



California Chapter 2 San Luis Obispo · Santa Barbara · Ventura
Kern · Los Angeles · San Bernardino · Riverside

AAP-CA2 Advances in Pediatrics Symposium
Universal Sheraton in Los Angeles, CA
April 28, 2018

Pediatric Trainees Presentation Program

Abstract Chairs

Christine Thang, MD; UCLA Mattel Children's Hospital
Alexa Manriquez, BS; Keck School of Medicine of USC

Abstract Board of Reviewers

Vincent Chan, MD; UCLA Mattel Children's Hospital
Alexandra Mihalek, MD; Children's Hospital Los Angeles
Melissa Ruiz, MD, FAAP; AAP-CA2 Early Career Physicians
Susan Wu, MD, FAAP; AAP-CA2 Chapter Secretary

Oral Presentation

A Pilot Symbiotic Shadowing Program for Pediatric Residents and Undergraduate Premedical Students.
Christine Thang, MD; Natalie Barnette, BS; James H. Lee, MD
UCLA Mattel Children's Hospital, Los Angeles, CA

Poster Presentations

1. Phone Application Diary Use in the Outpatient Setting.
Deema Akari, BS; Taylor Fujimoto, BS, MS; Michael Deo, BS, MS. UC Riverside School of Medicine
2. Language Barriers Impact Access to Services for Children with Autism Spectrum Disorders.
Helaine G. St. Amant, BA¹; Sheree M. Schragger, PhD, MS²; Carolina Peña-Ricardo, MD²; Marian E. Williams, PhD¹; Douglas L. Vanderbilt, MD¹
¹ Keck School of Medicine of USC, Los Angeles, CA
² Children's Hospital Los Angeles, Los Angeles, CA
3. Social Determinants of Health Screening in a Safety-Net Pediatric Primary Care Clinic: Phase II.
Sung Hyun (Angie) Lim, MPH; Lisa Gantz, MD; Amy Shekarchi, MD
UCLA Mattel Children's Hospital, Los Angeles, CA
4. Educational Intervention to Improve the Sleep Behavior and Well-Being of Students.
Alexandra Colt, BA; Jo Marie Reilly, MD, MPH
Keck School of Medicine of USC, Los Angeles, CA
5. Creating a Day of Action to Advocate for the Children's Health Insurance Program (CHIP).
Alexa Manriquez, BS¹; Suzanne Stewart, MD²
Keck School of Medicine of USC, Los Angeles, CA
UC Davis Medical Center, Sacramento, CA
6. A Case of Progressive Rash.
Esther Jun, MD; Katie Strobel, MD; Amanda Kosack, MD; Rabia Cheema, MD
UCLA Mattel Children's Hospital, Los Angeles, CA
7. Informed Care of the Immigrant Family: The Role of Physician-Avocacy In The (Potential) Post-DACA Era.
Brian Lonquich, MD
UCLA Mattel Children's Hospital, Los Angeles, CA
8. A Quality Improvement Project to Improve Contingency Planning at Discharge.
Yin Zhou, MD; Joyce Koh, MD; Susan Wu, MD
Children's Hospital Los Angeles, Los Angeles, CA
9. Hepatoblastoma in a Child with Spondyloepiphyseal Dysplasia Congenita.
Jiwen Li, MD¹; Fataneh Majlessipour, MD²
¹ UCLA Mattel Children's Hospital, Los Angeles, CA
² Cedars-Sinai Medical Center, Los Angeles, CA
10. Exposure to Angiotensin-Converting Enzyme Inhibitors in Pregnancy and the Risk of Low Birth Weight and Congenital Cardiac Malformation.
Sneha Chintamaneni, MD; Lewei Duan, MS; Avetis Hekimian, MD; Marwan Qattan, MD; Ming-Sum Lee, MD, PhD
Kaiser Permanente Los Angeles Medical Center, Los Angeles, CA
11. Interdisciplinary Efforts to Enhance Trauma-Informed Legal Services for Unaccompanied Immigrant Children at the Texas-Mexico Border.
Lisa Gantz, MD¹; Angel Augustin, BS²
¹ UCLA Mattel Children's Hospital, Los Angeles, CA
² Florida State University College of Medicine

Pilot Symbiotic Shadowing Program for Pediatric Residents and Undergraduate Premedical Students

Christine K. Thang, MD, James H. Lee, MD, Natalie Barnette, BS
UCLA Medical Center, Los Angeles, CA

It has been recognized that near-peers serve as effective mentors with better social and cognitive congruence between mentee and mentor. While residents seek faculty support for their scholarly activities, there is also opportunity for residents to serve as mentors themselves. However, busy clinical duties and stress about workflow interruptions among trainees are frequently mentioned deterrents. Recognizing this along with the increasing difficulty for undergraduate students to shadow physicians due to stricter institutional rules, we implemented a pilot program in which undergraduates shadow pediatric residents while assisting them in office tasks (i.e. organizing forms, faxing documents, scanning outside records, etc.) that are not physician-level tasks but that have been traditionally placed on residents. We created pre/post-participation surveys for college and resident participants from September 2017 to January 2018. Results: Utilizing a 5-point Likert scale, the undergraduate survey (n=10) assessed items such as knowledge about resident duties (3.7/5), well child care (3), urgent care (4), and how a clinic functions (3.4). The resident survey (n=5) assessed experience in having the undergraduates in clinic with respect to teaching (3.8), mentorship (3.6), career guidance (3.2), workflow (3.6), and overall enjoyment (4.6). These preliminary questionnaires revealed various knowledge gaps among the students and opportunities to mentor and teach without sacrificing workflow for the residents. This pilot portrays an example of a symbiotic relationship, in which students can gain greater insight into the clinical duties of a resident while the trainees can mentor and get help with some of the clinical tasks that do not require a physician. Next steps will be to assess the program's impact at the end of this academic year from the post-participation questionnaires and to gain additional feedback from the residents as more rotate through the clinic and participate in the pilot program.

Email: cthang@mednet.ucla.edu

Phone Application Diary Use in the Pediatric Outpatient Setting

Deema Akari, B.S, MS3 (UCR); Taylor Fujimoto, B.S, M.S; Michael Deo, B.S, M.S

Technology is a prevailing force in contemporary society and is often used in medicine to improve health outcomes and long-term care for patients. However technology is far more prevalent in highly specialized fields such as radiology and much less so in the primary care fields such as pediatrics. This leads to a restriction in the amount of patients who are able reap the many benefits that technology can contribute to their health.

The nature of primary care lends itself to continuity and long term care. Investing in even a modest amount of digital technology, such as phone application diaries, can make a significant difference for patients over many years. Digital phone application diaries have incredible potential to serve as a conduit for information sharing. They can serve as facilitators of conversation between physicians and patients and can thus serve as a powerful force for education during appointments.

A survey was designed to gauge a need and desire for such digitalized information sharing between parents and their children's pediatricians. This study was adapted from the Technology Acceptance Model (TAM), outlined in Figure A, formulated by Richard J. Holden and Ben-Tzion Karsh¹. It focused on the attitudes of parents toward digital technology in relation to their children's healthcare. Individuals surveyed were parents of pediatric patients and they were assessed for their current methods of logging and reporting their children's health and development to pediatricians. The survey assessed general attitudes and satisfaction with the amount of digital technology that their pediatrician's use in the care of their children. The survey will use this information ascertain parent perceived usefulness and ease of use of digital technology such as phone diary applications, and their attitudes towards using these applications. It will also ascertain the behavioral intention to use such an application in conjunction with physician visits and conversations. In the future, the study will look to assess the actual use of digital technology by parents in conjunction with pediatrician visits and whether the use of phone applications in pediatric settings contributed to perceived improvement in patient care.

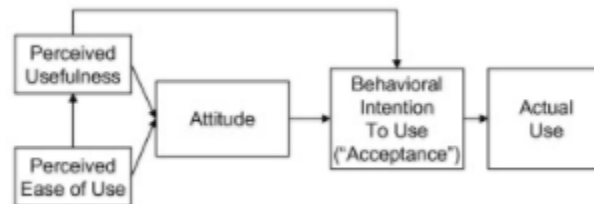


Figure A Technology Acceptance Model (TAM)

¹ Holden, Richard J., and Ben-Tzion Karsh. "The technology acceptance model: its past and its future in health care." *Journal of biomedical informatics* 43, no. 1 (2010): 159-172.

Language Barriers Impact Access to Services for Children with Autism Spectrum Disorders

Helaine G. St. Amant, BA (USC); Sheree M. Schragger, PhD, MS (CHLA); Carolina Peña-Ricardo, MD (CHLA); Marian E. Williams, PhD (USC), Douglas L. Vanderbilt, MD (USC)

Racial and ethnic disparities in accessing health care have been described in children with autism spectrum disorder (ASD). In a retrospective chart review of 152 children with ASD, children of parents whose primary language was English were significantly more likely to have both social skills and communication goals within their individualized education plan (IEP) compared to children of parents whose primary language was not English. Additionally, children of primary English speakers received significantly more hours of direct services from their state disability program. After controlling for demographic covariates, findings suggest that language barriers may negatively affect parents' abilities to access health care services for their child with ASD. Acculturation factors must therefore be considered when analyzing disparities in autism.

Email: hstamant@usc.edu

	<u>IEP – Social Skills</u>		<u>IEP - Communication</u>		<u>CA DDS Access</u>		<u>CA DDS # Hours</u>	
	OR	p-value	OR	p-value	OR	p-value	β	p-value
Parent primary language (unadjusted)	3.67	0.001	5.88	0.02	0.69	0.30	0.22	0.04
Parent primary language (adjusted)	4.81	0.001	11.00	0.007	0.81	0.66	0.24	0.03
Age at assessment (years)	1.07	0.22	0.92	0.24	1.06	0.35	0.29	0.01
Male gender	1.04	0.93	1.22	0.78	0.78	0.68	0.04	0.69
Hispanic ethnicity	0.99	0.99	2.76	0.11	0.91	0.86	-0.06	0.61
Location: CA DDS	1.07	0.91	1.78	0.46	5.91	0.001	-0.05	0.70
Location: Home institution	0.35	0.10	0.23	0.07	0.13	0.004	-0.12	0.33

Table 1. Unadjusted and adjusted regression analyses predicting ASD services outcomes.

Variable	Categories	N (%)
Diagnosis	Autism	116 (76%)
	PDD/ASD	32 (21%)
	Asperger's	4 (3%)
Child's Gender	Male	127 (84%)
	Female	25 (16%)
Race	Hispanic	98 (64%)
	Asian	17 (11%)
	White	13 (8.5%)
	Black	13 (8.5%)
	Multiracial	7 (5%)
	Other	4 (3%)
Ethnicity	Hispanic	105 (69%)
	Non-Hispanic	47 (31%)
Parent's primary language	English	52 (34%)
	Spanish	80 (53%)
	Other	20 (13%)
Parent's secondary language	None	89 (59%)
	English	50 (33%)
	Spanish	10 (7%)
	Other	3 (2%)
Eligible for CA DDS services		95 (63%)
Social skills goals in IEP		71 (47%)
Communications skills goals in IEP		123 (81%)
Variable	Range	Mean (SD)
Age in months at time of parental concern	1-84 mo	20.36 (11.16)
Age in months at time of ASD diagnosis	17-180 mo	53.62 (35.66)
Hours of direct services per week	0-40 hrs	2.90 (6.88)

Table 2. Sample demographics and outcomes.

Social Determinants of Health Screening in a Safety-Net Pediatric Primary Care Clinic: Phase II

Sung Hyun (Angie) Lim, MPH; Lisa Gantz, MD; Amy Shekarchi, MD (UCLA)

Growing evidence has shown that screening for social determinants of health (SDOH) can help lead to timely referrals and connection with support services to address unmet needs of families that ultimately can lead to improved health and wellbeing. Using a quality improvement framework and Plan-Do-Study-Act (PDSA) cycles, we completed Phase II of an ongoing quality improvement project to implement a SDOH screening tool for use in a safety-net pediatric primary care clinic.

Based on preliminary data from our initial pilot, we adjusted our workflow to include volunteers who administered surveys to families (rather than survey self-completion). We also added two screening questions to assess need for (1) job/learning/language resources and (2) assistance with legal concerns and incorporated tracking of post-visit outreach efforts (such as phone calls or e-mails) to follow-up with families or provide additional resources.

Between June 2017 and December 2017, 82 parents of patients under the age of 12 completed screenings. We administered 47 surveys in English, 26 in Spanish, and 2 in either language. There were 31 unique zip codes represented. We had 38 positive screens indicating 97 total needs. We compared this aggregate data with the results from Phase I, which included 131 surveys completed between January 2017 and March 2017.

When comparing data from Phase I and Phase II screens completed by parents for patients under the age of 12, the identified needs for food (7% in Phase I vs. 6% in Phase II) and housing (17% in Phase I vs. 18% in Phase II) stayed similar. Regarding the questions added in Phase II, 23% of respondents requested resources for job/learning/language and 9% requested assistance with legal concerns.

Based on concerns raised in the screen, a total of 5 social work consults were placed. Two of the 5 social work consults resulted in investigations by the Department of Children and Family Services. A total of 21 families received handouts on various topics including housing, childcare, food banks, and parks and recreation. Seventeen families received additional post-visit outreach via phone calls or e-mails. Two out of 17 confirmed that they were successful in achieving referrals, including one family that received legal assistance and childcare and another family that received assistance for housing and transportation. Of those contacted for follow-up, previously reported barriers to referral achievement included: transportation (2), work/employment (3), and “other reasons” (4) such difficulty understanding required paper work or insecure housing.

Overall, we found that rates of reported needs identified by our screening tool were consistent between Phase I and Phase II. We also identified additional needs that were not assessed previously, including legal assistance and job/learning/language resources. Seventeen out of 24 positive screens who accepted assistance (71%) were followed up either via phone or e-mail and further identified barriers to referral achievement. We believe that addressing these barriers is an important added step to effectively complete the intervention. In the future, we hope to use geo-mapping to identify at-risk communities that may benefit from community collaborations or visits from community health workers.

Email: SungHyunLim@mednet.ucla.edu

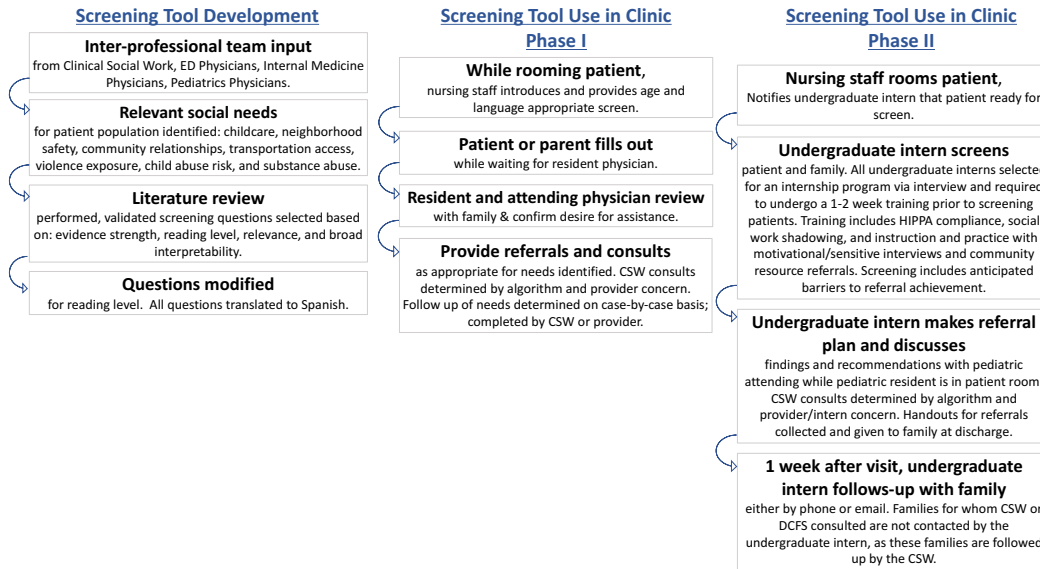


Figure 1. Screening tool development process

PLACE PATIENT STICKER HERE

PEDIATRICS PCMH SDOH PATIENT SURVEY
PARENT SCREEN: AGES 12 YEARS AND YOUNGER

	OFTEN CON FREQU- ENCIA	SOME- TIMES A VECES	NEVER NUNCA
Your answers to the following questions are optional and confidential. Your answers are only shared if you or someone you know is in danger OR if you choose to receive assistance for the needs you identify on the survey. Please answer about your experiences in the last year... <i>Sus respuestas a las siguientes preguntas son opcionales y confidenciales. Sus respuestas solo se comparten si usted o alguien que usted conoce está en peligro o si optó por recibir asistencia para las necesidades que identificó en la encuesta. Por favor responda las declaraciones abajo sobre su experiencia en el último año...</i>			
I want to find activities or childcare for my children. <i>Quiero encontrar actividades o cuidado de niños para mis hijos.</i>			
I want resources on job, learning, or language services. <i>Quiero recursos sobre el trabajo, el aprendizaje o los servicios lingüísticos.</i>			
I or my child needed to see a doctor but couldn't because we didn't have a way to get there. <i>Mi hijo o yo necesitábamos ver a un médico pero no pudimos porque no teníamos una manera de llegar allí.</i>			
My family or I could not pay our rent or mortgage on time. <i>Mi familia o yo no podemos pagar nuestra renta o hipoteca a tiempo.</i>			
My family or I have been close to becoming homeless or losing our housing. <i>Mi familia o yo hemos estado cerca a perder nuestra vivienda.</i>			
My family or I have run out of food or worried that we will run out of food before we get more. <i>Mi familia o yo fuimos cerca a no tener comida o preocupamos que no íbamos a tener comida antes de poder comprar mas.</i>			
My family or I have been afraid of, threatened by, or hurt by someone. <i>He tenido miedo, y he sido amenazado o herido por alguien*.</i>			
My family or I have a legal problem or concern. <i>Mi familia o yo tenemos un problema o preocupación legal.</i>			
I or someone in my house has had a problem with drugs or alcohol. <i>Yo o alguien en mi casa ha tenido un problema con las drogas o el alcohol.</i>			
I feel like my child is difficult to take care of. <i>Siento que mi hijo es difícil de cuidar.</i>			
I feel that I need to hit or spank my child. <i>Siento que necesito golpear a mi hijo.</i>			
Are there any other things you'd like us to know or assist with? <i>En esta casilla, por favor escriba si desea que le ayudamos con cualquier otra cosa.</i>			
Would you accept assistance or information about the needs you've identified today? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>¿Le gustaría recibir ayuda con las necesidades que identificó en esta encuesta?</i> <input type="checkbox"/> Si <input type="checkbox"/> No			

PATIENT DEMOGRAPHIC INFORMATION:

Name of person answering questions:

Parent out of room: Yes No

Patient city and zip code:

Preferred contact method:

 Phone: Email:

Preferred Language:

Translator Used (ID, language):

INTERVENTION PLANNING:Information discussed with parent/caregiver: Yes No

What will make it difficult for patient to follow up with referrals:

 Motivation lacking School (caregiver) School (patient) Transportation Work/employment (caregiver) Work/employment (patient) Other. Specify:

Interventions: (select all that apply)

 SW consult- Orchid order placed Called/paged CSW to clinic Handouts provided. Specify: Other. Specify:

Figure 2. New screening form

Table 1. Demographics (N=82)

Average age (months)	45
Preferred language	
English	47
Spanish	26
Bilingual	2
Unknown	7
Types of different zip codes	31
Number of positive screens	38
Accepted assistance	24
Did not accept assistance	14

Table 2. Comparison between identified needs during first vs. second round of screens

	Phase I (N=131 surveys)		Phase II (N=82 surveys)	
Total identified needs	156		97	
Types of identified needs	Frequency	Percent	Frequency	Percent
Activities or child care for children	79	51	25	26
Job, learning, or language service resources for parents	N/A	N/A	21	22
Transportation to doctor	14	9	3	3
Housing needs	26	17	17	18
Food needs	11	7	6	6

Afraid of, threatened, or hurt by someone	7	4	3	3
Legal problem	N/A	N/A	8	8
Drugs or alcohol problem	2	1	2	2
Child difficult to take care of; hit or spank child	17	11	12	12

Educational intervention to improve the sleep behavior and well-being of students at the Francisco Bravo Medical Magnet High School

Alexandra Colt, BA and Jo Marie Reilly, MD, MPH (Keck School of Medicine of the University of Southern California, Los Angeles, CA)

Introduction Adolescent sleep physiology, school schedules, homework, and distractions leave many students at risk for sleep deprivation, potentially harming health, mood, and academic performance. Adolescent sleep researchers highlight the importance of sleep education to improve the health and well-being of adolescents. The goal of this study was to determine whether a sleep education intervention program improves both sleep knowledge and sleep behaviors in high school freshmen.

Design, Setting, and Participants

Design This pilot study includes both a 4-hour, after school didactic course and a 9-week sleep behavior journal project. Pre- and post-intervention surveys measured the high school students' sleep behaviors and sleep knowledge. Investigators were blinded to the student responses, except if the Patient Health Questionnaire-9 (PHQ-9) scores measured ≥ 10 (moderate or more severe depression) or suicidal ideation, indicating a student need for significant and urgent mental health intervention.

Setting The setting was a single, magnet high school in Los Angeles, California.

Participants Student volunteers (average age of 14-years-old) were recruited through their health class; 24 freshmen high school students participated in the educational intervention. 18 completed the intervention and pre and post surveys.

Intervention The curriculum consisted of 4 hours of interactive lectures emphasizing the physiology and benefits of sleep, what impacts sleep, and methods to improve sleep, followed by a 9-week sleep behavior change journal.

Measures Pre and post sleep surveys and the PHQ-9 depression screening tool were administered to all student participants prior to and immediately after the sleep intervention and data was collected and tabulated. T-tests and chi-squared tests were used to analyze pre- to post-test change (Prior to data collection, hypothesis was that sleep behaviors, depression, and knowledge of sleep would improve.)

Results Of the 24 student participants, 18 (17 females, 1 male) completed the pre survey, lectures, journal, and post survey and were included in the data analysis. Subjects showed statistically significant improvement in average sleep hours per night (6.9 hours to 7.8 hours, $p=0.01$), average weekend night bed time (11:36pm to 10:54pm, $p=0.03$), and answering correctly (No) to whether weekend "catch up" sleep was advisable (3 subjects to 9 subjects, $p=0.03$). Depression levels were not statistically significant but trended downward (average PHQ-9 score 5.1 to 4.2, $p=0.46$). The top three remembered subjects from the course were caffeine physiology, sleep's effect on academics, and electronics' effect on sleep (Figure 1). The most popular student goal noted (6 subjects) was to decrease electronics use (Figure 2).

Conclusions and Relevance This pilot high school sleep education intervention demonstrated that high school student’s average sleep hours per night, weekend bed time, understanding of the poor effectiveness of weekend “catch-up” sleep, and the impact of electronics on sleep improved after the sleep program was completed. These findings suggest the benefit of a sleep education intervention in this population. Further studies are need to demonstrate the effectiveness of this education over time and its generalizability to other high school students.

Email: acolt@usc.edu

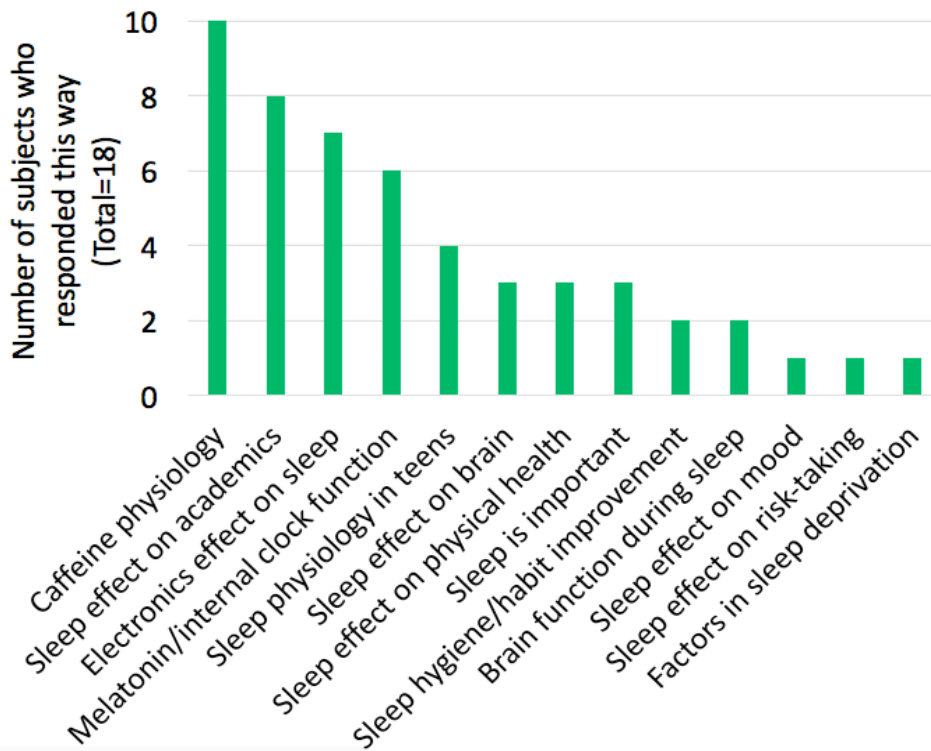


Figure 1. Answers to “What are three things you learned in this sleep course?”

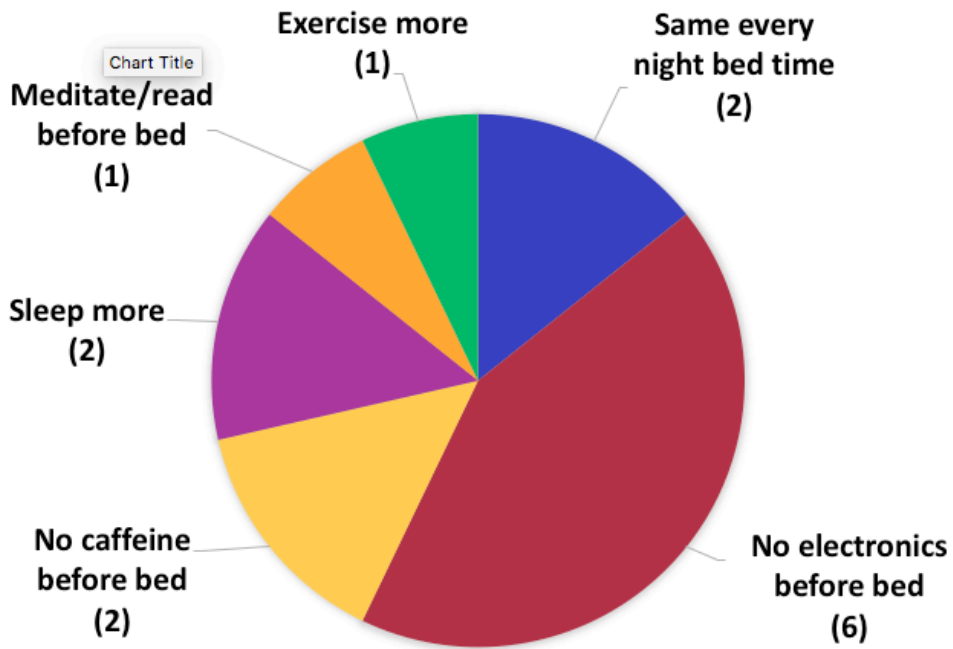


Figure 2. Answers to “What will you change as a result of this sleep course?”

Creating a Day of Action to Advocate for the Children's Health Insurance Program (CHIP)

Alexa Manriquez (USC) and Suzanne Stewart, MD (UC Davis)

Introduction

CHIP insures nearly 9 million children across the United States.¹ On September 30, 2017, the funding for the program expired. After over 100 days of uncertainty looming over states with exhausted resources, the care for CHIP recipients hung in the balance. Pediatricians were concerned that a program successful in reducing uninsured children to an all-time low was coming to an end.

Methods

Recognizing the significance of CHIP and the critical importance of families' voices being heard, a group of pediatric residents in California developed the idea of Rally4Kids. Utilizing resources from the AAP Section on Pediatric Trainees (SOPT) and State Advocacy Training Collaborators, leaders from across the state came together in a matter of days. A planning phone call among state pediatric trainee advocacy leaders took place one week prior to the event. Originally, programs intended to present a united front in support of multiple children's health issues, including CHIP and Deferred Action for Childhood Arrivals (DACA). Programs planned to participate at the same date and time with specifics of methods left to program leadership.

While getting approval from national AAP for Rally4Kids, national AAP leaders asked if the statewide rally could be turned into a national day of action focused on renewing CHIP. To increase volume of participants, the goals changed to make the rally simple yet impactful and maximize participation and therefore, visibility. The focus became a photo campaign on social media using the hashtag "Rally4Kids". In order to maintain cohesion and unity, signs were shared amongst all pediatric trainees via email and social media.

Results

15 programs in the original state and approximately an additional 50 different training programs across the nation participated in Rally4Kids on December 12, 2017. Programs made the day their own with letter-writing, phone calls, and information sessions. Trainees at each institution took to social media with photos shared under the common hashtag, "#Rally4Kids," linking each event. The hashtag was used with 283 tweets on Twitter. On January 22, 2018, 40 days after the event, Congress passed a six-year funding extension for CHIP.

Conclusion

Rally4Kids demonstrated the power of grassroots efforts to mobilize pediatric trainees across the country and contribute to policy change. Utilization of email and social media as a platform to coordinate advocacy efforts proved an effective way to facilitate collaboration between individuals who may not regularly communicate. Sharing photographs and stories in pursuit of a common goal helped foster community among trainees of all levels. Further, participating in Rally4Kids granted trainee-advocates another avenue to give patients a stronger voice with potentially more visibility to legislators and representatives.

Subsequent advocacy efforts should focus on education as a central component. Anecdotally, Rally4Kids events that included more than photograph-sharing on social media seemed to have great educational impact for trainees, in terms of informing trainees about pertinent issues in children’s healthcare, providing advocacy strategies to be used in future initiatives and compelling future action. Garnering the momentum from Rally4Kids and similar campaigns, pediatric trainees will focus future advocacy efforts on protecting immigrant families, reducing gun violence and prioritizing school safety.

1. Statistical Enrollment Data System (SEDS) Combined CHIP Enrollment Total Report and Form CMS-64.EC (As of 02/15/2017)

Email: amanrriq@usc.edu



Figure 1. Signage used for the Rally4Kids Day of Action



Figure 2. Rally4Kids California Participants

A Case of Progressive Rash

Esther Jun, MD (UCLA); Katie Strobel, MD (UCLA); Amanda Kosack, MD (UCLA), Rabia Cheema, MD (UCLA)

13 year old male presents with a rapidly worsening rash which initially started as annular targetoid lesions on bilateral upper extremities and spread to include back, buttock, lower extremities and groin. He has had a three week history of rhinorrhea, cough and fever. Physical exam reveals a rash that consists of erythematous edematous papules coalescing into plaques, some annular and targetoid, some with scattered 1 mm pustules on back, chest, axillae, abdomen, arms and legs. In addition, plantar surfaces have few erythematous macules and palmar surfaces have mild erythematous patches. His buccal mucosa has a few erythematous macules and mild erosions and dorsal tongue has multiple 1mm white papules. Initial laboratory findings are significant for white blood cell count of 24,100/ μ L (24.1×10^9 /L) with neutrophilic predominance of 92%, C-reactive protein (CRP) level of 10.1 mg/dL. Chest X-ray reveals areas of central bronchial wall thickening. Condition worsens with fever, increased pustular component of rash, bilateral conjunctivitis, joint pain and pleuritic chest pain. ANA, DNase-B, ASO, C3, C4, immunoglobulins, cold agglutinins, cryocrit, immune complex c1q, vwf cofactor, factor VIII and ferritin are all within normal limits. Blood culture, respiratory viral panel, EBV PCR, Cocci IgG and IgM, Parvovirus B-19 PCR, Measles, Mumps and Rubella IgM are all negative. Skin biopsy is performed and is nonspecific with acute suppurative folliculitis and perifolliculitis with numerous eosinophils. HSV PCR and Varicella PCR of skin lesion are negative. *Mycoplasma pneumoniae* respiratory PCR is negative but *M. pneumoniae* serologies (IgG=2.81, normal <0.90 and IgM= 816 U/mL, normal <770 U/mL) are positive.

Mycoplasma pneumoniae is a common cause of community-acquired respiratory tract infections. It has been found that 11 percent of patients with *Mycoplasma pneumoniae*-induced pneumonia develop a rash. *M. pneumoniae* has been associated with both Stevens Johnson syndrome (SJS) and erythema multiforme (EM) major. Patients with prominent mucosal involvement are categorized as *Mycoplasma pneumoniae*-induced rash and mucositis (MIRM). MIRM patients have prominent mucositis and sparse cutaneous findings but in more moderate-severe cases have more extensive cutaneous involvement. Mucosal involvement occurs in both SJS and EM and is more difficult to distinguish, but mucositis is rare in patients with EM. The patient has characteristics of both EM and a severe presentation of MIRM. MIRM patients have a milder course with lower mortality and long term sequelae, with less recurrences than SJS. The rash and onset of pleuritic chest pain prompted workup for *Mycoplasma pneumoniae*. He was subsequently diagnosed with *Mycoplasma pneumoniae*-associated mucocutaneous disease, in particular EM versus a severe presentation of MIRM. This case calls attention to the broad differential diagnosis of progressive rash and mucositis and the need to have a high index of suspicion for unusual presentations of common conditions.

Contact E-mail: Esther Jun MD ejun@mednet.ucla.edu

Informed Care of the Immigrant Family: The Role of Physician-Avocacy In The (Potential) Post-DACA Era.

Brian Lonquich, MD (UCLA Internal Medicine-Pediatrics PGY-4)

If Congress does not act by March 5, 2018, more than 1000 DACA (Deferred Action for Childhood Arrivals) recipients will lose their legal status a day and face potential deportation. This poses an unacceptable array of consequences that demands advocacy for immigration reform, and physicians are uniquely positioned to advocate for this vulnerable population at the intersection of health and policy.

Dovetailing into the recent AAP Perspectives piece by Kuczewski et al., this oral presentation will serve as a primer for the recent immigration policies outlined by Attorney General Sessions and President Trump, with special focus on distinguishing the DREAM (Development, Relief, and Education for Alien Minors) Act from DACA in a manner relevant and approachable to pediatric providers^{1,2,3}. I will also review Temporary Protected Status and the implications of the decision by the US Department of Homeland Security to terminate the status of El Salvador, Haiti, Sudan, and Nicaragua⁴. As a result of this change nearly another 300,000 will be forced into potential deportation proceedings to countries now deemed safe to return to, despite appalling levels of gang violence and social determinants of health statistics to the contrary⁴. I will then review the known deleterious health consequences of current detention policies, with particular attention to children and their developmental outcomes³.

I hope to leave the audience with a firm grasp on just what is at stake for the one million “Dreamers” left in limbo following recent statements by President Trump, the uncertainty that TPS holders now face, and the plight of undocumented children under the care of the Office of Refugee Resettlement. With full understanding of these policies in the context of health I will then highlight the role for physician-advocates with pragmatic ways to take action at a local, state, and national level. Deporting children escaping drug violence or Dreamers that are American by every sense of the word is unacceptable, and pediatricians have a duty to inform themselves and take action against current immigration policies that traumatize and disrupt the well-being of children and their families.

Email: blonquich@mednet.ucla.edu

References:

1. Kuczewski M, Lantos JD, Patel Z. Advocating for the DREAM Act: Why Pediatricians Should Care and What They Can Do. *Pediatrics*. 2018;141(1):e20173314
2. Tsou P-Y. A Pediatrician’s Day in Immigration Court. *Pediatrics*. 2018;141(1):e20170921
3. Linton JM, Griffin M, Shapiro AJ, AAP COUNCIL ON COMMUNITY PEDIATRICS. Detention of Immigrant Children. *Pediatrics*. 2017;139(5):e20170483
4. Zuzana Jerabek. Fact Sheet: Temporary Protected Status. National Immigration Forum. Accessed Jan 2 2018.

A Quality Improvement Project to improve Contingency Planning at Discharge

Yin Zhou, MD (CHLA); Joyce Koh, MD; Susan Wu, MD (CHLA/USC)

Background: An effective hospital-to-home transition is critical in preventing adverse events after discharge. Contingency planning, or having instructions for what to do when issues arise after discharge, is a key strategy to reduce post-discharge events.

Objective: Improve % caregivers with knowledge about who to call for questions after hospital discharge from 30% to 90%.

Methods: A monthly sample of 10-15 caregivers of patients, discharged from inpatient medical teams at Children's Hospital Los Angeles, were surveyed within 7 days of discharge. Outcome measures include percentages of caregivers who knew which physicians to contact for 1) worsening symptoms, 2) general medical questions, 3) hospitalization related questions and 4) discharge medication related questions. A composite score was calculated for each patient by combining all 4 measures, expressed as % of questions answered correctly. Data were plotted on run charts and control charts displaying proportions. Our intervention included a standardized sheet with contact information of relevant physicians, after-hours triage and pharmacy. Multiple plan-do-study-act cycles were conducted to optimize utilization of the standardized sheet on inpatient resident teams.

Results: At baseline (n=129) (Oct 2016 to July 2017), 75% of caregivers knew which physician to call if original symptoms worsened, but only 30% (median) knew to contact the discharge attending physician for hospitalization related questions such as pending test results and newly prescribed medications. Majority of caregivers knew to contact their primary care provider for general symptoms unrelated to hospitalization (median 89%) and to contact the pharmacy for questions concerning discharge medications (median 88%). More caregivers of subspecialty patients knew which physician to contact when symptoms worsen (88%) than their general pediatric counterparts (61%). Post-intervention, (n=26) 73% understood which physician to contact when original symptoms worsen, and 69% knew to contact the discharge attending physician for hospitalization related questions. Overall composite score improved from 68% (median) to 78%.

Conclusion: Despite current discharge instructions, caregivers do not know who to contact if their child worsens at home or to contact the discharging physician for questions related to hospitalization. A standardized information sheet may improve caregiver knowledge. Further PDSA cycles are needed to optimize the delivery of discharge information.

Email: yizhou@chla.usc.edu

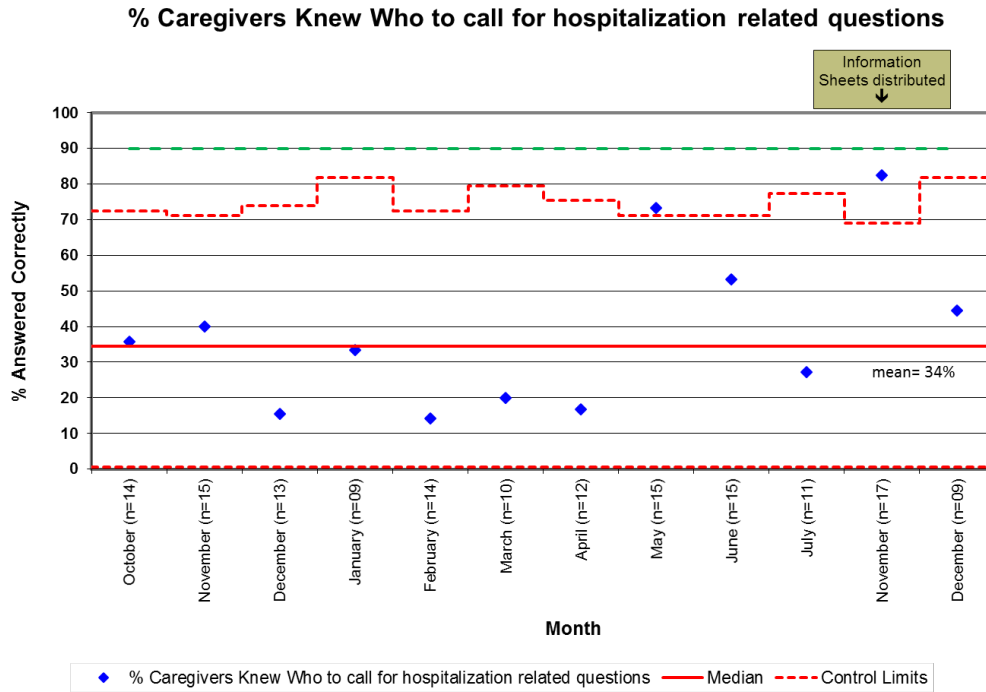


Figure 1. P-chart of caregivers who knew to call discharge attending physician for hospitalization related questions

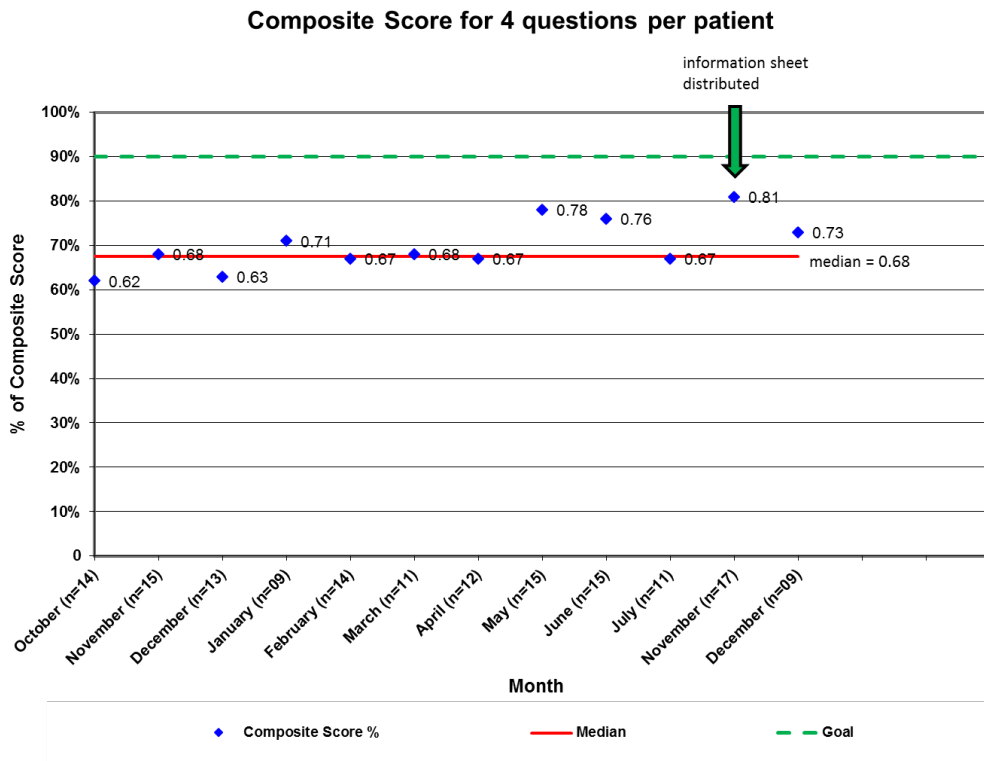


Figure 2. Run chart of composite score of all 4 outcome measures

Hepatoblastoma in a Child with Spondyloepiphyseal Dysplasia Congenita

Jiwen Li, MD (UCLA); Fataneh Majlessipour, MD (Cedars-Sinai Medical Center).

Background: Spondyloepiphyseal dysplasia congenita (SEDC) is an autosomal dominant disorder in type II collagen assembly due to defects in the COL2A1 gene. Though malignancies have been reported in the larger family of collagen assembly disorders, they have never been reported in SEDC. Though rare, hepatoblastoma is the most common primary liver malignancy found in the pediatric population. Here we describe a novel case of hepatoblastoma presenting in a patient with SEDC, and exploration into the interrelationship between the two conditions.

Case Presentation: A 20-month-old child with prior diagnosis of SEDC based on COL2A1 gene sequencing with a novel heterozygous mutation presents with abdominal pain and a palpable abdominal mass with highly elevated serum alpha-fetoprotein >160,000. Magnetic resonance imaging was consistent with hepatoblastoma. The patient underwent complete surgical resection with negative margins and no nodal involvement, classifying him as stage I and standard risk by pretreatment extent of primary tumor (PRETEXT) staging. He had pre-existing conductive hearing loss due to SEDC, and received a customized, reduced course of chemotherapy consisting of vincristine, 5-FU, and cisplatin out of concern for compounded ototoxicity. After surgical resection and completion of chemotherapy, his AFP decreased to undetectable levels, and he remains disease-free to date. Histology and chromosomal analysis revealed mixed epithelial (with fetal and embryonal) and mesenchymal type hepatoblastoma with hyperdiploidy.

Conclusion: This is the first reported case of hepatoblastoma in a patient with SEDC. Currently, no genes clearly related to a predisposition for the development of hepatoblastoma have been mapped to chromosome 12. Prior cases of hepatoblastoma involving abnormalities in chromosome 12 has been previously reported (1). Inherent abnormalities on chromosome 12 could be associated with the development of hepatoblastoma, and further investigation of this relationship is warranted.

Reference:

- 1.) Nagata, T. et al. Cytogenetic abnormalities in hepatoblastoma: report of two new cases and review of the literature suggesting imbalance of chromosomal regions on chromosomes 1, 4, and 12. *Cancer Genetics and Cytogenetics* 156, 8–13 (2005).

Email: jili@mednet.ucla.edu

Exposure to angiotensin-converting enzyme inhibitors in pregnancy and the risk of low birth weight and congenital cardiac malformation.

Institutions and Authors

Sneha Chintamaneni, MD, Lewei Duan, MS, Avetis Hekimian, MD, Marwan Qattan, MD, Ming-Sum Lee, MD, PhD (Kaiser Permanente Los Angeles Medical Center, Los Angeles, CA.)

Keywords:

Pregnancy, Congenital heart disease, angiotensin-converting enzyme inhibitors

Abstract (1900 characters – 600 for each table):

Background:

The goal of this study is to investigate the impact of exposure to angiotensin-converting enzyme inhibitors (Ace-i) in pregnancy on the risk of low birth weight and congenital cardiac anomalies.

Methods:

This is a retrospective cohort study that included singleton births in the Kaiser Permanente Southern California Region between 2003 and 2014. Pregnant women exposed to Ace-I during pregnancy were identified using pharmacy dispensing records. Maternal co-morbidities and fetal congenital cardiac anomalies were identified by searching electronic medical records using ICD9-CM codes. Logistic regression analyses were used to estimate odds ratios (ORs) with 95% confidence intervals (CIs).

Results:

Among 379,238 singleton pregnancies, 404 were exposed to Ace-I. Ace-I used were lisinopril (n=398, 98%), captopril (n=3, 1%) and benazepril (n=3, 1%). Women exposed to Ace-I were older, had higher body mass indices, and were more likely to have hypertension, heart failure, diabetes, and chronic renal insufficiency. The prevalence of preterm births (<37 weeks) was significantly higher in the Ace-I group compared to non-exposed controls (23.5% in the Ace-I group vs. 7.9% in controls). Fetal birth weight was lower in the Ace-I group. Mean birth weight and % low birth weight (<2500g) were 3165 ± 807 g and 14.6% in the Ace-I group, and 3349 ± 559 g and 5.4% in the control group. The prevalence of congenital cardiac malformation was 4.2% in the Ace-I group, compared to 1.4% in controls. Ace-I exposure was associated with a higher risk of congenital cardiac malformation (OR 3.1, 95% CI 1.9-5.1, p<0.001). This risk was attenuated after adjustment for maternal age, ethnicity, and maternal comorbidities (adjusted OR 1.8, 95% CI 1.1-3.0, p=0.016).

Conclusion:

Maternal exposure to Ace-I is associated with preterm birth and low birth weight. The association between Ace-I and congenital cardiac malformation is attenuated after accounting for maternal comorbidities.

Clinical Implications:

In this population-based study, we found a high prevalence of fetal congenital cardiac malformation in pregnancy exposed to Ace-I. Referral for fetal echocardiogram should be considered in pregnant women exposed to Ace-I to allow early diagnosis and management of fetal congenital heart disease.

Email: sneha.chintamaneni@kp.org

Interdisciplinary Efforts to Enhance Trauma-Informed Legal Services for Unaccompanied Immigrant Children at the Texas-Mexico Border

Lisa Gantz, MD (UCLA Med Peds); Angel Augustin, BS (Florida State University College of Medicine)

Growing evidence supports the need for trauma-informed practices in the fields of medicine, behavioral health, and social work. ProBAR provides pro-bono legal services to children and families in detention facilities along the South Texas Border. ProBAR's Children's Project provides care to unaccompanied minors, a population with disproportionately high rates of mental health issues and history of trauma exposure. In an effort to best serve these children, an understanding of trauma-informed care is needed.

A needs assessment was conducted via key informant interviews with ProBar staff from the children's project including attorneys, paralegals, shelter specialist, and shelter coordinators, as well as leadership including the director of the Children's Project. In response to staff requests, training sessions were prepared and shared with staff on the following topics: adverse childhood experiences and toxic stress in children and unaccompanied minors; overview of common pediatric mental health conditions; recognizing and combating burnout and secondary trauma; and trauma informed interviewing.

In addition, a mixed-methods internal analysis was conducted to assess the current rates of compassion satisfaction, burnout and secondary trauma among staff, and the effectiveness of current wellness and resiliency programs at ProBar. ProBar staff were invited to participate in a focus group via email. We conducted 4 focus groups. Two focus groups included only staff from the shelter services and 2 from legal services.

Approximately 55 staff attended 2 in-person educational training sessions. A total of 17 staff participated in focus groups and 31 completed anonymous surveys. Survey respondents were predominantly female (87.1%) and the majority (77.4%) of participants were between 25 and 34 years old. The majority (58%) of respondents had worked at ProBar for one year or more, with 10 respondents from the legal teams, 14 respondents from the shelter teams, and 6 respondents from other departments. Mean PROQOL scores for the sample were average for burnout (24.45), secondary trauma (25.73), and compassion satisfaction(39.54). Analysis of subgroups was conducted based on employee department (legal, shelter, or other). One respondent from the shelter team was found to have high secondary trauma and low compassion satisfaction. Average compassion satisfaction was highest among shelter team (39.8) and secondary trauma was lowest among employees that marked "other" (21.85). Focus groups discussions were analyzed and summarized. Prominent themes identified include: higher sense of burnout and secondary trauma among shelter staff when compared to legal staff; positive attitudes towards existing wellness resources, with a desire to improve accessibility for shelter staff; and a desire among

staff to increase frequency and number of staff trainings related to trauma, self-care, and mental health.

ProBAR's current policies and practices meet criteria for trauma-informed care. Opportunities for improvement include celebrating successes during scheduled meetings, providing periodic trainings on secondary trauma, creating protected wellness time for staff, and providing periodic "check-ins" in both a group and individual settings.

Email: Lisagantz@mednet.ucla.edu