

CHDS 2018 Summer Research Students

Eva Aranda

Kristen Kaiser

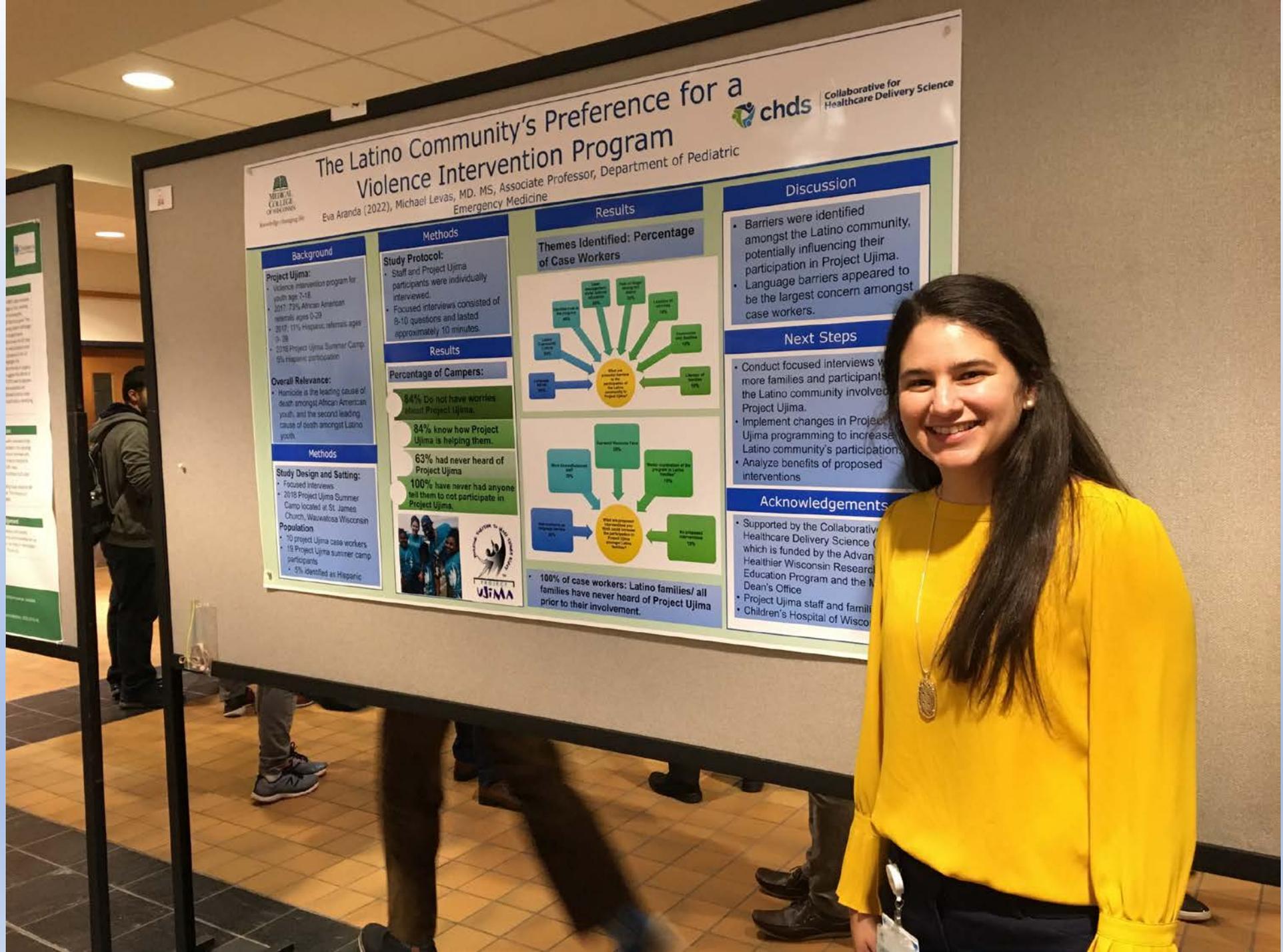
Andy Kleven

Olivia McCarty

Zak Sharif-Sidi

Karoline Wang

Eva Aranda



The Latino Community's Preference for a Violence Intervention Program

chds Collaborative for Healthcare Delivery Science

Eva Aranda (2022), Michael Levas, MD, MS, Associate Professor, Department of Pediatric Emergency Medicine

Background

Project Ujima:

- Violence intervention program for youth ages 7-18
- 2017: 73% African American referrals ages 9-19
- 2017: 11% Hispanic referrals ages 9-19
- 2018 Project Ujima Summer Camp: 65% Hispanic participation

Overall Relevance:

- Homicide is the leading cause of death amongst African American youth, and the second leading cause of death amongst Latino youth

Methods

Study Protocol:

- Staff and Project Ujima participants were individually interviewed.
- Focused interviews consisted of 8-10 questions and lasted approximately 10 minutes.

Study Design and Setting:

- Focused Interviews
- 2018 Project Ujima Summer Camp located at St. James Church, Wauwatosa Wisconsin

Population

- 10 Project Ujima case workers
- 10 Project Ujima summer camp participants
- 5% identified as Hispanic

Results

Themes Identified: Percentage of Case Workers

- Staff in charge of program 8%
- Staff in charge of program 1%
- Latino of interest 1%
- Hispanic of interest 1%
- Latino of interest 1%
- Hispanic of interest 1%
- Latino of interest 1%
- Hispanic of interest 1%
- Latino of interest 1%
- Hispanic of interest 1%

Percentage of Campers:

- 84% Do not have worries about Project Ujima.
- 84% know how Project Ujima is helping them.
- 63% had never heard of Project Ujima
- 100% have never had anyone tell them to not participate in Project Ujima.

100% of case workers: Latino families/ all families have never heard of Project Ujima prior to their involvement.

Discussion

- Barriers were identified amongst the Latino community, potentially influencing their participation in Project Ujima.
- Language barriers appeared to be the largest concern amongst case workers.

Next Steps

- Conduct focused interviews with more families and participants from the Latino community involved in Project Ujima.
- Implement changes in Project Ujima programming to increase Latino community's participation.
- Analyze benefits of proposed interventions

Acknowledgements

- Supported by the Collaborative for Healthcare Delivery Science (CHDS) which is funded by the Advancing Healthier Wisconsin Research Education Program and the Medical Dean's Office
- Project Ujima staff and families
- Children's Hospital of Wisconsin





knowledge changing life

Surgical treatment outcome measures for patients with craniosynostosis

Kristen Kaiser, BS, Lori Duesing, NP, Irene Kim, MD



chds Collaborative for Healthcare Delivery Science

BACKGROUND

METHODS

CONCLUSIONS

BACKGROUND

Craniosynostosis affects 1 in every 2000 births each year. If untreated, it can result in abnormal head shape and occasionally, increase in intracranial pressure. There are two main methods of surgically correcting craniosynostosis. Open surgical correction, which includes cranial vault remodeling (CVR) and frontal orbital advancement (FOA), is a longer operation that corrects the head shape immediately. The minimally invasive (MI) approach is typically a shorter operation and therefore requires less anesthesia but corrects the defect slowly through the use of cranial orthosis for approximately 1 year. Many patients require blood transfusions during these procedures and the amount of blood loss can range from 20-500% of the total circulating volume.

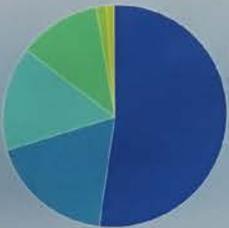
SPECIFIC AIMS

The aim is to review patients who have undergone surgical correction for craniosynostosis at CHW and evaluate variables, such as method of correction, need for blood transfusions, number of transfusions required, length of hospital stay, and need for reoperation in order to better characterize and understand the outcomes of patients undergoing surgical correction for craniosynostosis.

RESULTS

Case Type	# of Cases	Mean EBL		Received Transfusion	median transfusion (mL/kg)
		Total mL	mL/kg		
Open	403	444	45.8	98% (n=395)	60.5
MI	34	73.8	11.2	56% (n=19)	12.3
Total	437	417	43.2	95% (n=414)	47.1

Table 1: Blood Transfusion Use
EBL: Estimated Blood Loss



- Sagittal (52.4%)
- Metopic (18.3%)
- Coronal (15.1%)
- Multi (11.7%)
- Lamboid (1.4%)
- Other (1.1%)

Chart 1: Suture Type by Case

CONCLUSIONS

Over half of the patients at CHW underwent surgery for correction of sagittal synostosis. A majority of patients who underwent surgical correction for craniosynostosis required a blood transfusion for their procedure. Over 90% of the cases performed during this period were open cases (FOA and CVR) which require greater surgical exposure and are longer operations than MI cases. As expected, we found that patients who underwent open surgery required transfusions more frequently and at larger volumes per weight than patients who underwent MI surgery. Because the neurosurgeons at CHW started utilizing the MI approach more recently (in mid-2015), there are fewer of these cases to analyze. The approaches by various surgeons may have been adapted over time which may also lead to bias in our data by using cases from 2004 through 2017.

ACKNOWLEDGEMENTS

Funding Source: Supported by the Collaborative for Healthcare Delivery Science (CHDS), which is funded by the Advancing a Healthier Wisconsin Research & Education Program and the MCW Dean's Office.

REFERENCES

1. ...
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. ...
9. ...
10. ...

Kristen Kaiser



Intervention to improve quality of care for patients with serious mental illness

Olivia McCarty (2021), Kathlyn E. Fletcher MD MA, Department of Internal Medicine



Background

- Patients with serious mental illness (SMI) receive poorer quality care
- Non-psychiatric medical providers, less confident and feel more limited in knowledge/resources
- A 2014 study implemented proactive psychiatry consultation service (Siedge et al. 2015)
- Does creating opportunity for proactive discussion between medical & psychiatry providers improve quality of care?

Aim

Adapt and test an intervention that includes mental health and medical providers' input into patient care for those patients admitted to general medicine services who also have comorbid serious mental illness

Methods

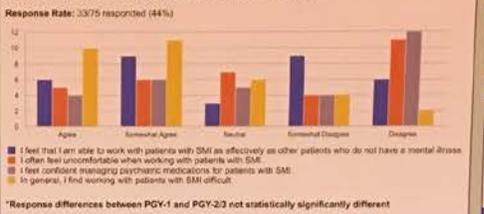
- Study Design:**
- Prospective Observational
 - Retrospective chart review (planned)
- Participants:**
- Psychiatry fellow, internal medicine teams
- Data Collection:**
- Psychiatry fellow and pilot medical teams met 3 times per week for two weeks
 - Huddles observed with structured field notes taken
 - Pre- and post-intervention surveys (Siedge et al 2015)
 - Retrospective chart review (planned)
- Data Analysis:**
- Descriptive statistics

Results

Process Data of Huddles (n=12)

	Average Huddle Length	Number of Formal Consultations	Number of Informal Consultations	# Huddles w/ Psychiatric Meds Discussed	# Huddles w/ Psychiatry Fellow Advice
Medical Team 1	2.6 minutes	none	5	4/6	4/5
Medical Team 4	5.8 minutes	none	8	3/6	4/5

Provider Confidence When Caring for Patients with SMI Pre-Intervention



Post survey: 100% of respondents (5/5) were satisfied with the psychiatry fellow's helpfulness in managing the care of patients with SMI

Discussion

- Positive provider response to intervention
- How will intervention influence provider confidence levels and patient outcomes?
- Provides support of closer collaboration between mental health and internal medicine

Next Steps

A psychiatrist will continue to meet and huddle with medical teams 3 times per week through the end of the year, and further data will be collected

Acknowledgements

Supported by the Collaborative for Healthcare Delivery Science (CHDS), which is funded by the Advancing a Healthier Wisconsin Research & Education Program and the MCW Dean's Office

Thank you to Dr. Sabeen Haque, Dr. Thomas Henrich, and internal medicine teams 1 and 4.

References

Siedge WH, Gueorguieva R, Dewan P, Bozzo JE, Donald J, Lee HB. 2015. Multidisciplinary proactive psychiatry consultation service: impact on length of stay for medical inpatients. *Psychiatr Psychosom*. 84:268-278



Olivia McCarty

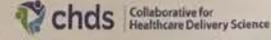
Zak Sharif-Sidi



Addressing unmet mental health needs through digital tools

Sharif-Sidi Z¹, Crotty BH, MD, MPH, FACP²

Medical Student, Medical College of Wisconsin¹ Department of Medicine, Medical College of Wisconsin²



Background

- Depression impacts 16.2 million Americans with an estimated annual cost exceeding 200 billion dollars. ^{1,3}
- Cognitive behavioral therapy (CBT) is one of the first line treatment modalities for the treatment of depression, but access is poor due to limited system resources, high cost, and an increasing number of patients with behavioral health needs. ^{4,5}
- Efficacy of internet-based cognitive behavioral therapy (iCBT) is comparable to traditional CBT and may require less time and money for both patients and health systems. ^{2,6}

Aim

Investigate whether iCBT can help a large academic health system meet the needs of patients with depression while reducing cost. To answer this question, we assessed the following:

- 1) Do people with depression use iCBT if it is prescribed?
- 2) Are providers prescribing iCBT when it is available?
- 3) Does iCBT result in a reduction of PHQ-9 scores?
- 4) Does iCBT reduce wait times for mental health services?
- 5) Does iCBT reduce health system spending in the treatment of depression?

Methods

SilverCloud: the iCBT Intervention



- SilverCloud provides a clinically validated digital iCBT program that facilitates asynchronous & synchronous support to patients receiving therapy

- SilverCloud tracks patient progress and generates reports for the health system

Inclusion Criteria

- Patients with established care at Froedtert and PHQ-9 score ≥ 10
- Cannot have received behavioral healthcare at Froedtert in the past year

Study Design

- Retrospective analysis utilizing EHR and iCBT data from Froedtert & the Medical College of Wisconsin between 7/1/2017-7/1/2018. Participants were divided into three cohorts:
 - 1) received only iCBT
 - 2) received only traditional CBT
 - 3) received both iCBT and traditional CBT

- Baseline PHQ-9 scores were compared to PHQ-9 scores 24 weeks post-intervention. Comparisons were done between those that received any iCBT and those that received only traditional CBT.

Measures

The table below corresponds to questions from "Aims" section

Aim	Measures
1	Percent that used the service Percent to complete ≥ 4.5 modules
2	Physicians prescribing iCBT by specialty
3	Avg. PHQ-9 at initial screening Avg. PHQ-9 24 weeks post intervention
4	Days between referral and first use Visits to health system
5	Cost of services Patient calls to health system

Preliminary Results

Figure 1: Pre & Post PHQ-9 Scores

Changes in PHQ-9 scores for individuals at one FAMCW site participating in iCBT that activated their account and had pre/post PHQ-9 data available. Sample size (n) = 202; time period of 7/1/2017 - 5/15/2018

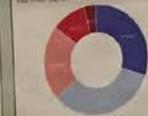
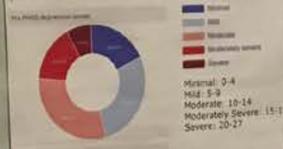


Figure 2: Patient Activation of SilverCloud Accounts

Number of patients that received a SilverCloud referral and activated their account at all sites. Time period: 7/1/2017 - 5/15/2018



Figure 3: Provider Adoption

Represents 81 total ordering providers, with 50% of referrals coming from 14 providers. Time period: 7/1/2017 - 5/15/2018

Provider Specialty	Number of referrals
Primary Care	1
Care Coordination	113
Family Medicine	1
Gastroenterology	345
Internal Medicine	38
Pediatrics	215
Psychiatry	1
Urology	1

Discussion & Next Steps

- Health systems are faced with an increasing number of patients screening positive for behavioral health conditions, but are limited in resources to provide first line treatment to all patients in a timely manner
- Digital tools may help solve the increased demand for behavioral health services and cost less for both the health system and patient
- However, this model only works if both providers and patients are willing to use digital tools and if these tools are effective
- The use of digital tools and the concept of guided self-management have potential implications for the management of medical conditions beyond depression, such as anxiety, diabetes, hypertension, or coronary artery disease

Acknowledgements

- Supported by the Collaborative for Healthcare Delivery Science (CHDS), which is funded by the Advancing a Healthier Wisconsin Research & Education Program and the MCW Dean's Office
- Special thanks to Dr. Crotty (advisor), Ryan Hanson (statistician), CHDS, and Inception Health

References

1. Dworkin, J. S., Turner, J. A., Sullivan, T., Pao, C. C., & Minkov, R. C. The economic burden of major depressive disorder in the United States. *Journal of Affective Disorders*, 171, 111-118 (2014).
2. World Health Organization. *World Mental Health Surveys: Prevalence, Risk, and Treatment of Major Depressive Disorder*. Geneva: World Health Organization, 2003.
3. Lewinsohn, P. M., Rohlfing, D. L., & Seeley, J. R. (2006). A 12-week, self-guided internet-based cognitive behavioral therapy for depression: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 74, 1029-1038.
4. Lewinsohn, P. M., Rohlfing, D. L., & Seeley, J. R. (2007). A 12-week, self-guided internet-based cognitive behavioral therapy for depression: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 74, 1029-1038.
5. Lewinsohn, P. M., Rohlfing, D. L., & Seeley, J. R. (2007). A 12-week, self-guided internet-based cognitive behavioral therapy for depression: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 74, 1029-1038.
6. Lewinsohn, P. M., Rohlfing, D. L., & Seeley, J. R. (2007). A 12-week, self-guided internet-based cognitive behavioral therapy for depression: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 74, 1029-1038.

EFFECT OF HOSPITALIST – ADVANCED PRACTICE PROVIDER TEAMS ON PATIENT EXPERIENCE

Karoline Wang (M2) MHA; Siddhartha Singh, MD,MS; Medical College Physicians Administration, Froedtert & Medical College of Wisconsin, Milwaukee, WI

BACKGROUND

Due to restrictions on resident duty hours, increasing numbers of patients at academic hospitals are being cared for by hospitalists paired with advanced practice providers (H-APP teams). Hospitals are held accountable for their patient's experiences by pay for performance programs such as the Centers for Medicare and Medicaid Services value based purchasing program, yet there is limited research investigating the impact of H-APP teams on patient experience.

OBJECTIVES

Determine if there is a difference in patient experience when cared for by APPs paired with hospitalist versus traditional general medical inpatient teams comprised of residents and medical students supervised by hospitalists.

METHODS

A retrospective cohort study was conducted to examine patient experience when care was provided by H-APP teams versus care provided by Hospitalist – Resident teams (H-RES) at a 500 bed academic medical center.

General medical care at this hospital is provided by two types of teams: H-APP teams and traditional resident-based teams. Admitting schedule (time of day) is the only consideration when assigning patients to these teams. Patient complexity or "teaching value" is not taken into consideration while assigning patients. Moreover, patient care nurses were assigned randomly to each team.

For a 4.5 year period from January 2013 to June 2017, we obtained top box scores (percentage of responses in the highest category) for the 3 items in the "doctor communication" section of the Hospital Consumer Assessment of Healthcare Providers and Systems Survey and attributed these scores to the discharging hospitalist.



Table 1. Differences in structure and function between Hospitalist – Physician Assistant (H-PA) and Traditional resident (RES) teams.

	H-APP Teams	RES Teams
Attending physician	Hospitalist	Hospitalist
Attending physician role	Supervisory for some patients (about half) and sole care provider for others	Supervisory for all patients
Team Composition	One attending paired with one PA	Attending + senior resident + (2) Interns (2-3) Med students
Rotation schedule		
Attending	Every 2 weeks	Every 2 weeks
Advanced Practice Provider	On on weekends	-
House staff & medical students	-	Every month
Admission times	7a.m. to 3 p.m (7 am to noon weekends); admissions after 3pm admitted by covering faculty and transferred to primary team next morning	8 day cycle with 3 admitting days. Overnight call day (5pm – 7am), daytime admitting day (noon – 5pm), morning admitting day (overnight admissions admitted by night first)
Source of admissions	Emergency Room, Clinics, Other hospitals	Emergency Room, Clinics, Other hospitals
Number of admissions	4-6 patients per day per team	Overnight call: maximum of 8 patients Daytime admitting day: maximum of 6 patients Morning admission day: maximum of 4 patients
Overnight Coverage	In house faculty	On call interns and resident
Roles and responsibilities		

METHODS (cont'd)

The survey respondent's discharge date was then matched with their hospitalists' name to the team block schedule to determine if the survey result reflected care provided by an H-APP team or RES team supervised by a hospitalist. Some hospitalists staffed only H-APP or H-RES teams during the study period but not both. We excluded data for these hospitalists and included data for only those hospitalists who staffed both H-APP and H-RES teams during the study period.

Since HCAHPS scores are generated on a monthly basis, if a hospitalist spent three days or more during a one-month period on the other service, their patient experience scores would not be assigned to either group for that month.

METHODS (cont'd)

Our final data set comprised of survey results for 38 hospitalists. We compared the composite patient experience scores with doctor communication as well as scores for each of the 3 items separately between care provided by H-APP and H-RES teams using the Chi-squared test.

Table 2. Comparison of percent 'top box' patient experience items between Hospitalist – Advanced Practice Provider teams (H-APP) and Hospitalist – Resident teams (H-RES). P value derived using Chi Squared test.

	H-APP	H-RES	P value
Composite patient experience with communication with doctors	73.77	64.41	0.01
How often did doctors treat you with courtesy and respect?	72.37	75.23	0.67
How often did doctors listen carefully to you?	60.96	66.79	0.50
How often did doctors explain things in a way you could understand?	82.11	81.14	0.83

RESULTS

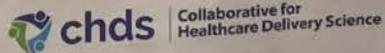
Patient experience with doctor communication was no different between hospitalists on an H-APP team or a H-RES team.

CONCLUSIONS

Based on a large sample of patient experience surveys from 38 hospitalists, covering a 4.5 year period of time, the H-APP team model of care provides similar patient experience relative to the "doctor communication 'Top box' patient experience scores" as compared to H-RES teams. However, a smaller study covering a period of 3 years showed better patient experience with doctor communication. Thus, advanced practice providers may provide a viable alternative to traditional resident teams in providing high quality health care.

Acknowledgements

Supported by the Collaborative for Healthcare Delivery Science, which is funded by the Advancing a Healthier Wisconsin Research & Education Program and the MCW Dean's Office.



Karoline Wang