

Public Health Practice



Stories from the Field

The University of Texas School of Public Health
Student Practicum Experiences
Summer 2014 – Dual Degree

Prevention diabetes safe kids clean water policy disaster response
cancer adolescent sexual health HIV/AIDS research obesity
alcohol empowerment vaccinations maternal & child 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 fourteenth-edition e-magazine showcases student practicum experiences throughout the Summer 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: 3

Hours per Week per Student	Approximately 12
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Campuses (Houston)	1
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Division	1
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Student

Dual Degree

Best open repair for ventral hernias	Ioana Bondre
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Special Populations in Pediatrics	Rachel Hicks
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Blunt Cerebrovascular Injury	Cozette Kale
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Best open repair for ventral hernias



LBJ Hospital
Harris Health
System
Houston, TX

Image credit
www.lbj.uth.tmc.edu

Research at LBJ Surgery: improving the care of Harris County citizens

My main practicum project involved a retrospective chart review of all patients who received a ventral hernia repair at LBJ Hospital between 2010 and 2011.

The data I collected was merged with data from six other large medical centers. My data analysis aims to answer the question of which type of open ventral hernia repair results in the lowest rate of surgical site infections,

recurrence, and reoperations. The types of repair considered are: primary suture repair and mesh repair either with light weight synthetic mesh or biologic mesh.

The abstract of my research project will be submitted to the 2015 Academic Surgical Congress conference. The findings will also be submitted for publication. However, the manuscript will not be finalized until after the end of the practicum.

Public Health Significance

LBJ Hospital provides several Public Health Essential Services. Most closely related to my practicum experience is research for new insights and innovative solutions to health problems

My project on ventral hernias is meant to help with decision making regarding the best repair option for umbilical and incisional hernias which, such that surgical site infections, recurrence, and reoperations are minimized. Ventral hernia repairs are a significant public health problem. They are challenging

to treat and present a substantial financial burden on the healthcare system. It is estimated that in 2006, 3.2 billion dollars were spent on the repair of 365,000 hernias.

Other Public Health Essential Services provided at LBJ Hospital are: linking people to needed personal health services and assure the provision of health care when otherwise unavailable, diagnosing and investigating health problems and health hazards in the community, and educating people about health issues.

Special events/ duties during your practicum

- Learned how to read abdominal CT scans and measure hernias.
- Applied the competencies learned in the MPH Biostatistics course to analyze the data I collected.

Lessons Learned [OR] Advice for Future Students

- Be flexible about the project(s) you are involved in. Your responsibilities could change throughout the duration of the practicum.
- Be prepared to do a lot of independent learning. You may need to do use things you have not learned in class.



Ventral hernias are protrusions through the abdominal wall fascia.

Image credit:
www.ventral-hernia.co.uk

Special Populations in Pediatrics

Practicum Highlights

- Preceptorship at the Juvenile Detention Center in downtown Houston
- Becoming very familiar with the research process and the IRB

Lessons Learned

- Lessons learned: research is a long process that requires patience; it would have been beneficial for me to have had learned this earlier!
- Medicine involves dealing with special populations, most of which will illicit different feelings; I learned it is important to reflect on these feelings and use them to shape my future career and hone in on what I want to achieve



This practicum took me all over Houston, well beyond my home of the Med Center.

<http://www.urbansplatter.com/photos-houstons-pretty-skyline/>

Juvenile Delinquents, Pediatric Obesity, and More

By: Rachel Hicks

My practicum had a lot of components, but one very important theme: special populations within the realm of pediatrics. Part of my practicum was spent precepting an adolescent medicine specialist at the Juvenile Detention Center in downtown Houston. I saw a lot of things I did not like there, and it made me feel even more passionate about health disparities. I also was able to shadow a pediatric physician in the Emergency

Department, who was crucial in aiding with my research project.

The other major half of my practicum involved creating a research project, which is still in the works. I wanted to study any possible associations between pediatric obesity and emergency medicine, specifically examining these variables: chief complaint, admission rate, race, ethnicity, discharge diagnosis, time spent in the ER, and quite a few more!

Public Health Significance

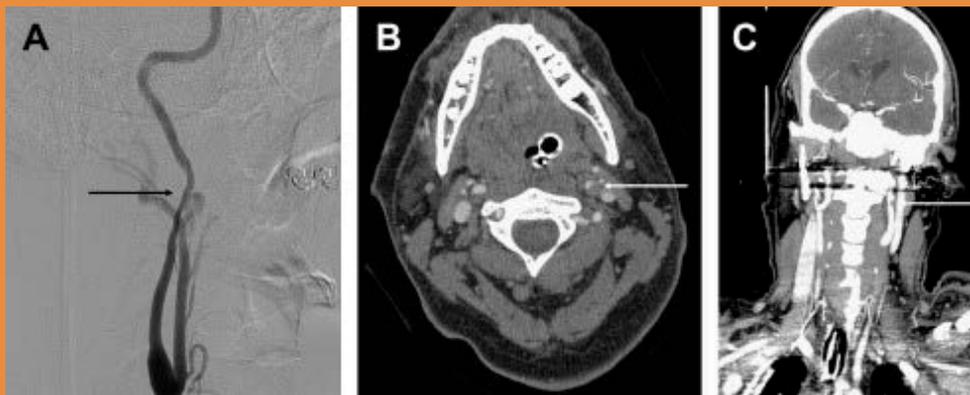
This practicum worked to fulfill two major Public Health Services by monitoring the health status of children and researching new insights.

Precepting at the Juvenile Detention Center Medical unit showed me that a lot of what makes up the physician's job at this location is to monitor the health of these kids, many of whom have never seen a doctor before. As a precepting student, I was also a part of this essential service. As physicians, they work to diagnose various health issues,

such as in the treatment of STDs, anxiety problems, and even dental issues that have gone unnoticed for years.

One of the main goals of my research project is to shed new light on pediatric obesity and how it pertains to the population at Memorial Hermann and to the field of Emergency Medicine. I hope to be able to contribute new insights on the prevalence of pediatric obesity in this population, as well as the demand it places on one of the most expensive avenues for care.

Blunt Cerebrovascular Injury (BCVI)



Greater than 25% luminal narrowing of carotid artery consistent with Grade 2 BCVI injury per Denver Grading Scale (A-C). Image source: Burlew, C. C., & Biffi, W. L. (2011). Imaging for blunt carotid and vertebral artery injuries. *Surgical Clinics of North America*, 91(1), 217-231.

Management of BCVI with concomitant injuries that contraindicate antithrombotic therapy

A. Cozette Kale

This summer I had the opportunity to help conduct a retrospective study with the Center for Translational Injury Research (CeTIR) under the supervision of Dr. Michelle McNutt and Dr. John Holcomb, concerning the incidence of stroke among patients diagnosed with a blunt cerebrovascular injury (BCVI), an injury to the vertebral or carotid artery due to blunt trauma.

I used electronic medical records and the trauma registry at Memorial Hermann Hospital to retrieve data from our blunt trauma population diagnosed with a BCVI. These data were evaluated to determine whether BCVI patients with other injuries such as traumatic brain injury, solid organ injury, or spinal cord injury are at a higher risk for stroke than patients with isolated BCVI. Antiplatelet or heparin therapy are indicated in isolated cases of BCVI as these treatment regimens are associated with decreased incidence of ischemic stroke. However, proper treatment remains unclear for BCVIs with other injuries due to potential bleeding complications.

Results will be presented at the Summer Research Forum and Frank C. Webber Poster Competition at UT Houston Medical School in Fall 2014.

Public Health Significance

The incidence of BCVI is less than 1% in the greater trauma population; however, these injuries predispose patients to devastating cerebral ischemic crises (Biffi et al., 2002).

Common mechanisms of injury that cause BCVIs, such as motor vehicle accidents, many times also result in concomitant injuries that contraindicate antithrombotic therapy.

Proper treatment for BCVIs complicated by other injuries has yet to be established.

Biffi, W. L., Ray Jr, C. E., Moore, E. E., Franciose, R. J., Aly, S., Heyrosa, M. G., ... & Burch, J. M. (2002). Treatment-related outcomes from blunt cerebrovascular injuries: importance of routine follow-up arteriography. *Annals of surgery*, 235(5), 699.

Our study will help elucidate proper management strategies for these BCVI patients when traditional therapy is contraindicated.

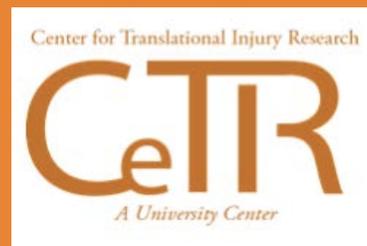
Therefore, the primary Public Health Essential Service (PHES) that our BCVI study addresses is "Research for new insights and innovative solutions to health problems."

Practicum Highlights

- Work with electronic medical records to retrieve patient data
- Analyze retrospective data for stroke risk factors
- Attend weekly Surgery Grand Rounds and CeTIR Injury Meetings
- Shadow trauma surgeons in the Emergency Department

Lessons Learned

- Evidence-based treatment strategies for trauma patients continuously evolve and improve
- Clinical research is a collaborative process that involves the direct application of epidemiologic and statistical principles
- Retrospective studies have limitations: inconsistencies in data collection and/or incomplete records
- Protecting patient privacy is crucial to the integrity of medical research
- Ask questions and take advantage of every learning opportunity!



CeTIR is a research center affiliated with the UT Health Science Center at Houston
<http://cetir-tmc.org/>

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/>