

Public Health Practice



Stories from the Field

The University of Texas School of Public Health
Student Practicum Experiences

Spring 2013 – Environmental & Occupational Health

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 tenth-edition e-magazine showcases student practicum experiences throughout the Spring 2013 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: 5

Hours per Week per Student	Approximately 12
----------------------------	------------------

Campuses (Houston)	1
--------------------	---

Division	1
----------	---

Student

Environmental & Occupational Health

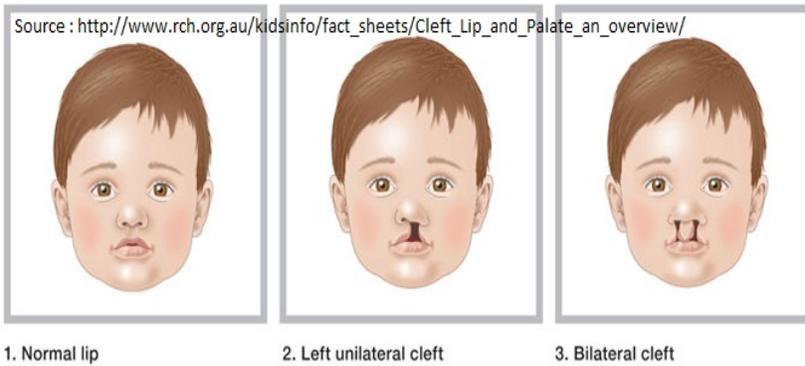
Cleft Lip/Palate Research	Jafreen Ahmed
---------------------------	---------------

Obesity Prevention	Mallory Berger
--------------------	----------------

<i>Clostridium difficile</i>	Noureddin Bhri
------------------------------	----------------

Occupational Health & Worker Compensation	Christina Hegman
---	------------------

Cancer Screening	Gbemisola Olorode
------------------	-------------------



Isolated Cleft lip and Palate

JAFREEN AHMED

Description: At the department of Pediatrics at University of Texas Medical School, they are researching to estimate the environmental and genetic causes of isolated cleft lip and /or palate. They are collecting data from different hospital from patients with isolated cleft lip and/or palate to find any association between cleft lip and/or palate and environmental exposure. DNA samples like saliva and blood are collected from patients to analyze and find any single genetic change responsible for isolated cleft lip and/or palate. My duty was to review articles and studies on isolated cleft lip and palate, recruiting patients, taking informed consent and collecting saliva in saliva kit for DNA samples.

Public Health Significance: Every 1 in 700 children born have cleft lip and/or palate. Many of them are isolated and not the part of a syndrome. The definite cause of isolated cleft lip and/or palate is yet to be discovered. It has been assumed that either genetic or environmental or both factors are responsible for isolated cleft lip and palate. Finding any definite environmental exposure or genetic change will improve the knowledge base and will contribute to prevent this birth defect.

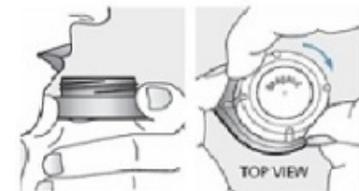
Practicum Duties:

-Review articles and studies related to isolated cleft lip and/or palate

-Taking consent and recruitment of subjects.

-Administration of questionnaires to study participants.

-Collection of saliva for DNA samples



Source:
<https://bcees.org.au/ita-instructions>

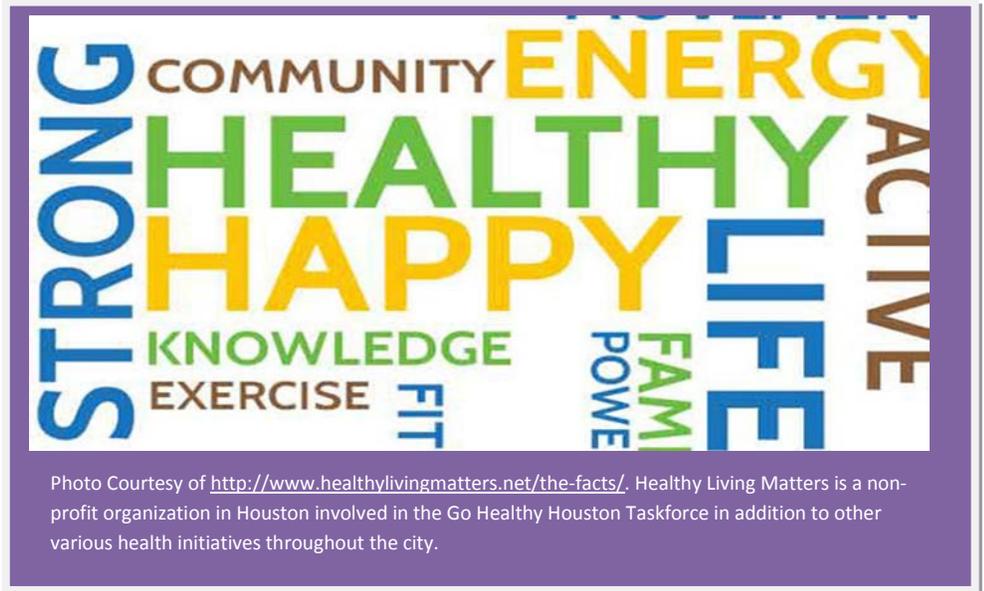
Houston Obesity Prevention

Practicum Highlights

- Identify current issues within the city that could be leading to the obesity epidemic.
- Formulate ideas to promote health around the city.
- Become familiar with Houston area non-profit health organizations
- Research relevant obesity prevention programs in Houston

Advice for Future Practicum Students

- I did my practicum off-site and was allowed to work from home. In the future, or if I were to do it again, I would have enjoyed having a specific place to report to. I think this would have enhanced my practicum experience and allowed me to be more connected to this project.



Go Healthy Houston Taskforce Campaign

By: Mallory Berger

My practicum was in part with the city of Houston's "Go Healthy Houston" campaign to promote health and wellness among the city of Houston. Obesity is a growing epidemic in our country and unfortunately Houston is ranked as one of the most obese cities in the nation.

The "Go Healthy Houston" campaign was introduced by Mayor Anise Parker as a health initiative that will promote

programs, policies and actions designed to reduce food deserts, promote the availability of locally-grown foods, encourage the development of sustainable food systems and promote recreational opportunities.

I was mainly in charge of researching current non-profit obesity initiatives in the city. This information will be used in the future to guide those in need of help.

Public Health Significance

This practicum experience is extremely important to the field of Public Health.

The current health status of Houston was **monitored** in order to **diagnose** the current Obesity problem within the city. As this practicum experience was backed by the Mayor's advisory council on health and environment in addition to the Department of Health and Human Services **developing policies and plans** is crucial to the success of the taskforce. **Enforcing** laws and regulations to promote healthy decisions is the main backbone of the

project. The assignment I worked primarily on in which I researched other obesity initiative programs is going to be later used as **link** for those in need to have quick access to places in which they can receive help if obesity and weight management is of concern.

Because this program is so new, **evaluation** and new **research** is not available.

Clostridium Difficile Infection (CDI)



Clostridium difficile bacteria.

Source:

<http://www.nature.com/news/faecal-transplants-succeed-in-clinical-trial-1.12227>

The role of host and pathogen factors in the pathogenesis of recurrent CDI in children.

By: Nouredin Bhri

At the Section of Pediatric Infectious Diseases of Texas Children's Hospital, they are working to identify specific risk factors associated with recurrent CDI, an emerging disease in children. Researchers are also aiming to identify a population of children at increased risk for recurrent CDI that may require additional treatment or preventive measures. Most of the efforts are focusing on correlating the clinical and laboratory data of eligible patients. As a research assistant, my job is to assist in conducting this study. I have assisted in developing several log forms needed for organizing our data. As part of my job, I am required to assist in data

collection, file in some study forms, specimen collection, and data entry. I have helped in subject screening and enrolment. I have also attended some weekly infection control meetings.

Special duties during practicum

- Assisted in subject screening and enrollment.
- Assisted in data collection, specimen collection, and data entry/analysis.

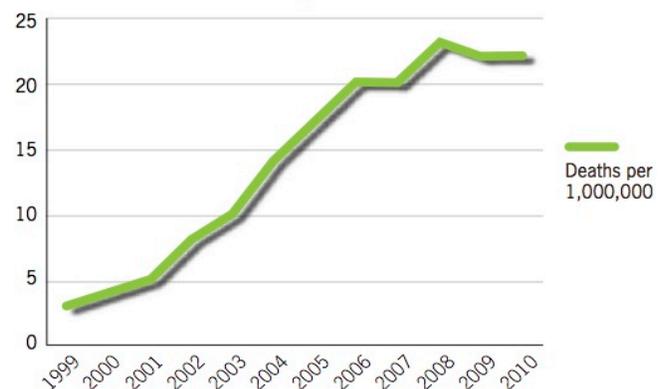
Public Health Significance

Clostridium difficile is an emerging cause of infectious diarrhea in children. It is a recognized cause of antibiotic-associated diarrhea and an important healthcare-associated pathogen. Despite treatment, approximately 20-30% of children with *Clostridium difficile* infection (CDI) have a subsequent episode of diarrhea within 3 months. Investigators at Texas Children's Hospital are currently conducting a prospective study to understand the factors associated with recurrent CDI in children. Research is an important service of public health which constantly pushes the boundaries of what is known, in order to improve the health of the people. By conducting research to help understand the factors associated with recurrent CDI in children, it is possible to prevent the infection and improve the quality of life for the patients. This practicum project thus has a direct impact on public health. Texas Children's Hospital is a research hub where all forms of research is conducted on various pediatric diseases and treatments with one common goal, "eliminating child mortality and suffering", thereby having a significant contribution towards public health.

Lessons Learned [OR] Advice for Future Practicum Students

"Certainly the research shows that grateful people are more innovative thinkers"

Deaths caused by *C. difficile* infections *



*Age-adjusted rate of *C. difficile* as the primary (underlying) cause of death.
SOURCE: CDC National Center for Health Statistics, 2012

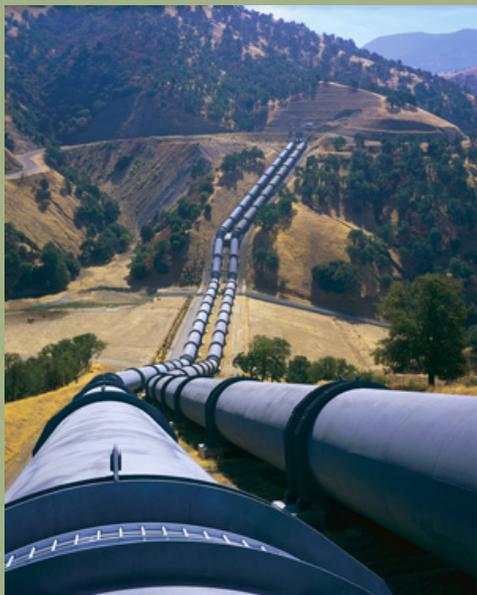
Deaths caused by CDI.

Source:http://cddep.org/blog/posts/more_prevalent_deadly_c_difficile_infections_and_oral_vancomycin_prescribing_correlation_0

Occupational Health & Worker's Compensation

A Closer Look at the Injured Worker

By: Christina Hegman, BSN, RN



Gas pipeline in California.

<http://blog.fieldid.com/2011/11/pipeline-safety-inspections-gaining-attention-from-regulators/>

I provided case management, education, and advocacy for a 24 year old pipeline inspection worker who was injured on the job in 2009. The worker sustained a high-intensity radiation burn to his dominant hand. He is suffering from chronic gamma irradiation syndrome and may lose his hand due to inadequate medical care/treatment.

Dr. Arch Carson and I worked with The Texas Department of State Health Services and The U.S. Department of Energy Radiation Emergency Assistance Center in Oak Ridge, Tennessee to assist the worker with an evaluation by a team of radiation experts from

France and the US.

The worker was evaluated at the Oak Ridge facility two weeks ago. The team from France wants him to travel to France for an experimental skin graft and stem cell transplant procedure in an attempt to save his hand. We are currently working to assist the worker with coordinating this trip.

A nurse is a patient advocate

- *I enjoyed meeting and talking with the worker and his family.*
- *I advocated for the worker to receive mental health services from the worker's compensation insurance company.*

Public Health Significance

Without my and Dr. Carson's help, this individual would not have traveled to Tennessee and would most likely have amputation as his only option. Although we missed the first step, monitor, we were able to follow through with the remaining essential services once the case was brought to our attention.

I think the services we most provided were to inform educate and empower the worker and to mobilize community partners.

My host organization is The University of Texas School of Public Health at Houston. The Southwest Center for Occupational and Environmental Sciences (SWCOEH) was created in 1977. With the help of the National Institute of Occupational Health and Safety (NIOSH), SWCOEH is able to address occupational and environmental health issues by providing training to public health professionals and research into emerging public health threats.

Lessons Learned

Workers are in need of an advocate. It is truly the system against them. Insurance companies will try to get away with the least care as possible. They will not guide the employee or offer assistance for the employee- the employee must be proactive and advocate for themselves. Worker's compensation is complex and confusing to workers. They need someone to guide and assist them through the process so they can receive quality healthcare and return to work as quickly and safely possible.



Workers using a camera to inspect pipeline.
<http://www.pipelineinspectionsservices.com/>

Advances in Cancer Screening.



Gbemí Olorode standing next to a biological hood at MDAnderson.

Special events/ duties during my practicum

- Tissue/ cell culture preparation.
- Passage cells
- Change culture media
- Research into new radiologic metabolites.

Lessons Learned [OR] Advice for Future Students

- I wish I started my practicum in the prior semester and not in my last semester. I would have had more time to integrate what I learn in class with my job. Therefore, start your practicum search early!

Employing metabolic pathways in cancer cells.

By: GBEMISOLA OLORODE

My practicum was at MDAnderson Cancer Center, Experimental Diagnostic Imaging Department.

The project I worked on focused on prostate, ovarian, breast and Kidney cancers.

Samples of cancer tissue were available to be cultured and experimented on to identify key metabolic products in the cancer cells.

The purpose of this is to identify those molecules that can be targeted for imaging studies; by doing this, we hope to make cancer screening and monitoring a lot easier than it is already.

Public Health Significance

At the Experimental and Diagnostic laboratory, different studies are being conducted to broaden the scope of cancer knowledge. We want to understand how cancer cells/tissue behave in order to diagnose cancer early enough to be treated or cured. This falls under 'Research for new insights and innovative solutions to health problems'.

The goal is to identify specific metabolites that can be labeled and easily monitored as they move along metabolic pathways; this process is incorporated into imaging studies to make them more sensitive in identifying cancer cells.



Gbemí Olorode at the tissue culture lab looking into a microscope.

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/>