Public Health Practice

Stories from the Field
Student Practicum Experiences
Spring 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.)
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Health and Safety Project

Health and Safety internship at HDHHS

By: Kok Yan Ling

Continuation of effective implementation of the assigned task of all HDHHS employees completing the electronic exercise concerning the Motor Vehicle Assignment and Use

This is a new policy require every employee at city government to complete the quiz online and submit to our department. It was mandatory as a safety regulation for the city employees to pay more attention while driving

I was responsible for employees’ data management by periodically send out reminder and check on the compliance on the due date.

Other than the primary objective I was involved in proposing safety regulation within the Health Department, Safety inspection, Health Care training, AED unit tagging and coding, Safety poster designed, Accident rate analysis, Collaboration of grant application, etc.

Public Health Significance

- Monitor health status to identify community health problems.
- 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.
- Enforce laws and regulations that protect health and ensure safety.

As I am working with Health and Safety Project most of the issues concerning implement or reinforcement of policy and regulations within Health Department. For example, every incident take place at the government organization has to be documented after it happened regardless how minor or major the injury was. We will then filed a complete record after we interviewed with the victim and identified the direct causes.

Special events/duties during your practicum

- Propose Health and Safety regulation
- Analyze 3 years data of accident causal in Health Department.
- Collaboration of grant application with the division of Epidemiology

“Our greatest glory is not in never falling, but in getting up every time we do.”

Many safety signs symbols and will be posted at various location as to rise the public awareness of potential hazards around the work environment.

All the Power Air Purifying Respirator (PAPR) Unit at the Health Department required periodically testing. Employees who are responsible for disease outbreak will be trained to practice the standard procedure of dressing and maintenance of the PAPR Unit.
Public Health Significance

Research has always pushed the boundaries of what we know. It was very knowledgeable working to understand how a lot of clinical trials can be done safely!!

I think the work and the trials CCTRN are doing and coordinating are groundbreaking and are helping a lot of people decrease their sickness.

Safety in Clinical trials

By: Amaraja Kanitkar

I worked in the cardiovascular Cell therapy Research Network (CCTRN) for reporting of serious adverse events to the DSMB and NHLBI.

It was fun working on an aspect of clinical trials that I was not really aware of. I worked on three clinical trials reporting under the guidance of the safety officers. Collecting information from the sites and compiling the reports was good fun!! Truly enjoyed working in the CCTRN!!

“Is it not enough to do new research it is important to be able to do it safely... without harming anyone”
Teaching in Public Health: a life experience

By: Marcia Oliveira

At my practicum, I worked as a teaching assistant for the course Epidemiology III at the School of Public Health. I was responsible for helping students achieve the learning objectives of the class, as well as assisting instructors managing the course. Classes were conducted in a very participative environment, where students were motivated to learn by discussing concepts and examples provided in class. Instructors worked extremely well as a team.

Having the opportunity to be at the “teaching side” of the classroom helped me to reinforce many concepts in Epidemiology. Interacting with the instructors that are enthusiastic about their work was essential for me to learn how the teaching process is built and how human interactions play an important role in this process. The curiosity, creativity and the seriousness with which the students face the course work and motivated me to become a teacher that sees the learning process as a two-way street, where all the parts involved learn and grow.

The curiosity and enthusiasm of students and instructors helped me keep in mind that teaching is about people, and without taking the human factor in consideration, it is impossible to be a good teacher. Such lessons will accompany me in every step of my academic life.

Public Health Significance

Teaching is part of one of the core areas of Public Health. It is through teaching that professionals and the public are educated, informed and empowered. Dissemination of information,

Highlights

• The enthusiasm of the instructors about their work was essential for me to learn how the teaching process is built and how human interactions play an important role in this process.
• The curiosity and creativity of the students motivated me to become an outstanding teacher.

“without taking the human factor in consideration, it is impossible to be a good teacher..”
Sex Education and Teen Pregnancy

Making Decisions about Sex Education: Institutional Structures, Social Dynamics, and Rhetorical Strategies

By: Eric A. Ratliff

For my practicum experience, I worked with Planned Parenthood and the UT Prevention Research center (UTPRC) to examine how various interested parties (UTSPH researchers, parents, teachers, school administrators) mobilized to address teen pregnancy in Harris County. My primary activity was observing public meetings at several school districts in the county that are in the process of selecting sexual health curriculum for middle and high school students. These meetings included presentations about the incidence of teen pregnancy and STIs, followed by presentations from vendors of sex education programs.

Each speaker at these meetings had a particular agenda; their effectiveness depended on how receptive the audience was to that viewpoint. Thus, teachers accepted the need for evidence-based programs that included contraceptive information, but some parents were skeptical of science, and more responsive to narratives that focused on spirituality and stereotypes of adolescents who could be seduced by talk of sex.

Public Health Significance

I intend to continue this research after the completion of my practicum. I will use an ethnographic approach of participant observation and informal conversations to study these processes over time, focusing on how people employ certain rhetorical strategies (i.e., “children are vulnerable”) to promote their political goals. This research will provide new insights into complex decision-making processes involving many people who have different perspectives and feel strongly about this issue.

I also hope that information from my practicum and continuing research activities will assist in mobilizing community partnerships to solve health problems such as teen pregnancy and sexually transmitted infections among adolescents. By understanding these decision-making processes of groups, Planned Parenthood and UTPRC can better assist communities in achieving their goals for sex education in local schools.

Practicum observations

• Local districts follow state guidelines for evaluating sex education curricula through school health advisory councils (SHAC);
• While SHACs provide structure, decision-making practices vary due to social dynamics of stakeholders (e.g., teachers, parents);
• Rhetorical disconnect between scientific ‘evidence’ and local observations and beliefs about adolescent sexuality remains.

“Sex education in schools is a contentious topic because, in addition to public health, it encompasses social, moral, and political concerns.”

Teen birthrates in Harris county (by zip code).
Insights into epithelioid sarcoma.

By Aniket Sakharpe

My practicum site was laboratory doing translational research. We decided to work on a rare sarcoma. Describe it clinically and then look at its molecular make up which could be used for better diagnosis of disease.

We started looking at patients presenting to MD Anderson Cancer center from 1992 onwards. We created a database for the clinical parameters. Using this cohort we did a retrospective analysis on the patient population. We also obtained a TMA from patient surgical samples for staining with diagnostic marker. In the end we were able to have enough data to be able to write a manuscript which is in writing now.

We found that INI1 one of the nuclear proteins is lost in this sarcoma.

Public Health Significance

The project I was working is an rare sarcoma. Sarcoma as such forms only about 1% of all the cancers. Of that 1% this epithelioid sarcoma consists of less than 1%. Though rare this disease is a more recently described disease entity (71') and the incidence as described in literature is about 1 per million. Being a relatively new and rare disease the disease has not been well characterized and the diagnosis is based on the pathologist experience. Saying the diagnosis is more subjective

We wanted to look for markers of the sarcoma which could be used for a objective evaluation of the disease. We looked at immunohistochemical markers which could be used for the better diagnosis of the disease.

“Progress would not have been the rarity it is if the early food had not been the late poison.”

Special events/ duties during your practicum
- maintaining a cell line
- Standardizing it.
- Creating the database
- Maintaining database
- Search for eligible pathology samples

A typical epithelioid sarcoma histology.

INI1 positive stain in controls and INI 1 loss in an epithelioid sarcoma.
Hand Hygiene

“High Five For Health:” A hospital hand hygiene campaign to promote patient and employee health

By: Chloe Franklin

It is rare to have the opportunity to act as an infection control representative, data analyst, photographer, and a graphic design artist. However, my practicum allowed me to do all the above and more! I worked with Infection Prevention & Management Associates (IP&MA) at an acute care hospital on a hand hygiene project that aimed to increase compliance among healthcare workers (HCWs). After an extensive literature review, and encouraging input from my preceptor, a month long hand hygiene campaign was designed to be implemented among 4 units. The campaign included weekly observations of hand hygiene behavior among HCWs and featuring and photographing a “hand hygiene model of the week,” from each unit, who exemplified proper hand hygiene. The model’s photo was displayed in the unit, and they received a gift card of appreciation. The unit with the most improvement after the campaign’s end would receive a catered lunch. It was believed that HCWs would be encouraged and motivated by their peers to promote positive behaviors, increasing compliance in each unit. The final product consisted of a write up of the experience which included the campaign results.

Highlights during practicum

• Weekly observations of healthcare workers’ hand hygiene behavior
• Featuring & photographing HCWs exemplifying proper hand hygiene

Public Health Significance

Hand hygiene in a clinical care setting is considered the single most important measure to prevent hospital associated infections. The Center for Disease Control recommends compliance>90% on a hospital wide basis, but adherence among health care workers often falls below these guidelines due to a variety of risk factors. This project aimed to increase hand hygiene compliance by addressing a number of these risk factors, aligning with the Essential Services of Public Health. Specifically, this hand hygiene campaign works to “ensure a competent and public health and personal healthcare workforce” to increase hand hygiene compliance, reduce infections, and protect and promote patient and employee health. HCWs were actively encouraged to practice proper hand hygiene in a fun filled manner, and those with high compliance were featured to motivate others to do the same.

Overall, infection control contributes to public health in innumerable ways, embracing the essential services of public health. These include monitoring health status and investigating outbreaks in clinical settings, developing new policies and enforcing regulations to protect health, educating employees and patients, evaluating effectiveness of existing programs, and researching innovative solutions to new and existing health problems. Infection control is invaluable in protecting public health in clinical settings.

Hand Hygiene flyer distributed among the units in the hospital, announcing the campaign

“Clean hands protect patients, family, and myself.”—hand hygiene model
HIV/AIDS Surveillance Project

Public Health Significance

HIV/AIDS is a public health problem with negative impact on the cost, morbidity and mortality of the community. Knowing the risk behaviors may assist with the prevention and control of the disease.

Public Health Essentials:

Monitor: The HMMP monitors the behavioral risks and clinical outcomes of individuals in HIV care.

Link: HMMP assesses the met and unmet needs of PLWHA and also provides information about the health care providers and available services.

Quality Assurance Protocol – Houston Medical Monitoring project (HMMP)

By: Joyce Kgatlwane

HMMP is an HIV/AIDS surveillance project at the Houston Health and Human Services Department. It is a CDC multi-state project that monitors the risk behaviors, clinical outcomes and access to prevention and support services of people living with HIV/AIDS (PLWHA) in Houston/Harris County.

Data are collected through personal interviews and medical record abstraction of selected participants.

I was involved with the quality assurance (QA) for the HMMP. That included developing the QA protocol to ensure the standardization of processes associated with data collection and the flow of information.

The quality assurance protocol will ensure that data collected is of quality and integrity.

The project will uniquely advance the puzzle’s completion by providing comprehensive clinical and behavioral information from sampled patients. The information provided may be used by prevention planning groups, policy leaders, clinicians and other stakeholders to highlight disparities in care and services and advocate for new interventions and additional resources.

The Houston Medical Monitoring Project (HMMP) uses a puzzle logo to reflect the goal and objectives of the project.

The idea is that HMMP is putting together a puzzle whose pieces include, access to care and quality of life and prevention services etc.

The piece that is missing is “Y-O-U” which could either be the provider or the patient.

“Together, we can answer the most challenging questions that remain about HIV/AIDS and advocate in the best interest of our communities and one another”

Special events/ duties during your practicum

- Developed the quality assurance protocol for HMMP activities.
- Updated a list of participants in the QA component of the project.
- Reviewed and managed HMMP database
- Received training on web-based tracking system and data analysis
- Observed patient interviews and medical record abstractions.

Part of HMMP display board use during outreach events. Highlights information on goal, objectives and benefits of the project and gives basic HIV/AIDS statistics for Houston/Harris County.
The Prevalence of Honey Pacifier Use in Children 12 Months and Younger

Cross-Sectional Survey on the Use of Honey Pacifiers at the Lyndon B. Johnson Hospital Pediatric Outpatient Clinic

By: Vanessa Yataco-Marquez

Based on the principal investigator’s clinical experience, the use of honey pacifiers is common amongst the indigent Hispanic patients of Mexican descent seen at LBJ Hospital. Besides assessing the prevalence of honey pacifier use in the pediatric population, the study aims at informing parents about the risks associated with the use of these pacifiers.

As research coordinator in the study, I collected surveys from caregivers of children 12 months and younger attending the LBJ pediatric clinic. In many cases, the parents preferred to answer the survey questions through an structured face-to-face interview.

Why I enjoy my practicum?

Interacting with the caregivers is one of the most fun parts of this experience. The parents and extended family seem very concerned about their children’s wellbeing and are thankful when I provide them with the information on the risks of the use of honey pacifiers.

Public Health Significance

This practicum fulfills 2 essential public health essential services: first, the study focuses on the research aspect of the issue. Currently, no published studies on the prevalence of honey-filled pacifier use and the link to infant botulism are available. However, honey exposure is more common among infant botulism patients hospitalized outside of the U.S. The current recommendation to prevent infant botulism is for infants less than 12 months of age to avoid honey consumption all together. Secondly, this practicum aims at informing, educating and empowering caregivers by exposing the risks of honey pacifier use in children younger than 12 months of age. Indeed, caregivers often expressed their gratitude for the information and recommendations regarding the risks associated to these pacifiers and honey in general.

So far, our preliminary results indicate that 11.6% of caregivers of patients seen at LBJ Pediatric outpatient clinic have given a honey pacifier to at least one of their children. This result is consistent with the proportion of patients using honey pacifiers based on the clinical experience of the principal investigator (approximately 1 out 10 patients).
Air Force Mental Health

Air Force Web Preventive Health Assessment Mental Health Screening Effectiveness

By: Michael Madrid

The U.S. Air Force Healthcare Informatics Division is located at Brooks City-Base, TX. It is a virtual warehouse of surveillance and clinical data for the Air Force.

Within its walls are computers that collect and synthesize medical data under the watchful eye of statisticians, epidemiologists, public health professionals, healthcare providers, and support staff.

Survey results can be married with actual clinical results to analyze for trends and to allocate resources to provide optimal health care and ensure deployment readiness of U.S. Airmen.

Under the purview of the Healthcare Informatics Division, is to evaluate the Web based Preventive Health Assessment (WebPHA).

My focus of study was to evaluate the effectiveness of the WebPHA and its ability to realistically predict intervention criteria for mental health issues.

Epidemiology and Statistical Evaluation of WebPHA

- Do Pre- and Post-Deployment Screenings adequately identify at risk individuals?
- Are critical and priority alerts based on appropriate triggers?

Public Health Significance

This practicum experience related to the Essential Services of Public Health at many levels. First, the purpose of the Healthcare Informatics Division and its use of the WebPHA are to monitor Airman health trends. Second, is that data analyzed is used to diagnose and investigate specific cases that may require healthcare intervention. Third, is the realization that the WebPHA can be used to predict develop policies and plans to mitigate or prevent poor healthcare outcomes. Fourth, is the computer link that the WebPHA has to healthcare providers to alert them of an Airman that may be a “Critical” or “Priority” risk who warrants further evaluation. Fifth, is that multisource data analyzed by the Healthcare Informatics Division is used to assure adequate resources are available to Airmen to address high prevalence and preventative healthcare issues. Sixth, my specific function was to evaluate the effectiveness of the WebPHA in identifying Airmen that may require immediate as well as long term healthcare intervention. And finally, the Health Informatics Division is a research facility dedicated to prevention and treatment of healthcare issues.

Mental health is a critical component of a fit fighting force. Ensuring that mental health issues are prevented, mitigated, and treated is a responsibility

“Live for something rather than die for nothing.”

George S. Patton

Are the images and emotions of war ever erased?

Source www.militarysupportforums.com
The National Children’s Study (NCS)

Public Health Significance

This is a research study that is destined to produce a wealth of information concerning the health and wellbeing of children and associated environmental influences. This research seeks to inform, educate and empower communities, researchers and the general public about the impact of environmental, genetic, biological and psychosocial factors on the health of growing children.

Baylor College of medicine and Texas children’s Hospital that host the study

Understanding Harris County Hospitals’ Information System

By: Vincent J Tukei

The national children’s study is designed to follow-up children from conception to the age of 21 years to identify the effect of the environment on the health of American children. In preparing for the study, we desired to understand how participating hospitals in the county send information about births to regional and state health offices. Was it paper based or electronically done? This was my practicum. It involved contacting hospital birth registrar’s and the regional health officials by phone.

Out of the 20 hospitals contacted 18 send their information electronically. Two hospitals declined to offer any information, citing HIPAA regulations.

In addition, I was able to contact 9 regional health offices on related issues.

Special events

• Telephone calls to Harris County Hospitals
• Calls to regional Health offices
• Calls to WIC centers

“The solution to adult problems tomorrow depends on large measure upon how our children grow up today.”

Margaret Mead

Children are our Future!

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This practicum was only a small part of the overall effort of attaining this dream.

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Self-Reported Eating Habits and Physical Activity of Pregnant Women

Public Health Significance

One of the essential public health services this project fulfills is the research component of this issue. By exploring the specific eating behaviors and physical activity of women during pregnancy, we can identify the risk factors leading the development of obesity and problems such as gestational diabetes (GDM).

From the results of this study, we will be able to make recommendations on lifestyle modifications leading to appropriate weight goals during pregnancy.

Why I loved my practicum?
• I really enjoyed working with the principal investigator. She is an amazing mentor.
• The research topic was so interesting to me that I have decided to pursue the Maternal and Child Health concentration at UTSPH.

Women with higher severity of obesity tend to have lower levels of physical activity and higher amounts of weight gain during pregnancy.

Self-Reported Physical Activity during Pregnancy: A Cross-sectional Survey

By: Vanessa Yataco-Marquez

In this practicum, I assisted the principal investigator with the data entry process and with basic statistical analysis. The surveys were collected from 3 sites: UTHSCH Memorial Hermann Hospital, UTMB Hospital and UTHSCB Valley Baptist.

The relevant public health issue is the relationship of maternal obesity, excessive gain weight or the development of gestational diabetes related to eating habits and physical activity.

The research study group submitted an abstract focusing on the self-reported physical activity section of the cross-sectional survey to the Central Association of Obstetricians and Gynecologists (CAOG). The abstract was approved and we will present the results of the study during the CAOG annual meeting in October. Further analysis will continue in the next months.

Public Health Significance

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Pictures from:  http://www.public-domain-photos.com/people
Health impact of radiation exposure in the hospital setting.

By: Tetyana A. Keeble

I followed the Radiation Safety Officer to area, performed wipe testing for spillage of radioactive materials, calibrated I-131 radiotherapy sources, learned about monitoring of radioactive waste, and reviewed radionuclide permit applications, learned about trouble shooting of malfunctioning equipment.

Final product is a report that summarizes sources and characteristics of different types of radiation sources, types of radiological equipment and procedures that represents the most significant health hazard risk, and control measures and safe operating procedures.

The best practicum experience was 'hands on' the radiation testing equipment and dosimeters and learning how to use them properly.

Public Health Significance

The use of diagnostic medical imaging has dramatically increased over past years due to advances in technology. Despite numerous benefits, however, there is a growing concern over increasing radiation exposure of the patients undergoing such imaging procedures, making us consider more carefully potential health risks associated with the exposure.

At St. Luke’s Nuclear Medicine Department, I learned how to calculate personnel and patient radiation exposure dose, about shielding design, how to monitor all areas of the institution that utilize radiation sources, how to perform scintillation camera uniformity checks (flood fields) and dose calibrator constancy check - Ra-226 standard, Cs-137 in the nuclear lab.

“If you cannot explain it simply, you do not understand it well enough.”

Albert Einstein
My Semester at Lifeworks

By: KRISTIN MCDUFFIE

During my semester at Lifeworks, I served two main functions:

- Facilitating a REAL Talk group of 7th grade boys in discussions and activities related to sexual health topics

AND

- Helping to coordinate the iChoose Teen Summit on Sexual Health, a one day workshop series for teens on sexual health topics

I helped to plan and lead a weekly group of 6 boys at Burnet Middle School in Austin, engaging in discussions and facilitating activities about puberty, sexually transmitted infections, pregnancy prevention, birth control, dating, and healthy relationships. I also created and implemented a process evaluation survey for the iChoose planning process. In addition, I created a binder of compiled materials utilized in the planning process to aid in the planning of next year’s iChoose Summit!

Public Health Significance

Inform . Educate . Empower

My experience at Lifeworks allowed me to practice one of the most fundamental public health services: informing, educating, and empowering. Through the REAL Talk program, youth engage in conversation and experiential activities about sexual health and healthy decision making and develop skills necessary to navigate puberty and to avoid peer pressure and risky behavior.

Mobilize

The goal of the iChoose Teen Summit is “to educate and empower young people to prevent unintended pregnancy and sexually transmitted infections”, and was created through the mobilization of community partnerships. Sponsored by a host of community organizations, the Summit provides an opportunity for groups around the area to come together and create a collaborative effort to educate and empower the youth of our community.

http://www.ichoosaustin.org
Airmen and Alcohol

How do we fight an enemy that’s already inside the fence?
By: Justin Tingey, MD

The US Air Force’s Healthcare Informatics Division collects and analyzes all preventive, clinical, and deployment healthcare data in order to improve the care to our Airman. A practicum experience allows research into various topics such as disease screening effectiveness, clinical epidemiology, treatment effectiveness, and policy implementation.

My personal experience with this division assessed the effectiveness of the USAF’s yearly Preventive Health Assessment (PHA) as a screening tool to identify alcohol issues prior to significant disability of injury.

The end result of this research will help shape alcohol screening programs and policies within the USAF. An effective alcohol screening program will ensure a healthy and fit-to-fight force.

Preventive Screening
Epidemiology / Clinical
Data Analysis /
Deployment Healthcare
Analysis
• What are the biggest medical issues affecting our Airmen?
• How do we assess the USAF’s healthcare system’s effectiveness?

Public Health Significance

Evidence-based medicine is essential in delivering the quality of care that our Airmen need and deserve. The US Air Force uses a yearly web-based questionnaire to screen for a variety of health issues affecting our Air Force member. The Healthcare Informatics Division is responsible for collecting the data from these questionnaires, finding effective methods to use this data, and continually assessing the validity and effectiveness of this questionnaire as a screening tool.

To maintain a healthy force that is ready when needed, disease prevention is essential. Alcoholism and the long-term health effects of excessive alcohol consumption have a significant impact on the health of our military members. However, the harmful effects of alcohol excess can be mitigated if found and addressed early in the disease process.

The Healthcare Informatics Division is an essential part of the US Air Force’s disease surveillance, prevention, and treatment efforts.

“Leaders should make every reasonable effort to retain members when problems with alcohol surface and help them return to full productivity.”

Source: www.af.mil
Public Health Significance

My study focuses on assessing the knowledge, attitudes and behaviors related to oral cancer prevention and detection, oral health in cancer therapy, tobacco cessation and experience with and preferences for continuing education. Therefore, the Public Health Essential Services that most closely relates to my practicum experience is to evaluate the effectiveness, accessibility and quality of personal and population based health services. Additionally, my study also helps to inform, educate and empower people about health issues.

My host organization, Baylor College of Dentistry is providing information about continuing education to the dental professionals (Dentists and Hygienists) so that they can develop skills in supporting patients who are trying to quit tobacco. The education will eliminate ignorance regarding oral cancer knowledge and practices among dental professionals making them vigilant in oral cancer prevention and detection. This reduces the mortality and morbidity associated with oral cancers.

Spring 2010 ● Aparna Biradar ● Baylor College of Dentistry ● Oral Cancer Prevention and Detection
Childhood Obesity Prevention

Working with a Childhood Obesity Intervention
By: Sima Momin

For my practicum, I worked with the Institute of Health Promotion Research in San Antonio, TX. I was involved in a current intervention program is called Nutrition and Exercise Start Today (NEST) which uses evidence based approach for childhood obesity prevention in rural Hispanic families. The intervention was implemented at a pediatrics clinic in New Braunfels, TX.

I was responsible for developing the educational material for the intervention including newsletters and community resource guide. I also assisted the health educator with the health education curriculum for the parents and children in the intervention program. It was important that all newsletters were written in English and Spanish to ensure that the target population understands the material.

Main events during my practicum
• Meeting with all team members involved in NEST.
• Visiting the pediatrics clinic where select children and parents participate in the NEST program.
• Completing the newsletters to be sent out to participating parents.

“IT IS IMPORTANT THAT ALL EDUCATIONAL MATERIAL IS MADE SPECIFICALLY FOR THE TARGET POPULATION.”

I am showing the final draft of the NEST newsletters to my practicum supervisor.

Public Health Significance
Childhood obesity is increasing in our society. With many adverse health problems associated with childhood obesity, it is important for public health professionals to work on preventing obesity in children.

My practicum addressed this issue by informing, educating, and empowering the children and parents who were participating in the NEST childhood obesity intervention. This program utilized a health educator to teach the participating families about forming healthier habits in both diet and exercise. The newsletters and community resource guides offered the families advice on how to make healthy choices and identify resources in their community that they can use to help make changes in their dieting and exercise habits.

Spring 2010 ● Sima Momin ● Institute of Health Promotion Research ● Childhood Obesity Prevention
Public Health Significance

Currently, the data needed for biosurveillance and outbreak detection are housed in a variety of locations and in most cases are in paper format. The use of HIE clinical databases would assist public health investigators by capturing chief complaint information in real time allowing effective measures to be implemented.

Also, biomedical research could be more streamlined by comparing the incidence of disease with demographic characteristics of patients thus improving research planning and grant writing.

Integrated Care Collaboration is a nonprofit, regional health information exchange whose mission is to improve access to healthcare for the vulnerable populations in the Austin community through better coordination of services and translation of research into practice.

Practicum Duties

Create a database of all HIEs in the US
Conduct a literature review.
Develop a survey addressing metrics used for quality of care and return on investment.

“Imagine a state or even a national HIE which could identify and quantify illness, injury, or excessive exposure using real time information.”

HIE could provide up to the minute health information.
Weekly Young Men’s Clinic

Formative (What would the article title be?)
By:  Charles Shumate

The spring 2010 semester saw the People’s Community Clinic a 501 c(3) in Austin, Tx reorient its mission to be more inclusive of the needs of male clients. In the course of my practicum, I undertook doing the research that will assist them in meeting this goal.

Specifically, the clinic is gearing itself up to provide a weekly young men’s clinic to Travis county residents who are uninsured or underinsured.

Public Health Significance
Research

The Public Health Essential Service (PHES) that is aligned most closely with my practicum is the service of research. Since the clinic needs to increase the number of males seeking services and has tried to do so in the past, research from numerous sources was necessary to see how to tackle the situation. Although, other services are applicable to my experience, the majority of my duties first required extensive reviews of the literature.

At the same time my practicum included chart audits for titles funding, assisting on other PCC projects, and My legacy on the project is leaving the clinic with a standard operating procedure with a literature review, reports that address the areas where the clinic could improve its services to males as well as recommendations, and communication materials that publicize the clinic.

For example:

- Uncovering phrasing the target population uses
- Illuminating weaknesses in existing clinic procedures
- Editing/creating existing materials to serve low health literacy populations.
- Producing a guide book for future PCC staff to increase the services to target males

Photos from:  http://www.austinpcc.org/about-our-clinic/patient-stories/
Engaging the community enabled us to gain the trust of the neighborhood and a successful relationship to collaborate.

Public Health Significance

By both evaluating accessibility while researching possible macro indicators for individual outcomes this project addresses the community’s needs.

By exploring the neighborhood as it changes we hope to capture possible contributors to the flux in residents’ behaviors. Measuring perceptions versus observable outcomes such as BMI, test scores, and use of available resources can paint a more holistic picture for us to truly make a neighborhood

Each community has tremendous capacity if given the opportunity to find it!

New DART rail stations in Fair Park hopes to give residents access to Dallas while bringing tourism $$
Evaluation of the New (WIC) Food Packages in Cameron County, Texas

Public Health within the WIC Organization (Local WIC Agency 03)

By: Jennifer Mota

I was very limited to what I could do within the organization due to confidentiality and adhering to state guidelines. I had the opportunity to work with the Assistant to the WIC director to learn how the WIC organization functions and how it provides services to the three largest WIC clinics within Cameron County. I created a plan to recruit from WIC clinics, as well as procedures to implement the plan, a survey tool and consent form, and began the application process to conduct research with WIC clients. The application process involved sending an application etc. to the Texas Dept. of State Health Services WIC Institutional Review Board (DSHS WIC). I went through the pre-application process and the WIC director submitted it to the state.

The final product I created was completing and submitting the pre-application and creating a plan for how I was going to evaluate the New (WIC) Food Packages throughout Cameron County’s three largest WIC clinics.

Public Health Significance:

Recent recommendations and modifications were made to the WIC Food Package, aligning the new food package with the 2005 Dietary Guidelines for Americans and current infant feeding practice guidelines of the American Academy of Pediatrics. This is of public health significance, due to the importance of a high fiber, fruit and vegetable diet, which has shown to decrease the rates of certain cancers, obesity, diabetes and chronic disease particularly among Mexican-Americans who have disproportionately high rates of obesity and type II diabetes.

The WIC organization provides essential public health services by informing, educating, and empowering people. WIC services consist of providing food, nutrition counseling, and health referrals to more than 8 million low-income pregnant, and postpartum women, infants, and children up to 5 years who are at nutritional risk.
Teaching Adolescent Health

Enhancing the Medical Learner Experience in Adolescent Clinic

By: ACHILIA MORROW

Adolescent Clinic at BTGH is an interdisciplinary clinic that cares for patients ages 13-25 twice a week. There are several “learners” in the clinic—a medical student, a pediatric intern, and medicine residents. Although seeing patients is one of the best ways to learn about adolescent health, I wanted them to have additional resources as well. To develop a list of relevant topics I read guidelines, consulted my advisors, and considered the issues that were commonly seen in clinic. In order to enhance my own knowledge, I was allowed to attend educational seminars with the adolescent fellows at TCH. With guidance, there is now a draft of case-based multiple-choice questions that address relevant topics. Learners can than utilize a resource list that includes articles, websites, and the UTSPH intervention, “It’s your Game” to find answers to questions they respond to incorrectly. The practicum also provided knowledge about several community resources for patients.

Public Health Significance

The Women’s Health Pathway and the BTGH Adolescent Clinic allow future and current healthcare providers to care for an often over-looked segment of the population, adolescents and young adults. Preventing mortality and morbidity in this age group involves educating and empowering them about health issues that affect them, as well as helping them utilize and connect with the health care resources they need (Essential Public Health Services 3 and 7). This practicum offered me an opportunity to develop ways to better help future providers learn about the skills needed to care for adolescents.

As the practicum is set in Ben Taub General Hospital, our patients tend to be uninsured or on Medicaid and from ethnic and racial minorities. The BTGH Adolescent Clinic was started in 2001 by Dr. Schmidt who wanted to provide a place of care for those adolescents who did not qualify for insurance accepted by private hospitals but still had need of care by those with expertise in adolescent concerns. BTGH is the largest hospital in the Harris County Health District (HCHD). HCHD is the safety-net provider of Harris County as 60 percent of those served are uninsured.

Spring 2010 ● Achilia Morrow ● Ben Taub General Hospital● Adolescent/Women’s Health

“Adolescents are not monsters. They are just people trying to learn how to make it among the adults in the world, who are probably not so sure themselves.
~Virginia Satir, 1988

The people who make Adolescent Clinic work (from l to r): Mary Caliandro, LMSW; Cynthia Givens, Rhonda Johns, and Aphrodita Granderson, LVN.
Adolescent Sexual Health

Working with Planned Parenthood and the Center for Prevention Research

By: Jessy Uriarte

During my practicum, I worked in collaboration with Planned Parenthood and the Center for Prevention Research. I learned both about the high level planning that goes into advancing sexuality education in the school system and the “on the ground” realities of implementing an evidence based program.

Public Health Significance

This practicum allowed me to INFORM, EDUCATE and IMPower teens through the implementation of an evidence based program. I held twelve sessions with a small group of students (less than 25) where I taught the “It’s your game. Keep it Real” program developed by Dr. Tortolero, Dr. Markham, Dr. Peskin and Dr. Shegog at the University of Texas Center for Prevention Research. My students were 13 – 15 years old and provided provocative and never dull discussion of sensitive topics.

I acted during this practicum as a representative not only of UTSPH but also of Planned Parenthood. I sat in on a number of meetings and trainings at PP where I learned a great deal about their culture and goals as an organization. They are the experts in the field and have provided quality sexuality education and health care for women and men throughout the Houston area for decades.

This practicum gave me invaluable insight into the world of sexuality education as seen through the lenses of both the academic field and real world implementation.

Special events/duties/highlights during your practicum

• Shadowed sex educators in the field.
• Implemented an evidence based program with a group of high school students

“Proper Attire. Required for entry.”

Planned Parenthood’s unique brand of condoms has a catchy slogan.
Public Health Significance

According to the Ten Essential Public Health Services, (http://www.apha.org/programs/standards/performancestandardsprogram/reeksentialservices.htm):

My practicum most closely relates to the 10th EPHS: Research for new insights and innovative solutions to health problems. A secondary Service is the 3rd: to Inform, Educate, and Empower people about health issues.

Childhood Obesity Prevention

The NEST project aims to enroll 200 Hispanic children aged 5-14 years in an Obesity Clinic, half of which are randomized to a 14-week intervention promoting healthy nutrition and physical activity. The intervention consists of surveys, four physician visits, and a one-on-one session with a health educator, plus monthly follow-up phone calls and newsletters. Controls filled out half the surveys and saw the physician once. My duties included designing study surveys and protocols, translating the consent form into Spanish, and creating the database for data entry. The final products (besides surveys) included a Powerpoint presentation on MI and SOC (see sidebar). Work on the database is ongoing.

Nutrition and Exercise Start Today: a Community-based Intervention on Childhood Obesity in Hispanics in a Local Clinic

By: Dorothy Long Parma, MD

Childhood obesity is a growing public health issue in Texas, with ~16% of children aged 2-4 years (CDC PedNSS, 2008) and 2-19 years (2006) above the 95th percentile of weight for age and sex.

The IHPR contributes to Public Health by conducting research and providing grants to individuals working on various issues among Latinos in TX and nationwide, like cancer, smoking cessation, childhood obesity, and nutrition and physical activity promotion.
Healthy Lifestyles

Intergenerational Mentoring of School Children in an Underserved Community

By: Deidra Carroll

The Project SMART Youth Program was designed to influence healthy behaviors related to diet and physical activity and to decrease unhealthy behaviors such as substance use and risky sexual behaviors.

The theoretical framework used to design the program was the theory of possible selves. The theory posits that individuals are motivated in the present life by mental images of possible future selves.

Intergenerational mentoring was an innovative component woven into the Project SMART Youth Program. Mentors were matched with students prior to program inception and were active participants of the program. Rather than teaching class sessions, mentors learned with students and encouraged and reinforced behavior modification.

Public Health Significance

Project SMART Youth Program addressed Goal 2 of Healthy People 2010, to eliminate disparities among segments of the population as they relate to behavioral determinants of health in an African American community.

Five of the ten Leading Health Indicators in Healthy People 2010 reflecting major public health concerns in the United States were addressed through Project SMART: physical activity, overweight and obesity, tobacco use, substance abuse, and responsible sexual behavior (indirectly).

Project SMART included the following components:
• After school program for 4th graders
• Faith-motivated intergenerational mentoring
• Evidence-based curriculum which integrates the theory of possible selves

“Dare to reach your hand into the darkness, to pull another hand into the light.”

Photos from: http://cache1.assetcache.net/xc/10117015.jpg?v=1&c=IWSAsset&k=2&d=5047FA587DE1CADE0A49FF7605FF5976FB7E5AFC9849D8E3A16393DFEB1D7002
http://www.edmondschools.net/WestField/childrenjump1a.jpg

Spring 2010 ● Deidra Carroll ● St. Mary’s UMC/Foster Elementary ● Healthy Lifestyles
My final contribution was the facilitation of a teen pregnancy intervention. The intervention was targeted towards young girls and their mothers. We met once a week every other week for six weeks. At the end of each session evaluations were conducted by form of a survey. After the last session we conducted two focus groups – one with the girls and one with the mothers. These assessments provided us with valuable information about the strengths and weaknesses of the program.

It was an amazing experience.

Public Health Significance

Of the ten Essential Services of Public Health, my practicum excelled in informing, educating, and empowering young girls and their mothers about the realities of teen pregnancy, the unintended consequences of risky behaviors, and ways to prevent these activities from occurring.

One of the main focuses of the intervention was laying the foundation to establish an open field of communication between mothers and daughters. The girls were also encouraged to create a journal and collage of their goals past high school. We wanted to empower them, to remind them that they have so much to look forward to and while pregnancy can be a beautiful experience, it was all in due time . . .

Together, we can make a great impact.
Diabetes Shared Medical Visits

By: Jessica Davis, R.N., B.S.N., M.P.H. Candidate

During my practicum experience I investigated the effect of shared medical visits (SMV’s) on diabetic populations through search of current literature. I discovered various methods by which shared medical visits are implemented in practice and explored the structures of successful SMV programs. Opportunities provided by this practical experience allowed me to synthesize and apply much of what I learned at the School of Public Health to a health problem at large in the community, type 2 diabetes.

As part of my practicum project I had the opportunity to work with computerized patient data and to compile and present population statistics based on standardized target outcomes. I was also given the opportunity to create a protocol for diabetes shared medical visits and to construct a logic model for evaluation of program successes in the future. UTHS will be working to implement this protocol, which may undergo revision, and evaluate the successes of these protocol guided visits in the near future.

Public Health Significance

The shared medical visit (SMV) is being viewed more and more as an important option in delivery of chronic care in the U.S. This is not only because chronic illness among populations is expanding but, because there is a need to address limitations of current health care delivery structures.\(^1\) One of the biggest limitations in diabetes care delivery is time. Time in the form of: patient/provider interaction, education received by the public, and focus for management of this specific health problem, since many individuals with diabetes have associated illnesses that compete for attention during visits.\(^1,2\) The implementation of diabetes shared visits, though not withstanding an initial investment of resources by providers and support staff, has the potential not only for increasing time spent with patients but, for improving efficiency and effectiveness of the delivery of care.\(^1,2\)

During my practicum the essential services of public health were explored through assessment of UTHS diabetic population, and diagnosis and investigation of problems in diabetes care delivery. As this program is implemented it will link groups to needed services and it will educate and promote healthy behaviors among their diabetic population. Evaluation of services provided by the program and publication of its methods and results will provide an evidence-base for sharing model successes and for improving upon on diabetes targeted outcomes, patient satisfaction and population disease knowledge and skills. Policies and standards that support successful evidence-based SMV programs in practice can aid community providers in overcoming barriers to implementation of these programs, which may act as an effective agent for system structure change and provision of more effective, efficient health care delivery.

References:
Community Connections: Creating A Health Community

By: Rachel Rossi

My practicum was completed at Metrocare Services a non-profit organization that provides individual and family medical services to Dallas area residents. The specific program I participated in was the Early Childhood Intervention Program that assists families with children less than 36 months who have been diagnosed with developmental delay, a physical or mental condition that may result in a developmental delay. The Early Childhood Intervention team consists of early intervention specialists, occupational therapists, physical therapists and speech language pathologists.

The goal of my practicum was to help clients connect to health resources available to them in the Dallas/Ft. Worth area. The process consisted of taking inventory of current contacts that program had made and updating them to their current information. Then I started by researching new private and public health resources. I then contacted these organizations to learn more about their services available to our clients. Some of the most valuable resources I collected was information on Medicaid, CHIP, Texas Health Steps, stages of development, and free clinics. I collected all of this data into a resource library in physical binders and also created a web based version that could be accessed using the Local Area Network. This increased access to vital health resources and enabled ECI staff to meet the needs of clients in the home more efficiently.

Public Health Significance

My practicum focused on the area of mobilizing community health partnerships, informing, educating and empowering the ECI staff and the clients they serve. Many of the clients at ECI face financial hardship from mounting medical bills, daycare bills or difficulty maintaining a job with a special needs child. My aim was to locate and consolidate as many resources as I could find that could help lessen this burden. One of the most important resources was the list of doctors covered by Medicaid and CHIP. This made it easier for parents to locate doctors who took their insurance and created continuity in their child's care.

Another resource that helped facilitate care was the resources associated with free clinics that provided accessible primary care. ECI programs provide direct health services to those diagnosed with developmental delays by facilitating in the treatment of developmental, physical and mental impairments. These service provided by state and federal funding allows low-income families to get needed services. My resource library will help create community partnerships and empower ECI clients.

“Creating connections in the community and empowering clients with resources is the best way to have a healthy community.”

Practicum Duties

- Locate local resource for clients such as financial and health resources.
- Create a resource library for therapists and Early Intervention Specialist’s.
- To understand the health reality of our low-income clients and help facilitate their health needs with local resources.
Houston Emergency Departments and Safety Culture
By: Trevor McGinley

This joint venture between UT SPH and UT Emergency Medicine was designed to develop a survey to assess the safety culture found within Texas Medical Center Emergency Departments. We hope to determine the prevalence and impact that safety has in an unusually chaotic environment. This information will allow us to cross reference how prevalent staff feel safety is within their institution with actual data points to see if culture can help improve safety.

A complete and thorough literature review was completed looking for any prior studies assessing safety culture within emergency departments. The best information we found was extrapolated from safety culture within the general hospital, thus allowing our work to fill a gap in knowledge.

Public Health Significance

This experience relates to the Essential Services of Public Health through enforcement of safety, evaluation of health based services and assurance of competent healthcare workforce.

The Public Health Service that most closely relates to my practicum experience is assurance of a competent healthcare workforce.

This is accomplished through providing the means to obtaining the data necessary for assessing the safety culture of emergency departments in Houston. Once the safety culture of the various emergency departments is analyzed, we can begin to understand how safety culture impacts the care provided by the staff and model which methods of approaching safety in a chaotic environment are the most effective.

“The safety and happiness of society are the objects at which all political institutions aim, and to which all such institutions must be sacrificed” James Madison

Groundwork for innovative studies in Emergency Departments
• Expanding knowledge base through literature
• Meeting with Dr. King, Chairman of the Emergency Medicine Department

Spring 2010 • Trevor McGinley • UT Houston Emergency Medicine • Safety Culture of Emergency Departments
This study is a long-term study, and this is only the beginning of the project. We hope to quickly capture enough images for development of molecular medicine for improved measures in oral, dental, and craniofacial disorders.

3D Facial Imaging- FaceBase

By: JENNIFER NGUYEN

This comprehensive research initiative is focused on understanding the genetic basis of craniofacial construction and the development of craniofacial disease and disorders. The accumulated knowledge will be housed in a database termed “FaceBase”; the “FaceBase Project”, begun under this initiative, embraces the elements of experimental data collection and annotation, data coordination and integration, systems level analyses, and clinical application.

I was responsible for consenting the patients and taking their 3dMD images.

Public Health Significance

The long-term program goal is to accelerate development of molecular medicine for improved risk assessment, effective prevention, screening and treatment strategies, as well as functional restoration in oral, dental, and craniofacial disorders.

References:

2. www.3dmd.com

At least half of all birth defects is associated with some form of craniofacial malformation.
How Cost Volume Profit Analysis aids in Health Care Decisions?

By: Ayella Shams

My practicum at the administrative department of University Health System (UHS) allowed me to experience how budget constraints often shape public health. My primary project was to conduct a cost volume profit analysis for seven different clinics operating under UHS. The cost volume profit analysis allowed me to learn several public health finance tools and concepts. The analysis provided the number of patients that are required to break even with regards to operating costs. The results aided in strategic planning. Cost Volume Profit Analysis allows managers to anticipate whether programs or services are anticipated to be profitable or lose money. This helps in deciding whether that program/service will be implemented and how to make it more cost efficient. While making recommendations it should be kept in mind that improving quality and ensuring patient satisfaction are key factors. Costs should not be cut down at the expense of quality.

Public Health Significance

Chronic underfunding of America’s public health system significantly undermines the nation’s ability to meet routine health needs and respond to emerging public health threats. The current era of fiscal stringency puts an added pressure for accountability. The field of Public Health Finance is advancing out of the “sense of urgency” to understand the composition, utilization, and impact of the finances that fund all components of the public health system. Public health finance is grounded in public finance theories but is focused on the provision of resources for the delivery of public health functions and the impact of these resources on population health and the public health system.

Essential Services: Public Health plays a key role in evaluating effectiveness, accessibility, and quality of personal and population-based health services. It also aids in developing policies and plans by providing a clear picture of the costs and benefits.
Dietary Protein Requirements in Hemodialysis Patients: a prospective, single cohort, single center pilot study

By: NADINE HAYKAL

Through the collaborative efforts of BCM Nephrology and The Methodist Hospital Transplant Division, I am carrying out this study to test if clinically stable maintenance hemodialysis patients, who display evidence of protein-energy malnutrition (PEM), will experience a significant increase in TBNuf after dietary protein intake is increased to 1.3g protein/kg/day over 5-months.

However, as with many studies, challenges were faced particularly with the unexpected closure of the dialysis facility approved for use by the study. Thus, I searched for a new facility while updating research personnel and physicians. I trained to use the BIA and Indirect Calorimetry devices for patient exams and created study documents and patient notebooks. After finding a new facility, I made necessary IRB changes. I then orchestrated a meeting with the new facility to review administrative, clinical, and protocol issues and procedures.

The study is now ready to enroll patients. I will continue as study coordinator with the goal of affirming our hypothesis to create a multi-center trial.

Bottom Line: using research to improve and maximize the care and health status of people with ESRD.

Public Health Significance

End Stage Renal Disease currently affects over 500,000 Americans with an estimated worldwide burden of two million people. Currently, the two accepted forms of treatment are dialysis and kidney transplantation. Although hemodialysis (HD) is the most accessible, lifesaving form of treatment, it comes with a price. Longer periods spent on dialysis increase risks to the development of co-morbidities such as anemia, cardiovascular disease, serious infection, and PEM that drastically affect morbidity and mortality rates. The onset of these co-morbidities play a large role in further increasing the dollars spent on care for patients with ESRD, for which Medicare already spends an average yearly $70 to $75 million not including kidney transplantation.

This project embodies the Public Health Essential Services of research by using innovative ways to test for protein status in individuals with ESRD on HD. Thus, we can head towards setting standards for optimal protein requirements and for monitoring the health status in terms of nutrient and protein intake in this population. Furthermore, evaluations of the increased quality of life of this population may prove cost-effective for Medicare in the long run.

Special events/ duties

- Learning to use the indirect calorimeter by practicing on my fellow coordinators
- Visiting the Children’s Nutrition Research Center and testing out the various body scans and other diagnostic machines
- Conducting in-service training for the nurses and staff at the new dialysis unit

“The road to innovation and improving the health status of individuals is paved with sticks, boulders, and marbles.”

–Nadine Haykal

Photo of a dialysis machine and chair unit.

Photo taken from: http://upload.wikimedia.org/wikipedia/commons/3/3e/Hemodialysis_machine_INNOVA.jpg

Training to use the Indirect Calorimeter on a co-worker.

Photo of Nadine Haykal.

Training to use the BIA on a co-worker.


By conducting a health assessment on every new patient at the clinic, we are monitoring their health from the moment they make our clinic their home. Since having phoned the employees of Houston's Service Workers, we have seen an increase in patient attendance at the clinic. It is especially rewarding for all of us to hear that our services are being spread by word of mouth. We as the Clinic employees hope to inform, educate, and empower our patients' quality of life by recognizing and addressing any health issues that the workers may have. Furthermore, we hope to assure an environment that enforces and enhances their health in the workforce and in their everyday life.

Duties of my Practicum Experience

• Invite employees of the Houston Service Worker's Clinic to attend their first medical visit
• Assess the health of all new incoming patients

"There is no limit to the services provided at the Clinic. We are the Houston Workers Medical Home."

A Medical Home for Houston Workers

By: Krissett Alexis Loya

My experience at the Houston Service Worker's Clinic brought an opportunity to assess the health of approximately 500 male and female janitors across the Houston area. By using a valid and reliable instrument, we will be able to assess the health of a population that may have complex medical conditions and who may have difficulty accessing care. I conducted primary data collection from November 2009 to April 2010 by calling any workers that were covered by the Service Employee International Union- Local 1 (SEIU) Health Care plan and who had not yet attended the clinic. The purpose of my call was to invite the employees to take advantage of the services offered to them, which include preventive wellness visits and office visits, by setting an appointment to come into our clinic. During their first appointment, I conducted a 25-minute health assessment in Spanish.

Public Health Significance

By conducting a health assessment on every new patient at the clinic, we are monitoring their health from the moment they make our clinic their home. Since having phoned the employees of Houston’s Service Workers, we have seen an increase in patient attendance at the clinic. It is especially rewarding for all of us to hear that our services are being spread by word of mouth. We as the Clinic employees hope to inform, educate, and empower our patients’ quality of life by recognizing and addressing any health issues that the workers may have. Furthermore, we hope to assure an environment that enforces and enhances their health in the workforce and in their everyday life.
The Adverse Impact of Obesity on Colorectal Cancer Outcomes

By: Courtney Balentine

Our group studied the impact of obesity on outcomes in colon and rectal cancer surgery. We explored traditional measures of obesity such as body mass index (BMI) and compared this measure to newer approaches looking at fat distribution and quantity.

I was involved in data collection and analysis as well as being actively involved in collecting cancer specimens for genetic analysis to determine which features predict better or worse outcomes.

We found that greater quantities of intra-abdominal fat predicted better long-term survival following surgery. We also found that larger waist size was associated with more short-term complications following surgery.

Public Health Significance

We helped to identify a population at high risk for short-term complications as well as identifying features associated with improved survival. These findings enabled us to identify individuals who would benefit from targeted interventions in order to reduce inequities in health care outcomes.

Since the VA system is well-integrated at the national level and has a great deal of interest in health services research, our findings serve as preliminary data to begin targeted interventions that will help veterans at multiple hospitals.

“Veterans have given so much to their country, and they deserve the best care we can provide.”

Michael E DeBakey VA Hospital
Genes associated with Scleroderma

Genes and SNPS (Single Nucleotide Polymorphisms) associated with Scleroderma in Choctaws

The basic aim of this project is to identify the genes and provide proof of SNPS being linked with scleroderma among the Choctaw population which suffer from the scleroderma with an incidence rate of 10 times higher than the other populations in the world. The samples of the people were collected and examined at UT Medical School. Candidate gene identifications were done. Through GWAS analysis common SNPS with significant P-values were found out. These P values and SNPS were compared for the GWAS White population suffering from Scleroderma and Choctaw Indians. Odds ratios were compared along with allelic frequency to show the high penetration of certain genes for the high incidence of scleroderma among Choctaws. The Rheumatology department has a Scleroderma Registry where data is collected from patients suffering from scleroderma and help is provided regarding treatment availability and treatment options.

Public Health Significance

Scleroderma was not considered a genetic disease 3-4 years ago. Recent research and interest in genetics have shown that indeed like other autoimmune diseases it is related to genes which impact the functioning of immune system. Genetic epidemiology is a study of distribution of genes. This project helped me to understand the concepts of genetic epidemiology.

Learning laboratory work and getting knowledge about linkage analysis and gene-gene interaction will definitely help me in the future. This also provided me with an opportunity to get a publication as we are trying to complete the analysis and submit a paper on this topic.

Special events/duties during your practicum
- Learned DNA Extraction
- Evaluation and importance of analyzing GWAS data
- Ability to communicate and team work

“Genes- Hold the key to personalized medicine, we all are looking forward too”
Spatial Epidemiology for Community Health
By: Mary M. Ford

As a charity devoted exclusively to assessing and enhancing community health, St Luke’s Episcopal Health Charities uses many cutting-edge research tools to evaluate public health needs.

This spring semester, working with Dr Linda Highfield, I created spatial maps of the Charities grantees. The Charities has funded over 320 programs in the 57 diocese of Texas. During the semester over two dozen maps were built in order to display the great area the Charities’ grant-making covers as well as the variety of health programs funded.

Spatial mapping is not only useful for mapping specific organizations or locations, it can also be used to map prevalence of disease, rates of uninsured, or many other demographic and health areas of interest.

Spatial mapping can be used to retroactively to determine sources of disease outbreaks, monitor health status to identify community health problems, and proactively to predict outbreak areas or disease incidence.

Creating detailed visualizations of public health data and trends informs, educates, and empowers people about public health issues.

Community health in particular receives a great benefit from GIS and spatial mapping in terms of analyzing spatial trends, targeting interventions, and monitoring health trends over time.

Geographical Information System (GIS) or spatial mapping is the merging of cartography and database technologies. It is a visual representation of spatial data that can be combined with traditional cartography methods.

“New Trends in Cartography.”
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