutions to health problems”.

The clinicians have found increased number of patients with NAFLD without type 2 diabetes, and most of these patients developed type 2 diabetes later. Therefore, we are developing a prospective study to observe the disease process of NAFLD and the effectiveness of the current therapeutic regimen. The goal is to prevent the progression of NAFLD to cirrhosis of the liver and the complications of type 2 diabetes and metabolic syndrome.

Practicum Highlights

- Collaborating with physicians in developing prospective study.
- Conducting data collection and analysis.
- Submitting proposal to IRB for approval for a prospective study.

Lessons Learned

[OR]

Advice for Future Practicum Students

- Doing practicum in your interested research area is very helpful for the public health career.
- Doing the volunteer research work gives students more learning opportunities and flexibilities.
- The practicum project gives an opportunity for writing the graduating thesis.
Public Health Significance

Heart disease is one of the leading causes of hospitalization in the United States. Every time there is a hospitalization, dollars are spent on delivering the care. Many of these hospitalizations are because of medication non-compliance that can be prevented. My goal was to inform, educate and empower people to help them understand the risk of disease burden associated with medication non-compliance.

When I started my practicum I did not realize that counseling patients would be so difficult until I started doing it. Later on, I understood that verbal communication is just one aspect of communication and I needed something more than that. It was then when I started using pictures, audio and video clips to reinforce the message.

Importance of medication adherence for patients who are diagnosed with acute coronary syndrome

By: Saurav Suman

I am a medical resident working at Jersey City Medical Center, NJ and I saw a lot of readmission for patients with heart disease. Some of the reasons are just progressive disease but I also found out that a sizeable portion of readmission was because of medication non-compliance by the patients.

Patients sometimes forget the importance of medications after the acute phase of sickness. This can be problematic for chronic diseases especially heart disease that may require taking medications every day for the rest of the life.

During my encounter with patients, I found out that many of these patients did not know how valuable these medications were for their health. This led to my practicum of counseling patients about the importance of medication adherence who are diagnosed with heart disease.

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I am a medical resident working at Jersey City Medical Center, NJ and I saw a lot of readmission for patients with heart disease. Some of the reasons are just progressive disease but I also found out that a sizeable portion of readmission was because of medication non-compliance by the patients.

Patients sometimes forget the importance of medications after the acute phase of sickness. This can be problematic for chronic diseases especially heart disease that may require taking medications every day for the rest of the life.

During my encounter with patients, I found out that many of these patients did not know how valuable these medications were for their health. This led to my practicum of counseling patients about the importance of medication adherence who are diagnosed with heart disease.

When I started my practicum I did not realize that counseling patients would be so difficult until I started doing it. Later on, I understood that verbal communication is just one aspect of communication and I needed something more than that. It was then when I started using pictures, audio and video clips to reinforce the message.
I have enrolled in Global Service Corps' International Health Program in Cambodia, a program that has connected me with two non-profit organizations in the country. I was first assigned to help out at Wat Opot, an orphanage for HIV infected and affected children, and it’s presence for over ten years in the community has transformed a majority of the people’s perspective on HIV in the area. The orphanage itself has HIV positive and negative children living together, and the children are accepted at the public school in the community – a rare sighting in Cambodia. As a volunteer, I got to witness how children whose lives have been so impacted by the disease manage in a developing country.

For the remainder of my practicum I have been with RiverKids Project, an organization that reaches out to women and children in the slum communities of Phnom Penh. For the remainder of my practicum I have been with RiverKids Project, an organization that reaches out to women and children in the slum communities of Phnom Penh. As a volunteer in the Health Department, we make visits to check up on pregnant women and families with very young infants, distributing assistance funds, formula, and health advice. In addition, we host health workshops for the members of the RiverKids programs. My assignment was to develop a 2-day workshop for the women in the micro-business program which provides positions as seamstresses to women who are otherwise unemployed, HIV positive, or former sex workers. Our topics were Family Planning and Breast & Cervical Cancer, two very critical topics for women in developing countries. The workshop was a success, as the women asked questions, shared their stories, and were very attentive.

Public Health Significance

I observed RiverKids monitor community health during regularly scheduled monthly check-ups by a doctor for the RiverKids children and to a certain extent the slum community to assess and treat health problems, keeping track of who comes in and for what health problem. I informed, educated, and empowered by holding health workshops for the members of the RiverKids programs. My assignment was to develop a 2-day workshop for the women in the micro-business program which provides positions as seamstresses to women who are otherwise unemployed, HIV positive, or former sex workers. Our topics were Family Planning and Breast & Cervical Cancer, two very critical topics for women in developing countries. The workshop was a success, as the women asked questions, shared their stories, and were very attentive.

Practicum Highlights

- **Wat Opot Children’s Community** - a community in which HIV infected and affected children live and learn together
- **RiverKids Project** - a local non-profit dedicated to providing opportunities for women and children to go to school, work, and be healthy
- **RiverKids Micro-Business Workshop** - a two-day workshop for the women in the micro-business program at RiverKids that reviewed Family Planning and Breast & Cervical Cancer Prevention

Sharing Experiences

- Working/volunteering in another country has been one of my greatest achievements as well as the most rewarding experience thus far – I highly recommend doing a practicum abroad if possible!
- It is a huge challenge to work with people who barely speak English: be patient in any work environment, and don’t be afraid to repeat yourself or ask questions – it’s better to be clear than to make a mistake!

Serving the Underserved, Opportunity for the Marginalized

By: Elizabeth Tocco

During a visit to a family in crisis in a slum area of Phnom Penh, trash completely covers the ground and a rickety bridge is all that holds us above it.

Photo by Seiha Khun, RiverKids Volunteer Coordinator

Taken April 23, 2014
Bacterial effects of lasers on oral biofilms

By: Monika Vishwakarma

During my practicum I helped a clinician in preparing research samples and data collection.

We worked to analyze the effects lasers as a treatment for a common oral disease: Periodontitis.

Public Health Significance

Essential services of public health related to my practicum is: Research; for new insights and innovative solutions to health problems.

Periodontitis is a very common disease in US population. According to American Dental Association, nearly half of the American adults aged 30 years or older have some form of gum disease and it is an important public health problem in US.

Approach taken to address this issue was to observe the in vitro effects of lasers on teeth and on oral bacteria. The study is still going on. If this gives significant results, further research may be done on the in vivo effects of lasers, which if successful may lead to improved treatment for periodontitis.

If the lasers we used, are successful in:
- killing the periodontal microorganisms efficiently and
- creating ideal tooth surface for periodontal cells to reattach and return back to healthy state;

They might become an important part in the periodontists’ armamentarium and a relief for people suffering from periodontitis.

Practicum Highlights

- In vitro trial
- Fluorescent staining of oral bacteria
- Effects of two types of lasers: Er,Cr:YSGG and diode
- Incredible learning experience about new procedures

Advice for Future Practicum Students

- Start looking early
- Once you find an opportunity, make the most of it.
- And most important: Enjoy and learn! I had a wonderful time and learnt a lot, working with my community preceptors. There is no point in doing it just for the credits.
Gastric Cancer Disparities in Hispanics

GASTRIC CANCER DISPARITIES IN TEXAS AND UNITED STATES

By: Gustavo Westin, MD

In this practicum we evaluated the incidence rates and trends of Gastric Cancer in the Latino populations of Texas and the United States. Data was extracted from SEER and TX registry databases from 1995-2010.

Practicum took place in San Antonio at the Institute for Health Promotion and Research. I worked closely with Edgar Munoz, MS (senior statistician), Dr. Amelie Ramirez, PHD (International Latino health disparities expert) and Dr. Dorothy Long Parma, MD (project manager and research instructor).

Public Health Significance

Gastric cancer incidence is declining worldwide, however it persists as the second leading cause of cancer related death in most Western countries. Our objective was to investigate the incidence of GC in Latinos in Texas and in the United States.

Currently Latinos account for 16% of US, and 38% of Texas population. Our study showed that GC incidence is significantly higher in this ethnic group, which signals the need for policies and PH interventions specifically aiming this group.

Results: The incidence rates of GC were higher in Latinos compared to WNH. Results were similar within all Latino groups; however, WNH GC rates were lower in TX and STX compared to U.S. WNH. Gender subgroup analysis revealed that Latinas have the largest disparity for all types of GC compared with WNH women. This disparity was greater in Texas.

Duties during your practicum

- Review available literature relevant to the research topics;
- Access and extract data from SEER and Texas Cancer Registry databases;
- Interpret scientific findings and draw conclusions from the gathered data;
- Select appropriate techniques for the analysis and interpret the data;
- Prepare a written report describing project objectives, methods, results.

Advice for Future Students

- SEER database is free and is available to the general public. If you want to work with this database you can request access here: https://seer.cancer.gov/seqtrack/data/request/
- SEER database does not include the state of Texas. Cancer data in Texas must be extracted from the Texas Cancer Registry.

http://surveillance.cancer.gov/about/mission.html
Head and Neck Cancer Database at the VA

National Head and Neck Cancer Database for Veterans will help improve treatments and outcomes

By: Jose P. Zevallos, MD

I performed my practicum at the Center for Innovations, Quality, and Safety (iQuest) of the Michael E. DeBakey VA Medical Center in Houston. Specifically, I worked on the creation and implementation of a novel nationwide head and neck cancer database to 1) identify trends in head and neck cancer among veterans, 2) identify treatment effectiveness and outcomes in head and neck cancer, and 3) identify possible areas of future research to improve the care of veterans with head and neck cancer.

Under the supervision of Jennifer Kramer, PhD we were able to use existing administrative data within the VA to guide the creation of our database. We also began to generate incidence data on oropharynx cancer within the VA.

Public Health Significance

The creation of a head and neck cancer database focused on veterans takes into account the unique characteristics of this population. Given the higher prevalence of smoking in the VA population compared to the general population, veterans often present with more advanced cancers and have worse outcomes. Of the 10 essential public health services, my work with head and neck cancer epidemiology at IQuest serves to monitor the population of veterans with head and neck cancer, assists in the diagnosis and investigation of new trends in the head and neck cancer unique to the veteran population, and evaluates the state of current head and neck cancer care in the VA population. It also provides a platform for future research.

Special events/duties/highlights during your practicum

• Created a national head and neck cancer database
• Evaluated oropharynx cancer incidence trends

Lessons Learned for Future Practicum Students

• Public health is a team effort. A lot can be accomplished when public health professionals, statisticians, epidemiologists, and clinicians come together with a common goal.

Head and neck cancer is a debilitating and often aggressive disease. Veterans appear to suffer disproportionately worse outcomes compared to the general population (image source: www.radonc.edu)
Research and Public Health

Epidemiological Investigation: Data Management and Analysis

By: Hiba Zwiya

I participated effectively in the data management process of “Genetics and Ankylosing Spondylitis (AS) Pathogenesis” project at UT Medical School, IM Rheumatology department. The project is supported by experienced professionals from the Biostatistics, Epidemiology and Research Design (BERD) of the Center of Clinical and Translational Science (CCTS) at UT Health in Houston which is directed by Dr. Mohammad H. Rahbar.

I also performed data analysis for another project involving Autism disorder in Pakistan in order to re-investigate the epidemiologic research outcome and perform logistic regression to locate possible confounder in the results.

I worked on two public health issues: Ankylosing Spondylitis and Autism Disorder by performing data management and data analysis respectively.

Both my community preceptor Ms. Laura Diekman and my faculty advisor Dr. Rahbar collaboratively guided my practicum to ensure I gain the knowledge and experience in epidemiological research that support my future career goals.

My final product is a progress report that describes my experience and accomplishment in both parts of my practicum.

The major accomplishment of the AS project was proper storage and handling of research documents of approximately 4000 participants of the 5 active sites participating in the project. As for the data analysis part, I was able to perform multivariable analysis of the study using logistic regression to examine potential confounders in the results, in addition to generating summary statistics using a statistical software STATA 13.

Special events/duties during your practicum

- Assisting in data management for Ankylosing Spondylitis project.
- Data analysis using logistic regression.

Advice for Future Students

- Practicum is a great opportunity to expand your knowledge. Enjoy the experience, take benefit of every moment and learn from the real public health outside world.

Epidemiologic studies and the process of data management and analysis.


Spring 2014 • Hiba Zwiya • UT Professional Bldg. and UT Medical School • Epidemiological Investigation: Data management and analysis.
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/