



THE UNIVERSITY OF ARIZONA

**Mel & Enid Zuckerman  
College of Public Health**

**Fall 2019  
MPH Internship Conference**

**Friday, November 15, 2019  
1:00pm – 3:40pm**

**Drachman Hall  
Phoenix Biomedical Campus**



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# **Acknowledgements**

All of our wonderful internship sites  
throughout the state, nation, and world with  
whom we work to improve the state of public health

The students and faculty of MEZCOPH,  
who are central to the success of the MPH Program

The Office of Student Services and Alumni Affairs  
for their outstanding efforts, support, and encouragement

## **Internship Conference Volunteers**

We would like to thank all of the volunteers for their time  
and effort in making this a wonderful event

## **Conference Planning Committee**

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Hannah Launius | Ananya James | Rodrigo Valenzuela-Cordova

## **Office of Student Services and Alumni Affairs**

Kim Barnes  
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# Schedule of Events

**1:00p-3:40PM:** Student Internship Presentations  
**Tucson-Drachman Hall A;**  
**Phoenix-Biomedical Campus Building 2**

**Session I:** Drachman Hall, Room A112

**Session II:** Drachman Hall, Room A116  
Phoenix Building 2, Room 2306

**Session III:** Drachman Hall, Room A118

**Session IV:** Drachman Hall, Room A120

**3:30 – 5:00PM:** Reception  
**(Walkway of Wellness, Tucson)**

## Presenters

Name	Concentration*	Room**	Time	Abstract Page
Rachel Abraham	PHPM	A112	1:00	19
Tiffany Archer	FCH Global	A116/ Phx 2306	1:00	27
Bianca Avalos	PHPM	A112	1:20	20
Christina Baum	EPI	A120	1:40	46
Wrandi Carter	EPI	A118	2:20	39
Kathryn Cremer	EPI	A118	3:00	41
Rowena Davis	FCH Global	A112	2:20	23
D. Desiree Esquivel	FCH Global	A118	1:40	38
Dakshina Gautam	FCH MCH	A120	2:40	49
Sarah Gruza	EOH	A120	1:00	44
Emily Harris	FCH Global	A120	3:00	50
Maryam Hockley	MD/MPH	A116/ Phx 2306	2:40	32
Keegan Krause	FCH Global	A120	2:20	48
Katherine Lawson-Michod	PHPM	A120	2:00	47
Kara Lay	PHP	A116/ Phx 2306	1:20	28
Gianna Mattio	EPI	A120	1:20	45
Brenda Mbaabu	EPI	A118	2:40	40
Taylor Mortensen	EOH IH	A112	3:00	25
Ama Owusu-Dommey	EPI	A112	2:00	22
Lea Palmer	PHP	A116/ Phx 2306	3:00	33
Emily Podolak	HSA	A116/ Phx 2306	1:40	29
Victor Quintana	HSA	A116/ Phx 2306	2:00	30
Jess Seline	HBHP	A112	2:40	24
Owen Spencer	HSA	A116/ Phx 2306	3:20	34
Sidney Thigpen	EPI	A118	1:20	37
Priscilla Valenzuela	One Health	A112	1:40	21
Hollie Watson	EPI	A118	1:00	36
Laura Woodland	HSA	A116/ Phx 2306	2:20	31

\*Concentrations and Dual Degree Designations

BIOS – Biostatistics

EOH – Environmental and Occupational Health

EOH IH - Environmental and Occupational Health Industrial Hygiene Track

EPI – Epidemiology

FCH MCH - Family and Child Health, Maternal and Child Health Track

FCH GLOBAL - Family and Child Health, Global Health Track

HSA – Health Services Administration

HBHP - Health Behavior Health Promotion

MD/MPH- Medical Doctor/Master of Public Health

PHP - Public Health Practice

PHPM – Public Health Policy & Management

\*\*Rooms:

All “A” rooms listed are found on the first floor of Drachman Hall.

Phoenix presentations are located in Biomedical Campus Building 2, Room 2306.

## Presenters' Email Addresses

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## Presenter Schedule

<b>Time</b>	<b>Session I A112</b>	<b>Session II A116/PHX 2306</b>	<b>Session III A118</b>	<b>Session IV A120</b>
<b>1:00</b>	R. Abraham	T. Archer (Phx)	H. Watson	S. Gruza
<b>1:20</b>	B. Avalos	K. Lay (Phx)	S. Thigpen	G. Mattio
<b>1:40</b>	P. Valenzuela	E. Podolak (Phx)	D. Esquivel	C. Baum
<b>2:00</b>	A. Owusu-Dommey	V. Quintana (Phx)	<i>No Presenter</i>	K. Lawson-Michod
<b>2:20</b>	R. Davis	L. Woodland (Phx)	W. Carter	K. Krause
<b>2:40</b>	J. Seline	M. Hockley (Phx)	B. Mbaabu	D. Gautam
<b>3:00</b>	T. Mortensen	L. Palmer (Phx)	K. Cremer	E. Harris
<b>3:20</b>		O. Spencer (Phx)		

## Session I

*(Drachman Hall, Room A112)*

- 1:00 SUPPORTING STATE ADOPTION OF STOCK INHALER LEGISLATION. **R. Abraham.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Joe K Gerald MD PhD. Site and Preceptor: University of Arizona Asthma & Airway Disease Research Center - Lynn B. Gerald, PhD, MSPH.
- 1:20 OPIOID OVERDOSE RECOGNITION AND NALOXONE ADMINISTRATION TRAINING FOR COMMUNITY HEALTH WORKERS (CHWS). **B. Avalos.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Joe K Gerald, MD, PhD. Site and Preceptor: Arizona Center for Rural Health - Alyssa Padilla, MPH.
- 1:40 THE IMPLICATIONS OF GENOMICS OF PUBLIC HEALTH. **P. Valenzuela.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Kristen Pogreba-Brown, PhD, MPH. Site and Preceptor: University of Arizona - Dr. Cooper Research Lab (ACBS Building) - Kerry Cooper, BS, PhD.
- 2:00 COMPLIANCE WITH SURGICAL SITE INFECTION PREVENTION BUNDLE AT BANNER HEALTH. **A. Owusu-Dommey.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Katherine Ellingson, PhD. Site and Preceptor: Banner University Medical Center - Brandie Anderson, BS, RN, BSN, MPH, CIC.
- 2:20 DEVELOPMENT OF AN EVALUATION TOOL FOR SCHOOL WASH IN DAR ES SALAAM, TANZANIA. **R. Davis.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Aminata Kilungo PhD. Site and Preceptor: Dar es Salaam, Tanzania - Hussein Muhammed, LLM.
- 2:40 ALL ARE WELCOME HERE? DEVELOPING AN ANTI-IMMIGRANT BIAS COMMUNITY & POLICY ASSESSMENT AND SYSTEMS MAPS TO ADVANCE HEALTH EQUITY IN MINNESOTA. **J. Seline.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Maia Ingram MPH. Site and Preceptor: Minnesota Department of Health - Shor Salkas, MPH.
- 3:00 MEDICAL SURVEILLANCE PROGRAM EVALUATION AND INTERVENTION. **T. Mortensen.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship

Committee Chair: Boris Reiss, PhD, CIH. Site and Preceptor: Freeport-McMoRan Phoenix Office - Rob McLain, BS.

## Session II

*(Drachman Hall, Room A116 | Phoenix Building 2, Room 2306)*

- 1:00 CAPACITY ASSESSMENT FOR ARIZONA'S TITLE V MCH PROGRAM. **T. Archer.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Velia Leybas Nuño, PhD, MSW. Site and Preceptor: Arizona Department of Health Services MCH Bureau, Office of Assessment and Evaluation - Martin Celaya, MPH.
- 1:20 ADDRESSING THREE HEALTH CONCERNS AMONG ARIZONIANS AT BCBSAZ. **K. Lay.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Cecilia Rosales, MD, MS. Site and Preceptor: Blue Cross Blue Shield of Arizona - Christine Wiggs, PhD, MPH, MS.
- 1:40 MEZCOPH'S PUBLIC HEALTH WORKFORCE ASSESSMENT. **E. Podolak.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Gail Barker, MBA, PhD. Site and Preceptor: University of Arizona College of Public Health - Emily Waldron, MPH.
- 2:00 ASSESSING THE ROOT CAUSE OF INCOMPLETE PATIENT CARE REPORTS AMONGST EMERGENCY MEDICAL SERVICE AGENCIES IN ARIZONA. **V. Quintana.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Gail Barker, MBA, PhD. Site and Preceptor: Arizona Department of Health Services - Benjamin Fisher, BS, MPA, NRP.
- 2:20 ASSESSING PREHOSPITAL DATA REPORTING AMONG EMERGENCY MEDICAL SERVICE (EMS) PROVIDERS IN ARIZONA. **L. Woodland.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Gail Barker, MBA, PhD. Site and Preceptor: Arizona Department of Health Services - Benjamin Fisher, BS, MPA, NRP.
- 2:40 AN INNOVATIVE PROVIDER OVERDOSE EDUCATION AND NALOXONE DISTRIBUTION (OEND) TRAINING PROGRAM. **M. Hockley.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: M. Moe Bell, MD, MPH. Site and Preceptor: Maricopa Integrated Health System - Kara Geren, MD, MPH.

- 3:00 MAMA TRIBES - PROGRAM-BASED APPROACHED TO REDUCING POSTPARTUM DEPRESSION IN THE MIDWEST. **L. Palmer.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Janet Foote, PhD. Site and Preceptor: Sanford Health - Siri Thaden, BSN.
- 3:20 DEPARTMENT IMPROVEMENT OPERATIONS ANALYSIS. **O. Spencer.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Janet Foote, PhD. Site and Preceptor: Banner Health - Banner Baywood Medical Center - Robert Gardner.

## Session III

(Drachman Hall, Room A118)

- 1:00 IMPROVING COMPLIANCE TO ISOLATION PRECAUTIONS USING VISUAL CUES IN A LARGE TUCSON HOSPITAL. **H. Watson.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Katherine Ellingson, PhD. Site and Preceptor: Banner University Medical Center Tucson Campus - Brandie Anderson, BS, RN, BSN, MPH, CIC.
- 1:20 REDUCING THE RISK OF HEALTHCARE ACQUIRED INFECTIONS THROUGH UPDATED PROTOCOL MEASURES AT KAISER PERMANENTE WASHINGTON REGION. **S. Thigpen.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Katherine Ellingson, PhD. Site and Preceptor: Kaiser Permanente Washington Region - Capitol Hill Campus - Elizabeth Rowan, RN, MSN, MBA.
- 1:40 COMMUNITY OUTREACH FOR CHRONIC DISEASE PREVENTION STUDIES: LESSONS LEARNED FROM STEP UP. **D. Esquivel.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: David O. Garcia, PhD. Site and Preceptor: Student Transformative Experiences to Progress Under-represented Professionals (STEP-UP) - Karen Dickeson, BA.
- 2:00 *No Presentation*
- 2:20 A STEP BEHIND THE OVERDOSE EPIDEMIC: A LACK OF ADEQUATE SURVEILLANCE LEAVES THE UNITED STATES RESPONDING TO THE OVERDOSE EPIDEMIC RATHER THAN PREVENTING IT. **W. Carter.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Leslie Farland, ScD, MSc. Site and Preceptor: American Medical Association - Amy Cadwallader, PhD.
- 2:40 PHENOLOGY WITH A NEW APPROACH. **B. Mbaabu.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Kacey Ernst, PhD, MPH. Site and Preceptor: The National Phenology Network - Erin Posthumus, MS.

3:00

EXPLORING THE LEADING CAUSE OF DEATH, CANCER, IN THURSTON COUNTY, WASHINGTON. **K. Cremer.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Kacey Ernst, PhD, MPH. Site and Preceptor: Thurston County Public Health and Social Services - Mary Ann O'Garro, BA, BS.

## Session IV

*(Drachman Hall, Room A120)*

- 1:00 WASHTENAW COUNTY VECTOR-BORNE DISEASE SURVEILLANCE AND PREVENTION. **S. Gruza.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Marc Verhougstraete, PhD. Site and Preceptor: Ann Arbor, Michigan- Washtenaw County Health Department, Environmental Health Division - Kristen Schweighoefer, BS, MPH.
- 1:20 COMPARISON OF SELF-REPORTED VS. HOSPITAL RECORD OBESITY RATES. **G. Mattio.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Heidi Brown, PhD, MPH. Site and Preceptor: Banner Health - Sumit Agarwal, MD, MBA.
- 1:40 REGIONAL VARIATION OF PANCREATIC CANCER INCIDENCE IN THE NILE DELTA REGION OF EGYPT. **C. Baum.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Heidi Brown, PhD, MPH. Site and Preceptor: Gharbiah Cancer Society, Tanta, Egypt - Amr Soliman, MD, PhD, MPH.
- 2:00 STOCK ALBUTEROL POLICY EXPANSION. **K. Lawson-Michod.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Joe K Gerald, MD, PhD. Site and Preceptor: Asthma and Airway Disease Research Center - Lynn Gerald, PhD, MSPH.
- 2:20 AN OCCUPATIONAL HEALTH ASSESSMENT OF YOUNG MEN WORKING IN THE INFORMAL TOURISM SECTOR OF THE DOMINICAN REPUBLIC. **K. Krause.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Douglas Taren, PhD. Site and Preceptor: The Dominican Education and Mentoring (DREAM) Project, Puerto Plata, Dominican Republic - Catherine DeLaura, MBA, MA.
- 2:40 FACTORS ASSOCIATED WITH THE DOUBLE BURDEN OF MALNUTRITION IN KATHMANDU, NEPAL. **D. Gautam.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Douglas Taren, PhD. Site and Preceptor: Nutrition Promotion and Consultancy Services (NPCS), Kathmandu, Nepal - Ram Shrestha DSc.



3:00

EVALUATION OF SPHERE STANDARDS AND ADHERENCE TO HOSPITAL ADMISSION PROTOCOL FOR SEVERE ACUTE MALNUTRITION IN LESOTHO. **E. Harris.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: John Ehiri, PhD, MPH, MSc. Site and Preceptor: UNICEF Lesotho - Lineo Mathule, MS.

**Session I:  
1:00 – 3:00**

*Drachman Hall, Room A112*

**Abstracts**

## SUPPORTING STATE ADOPTION OF STOCK INHALER LEGISLATION. **R. Abraham.**

University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Joe K Gerald, MD, PhD. Site and Preceptor: University of Arizona Asthma & Airway Disease Research Center - Lynn B. Gerald, PhD, MSPH.

**Background** One in 10 children in the United States has asthma. While no cure exists, it can be managed by daily medications that ensure long-term disease control and quick-relief medications that alleviate symptoms in the moment. However, many children lack access to quick relief medication (albuterol) while at school, leaving nurses and administrators without effective treatment options.

**Methods** With appropriate state legislation, public schools can maintain albuterol and administer it to any student experiencing respiratory distress. Currently, 14 states have stock albuterol legislation. To facilitate adoption of legislation in other states, advocates need support and technical assistance from experts within the field. Given that the Asthma & Airway Disease Research Center at the University of Arizona helped draft and pass stock inhaler legislation in Arizona, it is well-positioned to prepare customized materials including policy briefs and infographics to other states hoping to adopt similar legislation.

**Results** The American Lung Association and the Asthma and Allergy Foundation of America contacted the University of Arizona Asthma & Airway Disease Research Center for assistance in creation of materials for interested states. Customized materials were created for three states; Maryland, Colorado and California, using state specific data and needs of stakeholders in each state. Active communication allowed the states and organizations to provide input on the materials being created. Once materials were completed, they were distributed to stakeholders in each state.

**Conclusion** Advocating for stock inhaler legislation is an important policy action that can help improve the health and well-being for children with asthma. Creation of state-specific materials can assist advocates in the process.

OPIOID OVERDOSE RECOGNITION AND NALOXONE ADMINISTRATION TRAINING FOR COMMUNITY HEALTH WORKERS (CHWS). **B. Avalos.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Joe K Gerald, MD, PhD. Site and Preceptor: Arizona Center for Rural Health - Alyssa Padilla, MPH.

Title: Opioid Overdose Recognition and Naloxone Administration Training for Community Health Workers (CHWs) Background: Opioid Overdose Recognition and Naloxone Administration Training was provided via a 6-month pilot program implemented by members of the Arizona Center for Rural Health. It was intended for CHWs to learn how to recognize an opioid overdose and administer the opioid antagonist, Naloxone. The training was meant to increase opioid prevention workforce capacity among CHWs in aims to reduce opioid-related deaths. Methods: Trainings were funded by the Arizona Department of Health Services and held at the Arizona Community Health Workers Association Conference in Tucson and the Rural Health Conference in Flagstaff. Facilitators trained participants using an hour-long lecture supplemented with workbooks and demonstrations that provided information on recognizing opioid overdose symptoms and responding to it using Naloxone. Best care practices after administration were discussed. Participants rated their training experience. Responses were recorded in Google Forms. An online module was created to provide CHWs an opportunity to partake in the training instead of attending it in person. Results: A total of 115 participants attended the trainings. 112 (97%) indicated they improved their ability to respond to an opioid overdose using Naloxone 110 (96%) expressed that their knowledge of community resources that help individuals affected by substance abuse had improved. 112 (97%) felt encouraged to apply the information in their work and communities. Conclusion: The training was feasible in promoting Naloxone awareness among CHWs and within Arizona communities. It will potentially improve overdose prevention efforts. The next step is to complete the online module for CHWs to access at their own time.

THE IMPLICATIONS OF GENOMICS OF PUBLIC HEALTH. **P. Valenzuela.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Kristen Pogreba-Brown PhD, MPH. Site and Preceptor: University of Arizona - Dr. Cooper Research Lab (ACBS Building) - Kerry Cooper, BS, PhD.

Introduction: This project will address how whole genome sequencing (WGS) is utilized to support public health practice in the 21st century. WGS is a technique that is used to determine the entire DNA sequence of an organism. By determining DNA sequences, bacteria strains can be tracked in outbreaks and compared to other bacteria strains to determine relatedness. This project addresses a unique gap in public health practice in regards to using WGS in a One Health approach. Contributions of this project included comparing genetic relationship of all the clinical *Campylobacter* strains isolated in Colorado from 2018, examining the epidemiological data associated with each strain including the potential sources, and determining if all the *Campylobacter* cases were sporadic or belonged to unidentified outbreaks. Evidence that this approach works will be substantiated both through a literature search and a table created from the data obtained from WGS that describes the single nucleotide polymorphisms (SNPs). Methods: The methods included sequencing one *Campylobacter* bacteria isolate from clinical patients provided by the CDPH. This case was then compared to other human and animal cases found on the NCBI database. A bioinformatics program called Geneious Prime was used for WGS. A reference strain was used to complete the genome of the *Campylobacter* strain KKC303 and an SNP analysis was used to identify mutations between KKC303 and 61 *Campylobacter* strains. Results: The SNP analysis yielded an average of 14,731 SNPs between the different *Campylobacter* strains, whereas outbreak strains typically have <20 SNPs. Discussion: The project concluded that none of the 61 clinical *Campylobacter* strains appear to belong to a cluster or outbreak; this data supports the belief that *Campylobacter* causes sporadic illness in the public.

COMPLIANCE WITH SURGICAL SITE INFECTION PREVENTION BUNDLE AT BANNER HEALTH. **A. Owusu-Dommey**. University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Katherine Ellingson, PhD. Site and Preceptor: Banner University Medical Center - Brandie Anderson, BS, RN, BSN, MPH, CIC.

Background: On 01/01/19 Banner Health implemented a new bundle protocol consisting of 8 CDC-recommended clinical practices to prevent surgical site infections (SSIs) across 28 facilities. Prior to this, there was no system-wide standard of practices used to prevent SSIs. In implementing this protocol, clinicians were trained to complete and document the 8 practices for each surgery. Objectives: To evaluate compliance with clinical practices within bundle, as well as the number of bundle elements completed per surgery, before and after implementation in 28 facilities; and to observe these measures in practice by clinicians at Banner University Medical Center Tucson (BUMCT), to see if a Hawthorne effect improved compliance. Methods: We analyzed 36,991 pre-intervention and 18,259 post-intervention surgeries for compliance with each of the 8 clinical practices within the bundle, and compliance with the overall bundle using logistic regressions. We also used logistic regression to analyze if direct observation of clinicians (the Hawthorne effect) increased weekly bundle compliance over 6 weeks at BUMCT. Results: There was a significant pre-post intervention change across Banner Health in compliance with 6 of the 8 clinical practices. For example, glucose monitoring increased from 16.3% to 56.2% (OR 6.5, 95% CI 6.3-6.8). The number of bundle elements in compliance per surgery increased from 25.5% of surgeries completing 5 or more bundle elements pre-intervention, to 58.5% (OR 4.1, 95% CI 4.0-4.3). Direct observation of clinicians did not increase weekly bundle compliance during observations at BUMCT (OR 0.84, 95% CI 0.74-0.95). Conclusion: Compliance to CDC-recommended clinical practices improved in the 6 months following implementation of the SSI bundle. However, overall compliance remains suboptimal.

DEVELOPMENT OF AN EVALUATION TOOL FOR SCHOOL WASH IN DAR ES SALAAM, TANZANIA. **R. Davis.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Aminata Kilungo, PhD. Site and Preceptor: Dar es Salaam, Tanzania - Hussein Muhammed, LLM.

Basic water, sanitation, and hygiene, often referred to as WaSH, are essential elements towards improving community health. Established as a priority in UN Sustainable Development Goal 6.2 to “achieve access to adequate and equitable sanitation and hygiene for all” by 2030, over \$300 billion was spent in sub-Saharan Africa between 1990-2015 to improve WaSH. WaSH improvements in schools are a key to achieving SDG 6.2 due to their importance to communities and impact on student health. However, regular monitoring and evaluation has not been instituted, and some schools show difficulty in adequately maintaining programs and facilities. In partnership with Muhimbili University of Health and Allied Sciences (MUHAS), this project developed and administered a tool to evaluate facilities and programs according to SDG indicators in 24 government run primary schools in the Ilala District, in Dar es salaam, a major city in Tanzanian. The evaluation process included identification of community resources, discussion of solutions to common barriers, and facility maintenance and program development. An issue brief describing current facilities and recommendations for improvements will be delivered to stakeholders including school teachers and administrators, Tanzanian municipal government, and local and international NGOs focused on WaSH.

ALL ARE WELCOME HERE? DEVELOPING AN ANTI-IMMIGRANT BIAS COMMUNITY & POLICY ASSESSMENT AND SYSTEMS MAPS TO ADVANCE HEALTH EQUITY IN MINNESOTA. **J. Seline**. University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Maia Ingram, MPH. Site and Preceptor: Minnesota Department of Health - Shor Salkas, MPH.

Minnesota consistently ranks as one of the healthiest states nationally, but large disparities remain. Along the I-94 highway in Minneapolis, there is a 13-year difference in lifespan for residents who live 3 miles apart. The Minnesota Department of Health organized a Health Equity Leadership Network (HELN) to address these health inequities. This project sought to advance HELN's work through addressing "Anti-Immigrant Bias", a top barrier identified by members. The project aimed to develop a community & policy assessment and utilize a community-led process to create a system map. A PubMed literature search and a review of national and local news articles and legislation guided the creation of the assessment. Interviews were also conducted with three local organizations. Thirteen community leaders were then invited for a half-day systems map meeting. Attendees created two Anti-Immigrant Bias maps: 1. "Problems with institutions" and 2. "Problems with narratives". 100% of participants found the systems mapping process useful for the Network and 89% also agreed that the meeting allowed them to connect with health equity champions. Both systems maps name institutional racism, colonization, lack of empathy, dehumanization, and white supremacy as major factors that contribute to anti-immigrant bias. The community & policy review revealed that Minnesota supports immigrant communities through multifaceted approaches, including policy and local action. However, given the negative effects continued anti-immigrant policy has on physical and mental health, the assessment urges Minnesota Department of Health to issue a formal condemnation of anti-immigrant policy. Results from both the systems maps and assessment show the need for additional policy and institutional support to address anti-immigrant bias in Minnesota.



MEDICAL SURVEILLANCE PROGRAM EVALUATION AND INTERVENTION. **T. Mortensen.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Boris Reiss, PhD, CIH. Site and Preceptor: Freeport-McMoRan Phoenix Office - Rob McLain, BS.

Background Occupational Health and Safety Administration (OSHA) standards require surveillance programs when workers are exposed to regulated substances. Programs for arsenic, cadmium, lead, noise, and silica are required at the mine sites of Freeport-McMoRan (FMI). FMI's Industrial Hygienists (IH) assess exposures of FMI's workforce to determine program enrollment. A review of FMI's program database Cority suggested a low enrollment. Former employees and duplicates were found in Cority. The objective of this work was to improve the data quality in Cority and increase enrollment. Methods FMI site IH's were interviewed, trained to review, and update FMI's programs. Enrollment records before and after interviews were compared. Cority was programmed to automatically enroll future employees. Individual employee records were obtained from site IHs and added to the database. Results Cority enrollment increased from 4,390 to 12,212. The largest increase occurred in the Morenci mine (2435 to 5342). The hearing program had the largest increase (3338 to 8326). The odds of enrollment increasing after interviews were 5.1 (95%CI: 1.4 to 23.7) times greater than before. The odds of increasing enrollment into hearing program were 26.6 (95%CI: 4.0 to 328.6) times greater than for arsenic. These findings are statistically significant  $P=0.022$  and  $P=0.002$  respectively. The odds of differences in enrollment between locations were not significant. The total employees needing enrollment in Cority was not determined. Conclusions The intervention was successful. Enrollment increased at all locations but varied substantially among surveillance programs. The total number of employees that require enrollment need to be determined. Program enrollment needs to continue until all employees are correctly recorded.

**Session II:  
1:00 – 3:40**

*Drachman Hall, Room A116 /  
Phoenix Building 2, Room 2306*

**Abstracts**

**CAPACITY ASSESSMENT FOR ARIZONA'S TITLE V MCH PROGRAM. T. Archer.**

University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Velia Leybas Nuño, PhD, MSW. Site and Preceptor: Arizona Department of Health Services MCH Bureau, Office of Assessment and Evaluation - Martin Celaya, MPH.

Introduction- CAST-5 is being utilized as part of the ADHS 2020 Needs Assessment. CAST-5 is a set of adaptable assessment and planning tools designed for states to examine their organizational capacity to carry out key MCH program functions. Methods- Arizona's assessment has involved a series of strategic planning steps with internal Title V partners, including a review of the Ten MCH Essential Services (ESs) and Process Indicator Scores (PIS) for each service, completion of a Capacity Needs Tool (CNT), and a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. Results- Findings from the CNT demonstrated a greater percentage of respondents who report more haves than needs when reflecting on their program's Greatest Achievement (GA) over the last five years, and more needs than haves when reflecting on their Greatest Missed Opportunity (GMO). For the GA reflection, at least 50% of respondents reported having sufficient capacity resources to perform most functions within the 10 MCH ESs. For the GMO, at least 50% of respondents reported needing several capacity resources. Mean PISs were calculated for each output within each ES and for each ES as a whole. ESs 1, 2, 5, and 10 reflected the highest PISs, indicating that program outputs corresponding to functions within the 10 MCH ESs at the state level- are substantially to fully adequate. ESs 4, 7, 8, & 9 had means in the partially to minimally adequate range, and SWOT analyses were conducted on them. Conclusion- CAST-5 revealed a relationship between internal staff perceptions of capacity resources and the state's ability to carry out the 10 MCH ESs. Arizona's ability to carry out many functions within the ESs are promising. Nonetheless, steps will be taken towards capacity improvements for ESs 4, 7, 8, & 9.

## ADDRESSING THREE HEALTH CONCERNS AMONG ARIZONIANS AT BCBSAZ. **K.**

**Lay.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Cecilia Rosales, MD, MS. Site and Preceptor: Blue Cross Blue Shield of Arizona - Christine Wiggs, PhD, MPH, MS.

Blue Cross Blue Shield of Arizona (BCBSAZ) is one of the leading health insurers in the United States. Their mission is to improve the quality of life for all Arizonans. BCBSAZ invests in the health of its members, customers, and the community at-large. In August 2017, BCBSAZ launched the Mobilize AZ initiative to combat the opioid epidemic impacting many communities across the state. Mobilize AZ also focuses on mental health and diabetes, as both are health conditions that affect the overall health status of our state. As a Community Health Interventions Intern, my role was to provide support to the Mobilize AZ initiative alongside the Community Health Interventions and Health Equity team. Primary activities included developing a literature review on suicide among the adolescent population in rural Arizona and managing the food pantry at NATIVE HEALTH. The literature review was conducted with the guidance of the Director of Community Health Interventions and Health Equity and provided suicide prevention program implementation recommendations for BCBSAZ based on the needs within the adolescent population in rural Arizona. Additional activities included observing the community grant process offered by BCBSAZ and assisting with Mental Health First Aid. Overall, the internship experience was a positive learning experience and provided valuable insight into the role of a public health practitioner.

MEZCOPH'S PUBLIC HEALTH WORKFORCE ASSESSMENT. **E. Podolak.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Gail Barker, MBA, PhD. Site and Preceptor: University of Arizona College of Public Health - Emily Waldron, MPH.

Introduction: The Mel and Enid Zuckerman College of Public Health (MEZCOPH) is accredited by the Council on Education for Public Health (CEPH). CEPH was established by the American Public Health Association and the Association of Schools of Public Health, MEZCOPH recently completed a Self-Study Report for re-accreditation. Purpose: The goal of this project was to complete a workforce assessment as part of the Self-Study Report. The report included an evaluation of recent graduates' ability to perform foundational public health competencies in an employment setting. Methods: 37 surveys were administered via email and sent to employers who had supervised or employed graduates of the MEZCOPH Bachelor of Science (BS), Master of Public Health (MPH), Master of Science (MS) or Doctor of Public Health (Dr PH) program(s). Quantitative and qualitative responses were collected and analyzed through Qualtrics. Results: With an 84% response rate, the survey included the feedback of 31 employers from the state or local health departments, the University of Arizona, nonprofit organizations, and a local health care service provider. The survey measured competence of 15 BS, 13 MPH, 1 MS, and 2 Dr PH graduates. 93% of undergraduates, 96% of Master and 100% of Dr PH graduates were found to be competent or very competent in the foundational competencies. Conclusion: The majority of participants thought graduates were competent in their ability to communicate public health information to diverse audiences through a variety of media. Graduates were also able to proficiently locate, use, and analyze public health information. Many employers recommended MEZCOPH work to improve student public speaking skills and help them acquire more experience working with communities to better apply classroom knowledge in the real world.

ASSESSING THE ROOT CAUSE OF INCOMPLETE PATIENT CARE REPORTS AMONGST EMERGENCY MEDICAL SERVICE AGENCIES IN ARIZONA. **V. Quintana.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Gail Barker, MBA, PhD. Site and Preceptor: Arizona Department of Health Services - Benjamin Fisher, BS, MPA, NRP.

Introduction: The Arizona Department of Health Services (ADHS) Bureau of EMS & Trauma System administers a statewide system of emergency medical services, trauma care and a trauma registry. The department produced an Electronic Patient Care Report (EPCR) to evaluate data reporting and completeness within a subset of trauma performance measures. Reporting was found to be incomplete and a study was conducted to determine why. Methods: An electronic 20-question survey addressing issues related to EPCR program usability, education, fatigue, exercise, mental well being, and injury was developed. Questions were in the format of fill-in-the-blank, Likert scale and multiple choice. The survey was created in Qualtrics and distributed via email to EMS personnel employed by EMS agencies that collaborate with ADHS. A total of 1,452 EMS personnel received the survey. Results: Although 392 recipients opened the survey only 63 individuals completed it. An analysis of survey data was performed using Stata. The mean age of EMS personnel was 45 years of age and ranged from 24 to 64 years of age. Respondent occupations consisted of paramedics (81%), emergency medical technicians-basic (14%) and EMT-intermediate, registered nurse, and "other" occupations (5%). Imagetrend was the EPCR program most used (54%) and Zoi was the second most used (16%). Statistical analysis demonstrated the largest negative correlations occurred with training and EPCR usability and fatigue and accuracy and completeness of EPCR's. Conclusion: Incomplete or inaccurate EPCR's stem from lack of EPCR training and fatigue. Implementation of policies and regulations could ensure proficient EPCR usability and adequately rested EMS personnel. Also, surveys that seek to evaluate EMS characteristics should be mandatory as they could benefit the EMS workplace condition.

ASSESSING PREHOSPITAL DATA REPORTING AMONG EMERGENCY MEDICAL SERVICE (EMS) PROVIDERS IN ARIZONA. **L. Woodland**. University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Gail Barker MBA, PhD. Site and Preceptor: Arizona Department of Health Services - Benjamin Fisher, BS, MPA, NRP.

Introduction: The Bureau of Emergency Medical Services and Trauma System (BEMSTS) is the authority responsible for establishing, coordinating and administering a statewide system of emergency medical services in Arizona. One of the quality assurance initiatives BEMSTS has developed is the Arizona Prehospital Information and EMS Registry System (AZ-PIERS). Emergency medical services (EMS) agencies in Arizona can voluntarily report electronic patient care report (ePCR) data to AZ-PIERS through compliant ePCR software. Purpose: The goal of this project is to survey EMS agencies across Arizona to determine if they are actively reporting ePCR data to AZ-PIERS. Methods: An online, anonymous survey containing ten questions regarding AZ-PIERS reporting was created in Qualtrics and administered to EMS agencies through a civic engagement platform. EMS agencies were given three months to complete the survey. The responses were then coded and analyzed. Results: Forty of the 200 known EMS agencies in Arizona responded to the survey. Among respondents, 90% were familiar with AZ-PIERS and were reporting ePCR data to AZ-PIERS. Another 7.5% of the agencies were familiar but were not reporting ePCR data, and 2.5% of the agencies were not familiar and were not reporting ePCR data. Conclusion: This project found that AZ-PIERS is utilized at rates higher than previously known by BEMSTS. Lack of ePCR software was the most common reason cited for agencies not reporting to AZ-PIERS. Future work should focus on increasing agency access to ePCR software and empowering agencies to implement quality improvement projects encompassing ePCR data. Because this project was limited by a low respondent rate, future work should also focus on engaging providers across Arizona, with particular care paid to small rural EMS agencies.

AN INNOVATIVE PROVIDER OVERDOSE EDUCATION AND NALOXONE DISTRIBUTION (OEND) TRAINING PROGRAM. **M. Hockley**. University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: M. Moe Bell, MD, MPH. Site and Preceptor: Maricopa Integrated Health System - Kara Geren, MD MPH.

The opioid epidemic remains a national health crisis, with initiatives and education aimed at mitigating risks for misuse as well as learning to recognize opioid overdose. In addition to proper prescribing of opioids, the mainstay of treatment for potential overdose victims remains the timely administration of naloxone, an opioid antagonist that can reverse an overdose. This project created and implemented an opioid curriculum for Maricopa Medical Center (MMC) residents and faculty with the aim of utilizing an opioid education and naloxone distribution program (OEND) to improve clinician knowledge of opioid misuse and use of naloxone. Pre- and post-education surveys from each group allowed us to gauge baseline prescriber knowledge and subsequent change after administration of the OEND curriculum. Survey questions rated resident confidence (on a scale of strongly agree, agree, disagree, strongly disagree) in identifying and counseling patients who struggle with or are at risk for opioid misuse, prescribing and counseling patients on how to fill a naloxone prescription, and provide instructions about how/when to use naloxone. Resident groups included OB/GYN, surgery, emergency medicine, internal medicine, pediatrics, pediatric dentistry, podiatry, family medicine, and psychiatry. Based on survey analysis pre- and post-OEND curriculum (Table 1), we concluded that there was a statistically significant increase in prescriber knowledge of opioids, risk for misuse, and effective naloxone prescribing (P value <0.05). In conclusion, OEND curricula are easy to implement and gear towards different specialty learning groups and should be widely distributed and adopted in residency training programs to increase awareness and appropriate naloxone prescribing rates.



MAMA TRIBES- PROGRAM-BASED APPROACHED TO REDUCING POSTPARTUM DEPRESSION IN THE MIDWEST. **L. Palmer.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Janet Foote, PhD. Site and Preceptor: Sanford Health - Siri Thaden, BSN.

Objective: To increase understanding of women's healthcare and create an evidence-based support program for Sanford Women's Center to better support moms after delivery and reduce the rates of postpartum depression in the Midwest. Methods: After a thorough literature review, the 'Mama Brigade' program was developed and piloted. The program addresses postpartum depression by connecting, educating, and empowering new mothers on multiple components of postpartum recovery. This social media-based program reduces access and feasibility barriers that new mothers often experience. A one-month pilot program was completed with staff members at Sanford Health to test feasibility, content interest and accuracy, and flow. Results: The literature review gave evidence to holistic- multi-faceted programs being successful for postpartum depression prevention and intervention. It is estimated that 20-25% of postpartum women experience a perinatal mood disorder that lasts beyond the first two weeks postpartum, yet there are minimal resources available to new moms in North Dakota. The pilot of the Mama Brigade program was successful, and feedback suggested the program would be feasible, effective, and realistic for the communities in North Dakota. Conclusions: Based off the results of the literature review, feedback from the program presentations, and feedback from the pilot of the Mama Brigade program, staff members at Sanford Health felt this program would be highly effective in addressing postpartum depression. Sanford Health's corporate managers gave approval and asked the program to be initiated using a similar model but open it up to all mothers. After initiation of the larger, more generalized program, named "Mama Tribes", the Mama Brigade program will then be able to roll out.

DEPARTMENT IMPROVEMENT OPERATIONS ANALYSIS. **O. Spencer.** University of Arizona, Phoenix, AZ, U.S.A. MPH Internship Committee Chair: Janet Foote, PhD. Site and Preceptor: Banner Health - Banner Baywood Medical Center - Robert Gardner.

Healthcare executives are facing an ever-changing landscape of appropriate performance targets, making it crucial that the revenue cycles and operations are managed more effectively than ever. The challenging healthcare environment of today, has made the provision of quality care and operation at peak efficiency more important than ever before. Identifying priorities for improvement through the comparison of peer-to-peer benchmarks helps to understand specific gaps for the best cost-saving potentials. An operational assessment of Banner Baywood Medical Center was organized into three separate phases based on fall risk severity level on nursing floors and suitable department performance using both self-created dashboards and an unrivaled comparative ActionOI database. Phase 1 began with a project initiation meeting that was set up in order to discuss data submission, collection requirements, and review of a timeframe. Phase 2 began the review of compare group data for the start of benchmarking that led to proper improvement strategies. Phase 3 was the final presentation of data. The summary of these results were shown through Custom Compare Reports (CCR), Stoplight Reports, and Dashboard summaries that were comprised of a flexible reporting style to support the appropriateness of information-gathering. These reports were used to drill into more specific information based on investigated characteristics of the departments and compare groups. Recommendations surrounding fall risk on nursing floors included the regular monitoring of outcomes. The data provided from the ActionOI results was used to compare quarterly trended data for the summary of potential performance improvements and to create targets for operational change across the organization.

**Session III:  
1:00 – 4:00**

*Drachman Hall, Room A118*

**Abstracts**

IMPROVING COMPLIANCE TO ISOLATION PRECAUTIONS USING VISUAL CUES IN A LARGE TUCSON HOSPITAL. **H. Watson**. University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Katherine Ellingson, PhD. Site and Preceptor: Banner University Medical Center Tucson Campus - Brandie Anderson, BS, RN, BSN, MPH, CIC.

Background: Healthcare-associated infections can result in complications including death. Infections can be transmitted between patients via healthcare workers if isolation protocols are not followed for patients with highly transmissible or hard-to-treat infections. Methods: At a large academic medical center in Tucson, 4 units were randomized to an intervention group and 5 units to a control group. In intervention units, visual cues promoting proper compliance with isolation precautions were posted on hand hygiene dispensers. Pre-intervention observations (n=468) were conducted over 7-weeks and post-intervention observations (n=264) were conducted over 4-weeks. Observations included donning personal-protective equipment (PPE) before entering an isolation room, hand hygiene before donning PPE, wearing PPE correctly, and doffing PPE upon exit. Logistic regression was used to model odds ratios for pre-post differences in compliance (overall and by specific element) for intervention and control wards separately. Interaction models assessed whether pre-post effects differed significantly for intervention and control units. Results: Overall compliance did not improve significantly in either intervention (OR=1.17, 95% CI=0.75-1.84) or control (OR=0.82, 95% CI=0.53-1.30) units. However, hand hygiene before donning PPE increased in the intervention wards (OR=4.13, 95% CI=1.35-12.65) but not in the control units (OR=0.35, 95% CI=0.10-1.28); the difference in ORs between intervention and control units was significant (p=0.001). Discussion: Evaluation of an intervention using visual cues to enhance isolation precaution compliance demonstrated improvement in hand hygiene before PPE use, but not in other isolation precaution elements. Future research should examine factors that could improve compliance with PPE protocols.

REDUCING THE RISK OF HEALTHCARE ACQUIRED INFECTIONS THROUGH UPDATED PROTOCOL MEASURES AT KAISER PERMANENTE WASHINGTON REGION. **S. Thigpen**. University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Katherine Ellingson, PhD. Site and Preceptor: Kaiser Permanente Washington Region - Capitol Hill Campus - Elizabeth Rowan, RN, MSN, MBA.

Background: Each year in the United States, an estimated 500,000 patients acquire a surgical site infection (SSI). In 2017, the CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC) released the first updated guidelines for SSI prevention since 1999. Individual organizations are responsible for updating their protocols with current guidelines. Objective: To update the Kaiser Permanente (KP) Washington Region SSI Prevention protocol in accordance with the 2017 CDC-HICPAC guideline and KP's national SSI prevention toolkit, and to promote awareness of updated recommendations. Methods: The CDC-HICPAC Guideline for the Prevention of SSIs and KP's National Toolkit for SSI Prevention were systematically reviewed and compared with current protocols and associated training materials. Updated recommendations for three surgical phases – pre-operative, peri-operative, and post-operative – were considered. Additions and changes to the current protocol were presented to and vetted by the Infection Prevention and Control, Infectious Disease, and Surgeon's committees. Results: Several recommendations from the CDC-HICPAC guideline were incorporated. For example, HICPAC guidelines recommend that topical agents not be administered after the surgical incision is closed in the operating room. This recommendation was added. Per the KP National's toolkit, mupirocin ointment should no longer be used for MRSA colonization; the updated protocol recommends povidone-iodine decolonization kits. Application: To ensure that KP staff members were aware of the updated protocol, training guides – called “huddlecards” – were designed and distributed throughout the KP Washington region. Huddlecards were shared with new employees during onboarding and existing employees via continuing education sessions.

COMMUNITY OUTREACH FOR CHRONIC DISEASE PREVENTION STUDIES: LESSONS LEARNED FROM STEP UP. **D. Esquivel**. University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: David O. Garcia, PhD. Site and Preceptor: Student Transformative Experiences to Progress Under-represented Professionals (STEP-UP) - Karen Dickeson, BA.

Successful recruitment in research and community health programs remains a challenge, particularly when working with underserved populations. A proper understanding of the health interests and health status of underserved people is necessary to tailor effective strategies to prevent and manage chronic conditions. This work offers lessons learned during one phase of recruitment for the Nosotros Network, a community-based study designed to assess the health status of participants in Southern Arizona, while increasing health awareness by linking to resources that may help serve their needs long-term. During an 8-week recruitment phase, thirty-six individuals completed a health interest questionnaire. Students participating in a multidisciplinary summer training initiative (STEP-UP) led by the University of Arizona Cancer Center actively participated in community outreach efforts for recruitment. Participants enrolled in the Nosotros Network were 63.9% female, 63.9% Hispanic/Latino, 68.18% 1st-2nd Mexican generation, 50% spoke Spanish as their primary language spoken at home and 41.7% had attended some college. The greatest health concerns for this study sample consisted of diabetes (50.0%), overweight/obesity in adults (47.2%) and vision (41.67%). Strategies for recruitment included tabling with an interactive activity, providing materials in both English and Spanish, and disclosing confidentiality of participation. Limitations included the average time of completion of the health interest questionnaire and the lack of an immediate incentive to complete it. This pilot study is meant to inform future community-based research efforts on recruitment strategies.

A STEP BEHIND THE OVERDOSE EPIDEMIC: A LACK OF ADEQUATE SURVEILLANCE LEAVES THE UNITED STATES RESPONDING TO THE OVERDOSE EPIDEMIC RATHER THAN PREVENTING IT. **W. Carter.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Leslie Farland, ScD, MSc. Site and Preceptor: American Medical Association - Amy Cadwallader, PhD.

Background: In 2017, approximately 72,000 Americans died from a drug overdose, 66% of which can be attributed to opioids. This summer, the American Medical Association hosted the Surveillance and Sharing of Overdose Data for Action Summit (SSODAS) to bring together key stakeholders to discuss best practices on overdose surveillance, prevention, and response. The primary objective of this internship was to create a comprehensive pre-read summary packet that informed summit participants on overdose trends and state laws, while identifying gaps in overdose surveillance and response. Methods: A literature review on overdoses in the U.S., conducted using PubMed, identified information on demographics, at risk users, and stakeholders. State laws on the reporting of overdoses, Naloxone accessibility, and Good Samaritan policies were identified. National-level information on overdose incidence was obtained from CDC Wonder to create relevant figures and tables. Results: The final packet included summary information for the U.S. on overdose epidemiology, trends in Naloxone utilization, key stakeholders, and state policies. A “Quick Facts” page was included to provide relevant statistics on the number of overdoses classified by fatality, Naloxone usage, and response efforts. The pre-read summary packet was sent to all SSODAS participants (n=32) one week prior to the summit. Conclusion: Adequate surveillance of drug overdoses is lagging on the national level. The most recent national data are from 2017. Only 15 states have mandated overdose reporting laws. The lack of time-sensitive surveillance prevents stakeholders from being able to respond quickly, which ultimately decreases the effectiveness of overdose prevention and treatment efforts. Unless surveillance methods are improved, overdoses in the U.S. will remain an epidemic.

PHENOLOGY WITH A NEW APPROACH. **B. Mbaabu.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Kacey Ernst, PhD, MPH. Site and Preceptor: The National Phenology Network - Erin Posthumus, MS.

The purpose of this project was to engage public health researchers, practitioners and underrepresented communities to determine their needs for phenology information of disease vectors. This project assessed for stakeholder needs that the National Phenology Network could assist with to plan public health initiatives. Project goals included (1) Determine existing tools for predicting phenology of disease vectors and informing management actions in the southwestern U.S. (2) Summarize existing diseases of concern in the U.S. southwest and how phenology can assist in their management. (3) Determine public health practitioners' and researchers' needs for phenology data. (4) Determine vector-related needs of underrepresented communities. Since August 2018, we gathered information through phone interviews, online surveys, and in-person discussions with public health practitioners and researchers within Arizona. Interviews began January 2019 and included researchers at the University of Arizona, the Translational Genomics Research Institute (TGen), the CDC, and the Environmental Health Tracking Portal. Practitioners were located at the Arizona Department of Health Services, the CDC, Maricopa County, and Pima County health departments. In the end, we received input from 17 researchers and 14 practitioners for a total of 31 interviews. The most common gaps identified were the lack of sufficient data and inconsistent communication amongst researchers and practitioners. Possible solutions included extending data collection to citizen scientists, public data sharing, regular state/county meetings, and the promotion of symposiums. The project continues this year as we interview community members in underrepresented locations of Tucson to determine their needs for information about vectors and vector-borne diseases.



EXPLORING THE LEADING CAUSE OF DEATH, CANCER, IN THURSTON COUNTY, WASHINGTON. **K. Cremer**. University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Kacey Ernst, PhD, MPH. Site and Preceptor: Thurston County Public Health and Social Services - Mary Ann O'Garro, BA, BS.

In Thurston County, Washington, which contains the state capital, Olympia, cancer is the leading cause of death. In the United States, the leading cause of death is cardiovascular disease, and the second being cancer. Reasons for this disparity were investigated throughout the course of the internship. Multiple methods were used to analyze the disparities. Statistical analyses of frequencies, cross-tabulations, and trends were performed, and incidence, prevalence, and mortality rates were calculated in SPSS and Microsoft Excel. Tables and maps were created to assess and investigate this disparity. All analyses were stratified by type of cancer, gender, and geographic regions. Analyses were coupled with a literature review to examine the role climate change may play in cancer incidence and prevalence rates. The project's goal was to begin to develop an initial understanding of the high cancer death rates in Thurston County. The investigation found there does not appear to be one single factor that addresses the high cancer death rates for Thurston County. However, the cancer mortality rate for Thurston County is higher compared to Washington's average, but is not the highest in the state. It may be just due to it being a bit ahead of the population curve because CDC just released an article, in September 2019, claiming the number one cause of death for the United States is cancer.



**Session IV:  
1:00 – 4:00**

*Drachman Hall, Room A120*

**Abstracts**

WASHTENAW COUNTY VECTOR-BORNE DISEASE SURVEILLANCE AND PREVENTION. **S. Gruza.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Marc Verhoughstraete PhD. Site and Preceptor: Ann Arbor, Michigan- Washtenaw County Health Department, Environmental Health Division - Kristen Schweighoefer, BS, MPH.

Due to changes in seasonal weather patterns and warmer temperatures occurring throughout Southern Michigan, the state's Emerging & Zoonotic Infectious Disease division has continued to facilitate vector-borne disease surveillance efforts at the county level. The Washtenaw County Health Department in turn conducted vector surveillance for identifying populations of *Aedes* species mosquitoes (*Ae. egypti* & *Ae. albopictus*) that can transmit Zika virus, in addition to surveying for populations of blacklegged ticks (*Ixodes scapularis*) capable of transmitting Lyme disease. Through developing and maintaining a systematic mosquito & tick surveillance system among the county's health department, staff and public health officials are better able to prepare communities for local vector-borne transmission risks. Methods of mosquito surveillance included utilizing convection traps placed throughout the county where specimens were identified and recorded into a CDC surveillance database. Blacklegged ticks were surveyed by conducting tick-draws at four locations, and if found, were sent to State of Michigan health officials for lab-testing of possible pathogens. During the three month duration of vector-borne disease surveillance no vector species of interest were found by investigators. Interdepartmental collaboration through a county-wide press release informed and educated county residents on surveillance goals and means of prevention. Tools for species-tracking visuals, such as geographic information systems, were also explored to enhance surveillance practices. The ultimate goal of proficient vector-borne disease surveillance and prevention at the county-level was staging local health officials with better preparation and capacity to protect the health of residents from possible disease-carrying vectors.

COMPARISON OF SELF-REPORTED VS. HOSPITAL RECORD OBESITY RATES. **G. Mattio.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Heidi Brown PhD, MPH. Site and Preceptor: Banner Health - Sumit Agarwal, MD MBA.

**OBJECTIVE:** By 2030 over half of the United States population is estimated to be obese (BMI>30kg/m<sup>2</sup>). Obesity is a major cause of morbidity, disability, and premature death. It increases the risk of a wide array of chronic illnesses such as diabetes, cardiovascular disease, and certain cancers. The US Centers for Disease Control and Prevention (CDC) reports state-level obesity data using self-reported data from The Behavioral and Risk Factor Surveillance System (BRFSS). We had the opportunity to compare self-reported BRFSS BMI data with Banner Health hospital BMI data. **METHODS:** The subjects consisted of 744,879 individuals who attended any Banner Health location in Arizona between 2015-2017, and 30,741 individuals who completed the BRFSS survey for those same years. All subjects were over the age of 18 and residents of Arizona. Self-reported and hospital recorded height and weight were used to calculate BMI. A chi-square test compared the distribution of obese vs. not obese, and a two-sample one-sided t-test was used to compare the mean BMI's. **RESULTS:** The chi-square test showed that there is a statistically significant difference between the distributions of obese individuals between sources (p<0.001). The clinically calculated mean BMI's from the Banner Health records (mean BMI = 29.69 kg/m<sup>2</sup>) were significantly higher than the self-reported mean BMI's from BRFSS (mean BMI = 27.63 kg/m<sup>2</sup>, p < 0.05). **CONCLUSION:** State-level obesity reporting is a source for policy and program development. In our comparison of two state-level obesity reports, our BMI estimates differed by dataset indicating that self-reported BRFSS BMI data may be underreported. While clinically measured BMI's may be more accurate, additional consideration must be placed on the potential bias of a population actively seeking medical care.

REGIONAL VARIATION OF PANCREATIC CANCER INCIDENCE IN THE NILE DELTA REGION OF EGYPT. **C. Baum.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Heidi Brown PhD, MPH. Site and Preceptor: Gharbiah Cancer Society, Tanta, Egypt - Amr Soliman, MD, PhD, MPH.

**BACKGROUND:** Pancreatic cancer is one of the deadliest forms of cancer, with incidence rates rising in many countries around the world. Geographic variation in pancreatic cancer incidence has not been studied extensively, especially in low- and middle-income countries. The aim of this internship was to characterize the distribution of pancreatic cancer incidence in the central Nile delta region of Egypt and to examine differences by urban and rural patient residence using the nation's only population-based cancer registry. **METHODS:** Utilizing the Gharbiah province population-based cancer registry, data were abstracted for 1,089 pancreatic cancer cases diagnosed over twelve years from 1999-2010. Age- and sex- specific incidence rates were calculated and compared for urban and rural areas of the eight districts of Gharbiah. **RESULTS:** The incidence of pancreatic cancer within Gharbiah varied considerably by urban/rural patient residence and by district. Crude incidence rates were 1.5 times higher in urban compared to rural areas (2.98 per 100,000 in urban areas and 1.99 per 100,000 in rural areas). The highest incidence rates were observed in urban centers of El Santa, Kafyr El Zayat, and Kotour districts (5.00, 4.99, and 4.95 per 100,000, respectively). **CONCLUSION:** Incidence rates varied greatly by urban and rural areas and by district of residence in the Nile delta region of Egypt. Future studies should examine potential environmental risk factors that may contribute to the geographic distribution of pancreatic cancer in this region.

STOCK ALBUTEROL POLICY EXPANSION. **K. Lawson-Michod.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Joe K Gerald MD PhD. Site and Preceptor: Asthma and Airway Disease Research Center - Lynn Gerald PhD, MSPH.

Less than 20% of children have access to their inhalers at school which contributes to the 750,000 asthma related emergency department visits and 200,000 hospitalizations annually. In 2017, HB2208 was passed in Arizona that allowed schools to maintain stock inhalers to increase access to this life-saving medication. My internship with the Asthma and Airways Disease Research Center facilitate efforts by other states' to adopt similar legislation. Using, HB2208 and the Stock Inhaler Program as a guide, I developed a "Stock Inhaler Development to Enactment Guide" and a draft policy for stock albuterol legislation. This guide provides advice for each step in the legislative process. The draft policy provided advocates with the essential and suggested components of model stock albuterol legislation to be introduced in the state. These materials were utilized by states working on enacting stock inhaler legislation. Locally, I assisted in the implementation of the Stock Pima County Stock Inhalers for Schools Program. This involved creating kits for schools in surrounding areas and delivered the supplies to the schools.

AN OCCUPATIONAL HEALTH ASSESSMENT OF YOUNG MEN WORKING IN THE INFORMAL TOURISM SECTOR OF THE DOMINICAN REPUBLIC. **K. Krause.**

University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Douglas Taren PhD. Site and Preceptor: The Dominican Education and Mentoring (DREAM) Project, Puerto Plata, Dominican Republic - Catherine DeLaura, MBA MA.

Introduction: Many young men living in tourist-hubs in the Dominican Republic (DR) rely on informal (licit or illicit) and unregulated employment characterized by increased exposure to physical and social health risks. The DREAM Project, an education-focused non-governmental organization (NGO) based in the DR, houses an internationally funded job-training program for at risk youth. I conducted a mixed-methods occupational health assessment to gather a contextual understanding of young men's experiences with job security, social capital, and mental and physical health while working in the DR's informal tourism sector with the objective of improving DREAM's job-training program. Methods: I used a cross-sectional occupational health survey (n=60), qualitative semi-structured interviews (n=9), and two months of participant observation with young Dominican and Haitian men (ages 18-30). The quantitative survey was adapted from the NIOSH Quality of Worklife Questionnaire and translated into Spanish and Haitian Kreyol before piloting. Quantitative data were analyzed using Stata® and the qualitative analyses was done using NVivo®. Results: Results identified a high rate of occupational injuries (63%) and social risks (50%), low access to health insurance (10%), and poor overall job security. Results also reflect a significant decrease in quality of worklife for Haitians compared with Dominicans. Haitians reported higher work difficulty (64% vs 38%), more elevated job-related stress (65% vs 51%), lower ability to cover basic living expenses (9% vs 62%), and experienced more discrimination (83% vs 17%) and violence (58% vs 17%) at work. Discussion: Targeting young Haitian men with tourism-specific job training, documentation assistance, and Spanish language training is suggested for program improvement.



FACTORS ASSOCIATED WITH THE DOUBLE BURDEN OF MALNUTRITION IN KATHMANDU, NEPAL. **D. Gautam.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: Douglas Taren PhD. Site and Preceptor: Nutrition Promotion and Consultancy Services (NPCS), Kathmandu, Nepal - Ram Shrestha DSc.

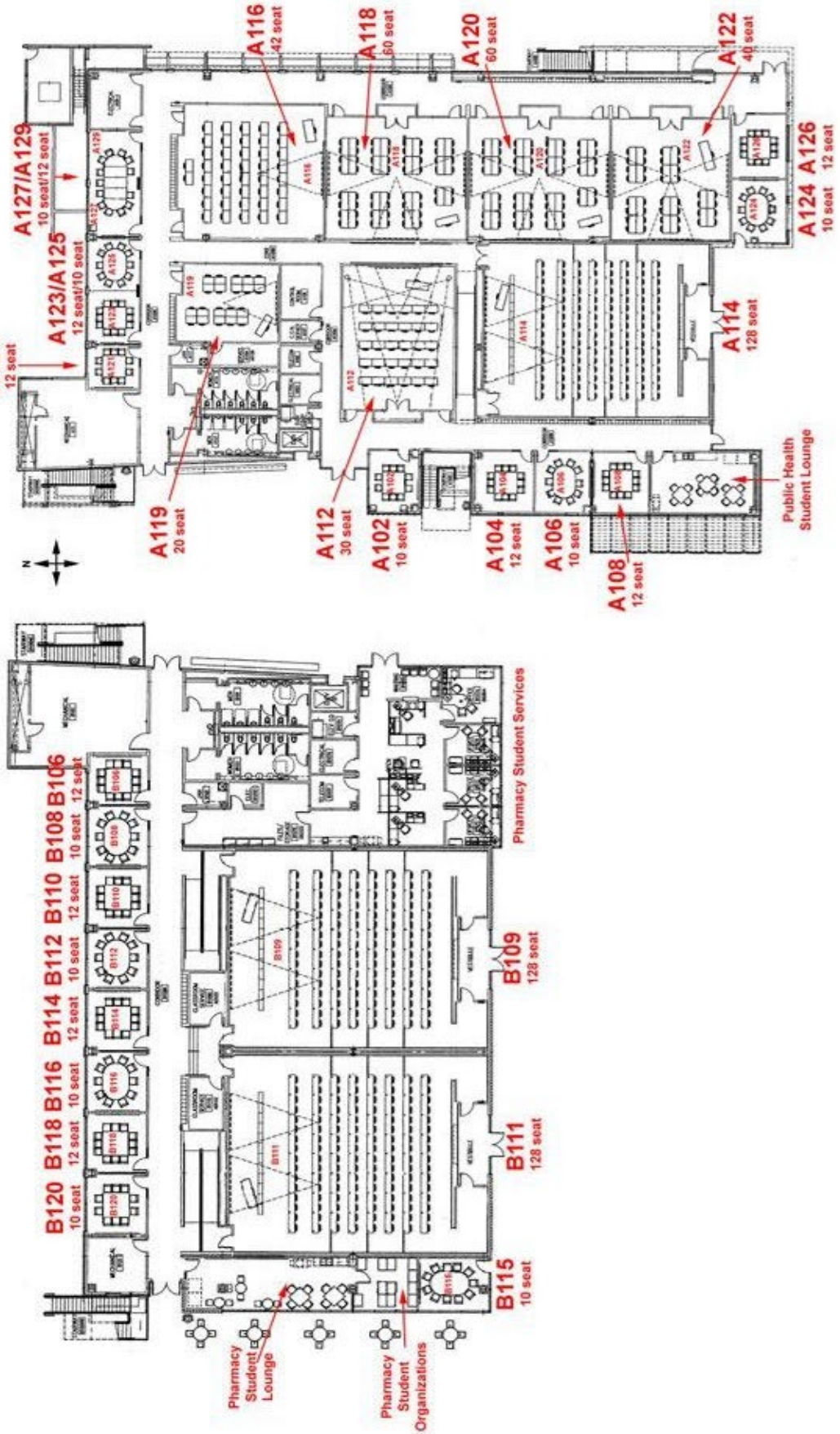
With growing urbanization in Kathmandu, the migration community from different parts of the country, with a dream to live a life full of new opportunities, has been moving to the capital to settle in the slums. Most slums in Kathmandu are located along the riverbank and are overcrowded, physically and socially disintegrated, and include unsustainable housing for a living. Due to a lack of access to education, health care, hygiene, drinking water and sanitation, and poor housing structure, the slum dwellers are vulnerable to various infectious diseases and malnutrition. The Nutrition Promotion and Consultancy Services (NPCS), a non-governmental organization based in Kathmandu, works to enrich the lives of Nepalis through better nutrition. NPCS has designed and implemented an Urban Nutrition Project (UNP) to improve the nutritional status of slum dwellers, particularly of children under 5 years of age, in two slum areas of Kathmandu: Banshighat and Sinamangal. As a project intern for UNP, I developed a case study of six households from these communities and an assessment of normative practices around food to identify factors contributing to malnutrition. I was also involved in community work and provided nutrition education and trainings to the mothers and adolescents group, and I worked on a biannual report and healthy snacks meal plan for school going children. Two of the most important factors identified as the contributor to malnutrition in these areas were the easy accessibility and availability of junk food. Due to higher consumption of junk food by these population, I hypothesized that there could be a risk of double burden of malnutrition (DBM) in these slums. Therefore, I also evaluated foods sold by vendors and confirmed the low cost and prevalence of junk food.

EVALUATION OF SPHERE STANDARDS AND ADHERENCE TO HOSPITAL ADMISSION PROTOCOL FOR SEVERE ACUTE MALNUTRITION IN LESOTHO. **E. Harris.** University of Arizona, Tucson, AZ, U.S.A. MPH Internship Committee Chair: John Ehiri PhD, MPH, MSc. Site and Preceptor: UNICEF Lesotho - Lineo Mathule MS.

**BACKGROUND** The 2015 / 2016 El Niño-induced drought severely compromised nutrition in Lesotho, resulting in acute food insecurity that is projected to last until 2020. Efforts from UNICEF's Nutrition sector are targeting severe acute malnutrition (SAM) at community and health facility levels. The objective of this project was to evaluate hospital inpatient programs for the management of SAM in three districts in Lesotho. **METHODS** Retrospective analysis of data from inpatient/outpatient (ITP/OTP) registers in three districts in Lesotho: Mokhotlong, Botha Bothe and Thaba Tseka. Registers covered inpatient admissions and discharges from January 2018 to July 2019 with a total case number of n=237 in four hospitals. Recovery, default and death rates were calculated and compared to Sphere standards, with data both adjusted and unadjusted for missing values. Adherence to admission protocol was assessed through evaluating recorded weight for height (W/H) Z-scores, Mid-Upper Arm Circumference, and oedema. **RESULTS** Adjusting for missing data, the Sphere standard for recovery rate (>75%) was met in the district total, Mokhotlong and Thaba Tseka. Default rate of <15% was met in all districts. Death rate of <5% was met in Mokhotlong and Thaba Tseka. For unadjusted rates, recovery rate of >75% was not met in any district. Default rate of <15% was met by all districts. Death rate of <5% was met in Mokhotlong. In assessing adherence to protocol of recorded anthropometric measures, 18% of admitted inpatients did not meet admission requirements, compared to 22% when W/H Z-scores were calculated and used in place of recorded values. **CONCLUSION** Further research is needed to understand adherence to admission protocol. Admission is a multifactorial process that includes components in addition to recorded anthropometric measures.

# Drachman Hall Map

## First Floor Drachman



## **The MPH Internship Experience**

From the inception of the Master of Public Health Program in 1993, the internship experience has been one of the most impactful and practical part of the program's curriculum. In the fall of 1999, MPH faculty determined that students needed a formal setting for making their oral presentations. A committee comprised of faculty, students, and student services professionals was formed to develop an appropriate presentation venue. In November 1999, the MPH Program debuted its first MPH Internship Conference. The format of the conference, held each fall and spring, is similar to that of a professional or scientific meeting.

Since its establishment, the MPH Internship Conference has grown in stature and significance to the Mel and Enid Zuckerman College of Public Health (MEZCOPH). The College uses this event as a public health networking tool by inviting public health practitioners, partners, and alumni throughout the state. The key to its success lies in the student participation. The MPH Internship Conference is a student-facilitated production. Students coordinate the multitude of details involved in its planning, promotion, and culmination; student presentations are its foundation.

Through contributions they have made and the benefits they have gained, the Internship Conference reflects the indelible handprint of MEZCOPH students on public health projects and agencies throughout the world.









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