

Your are invited to attend the



2013-  
2014

# Scholarly PATHWAYS



## M-3 Scholarship Forum Thursday, June 5, 2014

Third year MCW students will share the culmination of their scholarly work in seven Pathways:

Bioethics                      Clinician Educator                      Global Health  
Master Clinician                      Physician Scientist  
Quality Improvement & Patient Safety                      Urban & Community Health

Pathway advisors, project mentors, community partners, fellow students, collaborators, staff and others are invited to come and hear what was learned!

### ORDER OF EVENTS

- 1:00-1:15 **Convene and Welcome** - Linda Meurer, MD, MPH, Director, Urban & Community Health Pathway  
**Special Remarks** - John Raymond, MD, President and CEO, MCW
- 1:15-2:25 **Podium Presentations - Part I** in the Kerrigan Auditorium
- 2:25-3:25 **Poster Viewing & Refreshments** in the Alumni Center
- 3:25-3:30 **Reconvene** - David Brousseau, MD, MS, Director, Physician Scientist Pathway
- 3:30-4:30 **Podium Presentations - Part II** in the Kerrigan Auditorium
- 4:30-4:45 **Summary Remarks** - Jose Franco, MD, Director, Discovery Curriculum
- 4:45-5:00 **Evaluations**

For more information email [pathways@mcw.edu](mailto:pathways@mcw.edu)

















...of these women in many  
help, some women with the  
The study aimed to assess the  
business services and their relative  
importance in respect to their  
business. Methods: A literature  
review of case studies presented  
necessity exploring connections  
with family regarding their  
business. Subjects were part of  
focus groups, case studies, or  
interviews of various. Discussion  
responses were assessed in  
focus groups. Results/Conclusion:  
Women were more likely to  
access their health when  
information was placed in the  
documentary "horror-story" of  
women in the documentary was  
viewed. Viewers reported  
challenges in all three  
project countries as  
discriminate the documentary  
panels.

**Methods**  
High process  
exploratory  
of literature

**IDENTIFICATION AND EVALUATION OF A REFUGEE**  
EDUCATION  
... of the ...  
... of the ...  
... of the ...

**PATHWAYS**  
The ...  
... of the ...  
... of the ...



- Celiac disease is a chronic autoimmune disease that affects ~1% of the US population.
- ~85% of celiacs are undiagnosed.
- Untreated celiac is associated with significant morbidity
- Early recognition and treatment virtually eliminate the morbidity of celiac disease and the risk of mortality.
- The low diagnosis rate is believed to be due to difficulty recognizing relevant symptoms which span nearly every medical specialty.

**Who is the 1 in 100**



**Aims**

- To review all existing literature regarding celiac disease screening
- To identify patient presentations that suggest a high risk for celiac disease for whom screening should be offered.

**Search Methods**

... and PubMed were searched ... 2014 for relevant studies ... search strategy to identify case ... clinical trials, controlled trials, ... ation studies, meta-analyses

Studies on an adult patient population

Studies examining presenting symptoms of celiac disease

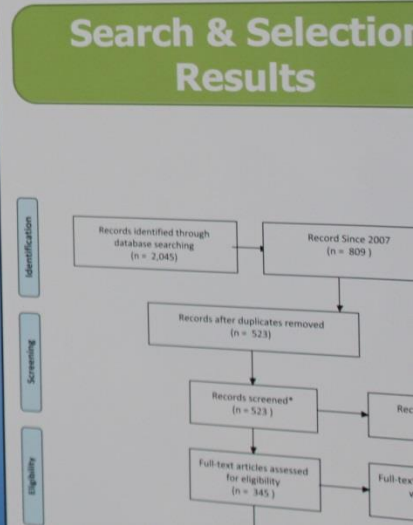
**EXCLUSION CRITERIA**

Studies examining progression, events, or interventions post-diagnosis

Studies examining the efficacy of screening or testing tools

Studies focused on the prevalence of celiac disease

Studies examining other gluten or wheat-related disorders



# Implementing a sustainable health education curriculum at Milwaukee's Journey House and South Division High School

Vida Rostami & Ketan Nadkarni

## Introduction

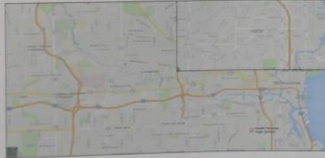
Milwaukee's poorest residents continue to have the poorest health. Health disparities must be approached from multiple angles. Community infrastructures, such as Journey House, work towards eliminating disparities. Journey House is "a community infrastructure that increases education, reduces unemployment and crime, strengthens families, and revitalizes neighborhoods." It has served over 4,400 men, women, and children (2011 Community Report). Participants' backgrounds: 62% Latino, 26% African American, 7% Caucasian (2011 Community Report)

## Objectives (Clear Goals)

Implemented by a service learning model, Medical students and medical students aimed to plan and implement a sustainable health education curriculum. Curriculum included: promote healthy choices, develop a mentorship program, and explore healthcare careers.

## Methods

- Spring 2012 Needs Assessment: Youth participants identify several health topics and interactive ways they enjoy learning
- Fall 2012: Begin monthly planning and implementation of sessions with Journey House youth leadership groups
- Monthly in 2012-2013 pilot: Informal reflection with MCW leaders and feedback from Journey House participants and leaders
- Monthly in 2013-2014: continuation of implementation of curriculum in addition to mentorship program development efforts



South Division High School is in one of the Milwaukee's most diverse, economically challenged, and crime ridden neighborhoods.

## Results

- Led 8 educational sessions for youth
- Addressed needs identified in needs assessment including bullying, nutrition, media literacy, puberty, and
- Interactive fun activities: skits, videos, cooking, quiz, and board game

## Conclusion

### Nutrition Session Plan Objectives

- Gain a basic understanding of serving size
- Learn to read a food label
- Incite enthusiasm for healthy eating and nutrition
- Expose students to healthy foods
- Provide introduction to connection between nutrition and disease
- Facilitate reflection on dietary habits

Setup: Students rotate through four stations, spending 15 minutes at each.

Station 1: How to read a food label & serving size

- Discussion of daily food choices
- What is a good food choice or a healthy snack?
- Share healthy snacks

Station 3: Nutrition and Disease

- Choice of a dinner of turkey chili or vegetable soup made by medical students and residents

### Example of monthly educational session

## Review

Area

-



# Effect of In-Person Interpreter Availability in the Pediatric Emergency Department by Limited English Proficiency

Jessica Lee, Breanne Pacheco Shah, MD, MPH<sup>1</sup>, Marissa Lee, MD, MPH<sup>2</sup>

## Background

- Language barriers are an important determinant of the quality of care received by LEP patients in the pediatric emergency department (PED)
- Current evidence suggests that in-person, professional interpreters are associated with improved patient outcomes
- Few studies have examined the impact of interpreter coverage hours on patient outcomes
- Research suggests that interpreter coverage hours are associated with patient outcomes

## Analysis

- Chi square analysis of proportion of LEP patients to EP Latinos before and after the change in interpreter coverage hours
- Sub-analyzed times 0000-0600 and 0600-2400

## Results

Hours	Date	Interpreters
0000-0600	Prior to Oct 2010	1
0000-0600	After Oct 2010	8
0600-2400	Prior to Oct 2010	12
0600-2400	After Oct 2010	58

Percentage of Spanish Interpretation from 0000-0600

Figure 2. Percentage of Spanish Interpretation from 0000-0600







# Parent and Family Satisfaction

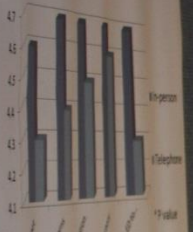
Michael Levas, M.D., Cole Helm  
University of Wisconsin Medical College, Children's Hospital of Wisconsin

Results

Conclusions

Limitations/Next Steps

Figure 2



Diet  
Coke

Sprite

UW MEDICAL COLLEGE  
UNIVERSITY OF WISCONSIN  
Medical Student

EXIT

# THE WARRIOR PARTNERSHIP

Benjamin Carron; Monica Stout; John Myers; Michael Orban; Michael McBride, MD  
Medical College of Wisconsin, Clement J. Zablocki VA Medical Center

## What We Learned from the Warrior Partnership

Students in medicine and a non-medical background are to approach veterans, particularly veterans who have served in the military, in programs and services, other programs such as those that are designed to help veterans, families and medical students, both groups, because more...

Background	Methods
<p>Background: The Warrior Partnership is a program that provides medical students with a unique opportunity to interact with veterans and their families. The program is designed to help medical students understand the needs of veterans and their families, and to provide them with the resources they need to help them. The program is a partnership between the Medical College of Wisconsin and the Clement J. Zablocki VA Medical Center.</p>	<p><b>Background:</b> Medical students interacted with veterans and their families through the Warrior Partnership. The program is designed to help medical students understand the needs of veterans and their families, and to provide them with the resources they need to help them. The program is a partnership between the Medical College of Wisconsin and the Clement J. Zablocki VA Medical Center.</p> <p><b>Methods:</b> Medical students interacted with veterans and their families through the Warrior Partnership. The program is designed to help medical students understand the needs of veterans and their families, and to provide them with the resources they need to help them. The program is a partnership between the Medical College of Wisconsin and the Clement J. Zablocki VA Medical Center.</p>





# Warrior Partnership

Presented by: John Myers; Michael Orban; Michael McBride, MD  
 Wisconsin, Clement J. Zablocki VA Medical Center

**What We Learned from the Warrior Partnership:**  
 Curriculum on how to approach Veterans, particularly when faced with Veterans' mental health.  
 Programs that benefit other Veterans; programs such as this one may shape future Veteran healthcare.  
 Veterans and medical students, both groups become more comfortable with each other.

Methods	Results
---------	---------

**Recruitment:** Medical students contacted through email, Facebook, or word of mouth. Veterans contacted through employees at the VA Mental Health Clinic and through the Veterans' student group at UW-Milwaukee.

**Education:** Students attended a mandatory meeting on project expectations, clinical skills-building in affect management, and crisis identification/management.

Small groups were assigned, consisting of medical students, 2-3 OIF/OEF Veterans, and veteran facilitators. The students and Veterans met as a large group to share a meal and discussion prior to each of the three small sessions that were held over the course of the project.

The small groups focused on:  
 - Military life  
 - Returning military deployment  
 - Deployment/visions of the future  
 After the final meeting, both Veterans and medical students were asked to provide feedback through questionnaires. The feedback was used to inform future participation in the project.

Over three sessions of the project, 40 Student and 29 Veteran feedback forms were collected.

### Student Feedback Forms

Category of Questions	Response
Level of preparation and comfort with experiences being shared	93% felt prepared for the discussions with experiences being shared.
Value in interacting with the Veteran population	100% thought project was valuable, especially for their future careers.
Appropriateness of project format, interest in future participation, and suggestions for improvement	100% said small groups appropriate. 98% interested in future participation. Suggestions included expanding the program, debriefing other small groups, and increasing Veterans session topics.

### Veteran Feedback Forms

Category of Questions	Response
Personal response to experiences being shared	86% felt comfortable sharing and hearing experiences of others.
Value in interacting with medical students and other Veterans in this context	100% found project valuable, particularly in its benefit to students as future physicians.
Appropriateness of project format, interest in future participation, and suggestions for improvement	97% liked the small group format. 97% interested in future participation. Suggestions included expanding the program and increasing students' participation in sessions.

### Conclusion/Next Steps

**Interpretation of Results:** The majority of Veteran and student participants felt the Warrior Partnership should be continued and expanded.  
**Limitations:** 1. The project was limited by a small number of participants (N=69). 2. Results based only on those present at each of the final sessions. Continued recruitment for MCW's and scholarly presentation to medical schools.

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MEDICAL COLLEGE OF WISCONSIN

Introduction

Medical Cytology in Low Resource Settings: A Review of 10 Studies

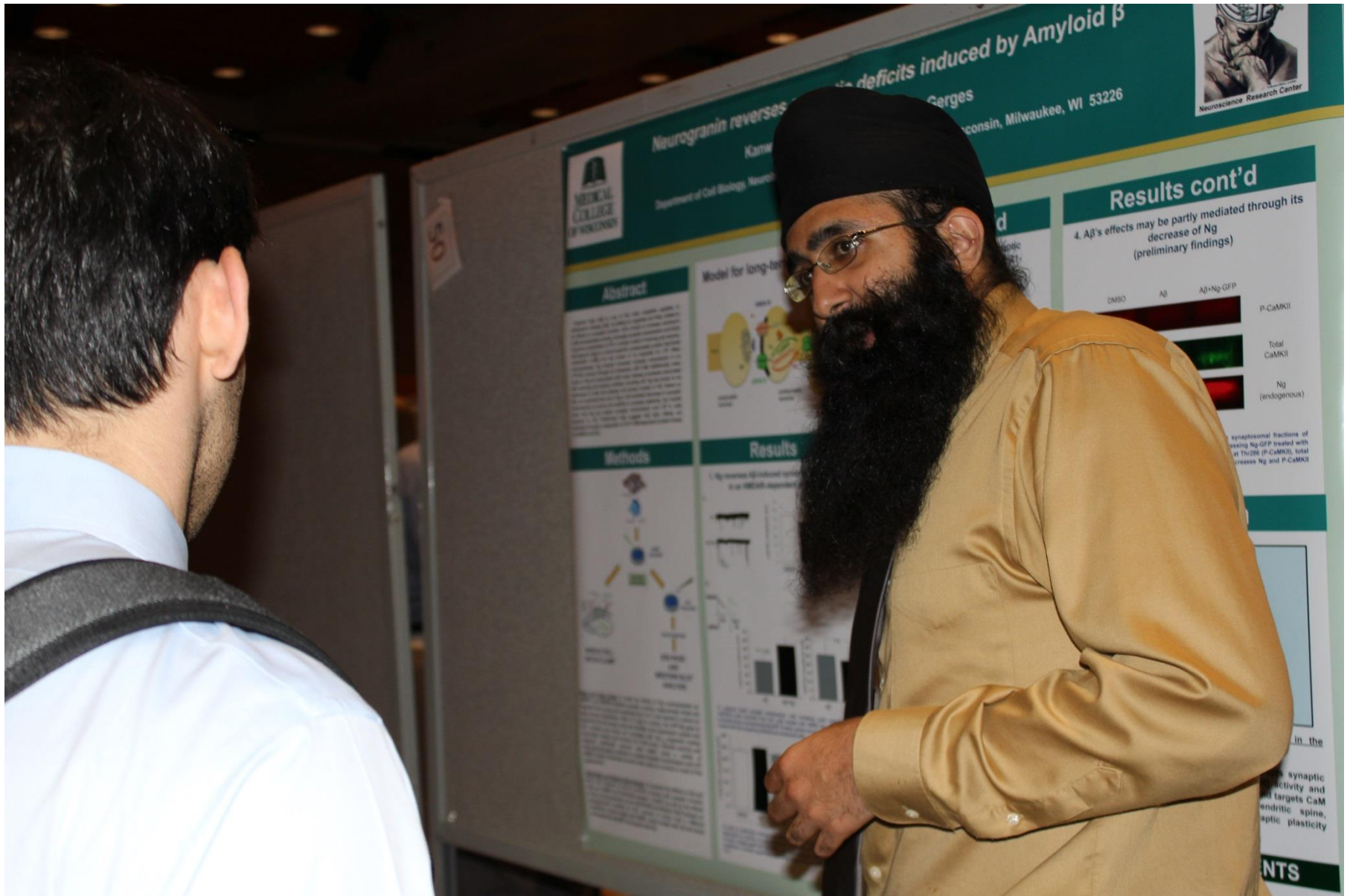
Methods

Results

Conclusion





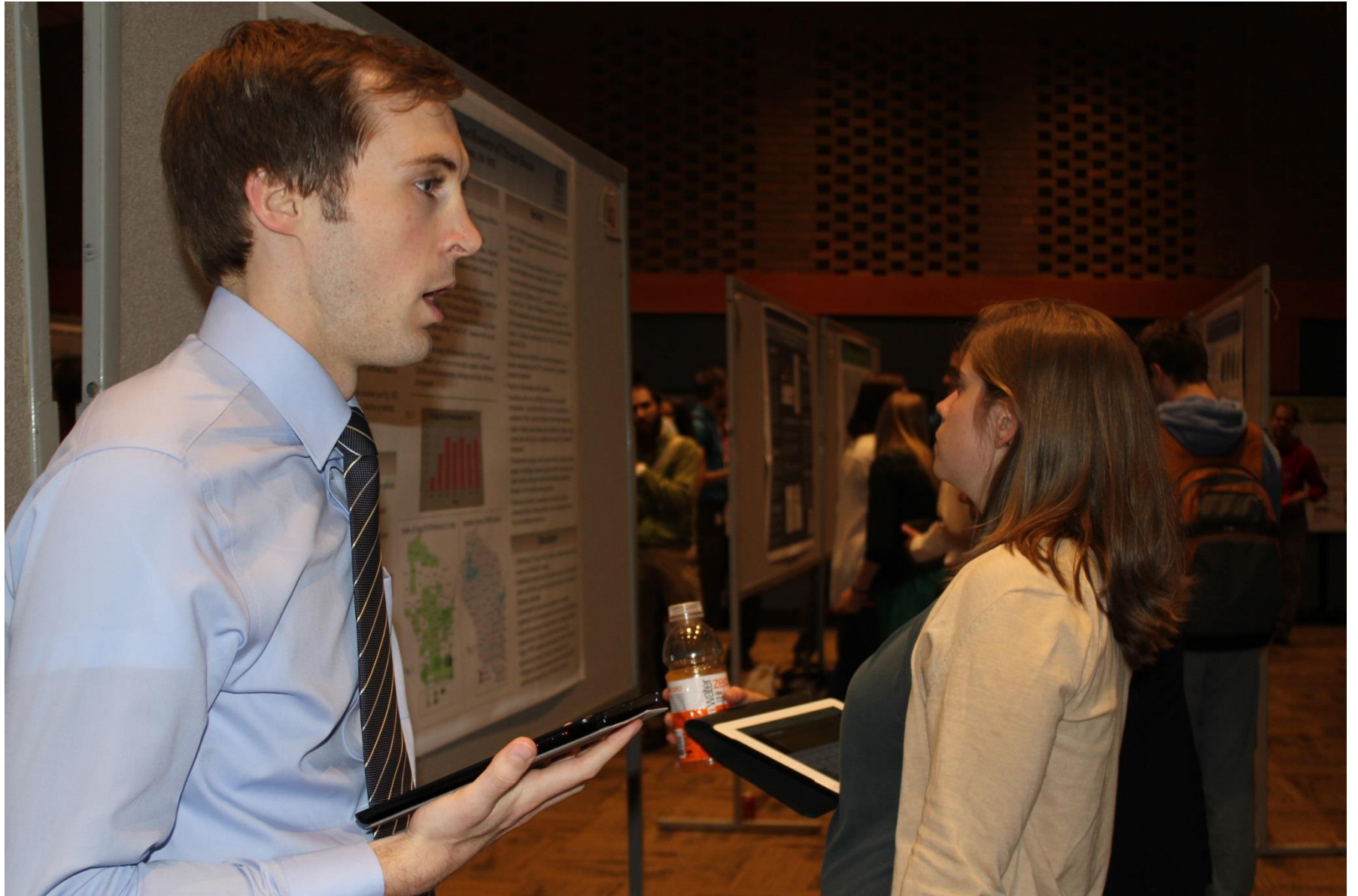












# Evaluation of Dating Violence Resources in Milwaukee Medical College of Wisconsin

## Background

- Teen dating violence (TDV) is defined as a continuum of controlling or dominating acts that cause some degree of harm, most often includes physical, psychological/emotional, verbal, and/or sexual abuse.
- Both teen dating violence (TDV) perpetration and victimization have been strongly correlated with multiple health risks among adolescents, including substance use, unprotected sex, unplanned pregnancy, multiple sexual partners, unhealthy weight control behaviors, and physical fighting. Many of these issues can lead to ED visits, increasing the likelihood of TDV victims and perpetrators presenting in the ED setting.
- There is no significant difference between genders in reporting victimization over their lifetime.

## Goals

- Discover resources available to victims of dating violence in Milwaukee.
- Evaluate the utilization of local resources by health care professionals and hospital social workers.
- Create a way to consolidate dating violence resources in a way that is easy and effective for health care professionals and victims to reach community agencies.

## References

Bronfen, C., Raj, A., Iori, S., & Bauchner, H. Dating Violence Among Adolescents Presenting to a Pediatric Emergency Department. Archives of Pediatric Adolescent Medicine, 165, 1101-1106.

Offenhauer, P., & Buchhalter, A. Teen Dating Violence: A Literature Review and Annotated Bibliography. Archives of Pediatric Adolescent Medicine, 1-92.

Ericsson MJ, Gitterman MA, David D. Risk factors for dating violence among adolescent females presenting to the pediatric emergency department. J Trauma. 2010;69(4) (suppl): S237-S232.



## Methods

SUBJECTS: Social workers, adolescent medicine physicians at the Children's Hospital

INTERVENTIONS: Creation of a Facebook page providing information on local resources, education on recognizing dating violence in a concise and interactive format.

MEASUREMENTS: Voluntary completion of a survey assessing dating violence resources and their utilization.



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## References

- Bromsen, C., Rag, A., Noel, S., & Bauckner, H. Dating Violence Among Adolescents Presenting to a Pediatric Emergency Department. *Archives of Pediatric Adolescent Medicine*, 165, 1101-1106.
- Offenhauer, P., & Buchhalter, A. Teen Dating Violence: A Literature Review and Annotated Bibliography. *Archives of Pediatric Adolescent Medicine*, 1-65.
- Erickson MJ, Gittelman BK, David D. Risk factors for dating violence among adolescent females presenting to the pediatric emergency department. *J Trauma*. 2010;69(4)(suppl): S227-S232.

...no, Amanda Kraus M3, Kelly Curran MD MA  
Medical College of Wisconsin



## Results

When surveyed, 43.3% of subjects did not have a way to easily access community resources when an adolescent patient presented with a history of TDV.

75% of subjects reported that a Facebook page that consolidated local resources for TDV that could be accessed via a mobile device would be a helpful resource.

SUBJECT  
medic...

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### Introduction

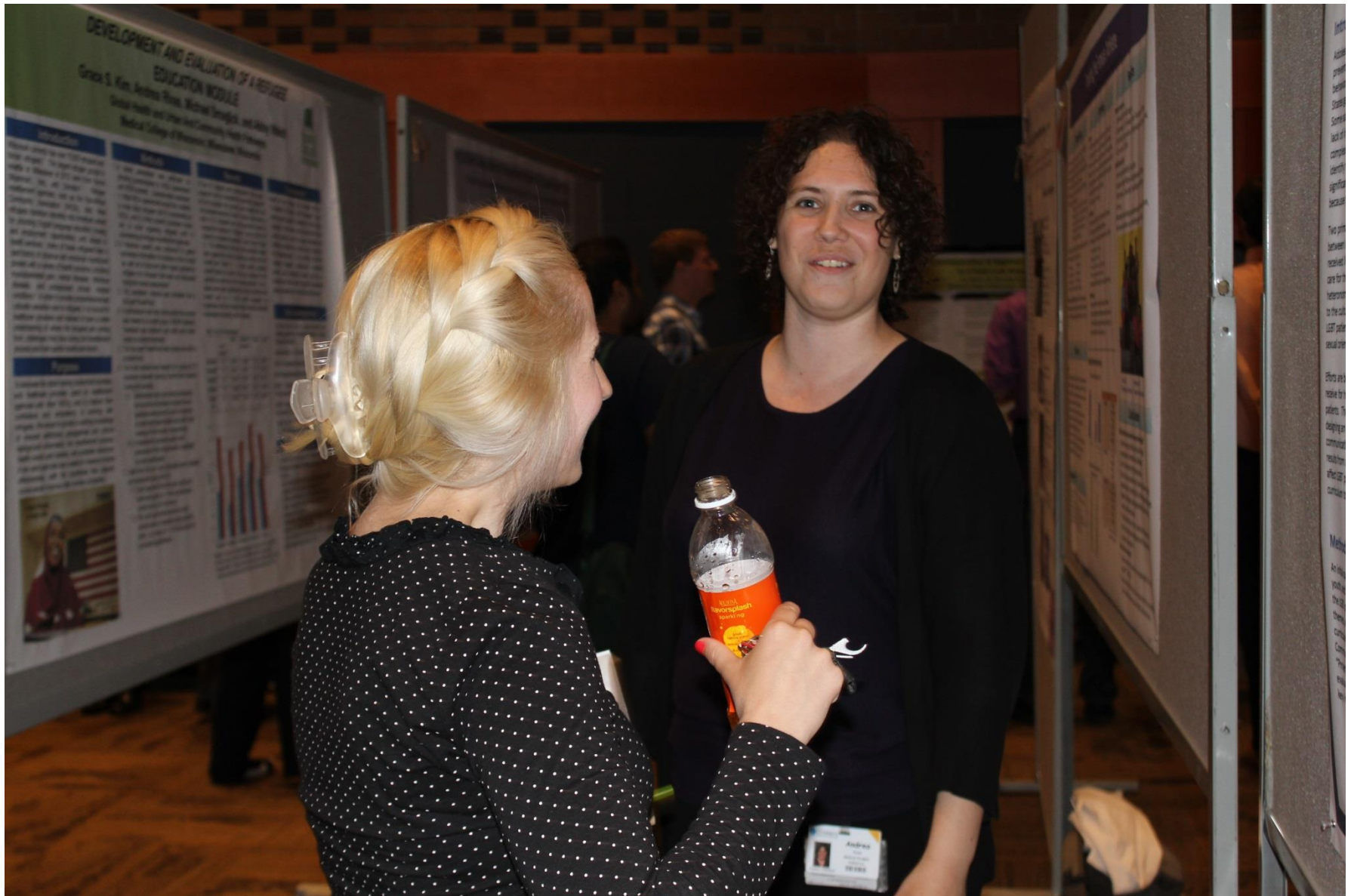
- By 2030, the percentage of the US population greater than 65 years old is projected to be 19.3%
- Latino Americans are one of the fastest growing minority elderly populations and have greater risk of developing dementia.
- Caregivers of dementia patients have higher risk for depression, anxiety, and other chronic co-morbidities.
- Latino family caregivers have a higher prevalence of depression and face a number of unique socioeconomic stressors including language barriers, socioeconomic disparities, and decreased access to healthcare resources.
- The Family Systems Model with Behavioral Activation (FSM-BA) has been efficaciously used to help Latinos with depression.

### Purpose

- Implement a 6-month, flexible, bilingual, multi-component intervention based on culturally-nuanced individual problem-solving sessions guided by Family Systems Model and Behavioral Activation for Latino family caregivers of a person with dementia.
- Determine the program's efficacy in decreasing caregiver burden and risk of depression.

...ers agreed to participate between 20...  
...d through UCC's Memory Clinic, A...  
...associated with the program...  
...ated at baseline, 3 months, 6 m...  
...9 (PHQ-9)  
...ment  
...C)  
...ions  
...UCC social worker  
...ation sessions  
...or Skype as nee...  
...the







## Trends in Racial/Ethnic Health Disparities

Isaac D Weeks, BA; John R Me  
Urban And Community Health  
Medical College of Wisconsin, Milwaukee

MEDICAL COLLEGE OF WISCONSIN  
Institute for Health and Society

### Abstract

**Background:** In 2011, the US Department of Health and Human Services released an Action Plan to Reduce Racial and Ethnic Health Disparities. This literature review reports on a selection of these measures in the years 2000 and 2010 in Milwaukee, Wisconsin and the US. Health disparities (percentage of low birthweight newborns) for black children were twice that of whites in all comparisons. Wisconsin experienced a lower rate of health insurance coverage in disparities than the US, and blacks in Wisconsin were less likely to have insurance in 2010. Non-Hispanic Americans had the highest smoking rates and were the most of blacks in disparities with chronic. Education, race/ethnicity, health insurance coverage, healthy body outcomes and weight for blacks, and tobacco prevention for Native Americans.

### Background

In 2011, the US Department of Health and Human Services published an Action Plan to Reduce Racial and Ethnic Health Disparities. The report includes 14 key disparity measures and several goals to reduce and/or eliminate national disparities in health and health care. Three disparity measures include rates of health insurance coverage, percentage of low birth weight, percentage of individuals who smoke, and percentage of individuals who are obese.

### Questions

What are the rates and trends of health disparities in Milwaukee and Wisconsin? Where should resources be focused? What are the greatest opportunities for improvement?

### Methods

Data was collected from the 14 key disparity measures listed in the 2010 Action Plan. We used related keywords to search Census Bureau American Factfinder, US Centers for Disease Control and Prevention, and the Wisconsin Department of Health Services and Health Statistics reported by counties. At times 2000 and 2010. We found information for the City of Milwaukee, Wisconsin, and the US for educational attainment, income and poverty, and low birth weight newborns. We Wisconsin, and the US about health insurance coverage, tobacco smoking, overweight and obesity.

### Results

**High school diploma or greater (aged 25 years or older) (Table 1)**

- Wisconsin increased from 2000 to 2010 in all groups.
- Most likely to have earned a high school diploma.
- Most likely to have earned a high school diploma.
- Most likely to have earned a high school diploma.
- Most likely to have earned a high school diploma.

**Income (Table 1)**

- and Hispanic households were significantly lower than whites and Asian households.
- in household, in Wisconsin, and Milwaukee County was 15% that of white households.

**Individuals below poverty (Table 1)**

- in Milwaukee, compared to the US average.
- City of Milwaukee reported greater rates of poverty.
- Milwaukee increased 100% more likely to be poor than whites in 2010.

**Low birthweight (under 3.5 lbs or 2500 grams) (Table 1)**

- Wisconsin, average in 2000 and 2010.
- of all newborns were significantly lower than the US in 2000 and 2010.
- low at low birth weight was double or more high than of other racial/ethnic groups.

**Elderly population (>65 years old) with health coverage (Figure 1)**

- coverage in both 2000 and 2010.
- of all elderly people had health coverage in both years.
- of coverage while Hispanics reported the lowest.

**Adolescents who smoke cigarettes (Figure 2)**

- in 2000, adolescents and young Wisconsin, among all racial/ethnic groups.
- likely to use cigarettes while Native Americans and those who were black to smoke.

**Adults with healthy weight (Figure 3)**

- increased in the US and Wisconsin from 2000 to 2010.
- to be obese compared to whites in Hispanics especially in Wisconsin.

low birthweight newborns (%)

elderly population (>65 years old) with health coverage (%)

percentage of individuals who smoke cigarettes (%)

percentage of individuals with healthy weight (%)

Year	United States			Wisconsin			Milwaukee			
	2000	2010	2000	2010	2000	2010	2000	2010	2000	
<b>Percentage with a high school diploma or greater (aged 25 years or older)</b>										
All	80.4	82.6	81.3	80.3	80.7	80.2				
White	80.5	80.7	80.9	82.3	80.7	80.7				
Black	72.3	82.9	68.1	80.6	67.9	67.9				
Hispanic	33.4	62.2	24.9	66.4	49.6	49.6				
Asian	80.4	81.4	79.2	82.7	82.7	82.7				
<b>Median household income in dollars</b>										
All	42,140	50,831	43,791	49,001	49,001	38,100				
White	43,204	50,178	43,356	51,372	42,878	42,878				
Black	30,639	33,137	23,349	36,275	24,220	24,220				
Hispanic	19,447	34,828	24,278	32,298	22,883	22,883				
Asian	53,223	68,236	47,543	47,149	43,947	43,947				
<b>Native Americans</b>										
All	30.9	27.7	37.9	32.7	32.7	32.7				
<b>Percentage of individuals below poverty</b>										
All	11.9	10.1	8.1	11.2	14	14				
White	9.7	8.9	6.1	9.8	6.6	6.6				
Black	22.3	27.4	31.6	18.7	22.8	22.8				
Hispanic	21.2	28.8	31.7	27.6	28.3	28.3				
Asian	10.4	12.1	19.7	21.1	18.2	18.2				
<b>Native Americans</b>										
All	23.7	22.7	38.9	22.9	22.9	22.9				
<b>Percentage of infants born at low birthweight (under 3.5 lbs or 2500 g)</b>										
All	7.07	6.11	6.33	7.04	9.09	9.09				
White	4.46	7.14	7.19	6.22	6.72	6.72				
Black	13.13	13.53	13.53	13.78	13.80	13.80				
Asian	8.49	6.03	7.36	7.12	7.12	7.12				
Hispanic	8.41	8.97	6.58	7.82	8.92	8.92				
Asian	7.01	4.60	7.13	10.43	10.43	10.43				
<b>Native Americans</b>										
All	7.98	7.98	8.08	7.78	7.78	7.78				

percentage of individuals with healthy weight (%)

**Table 1.** Health measures in the US, Wisconsin, Milwaukee County and the C  
2010 by race and/or ethnicity. Light green designates a significant difference from white  
designates the most disadvantaged group. \* = Data is from a three year estimate rather than a  
a five year estimate rather than a one year estimate. † = Data was specific for Lactansio/Hispanic  
Asian.

**Figure 2.** Percentage of adults and adolescents who smoke cigarettes.

**Figure 3.** Percentage of adults (>18 years old) with healthy weight.



### Hepatitis C Education at M&S Clinical Services

Benjamin Bondow M3, Nicole Levin M3,  
Rev. Mark Fossie, Jose Franco, MD.

#### METHODS

- Educational session with the staff of M&S to explain hepatitis C and create an open dialogue with the staff.
- Development of a screening survey to help the staff identify high risk individuals between April-November, 2012.
  - IV Drug users
  - Those who have received blood transfusions before 1992
  - Those who have been incarcerated
  - Those on hemodialysis
- Men who have sex with men
- A participating safe ARVU allowed for easy access to HCV testing of high risk individuals.
- Educational material was created to be given to all clients in order to increase awareness for those not accessing M&S clinical services.

#### RESULTS





# Assessment: Brainstem Infarcts

A Ceranske, AP Klein, MD  
Departments of Radiology  
Medical College of Wisconsin  
Milwaukee, Wisconsin

## Medulla

**CASE 1:** 54 year-old female with sudden onset of left face and neck numbness

**Imaging:** Axial DWI and ADC images show restricted diffusion in the left posterolateral medulla. What anatomic structure is involved that explains the patient's deficit? (See answer below in red).

### Overview

- Contains autonomic centers that regulate breathing, circulation, and gastrointestinal motility
- Extends from the pyramidal decussation inferiorly to the inferior pontine sulcus superiorly
- Contains nuclei for Cranial Nerves IX-XII
- Cranial Nerves V and VIII extend inferiorly into the medulla

### Ascending Sensory Pathways and Relay Nuclei

- Fasciculus gracilis and fasciculus cuneatus
- Nucleus gracilis and nucleus cuneatus
- Internal arcuate fibers
- Decussation of the medial lemniscus
- Medial lemniscus
- Spinal lemniscus

### Cerebellar Pathways and Relay Nuclei

- Accessory (lateral) cuneate nucleus
- Inferior olivary nucleus
- Central tegmental tract
- Lateral reticular nucleus
- Arcuate nucleus
- Dorsal spinocerebellar tract
- Ventral spinocerebellar tract
- Inferior cerebellar peduncle

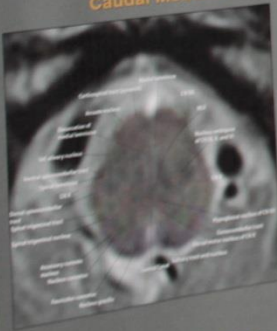
### Descending Motor Pathways

- Pyramidal decussation
- Pyramids

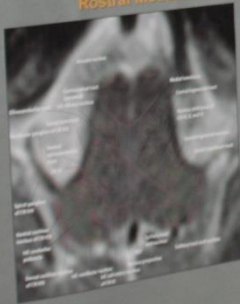
### Cranial Nerve Nuclei and Associated Tracts

- Medial longitudinal fasciculus (MLF)
- Solitary tract
- Dorsal Motor nucleus of CN IX
- Inferior olivary nucleus of CN X
- Hypoglossal nucleus of CN XII
- Nucleus ambiguus of CN IX, CN X, and CN XI
- Ventral horn of CN XII
- Spinal trigeminal tract
- Spinal trigeminal nucleus
- Inferior and medial vestibular nuclei of CN VIII

## Caudal Medulla



## Rostral Medulla



## Caudal Pons



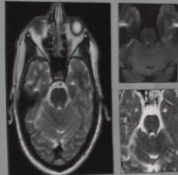
## Rostral Pons



## Pons

**CASE 2:** 55 year-old with sudden onset of nausea and double vision

**Imaging:** Axial MRI images show focal T2 hyperintensity and restricted diffusion within the right posteromedial aspect of the upper pons. What anatomic structure is involved that explains the patient's symptoms? (See answer below in red)



### Overview

- Contains auditory relay nuclei and vestibular nuclei that regulate vestibular reflexes
- Contains facial motor nucleus of CN VII for the muscles of the expression and the trigeminal motor nucleus of CN V for muscles of mastication
- It is made up of corticobulbar, corticospinal, corticopontine tracts, solitary tract
- The tegmentum is composed of CN nuclei, reticular nuclei, and major ascending pathways

### Ascending Sensory Pathways and Relay Nuclei

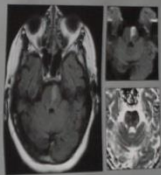
- Solitary tract
- Dorsal and ventral cochlear nuclei (Trigeminal body)
- Superior olivary nucleus
- Lateral lemniscus
- Medial lemniscus
- Spinal lemniscus

### Cerebellar Pathways and Relay Nuclei

- Central tegmental tract
- Cuneate nucleus
- Nucleus reticularis
- Superior cerebellar peduncle
- Pons

**CASE 3:** 74 year-old female with sudden onset right-sided weakness

**Imaging:** Axial MRI images demonstrate T2WI hyperintensity and restricted diffusion within the left paramedian pons. What anatomic structure is involved? (See answer below in red)



### Descending Motor Pathways (base of pons)

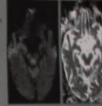
- Corticobulbar tract
- Corticospinal tract (corticospinal tract)
- Corticopontine tract

### Cerebellar Nuclei and Associated Tracts

- Dorsal and ventral cochlear nuclei of CN VIII
- Nucleus reticularis and superior olivary nucleus of CN VIII
- Medial longitudinal fasciculus (MLF)
- Abducens nucleus of CN VI
- Facial nucleus of CN VII
- Superior olivary nucleus of CN VIII
- Central tegmental tract and nucleus of CN I
- Motor nucleus of CN V
- Trigeminal sensory nucleus of CN V
- Nucleus ambiguus, nucleus and base of CN X
- Vestibular nuclei

**CASE 4:** 88 year-old female with acute-onset dizziness and vertical double vision

**Imaging:** T2WI and ADC images show a posterior focal area of hyperintensity within the left paramedian aspect of the base of the pons. What anatomic structure is involved? (See answer below in red)



### Overview

- Contains auditory and visual reflexes
- Contains CN VI and V nuclei for extraocular muscles
- Contains the vestibular nuclei, the superior olivary nucleus, the nucleus reticularis, the nucleus ambiguus, the nucleus and base of CN X
- Contains the solitary tract
- Cuneate nucleus

### Overview

- Contains auditory and visual reflexes
- Contains CN VI and V nuclei for extraocular muscles
- Contains the vestibular nuclei, the superior olivary nucleus, the nucleus reticularis, the nucleus ambiguus, the nucleus and base of CN X
- Contains the solitary tract
- Cuneate nucleus

## CASE 2 Answer and Discussion

1. The MRI shows a focal area of hyperintensity and restricted diffusion within the right posteromedial aspect of the upper pons. This area corresponds to the location of the facial nucleus (CN VII). The patient's symptoms of nausea and double vision are consistent with a lesion of the facial nucleus.

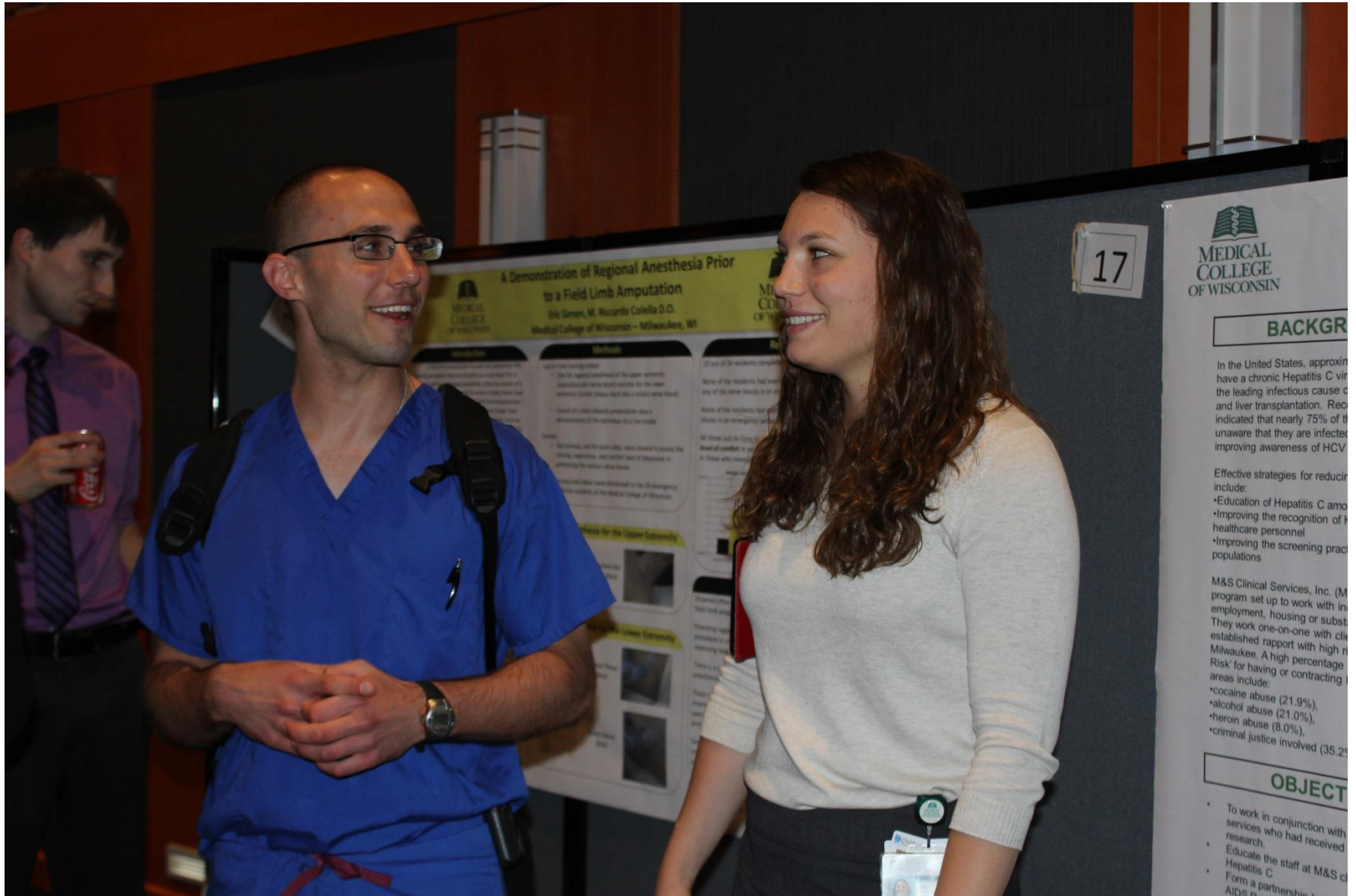
## CASE 3 Answer and Discussion

1. The MRI shows a focal area of hyperintensity and restricted diffusion within the left paramedian pons. This area corresponds to the location of the corticospinal tract. The patient's symptoms of right-sided weakness are consistent with a lesion of the corticospinal tract.

## CASE 4 Answer and Discussion

1. The MRI shows a focal area of hyperintensity and restricted diffusion within the left paramedian aspect of the base of the pons. This area corresponds to the location of the vestibular nuclei. The patient's symptoms of dizziness and vertical double vision are consistent with a lesion of the vestibular nuclei.





### A Demonstration of Regional Anesthesia Prior to a Field Limb Amputation

Eric Simon, M.D., Riccardo Calella D.O.  
Medical College of Wisconsin - Milwaukee, WI

**Introduction**  
The purpose of this study was to demonstrate the feasibility of performing a field limb amputation with regional anesthesia in a resource-limited setting. The study was conducted in a field setting, where the amputation was performed on a patient who had a traumatic injury to the right lower extremity. The patient was brought to the field site, and the amputation was performed using a tourniquet and a scalpel. The patient was then transported to the hospital for further care.

**Methods**  
The study was conducted in a field setting, where the amputation was performed on a patient who had a traumatic injury to the right lower extremity. The patient was brought to the field site, and the amputation was performed using a tourniquet and a scalpel. The patient was then transported to the hospital for further care.

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MEDICAL COLLEGE OF WISCONSIN

### BACKGR

In the United States, approximately 1.5 million people have a chronic Hepatitis C virus (HCV) infection, the leading infectious cause of liver transplantation. Recent studies have indicated that nearly 75% of these individuals are unaware that they are infected. Improving awareness of HCV infection is a critical step in reducing the burden of this disease.

Effective strategies for reducing the burden of HCV infection include:  
• Education of Hepatitis C among high-risk populations  
• Improving the recognition of HCV infection by healthcare personnel  
• Improving the screening practices for high-risk populations

M&S Clinical Services, Inc. (M&S) is a program set up to work with individuals who are homeless, unemployed, housing or substance abuse issues. They work one-on-one with clients to establish rapport with high-risk populations in Milwaukee. A high percentage of these individuals are at high risk for having or contracting HCV. The areas include:  
• cocaine abuse (21.9%),  
• alcohol abuse (21.0%),  
• heroin abuse (8.0%),  
• criminal justice involved (35.2%)

### OBJECT

- To work in conjunction with other services who had received research.
- Educate the staff at M&S on Hepatitis C
- Form a partnership with M&S and AIDS prevention services.

# Evaluation of genetic counseling referral patterns and outcomes in ovarian or fallopian tube cancer

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Medical College of Wisconsin, Milwaukee, WI

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## Background

Mutations in certain genes, such as BRCA1 and BRCA2, are linked to an increased risk of breast, ovarian, fallopian tube, and colorectal cancer in women.

Gene	Ovarian Cancer Risk	Other Cancer Risks
BRCA1, BRCA2	43% and 23%, respectively	Breast, fallopian tube, peritoneal, prostate, pancreas
PTEN	18% - 23%	GL cancers, cervix, breast
MLH1, MSH2, MSH6, PMS2, RPAH genes	0%	Colorectal, endometrium
APC	0%	Colorectal, endometrium

Full assessment and appropriate testing of these genes can help to identify patients and guide further screening and treatment options.

Adapted from The National Comprehensive Cancer Network (NCCN) Guidelines.



## Aim

Compare the frequency and outcomes of genetic counseling referrals in patients diagnosed with ovarian or fallopian tube cancer.

## Methods

- Query the Greater Health Care Registry for patients diagnosed with ovarian or fallopian tube cancer between January 2008 and December 2010 to determine the following: tumor histology, year of diagnosis, site of diagnosis, staging, lymph node status of cancer, and family history of cancer.
- Interviewed clinicians at all referral associations using the search terms "genetic" and "BRCA" to identify patients referred and/or were referred to genetic counseling (GC) and/or genetic testing.
- Interviewed genetic counselors at the patient counseling GC and sought genetic testing information.

## Results

The study population consisted of 238 women with ovarian or fallopian tube cancer; 132 (55.2%) of whom had a discussion with their oncologist regarding GC. Ultimately, 118 (49.4%) patients underwent genetic testing for various gene mutations. Testing identified 16 BRCA1/2 mutation carriers (6.7%). The mean age at diagnosis was 58.7 ± 14.3 years.

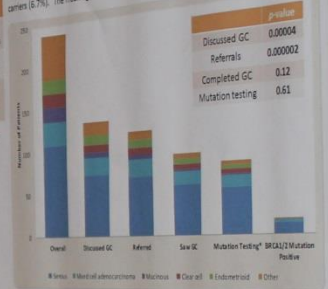


Figure 1: Comparison of referral patterns and outcomes by histology. Tumors in BRCA mutation carriers are most likely to be serous adenocarcinomas. In contrast, BRCA mutations are less likely to be seen in patients with mucinous tumors. Ovarian cancer in Lynch Syndrome has predominantly endometrial and clear cell histology.



Figure 2: Comparison of referral patterns and outcomes by FIGO staging. Ovarian cancer most commonly presents in stage II and makes up about half of all cases. These tumors are found in both ovaries with peritoneal implants outside the pelvis and/or positive retroperitoneal or regional lymph nodes. Cases with unknown staging were not included in p-value calculations.

## Results (continued)

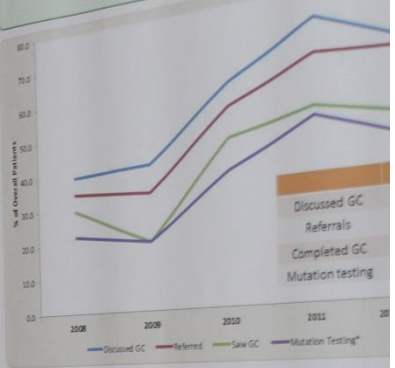


Figure 3: Comparison of referral patterns and outcomes by year of diagnosis

Cancer	Overall (N=239)	Discussed GC	Referred	Completed GC	Mutation Testing
Breast	16	15	15	10	10
Colorectal	3	1	1	0	0
Endometrial	2	1	0	0	0
Colon & breast	1	1	1	1	1
Endometrial & breast	2	2	2	1	1
Other	10	3	2	2	2
None	205	109	97	76	65

Figure 4: Comparison of referral patterns and outcomes by personal history of other from ovarian cancer. P-values for discussing GC and GC referrals were 0.02 and 0.00

## Conclusions

- Tumor histology, history of other cancers, and year of diagnosis were associated with oncologist discussions about GC and referrals to GC.
- Tumor staging was not associated with any of the outcomes we evaluated.
- Since 10-15% of women with ovarian cancer are BRCA carriers, our data suggest the importance of identifying these individuals.
- The most common reason cited for not pursuing genetic testing was concern about coverage and cost.

## Future Steps

- Design and implement an intervention embedded in EPIC to increase physician awareness of genetic counseling.
- Undergo additional chart review of this study population to obtain familial cancer history.
- Gather data on patients diagnosed with primary peritoneal cancer.
- Conduct a similar study on genetic counseling in other cancer types.





# DEVELOPING CONTEMPLATIVE SKILLS IN MEDICAL INTERACTIONS

Leist  
Wisconsin

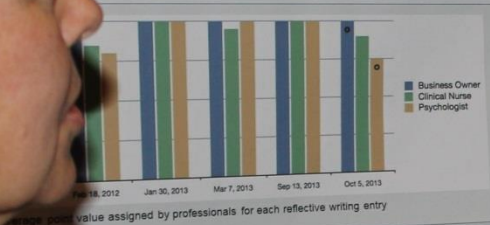


Figure 3. Average point value assigned by professionals for all entries

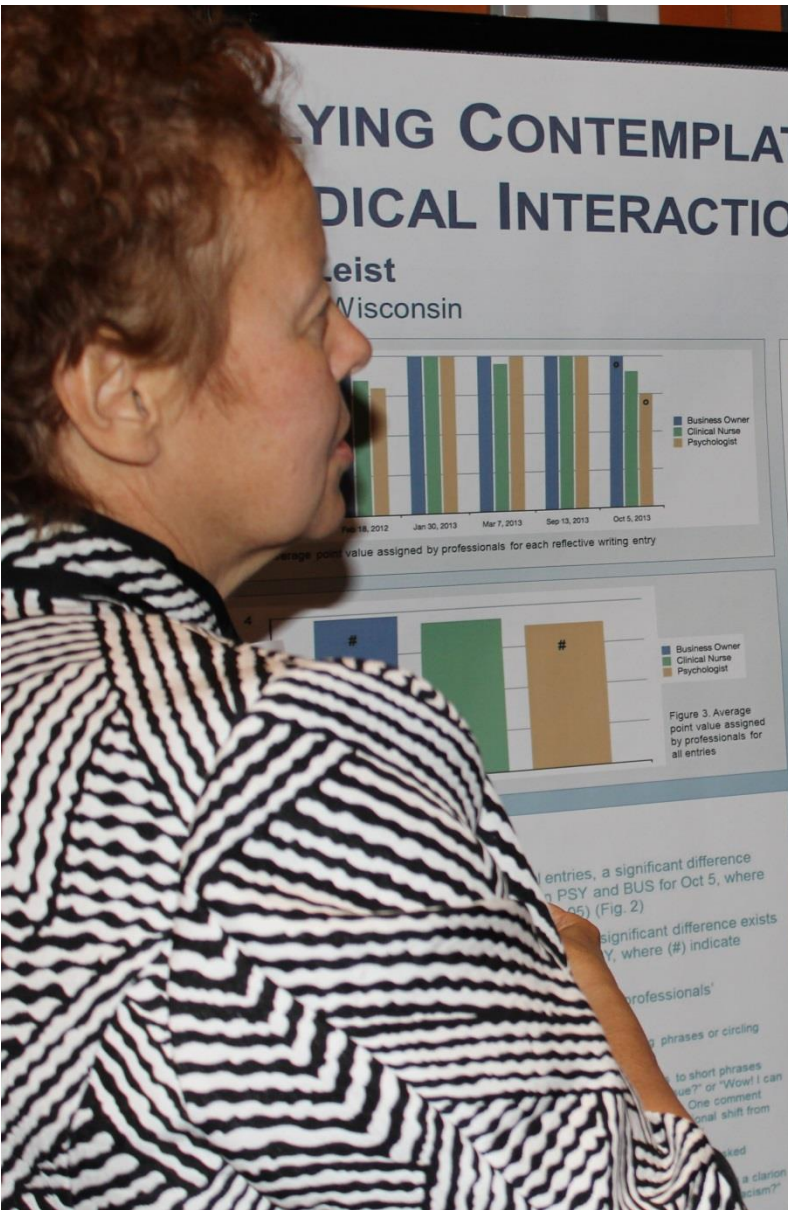
## Discussion

It had been posited that there would be no difference between CLI and the other professionals. However, it was not considered that there might be a significant difference between the two other professionals, PSY and BUS.

- Individual interpretations regarding categorical criteria could have varied
- No examples were provided for further elucidation of the REFLECT rubric to allow for professionals greater freedom; no minimum number or type of comments "required"
  - As the number of comments by each professional increased (20 → 23 → 42), their average value decreased (1.55 → 1.17 → 1.00), respectively
- Internal test of accuracy: Jan 7 and Oct 5 entries were between "thoughtful action" and "reflection"
  - PSY alone evaluated these entries in a similar way
  - CLI and BUS scored them higher between "reflection" and "critical reflection"
  - Alternatively, BUS could have scored entries higher as a result of some incredulity regarding the events that take place in actual clinical and hospital encounters
- Perspectives of professionals inside & outside medical training on the student reflective writings is invaluable
  - CLI and BUS challenged underlying assumptions and other truly human encounters between medical student, patients and medical staff that might be remained hidden by the volatile nature of the event

## Future Directions

- Larger cohort of medical students
- Wider recruitment of volunteer professionals
- Standardized training for REFLECT rubric
- Optional examples of constructive feedback





### Background

Fasting is considered one of the main pillars of Islam during Ramadan, the 9th month of the hijri calendar, when each of the 29 or 30 days...

- Muslim men fast and women from dawn to sunset each day during the month.
- Exceptions from fasting include those who are sick or traveling.

Many pregnant women observe Ramadan fasting. The impact on the maternal and foetal outcomes is unclear. Ramadan fasting in an otherwise normal pregnancy may result in poorer foetal and maternal outcomes due to the risk of malnutrition and dehydration and the possibility of poor maternal medication compliance. Maternal stress, which Ramadan fasting may increase, has been shown to be associated with birth outcomes, including birth weight and gestational age.

### Purpose

To evaluate the impact of Ramadan fasting in pregnant women on birth weight, gestational age and foetal weight gain, and to determine whether country/region plays a role in said outcomes.

### Methods

Systematic Review of the Literature  
Published papers on Ramadan fasting, pregnancy, maternal, foetal and neonatal outcomes.

Inclusion criteria:  
• Comparative Ramadan fasting versus non-fasting controls  
• Studies relating to maternal birth outcomes, in full or in part, maternal weight gain.

Exclusion criteria:  
• Studies that were assessed in vitro or in animal models.  
• Case-control or retrospective studies.

Quality assessment:  
• Randomized controlled trials: Cochrane risk of bias tool.  
• Cohort studies: Newcastle-Ottawa scale.

Statistical analysis:  
• Meta-analysis using random effects model.  
• Heterogeneity assessed using I-squared test.

Statistical significance was defined as p < 0.05.

Results:  
• 10 studies were included in the meta-analysis.  
• The meta-analysis showed that Ramadan fasting was associated with a lower risk of low birth weight (OR 0.75, 95% CI 0.55-1.00).

Lead Author	Year	Country
Saleh	1999	Malaysia
Mahotra	1999	Britain
Kavellamsetti	2004	Iran
Naderi	2004	Iran
Khalilani	2005	Turkey
Zaree	2010	Iran
Özdemir	2011	Turkey
Alward	2012	Lebanon
Haji	2012	Turkey

Study or Subgroup	Birth weight
Alward 2012	See the forest plot
Khalilani 2005	See the forest plot
Mahotra 1999	See the forest plot
Saleh 1999	See the forest plot

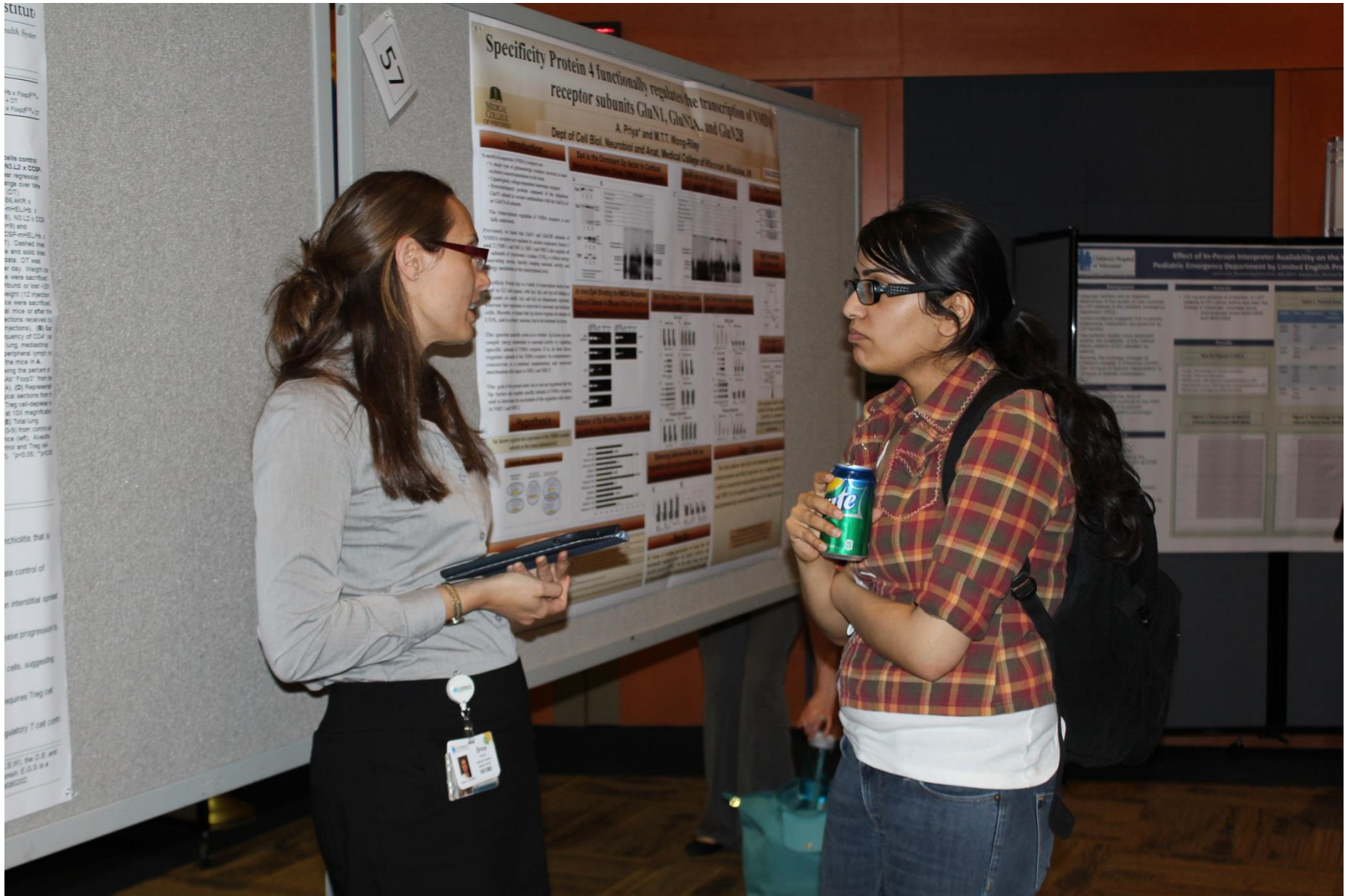
Overall Summary Estimate  
Forest plot showing the overall summary estimate for Birth weight.

Study or Subgroup	Gestational Age
Alward 2012	See the forest plot
Khalilani 2005	See the forest plot
Mahotra 1999	See the forest plot
Saleh 1999	See the forest plot

Overall Summary Estimate  
Forest plot showing the overall summary estimate for Gestational Age.

Study or Subgroup	Maternal weight gain
Alward 2012	See the forest plot
Khalilani 2005	See the forest plot
Mahotra 1999	See the forest plot
Saleh 1999	See the forest plot

Overall Summary Estimate  
Forest plot showing the overall summary estimate for Maternal weight gain.



# Specificity Protein 4 functionally regulates the transcription of NMDA receptor subunits GluN1, GluN2A, and GluN2B

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## Introduction

NMDA receptor subunits are highly expressed in the brain and play a critical role in learning, memory, and synaptic plasticity. The transcription of NMDA receptor subunits is regulated by various factors, including transcription factors, signaling molecules, and epigenetic modifications. We have previously shown that Sp4 is a transcription factor that regulates the transcription of NMDA receptor subunits. In this study, we have investigated the functional role of Sp4 in regulating the transcription of NMDA receptor subunits.

Sp4 is a member of the Sp1 family of transcription factors and is highly expressed in the brain. We have previously shown that Sp4 is a transcription factor that regulates the transcription of NMDA receptor subunits. In this study, we have investigated the functional role of Sp4 in regulating the transcription of NMDA receptor subunits.

The goal of this study was to determine the functional role of Sp4 in regulating the transcription of NMDA receptor subunits. We have investigated the functional role of Sp4 in regulating the transcription of NMDA receptor subunits.

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## Effect of In Person Interpreter Availability on the Pediatric Emergency Department by United English Speaking Patients

Abstract  
Background: The availability of in-person interpreters in the pediatric emergency department (PED) is critical for ensuring that non-English speaking patients receive appropriate care. The purpose of this study was to determine the effect of in-person interpreter availability on the PED.

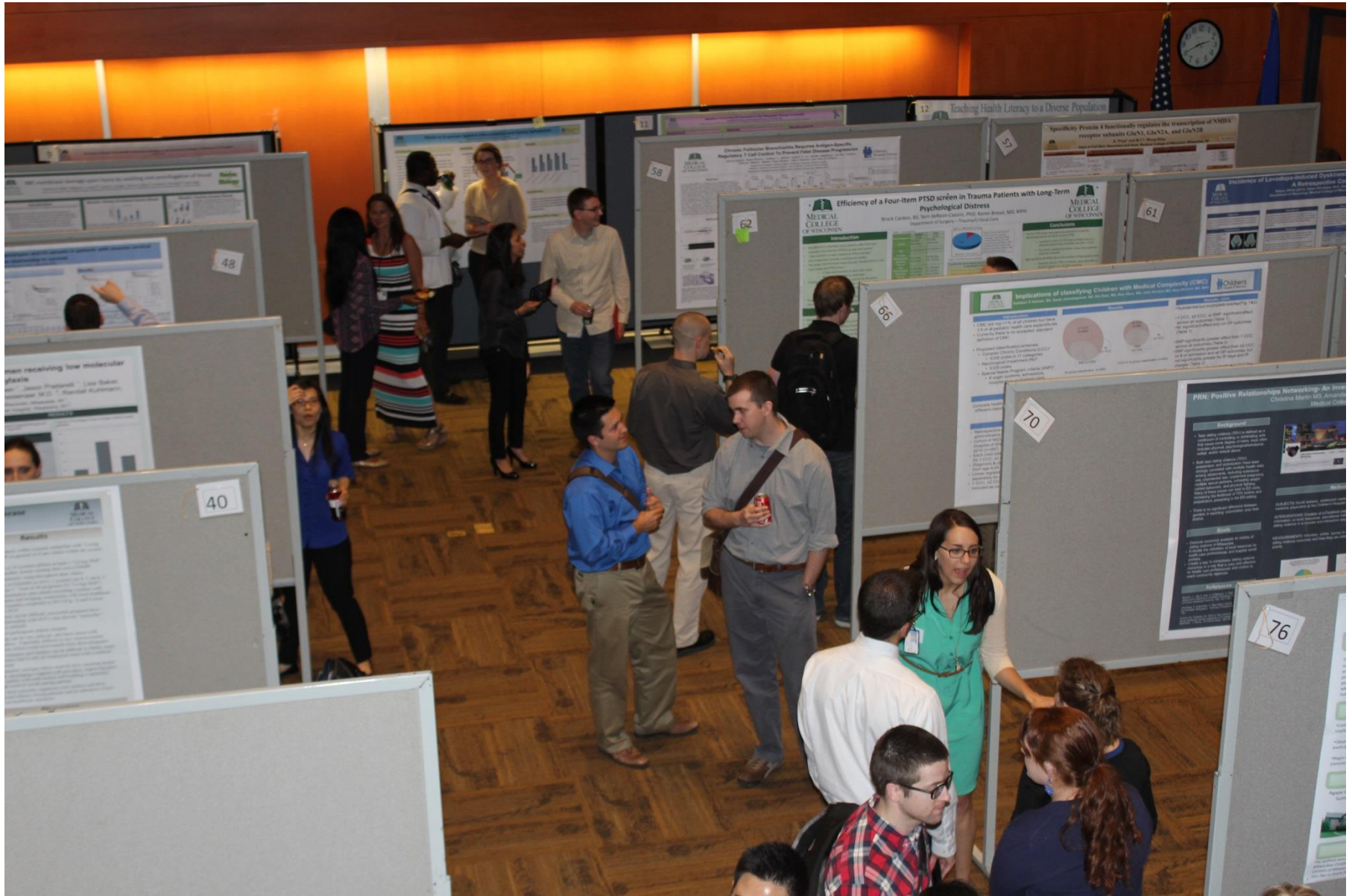
Methods: We conducted a retrospective analysis of PED admissions from January 2010 to December 2011. We compared the length of stay, time to admission, and time to discharge for patients with and without in-person interpreters.

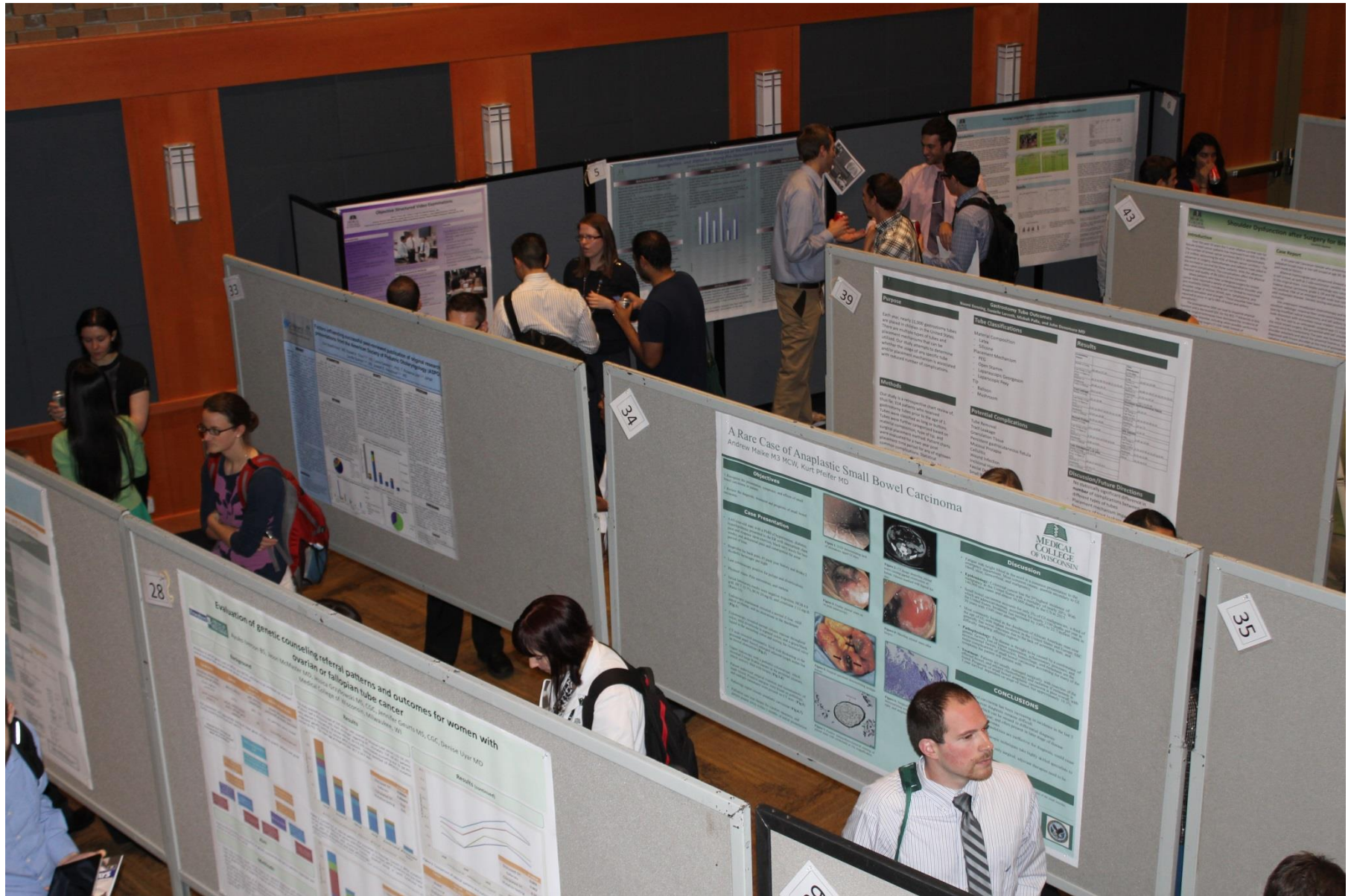
Results: We found that patients with in-person interpreters had a significantly longer length of stay and time to admission compared to patients without in-person interpreters. There was no significant difference in time to discharge.

Conclusion: The availability of in-person interpreters in the PED is critical for ensuring that non-English speaking patients receive appropriate care. The presence of in-person interpreters is associated with a longer length of stay and time to admission.

Keywords: Pediatric Emergency Department, Interpreter Availability, Length of Stay, Time to Admission, Time to Discharge.







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**Evaluation of genetic counseling referral patterns and outcomes for women with ovarian or fallopian tube cancer**  
 Medical College of Wisconsin (Milwaukee, WI)

**Background:**  
 Ovarian and fallopian tube cancer are the leading causes of death among women aged 20-59 years old. Genetic counseling is an important component of the management of these cancers.

**Methods:**  
 We conducted a retrospective analysis of genetic counseling referrals for ovarian and fallopian tube cancer at the Medical College of Wisconsin from 2010 to 2014.

**Results:**  
 A total of 100 women were referred for genetic counseling. The majority of referrals were for BRCA1/2 testing. The most common reasons for referral were family history of ovarian cancer (35%), personal history of ovarian cancer (25%), and personal history of fallopian tube cancer (15%).

**Conclusions:**  
 Genetic counseling referrals for ovarian and fallopian tube cancer are increasing. The majority of referrals are for BRCA1/2 testing. Further research is needed to determine the most effective way to identify women who would benefit from genetic counseling.

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**A Rare Case of Anaplastic Small Bowel Carcinoma**  
 Andrew Maize MD, Kurt Pfeifer MD  
 Medical College of Wisconsin

**Objectives:**  
 To report a rare case of anaplastic small bowel carcinoma and discuss the diagnostic and management challenges.

**Case Presentation:**  
 A 65-year-old male patient presented with a 3-month history of weight loss and abdominal pain. Physical examination revealed a palpable mass in the right lower quadrant. Laboratory studies were unremarkable. Imaging studies showed a large, enhancing mass in the terminal ileum. Biopsy of the mass revealed anaplastic adenocarcinoma.

**Discussion:**  
 Anaplastic small bowel carcinoma is a rare and aggressive malignancy. It is characterized by a high degree of cellular atypia and a lack of glandular formation. The most common sites of origin are the terminal ileum and the cecum. The prognosis is poor, with a median survival time of less than 1 year. Treatment options are limited and include surgery, chemotherapy, and radiation therapy.

**Conclusions:**  
 Anaplastic small bowel carcinoma is a rare and aggressive malignancy. It is characterized by a high degree of cellular atypia and a lack of glandular formation. The most common sites of origin are the terminal ileum and the cecum. The prognosis is poor, with a median survival time of less than 1 year. Treatment options are limited and include surgery, chemotherapy, and radiation therapy.

**Toile Classifications:**

Malnutrition
Leukemia
Diabetes
Postoperative Malnutrition
IBD
Open Drain
Hypernatremic Dehydration
Dehydration
Diarrhea
Malabsorption
Malnutrition

**Potential Complications:**

- Case Review
- Case Discussion
- Case Presentation
- Case Management
- Case Outcome
- Case Conclusion
- Case Summary
- Case Review
- Case Discussion
- Case Presentation
- Case Management
- Case Outcome
- Case Conclusion
- Case Summary

**Results:**

Parameter	Value
Weight	70 kg
Height	175 cm
BMI	22.5
Albumin	3.5 g/dL
Prealbumin	0.2 g/dL
CRP	10 mg/L
ESR	30 mm/hr
WBC	12,000/mm <sup>3</sup>
Hb	12 g/dL
Hct	35%
Plat	150,000/mm <sup>3</sup>
INR	1.1
aPTT	35 sec
PT	13 sec
PT-APTT	13 sec
PT-APTT Ratio	1.0
PT-APTT Index	1.0
PT-APTT Ratio	1.0
PT-APTT Index	1.0

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**Gastrostomy Tube Placement**  
 Medical College of Wisconsin

**Background:**  
 Gastrostomy tube placement is a common procedure used to provide enteral nutrition to patients who are unable to eat orally. The procedure is typically performed using a percutaneous endoscopic gastrostomy (PEG) technique.

**Methods:**  
 We conducted a retrospective analysis of PEG procedures performed at the Medical College of Wisconsin from 2010 to 2014.

**Results:**  
 A total of 100 PEG procedures were performed. The most common indications for PEG were dysphagia (45%), neurodegenerative disease (30%), and head and neck cancer (15%). The success rate for PEG placement was 95%.

**Conclusions:**  
 PEG placement is a safe and effective procedure for providing enteral nutrition to patients who are unable to eat orally. The most common indications for PEG are dysphagia, neurodegenerative disease, and head and neck cancer.

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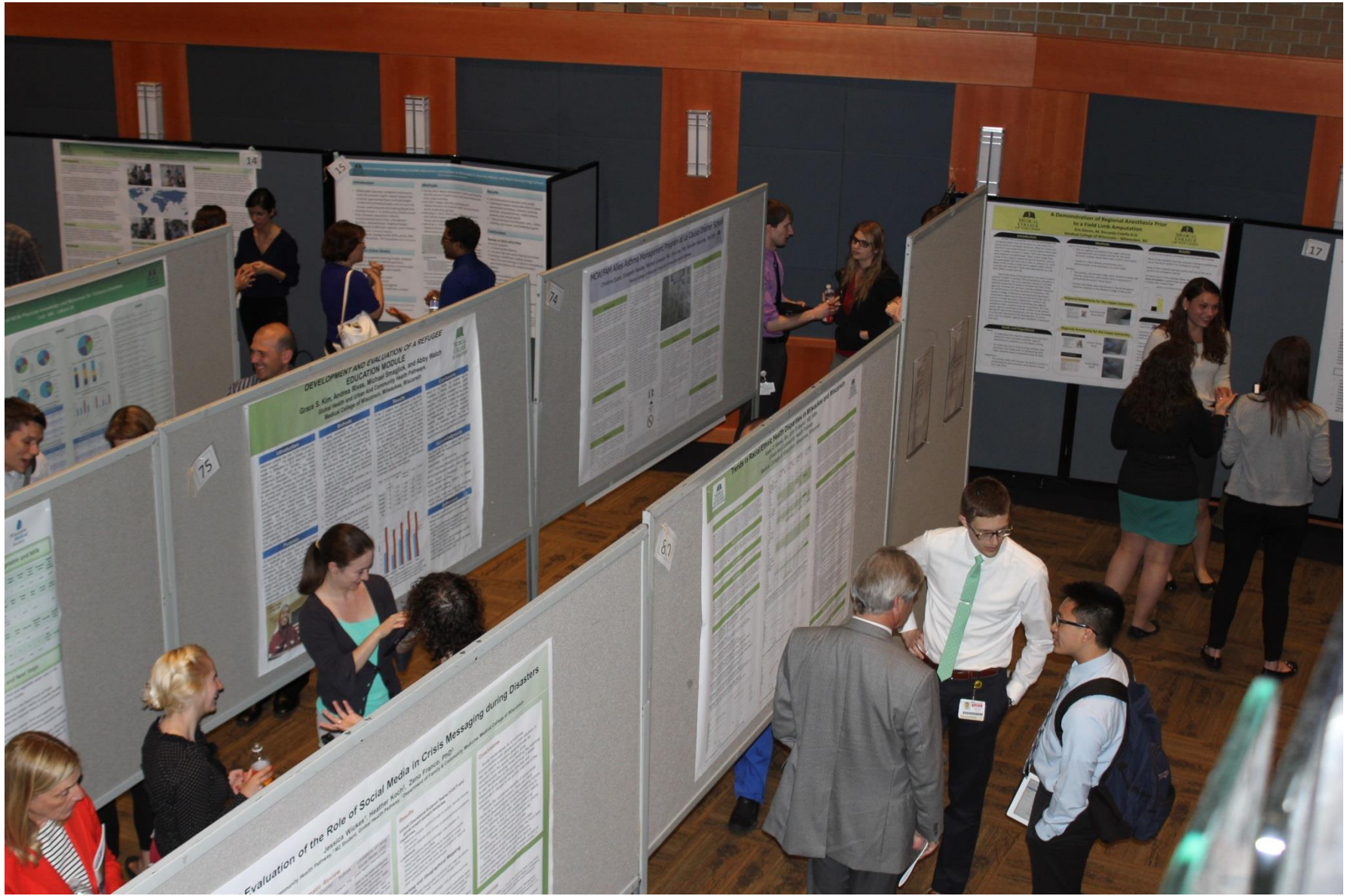
**Shoulder Dysfunction after Surgery for Breast Cancer**  
 Medical College of Wisconsin

**Background:**  
 Shoulder dysfunction is a common complication after breast cancer surgery. It is characterized by pain, stiffness, and limited range of motion. The most common causes of shoulder dysfunction are axillary lymph node dissection and axillary nerve injury.

**Methods:**  
 We conducted a retrospective analysis of shoulder dysfunction after breast cancer surgery at the Medical College of Wisconsin from 2010 to 2014.

**Results:**  
 A total of 100 patients were included in the study. The most common causes of shoulder dysfunction were axillary lymph node dissection (60%) and axillary nerve injury (40%). The most common symptoms were pain (80%), stiffness (70%), and limited range of motion (60%).

**Conclusions:**  
 Shoulder dysfunction is a common complication after breast cancer surgery. The most common causes are axillary lymph node dissection and axillary nerve injury. Further research is needed to determine the most effective way to prevent and treat shoulder dysfunction.



**Evaluation of the Role of Social Media in Crisis Messaging during Disasters**  
Jessica Wickham, Heather Knight, Zora Francis, PhD  
Department of Family & Community Medicine, Mount Sinai Hospital & University of Toronto

**DEVELOPMENT AND EVALUATION OF A REFUGEE EDUCATION MODULE**  
Grace S. Kim, Andrea Thiele, Michael Spangola, and Abby Walsh  
Global Health and Crisis and Contingency Team Network  
Medical College of Wisconsin, Milwaukee, Wisconsin

**A Demonstration of Regional Anesthesia Prior to a Field Limb Amputation**  
Dr. Robert M. ...  
Department of Anesthesiology, ...

**NOVEL AIR Asthma Management Program at a Community Site**  
Christina ...  
Department of ...