Research Day Abstract

Abstract Title: "Buddy" Characteristics in a Behavioral Weight-Loss Intervention

Background: Social support is an established mediator of health behavior changes, including weight loss, but little is known about the characteristics of those chosen to be a support “Buddy,” and how these relate to outcomes. We examined Buddies in the Opt-IN 6-month weight loss trial, how those characteristics compared to participants, and whether they were correlated with percent weight loss.

Methods: Participants select a Buddy who agrees to provide support; Buddies also provide demographic information and self-reported height and weight. We analyzed data from September 2015-July 2015 to determine what type of Buddy was most often chosen. We also compared Buddy-Participant pairs on race, gender, and BMI using Chi-squared tests to determine which variables showed homophily. Lastly, we examined the impact of homophily on participant BMI change using ANOVAs.

Results: Randomized Opt-IN participants [N=297; 83.8% female, 17.5% Black, age=38.81(10.99), BMI=32.77(3.42)] and their Buddies [N=297; 69.7% female, 17.5% Black, age=39.95(12.74), BMI=27.07(5.67)] were studied. As of July 2015, 157 participants completed a 6-month assessment. Participants most often picked a friend [43.1%] as a Buddy, followed by a spouse/partner [29%]. Homophily between participant and Buddy was observed on gender [X²(1, 297)=32.46, p=.038]. No significance was found for race [p=.186], gender [p=.267], or BMI [p=.678] on percent BMI change at 6 months.

Conclusions: Homophily was observed on race and gender, but not when comparing BMI of participants to Buddies. Homophily was not significantly related to changes in BMI after 6 months. Additional research is needed to determine whether certain types of Buddies are more effective in facilitating weight loss. Understanding such effects could help to optimize the provision of support by selecting effective Buddies and by training Buddies to improve their delivery of support, thereby improving the positive impact of social support in weight loss interventions.
Abstract Title: * Missing Data in the Context of Growth Models

OVERVIEW: One property of student growth data that is often overlooked despite widespread prevalence is incomplete or missing observations. As students migrate in and out of school districts, opt out of standardized testing, or are absent on test days, there are many reasons student records are fractured. Missing data in growth models can bias model estimates and growth inferences. This paper presents empirical explorations of how well missing data methodologies recover attributes of would-be complete student data used for teacher evaluation. Missing data methods are compared in the context of a Student Growth Percentiles (SGP) model used by several school systems for accountability purposes. Using a real longitudinal dataset, this study evaluates the sensitivity of growth estimates to missing data and compares the following missing data methods: listwise deletion, likelihood-based imputation using an expectation-maximization algorithm, multiple imputation using a Markov Chain Monte Carlo method, multiple imputation using a predictive mean matching method, and inverse probability weighting. Methodological and practical consequences of missing data are discussed.
Research Day Abstract

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Does this research involve women’s health?* No

Abstract Title:* Association of Strengths with Improved Functioning among Child Welfare System Youth in Residential Treatment

Theoretical Background:
In the child welfare system, among youth who are removed from their families due to risk of safety (e.g., abuse, neglect), 15%-30% are placed in residential care. Youth in residential treatment suffer from many different types of emotional and behavioral problems. One critical issue that residential youth face is poor long-term outcomes post-discharge, including criminal activities, poor mental health, and placement instability.

So what factors can improve their future functioning? Lyons et al. (2001) suggest that strengths such as coping skills can enhance youth’s behavioral and emotional functioning. Yet no studies to date have focused on the relationship between strengths and post-care functioning of youth in residential care. To fill this gap, this study addressed the following questions: 1) To what extent are youth strengths associated with future functioning? 2) What other youth characteristics (i.e., age, race, gender, placement setting immediately after residential discharge) are associated with subsequent youth functioning?

Methods:
Data were collected in the Illinois Department of Children and Family Services (IDCFS) system. The study sample includes 799 youth who were discharged from residential care between November 1, 2012 and August 31, 2015. Youth strengths and behavioral/emotional functioning were measured via the Child and Adolescent Needs and Strengths assessment.

We conducted descriptive and negative binomial regression analyses. The dependent variable was the number of behavioral/emotional problems that youth had 6 months after residential discharge. Independent variables were the number of strengths that are usable for youth treatment plans at residential discharge and the change in the number of usable strengths between residential discharge and 6 months post-discharge. Analyses were stratified by age, gender, race, and post-residential living arrangement to determine if these characteristics were also associated with behavioral/emotional functioning.

Results:
Strengths at residential discharge and the change in strengths between residential discharge and 6 months post-discharge were each significantly associated with behavioral/emotional functioning 6 months post-discharge. Specific strengths with significant associations included educational environment at discharge, and change in number of educational environment and interpersonal skills. Girls had significantly fewer behavioral/emotional problems than boys.

Discussion:
The results suggest that youth need continuous support to maintain strengths after residential treatment discharge in order to achieve higher levels of behavioral and emotional functioning. Moving from residential to less restrictive living arrangements with less intensive care requires adjustments that are facilitated by youth strengths such as interpersonal skills and a favorable school environment.

*Abstracts longer than one page will not be accepted.
Abstracts longer than one page will not be accepted.

Research Day Abstract

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Does this research involve women’s health?* No

Abstract Title:* Geographic Localization of Physicians Improves Perceptions of Teamwork

Background
Geographic localization of inpatient physician services to nursing units has been suggested to improve teamwork and patient safety among health care professionals, while perceived lack of collaboration has been associated with worse patient outcomes. On our inpatient oncology units, we previously found that large discrepancies exist in perceptions of teamwork and collaboration among professionals, with nurses perceiving teamwork as much worse than physicians. We hypothesized that one cause of perceived poor teamwork was dispersion of physician services across multiple units.

Methods
Localization of all physician services on the inpatient oncology units proved complex, since nine distinct clinical oncology services had patients scattered across three different units. We focused on the least localized services, including three oncology hospitalist and two solid and liquid tumor teaching services. Complexity necessitated designating primary and secondary units for each service. We implemented localization in May of 2014. To determine impact, we surveyed nurses, residents, and hospitalists via email on perceptions of teamwork and collaboration during November 2014 to February 2015 using the same validated instrument (Safety Attitudes Questionnaire; scale 0-100) used prior to localization. Respondents also rated potential barriers to collaboration using a 4 point ordinal response scale (1=not at all a barrier; 4=major barrier).

Results
Rates of localization for intervention services were 100% (91% primary unit, 9% secondary unit) for hospitalist, 100% (85% primary unit, 15% secondary unit) for solid tumor, and 100% (units unavailable) for liquid tumor services. Overall, 129 of 193 (67%) of eligible professionals completed the pre- and 58 of 99 (59%) completed the post-localization survey. The teamwork score among nurses improved (68.87 to 75.11, p=0.04). Teamwork scores were unchanged for hospitalists (84.33 to 80.36, p=0.52) and residents (81.9 to 76.47, p=0.24) (see Table 1). Nurses and hospitalists both perceived not having physicians routinely work with the same nurses as a barrier to communication, while nurses only perceived negative attitudes regarding the importance of communication, and not sharing the same office or medical records space as barriers to communication.

Conclusions
Geographic localization of physician services on oncology inpatient units improved ratings of teamwork and collaboration among nurses, who previously felt it was poor; while high ratings of teamwork and collaboration among hospitalists and residents remained unchanged. Perceived barriers to collaboration indicate continued need for improvement. Next steps include additional interventions building on localization, and assessing impact on patient outcomes.

| Table 1: Teamwork Scores by Professional Type Pre- and Post-Intervention* |
|----------------------------------------|---------|---------|---------|---------|
|                                       | Pre     | Post    | p-value |
| Team Score                            | N       | Mean (SD)| N       | Mean (SD) |
| Registered Nurse                      | 75      | 68.87 (14.65)| 32      | 75.11 (11.97)| 0.04    |
| Residents                             | 10      | 81.9 (8.9)   | 17      | 76.47 (12.42)| 0.24    |
| Hospitalist                           | 3       | 84.33 (9.87)| 4       | 80.36 (5.65)| 0.52    |

*Assessed using Safety Attitudes Questionnaire, Scale 0-100.
Abstract Title: Assessing Physician Awareness and Attitudes of Sex-Specific Cardiovascular Disease Prevention Guidelines

Hypothesis: Cardiovascular care for women is provided by internists, obstetrician-gynecologists, and cardiologists. Guidelines specific to female preventive cardiovascular health have been created and disseminated over the past two decades. Moreover, public campaigns regarding sex differences between male and female cardiovascular disease presentation and treatment have been established. In this study we examined whether these interventions have improved the attitudes and confidence among physician groups regarding preventive cardiovascular care for males and females.

Methods: An online survey was sent to 460 internists, obstetricians-gynecologists, and cardiologists with privileges at Northwestern Memorial Hospital. The survey was adopted from the American Heart Association, and assesses awareness of, attitudes towards, and knowledge of guidelines and differences in preventive cardiovascular care in women versus men. Additional questions were added to assess differences in responses by sex and by specialty. Cardiologists were assigned as the knowledge “control” group. Males were included in the study design for completeness.

Results: Awareness of cardiovascular preventive care guidelines and self-reported effectiveness in providing preventive cardiovascular care for both male and female patients was highest among cardiologists (p ≤.05). Additionally, all physicians felt more confident in treating female versus male patients. No physician group believed that clinical judgment is more effective than guidelines in improving health outcomes.

Conclusions: These results suggest that the additional training undertaken by cardiologists is critical to their ability to recognize guidelines and may instill confidence in their CVD preventive care practice. Additionally, the presence of multiple guidelines with differing recommendations for men and women contributes to confusion that might be ameliorated with clearer sex-based guidelines (e.g. not just ‘women’s’ or ‘general’ but guidelines specific to males and females) and short term educational interventions on how to approach male and female patients with regard to preventive cardiovascular care.
Abstracts longer than one page will not be accepted.

Research Day Abstract

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Does this research involve women’s health?* No

Abstract Title: * The Effect of Home Practice on Outcomes During an MBSR Course for Young Adults with Cancer: A Mixed Methods Study

Purpose: The purpose of this study was to examine role of home practice on outcomes in a Mindfulness-Based Stress Reduction Course (MBSR) for young adult cancer survivors.

Methods: Using SPSS 22, young adult cancer survivors (n=30) between the ages of 18-39 were divided into a high and low home practice groups using a median split. General linear modeling was used to examine group differences across the following outcomes: 1) Self-Compassion Scale, 2) Single Item Quality of Life Index, 3) Mindfulness Attention Awareness Scale, and 4) Perceived Stress Scale. We controlled for expectancy/credibility that MBSR would benefit their health as well as meditation experience/history. Next, we examined participant’s open-ended written observations that corresponded with their daily practice using qualitative coding methods. We systematically coded home practice passages, followed by grouping into larger thematic areas, which were reviewed by members of the research team until all comments were coded.

Results: Quantitative analysis indicated no statistically significant differences between home practice groups on self-compassion, quality of life, or perceived stress. However statistically significant differences were observed between practice groups on changes in mindfulness between baseline and 8 weeks (p<.01). Qualitative analysis revealed 90 codes, which were grouped into six higher order themes: Mind, Heart, Body, Practice, Attitudes of Mindfulness, and Benefits.

Conclusion: This study sheds light on young adult cancer survivor participants’ self-observations regarding home practice and the extent to which it effects outcomes. While certain expected outcomes were not different between home practice groups, positive changes in self-reported mindfulness were observed for those reporting greater practice. Through examining open-ended responses of home practice logs, we are able to identify what shifts, changes and types of awareness are occurring for those in the low and high practice groups, which provides greater context and richness to the interpretability of mindfulness scores and other self-reported outcomes.
Abstract Title: * Cross-Sectional and Longitudinal Associations of Chronic Stress with CRP and IL-6: The Coronary Artery Risk Development in Young Adults (CARDIA) Study

A growing body of research suggests inflammation may represent an important pathway linking chronic psychosocial stress to cardiovascular disease. Cross-sectional studies suggest chronic stress is related to elevated basal inflammation levels. However, few studies have examined this relationship longitudinally. Using data from the Coronary Artery Risk Development in Young Adults (CARDIA) study (2000-2001 and 2005-2006), we examined cross-sectional and longitudinal associations of chronic stress (chronic burden and social conflict) with inflammation. A chronic burden score was derived by asking about the presence and severity of ongoing, financial, job, relationship, or health-related problems lasting over 6 months. A social conflict score was derived using four questions regarding negative relationships. Log-transformed C-reactive protein (CRP) and interleukin-6 (IL-6) were used to measure inflammation. Linear mixed-effects modeling was used to assess relationships of each exposure with baseline inflammation and change in inflammation after adjustment for demographics, socioeconomic indicators, depressive symptoms, and inflammatory conditions and related medications. We tested a baseline stress*time interaction to assess whether baseline stress was related to changes in inflammation. We also examined whether change in stress was associated with change in inflammation. Each standard deviation increase in baseline chronic burden score was associated with a 5% increase in baseline IL-6 (95% confidence interval: 0.7%, 9.4%) in demographic adjusted models; findings were attenuated in fully adjusted models. Similarly, higher baseline social conflict was associated with higher baseline CRP and IL-6 in initial models but not fully adjusted models. Neither baseline chronic burden nor baseline social conflict was associated with change in CRP (P for interaction > 0.2) or change in IL-6 (P > 0.4). Further, there were no significant associations between change in either stress measure with change in CRP or IL-6. Our results suggest chronic stress may not impact cardiovascular health via elevated basal inflammation.
Melanoma perception in people of color: a targeted educational intervention

**Summary:** Although melanoma is more common in Caucasians, ethnic minorities face a worse prognosis and a greater risk of melanoma-related mortality due to presentation with more advanced melanomas. The reasons associated with late presentation may be attributed to presentation at atypical sites and a lack of awareness.

**Objective:** To assess the effectiveness of a “ABCDEs of Melanoma” educational pamphlet designed for people of color (POC).

**Methods:** 100 subjects who self-identified as African American, Asian or Hispanic were recruited from an academic dermatology clinic. A research associate delivered a scripted, verbal educational intervention using either a conventional pamphlet (n=50) or one targeted towards POC (n=50). Subjects completed questionnaires pre-intervention and post-intervention regarding their demographics, knowledge and attitudes. Pre-intervention and post-intervention responses were analyzed using McNemar’s test. The two groups were compared using Fischer’s exact test.

**Results:** Among the 100 subjects (15% male, 85% female), 78% self-identified as African American, 11% as Asian and 11% as Hispanic. The intervention increased knowledge that melanoma is a type of skin cancer (80% to 100%), that sun exposure is linked to melanoma (76% to 97%) and that a change in size, color or shape of a mole is a warning sign of melanoma (66% to 99%, p<0.001 for all), combining both conventional and POC groups. Perceived personal risk for developing melanoma increased more in the POC group than in the conventional group (58% vs 32%, p=0.025). Awareness that POC are at risk for developing melanoma increased more in the POC group (66%) than in the conventional group (38%, p=0.016).

**Conclusions:** While both educational interventions improved melanoma knowledge, the intervention targeted towards POC resulted in a greater increase in the perception of being at risk for developing melanoma. Our findings suggest melanoma educational material that specifically references ethnic skin has a larger impact on attitudes toward melanoma risk in POC.
Research Day Abstract

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Department:* Preventive Medicine
Does this research involve women’s health?* Yes

Abstract Title: * Psychosocial Model of Physical Activity and Subjective Memory Impairment in Breast Cancer Survivors

Background: Many breast cancer survivors report cognitive change after a cancer diagnosis and its treatment. However, very little is known about the relationship between physical activity (PA) and subjective memory impairment (SMI) in this population. The purpose of this study was to examine the relationship between PA, psychosocial factors, self-efficacy, and SMI in a sample of breast cancer survivors over a 6-month period.

Methods: All participants (N=1,477) completed self-report measures of PA, self-efficacy, fatigue, distress (depression, anxiety, concerns about cancer recurrence and perceived stress) and SMI at baseline and 6 months. A subsample (n=362) was randomly assigned to wear an accelerometer for 7 days at both time points. It was hypothesized that changes in PA would indirectly influence SMI via self-efficacy, distress, and fatigue. Relationships among model constructs were examined using panel analyses within a covariance framework over the 6-month period.

Results: The hypothesized model provided a good fit to the data in the full sample ($\chi^2 = 1462.5$, df = 469, $p = < 0.001$; CFI= 0.96; SRMR= 0.04). At baseline, PA participation indirectly influenced SMI via self-efficacy, distress, and fatigue. Relationships held among changes in constructs over time. Increased PA was associated with increased self-efficacy which was, in turn, associated with lower levels of distress and fatigue. Finally, lower distress and fatigue levels were associated with lower SMI. The majority of the hypothesized relationships were supported in the accelerometer subgroup ($\chi^2 = 961.8$, df = 535, $p = 0.001$, CFI = 0.94, SRMR= 0.05).

Conclusions: This study provides evidence to suggest physical activity, psychosocial factors, and self-efficacy may play an important role in understanding SMI in breast cancer survivors. Future research should replicate and extend these findings by examining the mechanisms underlying these relationships and investigate the role of PA as an intervention strategy for reducing SMI in breast cancer survivors.
Abstract Title: Delivering Video Patient Education through the Patient Portal Ahead of a Scheduled Clinic Visit

Summary: We previously reported on a pneumococcal vaccination (PnVx) education video, which was well received by patients who viewed the video during a clinic visit. However, to play the video through this delivery channel while retaining confidentiality of patient records required significantly greater staff involvement than initially planned or desired. Patient portals, a feature of many electronic health records (EHRs), present an alternate channel through which to deliver timely, relevant patient education without burdening clinic staff.

Objective: We conducted a feasibility study of sending patients newly eligible for PnVx a patient education video through the patient portal 7 days prior to a scheduled clinic visit. We assessed patient response and PnVx status following delivery of these patient portal messages.

Sample: Eligible patients were registered patient portal users, age 65 or 66, had a scheduled clinic visit, and no record of receipt or refusal of PnVx. Patients with a preferred language other than English, visual or hearing impairments, or cognitive disorders were excluded. All eligible patients were sent messages during the study period (April-November 2015).

Methods: Programmers created and verified accuracy of EHR code that ran nightly to query eligible patients and trigger automatic message delivery. Clinicians consented for their patient panels to be included; the Northwestern University Institutional Review Board approved the study with a waiver of patient informed consent. The message, automatically sent 7 days prior to a scheduled visit, highlighted the patient’s eligibility for PnVx and requested the patient click an embedded link to view a brief video. Patients who had not clicked the hyperlink within four days were sent a reminder message. Primary outcomes were message status (opened or unread) and video status (viewed, unviewed). A secondary outcome was PnVx status (yes, no, patient/medical exception). We assessed outcomes via EHR query and used descriptive statistics for study population and primary outcomes; logistic regression explored the relationship between watching video (yes/no) and vaccination status (yes/no).

Results: Of 116 patients receiving the message, mean age was 65.0 (SD=2.8), 29.3% were male, 57.8% were white. Most (n=86, 74.1%) opened the message; 22 (19.0%) clicked the hyperlink within 4 days. Among 77 patients who received a reminder message, 45 (58.4%) opened the message and over a quarter (n=23, 29.9%) clicked the hyperlink. Among those who clicked the hyperlink (either message), 11.1% did not start video, 24.4% watched a portion, and 64.4% watched the entire video. Of the 40 patients who watched at least part of the video, 32 (80%) received PnVx at their subsequent clinic visit. Patients who watched the video were more likely to receive PnVx (OR= 2.97, p=0.03) than those who did not view the video.

Conclusions: Most patients receiving a patient portal message opened it; over a third watched the video. Those viewing the video were significantly more likely to receive PnVx. Using the patient portal to deliver patient education about a preventive service to eligible patients ahead of a scheduled clinic visit appears to be both a viable and effective channel. Patient portal delivery requires no on-site staff time to deliver the message and clear documentation of the delivery attempt is available. A disadvantage to patient portal delivery is that unregistered patients or those who are unable to navigate electronic messages are excluded from message exposure. Future research should continue to explore varying delivery channels for health education messages to assess feasibility and effectiveness.
Abstracts longer than one page will not be accepted.

Research Day Abstract

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Does this research involve women’s health?* No

Abstract Title: * Ideal Cardiovascular Health and Employee Productivity

Introduction:
The AHA has defined ideal cardiovascular health (CVH) as the simultaneous presence of 4 optimal health behaviors (not smoking, eating a healthy diet, meeting physical activity goals, and maintaining a healthy weight) and 3 optimal health factors (lower blood pressure, blood sugar, and cholesterol). An association between cardiovascular health and employee productivity has not yet been established.

Objectives:
In this study, we sought to investigate whether employees in high cardiovascular health are more productive than employees with low or moderate cardiovascular health.

Methods:
In fiscal year 2014, a large academic medical center offered health risk appraisal surveys (HRAs) to its 6,500 employees. Completion rates have been >90% to date (n=6,144). Ideal, intermediate, and poor levels for each of the 7 components listed above were calculated from HRA responses according to standard AHA definitions and assigned values of 2, 1, and 0 respectively. An overall CVH score was calculated for each respondent from the sum of individual component scores with 0-7 being low, 8-10 moderate, and 11-14 high. Productivity was measured by responses related to missed work days due to illness (absenteeism) and days on which employees came to work but did not feel at their best (presenteeism). In this cross-sectional analysis, we used logistic regression to compare productivity related responses between employees with high, moderate, and low CVH.

Results:
Overall, 35% of employees were in ideal CVH, 58% intermediate, and 6% poor. The odds of missing at least one workday due to illness during a two-week period were 77% lower among employees with high CVH compared to employees with low CVH (OR 0.23; 95% CI, 0.14-0.37). The odds of reporting that physical or emotional health problems made it difficult to concentrate on work at least half the time were 91% lower among employees with high CVH compared with low CVH (OR 0.09; 95% CI, 0.04-0.19).

Conclusions:
High cardiovascular health was strongly associated with higher employee productivity as measured by fewer sick days and better concentration at work. These results support the notion that helping employees stay healthy may represent a valuable near-term strategy for employers.
Aiming to Save Lives: A Program to Empower Bystander Intervention to Violence Related Injuries

**Background:** The south side of Chicago has one of the highest homicide rates per capita in the country disproportionately affecting young people: 52.7 per 100,000 in the Greater Grand Crossing community area. The paucity of designated trauma centers in the south side of Chicago leads to prolonged transport times, increasing morbidity and mortality for those affected by penetrating violence. A Trauma First Responders Course (TFRC) could potentially mitigate this; however, a high quality, evidence-based course designed for the general public does not currently exist.

**Methods:** Designing and implementing a TFRC for neighborhood residents will give them the confidence, knowledge, and skills needed to provide rapid and effective care. Developing a sustainable TFRC tailored to the needs of the communities on the south side of Chicago will empower residents to take an active role in rendering immediate and life sustaining care for those affected by violence. Through focus groups currently being run, we will determine: (i) what witnessed traumatic events are most prevalent, (ii) community perceptions of violence, and (iii) how violence affects those who are surrounded by it. We will discuss potential skills that we could teach in our course and elicit feedback. We plan to train 500 participants over one year, including those who will be certified to continue to offer the training themselves.

**Outcomes:** We are evaluating changes both in participants’ knowledge and ability to treat trauma, as well as attitudes and perceptions of helplessness. This is paramount, as bystanders are present at 60-97% of all trauma cases and are more likely to provide assistance and higher quality care when they have had some first aid training.

**Conclusions:** Rapid initiation of effective first responder assistance by bystanders should reduce patient morbidity and mortality during the critical time period while awaiting transport to a trauma center.
Abstracts longer than one page will not be accepted.

Research Day Abstract

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Does this research involve women’s health?* Yes

Abstract Title: * Navigating New Motherhood: Developing a patient-centered, systems-based intervention to increase postpartum care in an urban women’s health clinic

Background: The postpartum visit is a critical time to connect new mothers with family planning, breastfeeding, mental health, and preventive health services. However, substantial disparities in postpartum care uptake based on payer status and race/ethnicity exist. Thus, identifying patient-centered, sustainable methods to improve access to postpartum care is a public health priority.

Methods: Our multidisciplinary team designed the patient-centered program Navigating New Motherhood (NNM) to enhance postpartum care in a population of low-income, largely minority women. During the postpartum hospitalization, the NNM navigator meets the mother to understand her health priorities and preferences. The navigator schedules the postpartum appointment, sends reminders using phone, text, and/or email, and accompanies the patient to visits. The navigator thus addresses individual barriers to care and keeps the new mother connected with health services during this transitional period.

Results: Strengthened by the full-time availability of a patient navigator and the team’s development of streamlined logistical systems, NNM has been met with substantial enthusiasm by both providers and patients in our center. While the study is ongoing, we hypothesize that in addition to increasing postpartum follow-up rates, NNM will help improve postpartum health behaviors such as contraception uptake, breastfeeding continuation, and adherence to primary and specialty care for chronic medical issues.

Discussion: Our patient-centered approach to improving postpartum health care utilization has resulted in the development of a sustainable, evidence-based health promotion program for underserved women. Further implementation of this program can help more new mothers receive necessary health services in a timely manner.

Learning Areas:
Provision of health care to the public
Public health or related research
Social and behavioral sciences

Learning Objectives:
• Articulate the importance of postpartum care for long-term maternal and fetal health
• Describe a patient navigation intervention designed to increase postpartum follow-up rates
• Evaluate critical success factors and potential pitfalls in the design of a patient-centered health promotion program

• Keywords: Postpartum care, contraception uptake, patient navigation

*Abstracts longer than one page will not be accepted.
Research Day Abstract

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Does this research involve women’s health?* No

Abstract Title:* Evaluating implementation of methicillin-resistant Staphylococcus aureus (MRSA) prevention guidelines in VA spinal cord injury and disorder centers using the PARIHS framework: a mixed-methods study

Background. To prevent methicillin-resistant Staphylococcus aureus (MRSA) in Spinal Cord Injury and Disorder (SCI/D) Centers, the “Guidelines for Implementation of MRSA Prevention Initiative in the Spinal Cord Injury Centers” were released in July 2008 in the Veterans Affairs (VA) Health Care System. The purpose of this study was to use the Promoting Action on Research Implementation in Health Systems (PARiHS) framework to evaluate the experiences of implementation of SCI/D MRSA prevention guidelines in VA SCI/D Centers approximately 2–3 years after the guidelines were released.

Methods. We used mixed methods across two phases to explore provider perceptions and experiences with early implementation of the SCI/D MRSA prevention guidelines. The first phase included an anonymous, web-based cross-sectional survey administered to health care providers employed at all 24 VA SCI/D Centers. Providers included physicians, nurses, therapists, and other allied staff. The second phase included semi-structured telephone interviews with staff members at nine purposefully-selected SCI/D Centers. The PARiHS framework was used to develop survey questions and a semi-structured interview guide. Survey questions were described using univariate statistics (frequencies, percentages, and means) and t-tests or Chi-square statistics. Audio-recorded interviews were transcribed verbatim and analyzed using constant comparative techniques, through which four coders independently assessed participant responses for prominent themes before convening to compare and compile findings. Themes were grouped according to PARiHS constructs (context, evidence and facilitation) to organize factors influencing guideline implementation in VA SCI/D Centers.

Results. The survey was completed by 295 SCI/D providers (43.8 % response rate) from 22 of the 24 SCI/D Centers (91.7 % participation rate). Respondents included nurses (57.3 %), therapists (24.4 %), physicians (11.1 %), physician assistants (3.4 %), and other health care professionals (3.8 %). Approximately 36 % of the SCI/D providers surveyed had not seen, did not remember seeing, or had never heard of the MRSA SCI/D guidelines, whereas 42.3 % of providers reported that the MRSA SCI/D guidelines were fully implemented in their SCI/D Center. Data revealed numerous barriers and facilitators to guideline implementation. Facilitators included enhanced leadership support and provider education, focused guideline dissemination to reach SCI/D providers, and strong perceived evidence supporting the guidelines. Barriers included lack of awareness of the guidelines among physical therapists and physician assistants and challenges in cohorting/isolating MRSA-positive patients and following contact precautions.

Conclusions. Successful implementation of MRSA infection prevention guidelines in SCI/D settings requires (1) guideline dissemination that reaches the full range of SCI/D providers working in inpatient, outpatient, and other care settings, (2) provider education that is frequent and systematic, (3) strong leadership support, and (4) that barriers unique to the recommendations are addressed. Using the PARiHS framework was beneficial in systematically identifying factors influencing implementation of infection prevention guideline in SCI/D Centers. These findings may be used to inform selection of implementation strategies and optimize infection prevention beyond MRSA as well as in other specialty care populations.
Research Day Abstract

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Principal Investigator:* Julie Lu, DO; Mary Talen, PhD
Department:* Family Medicine

Does this research involve women’s health?* No

Abstract Title:* Being Obese in Humboldt Park: Illness Narratives on Obesity

Objective:
The purpose of this study is to explore barriers and resources regarding obesity from a young adult patient's perspective through first person narratives. This study will enable young adult community members to tell their story of how obesity has affected both their medical care and personal life. Themes identified in this study can be used to improve obesity care for Humboldt Park patients and be a starting point for further research. By collecting specific demographic data (i.e. country of birth and gender) and dimensions of health-related quality of life (mental and physical), different themes may emerge within the subsets of this population. Such information will better inform providers serving obese young adults, and improve obesity prevention programs within the Humboldt Park Community. Our objective is to gather illness narratives so that we can better understand the social and cultural environment that influences the health of these patients, including the roles of Erie Family Health Center and other community organizations. Although many obesity programs already exist in the Humboldt Park community, by exploring our patients' perspective on health, we hope to create a more effective way of delivering weight management care.

Methods:
Prior to beginning the study, this project will be submitted to both the Erie Family Health Center Research committee and to the Northwestern University IRB. This will be a qualitative study. An interview will be conducted to help identify themes, assets and barriers to addressing health, weight management, and wellness in the community. The interview will be in an open-ended format with no specific questions to encourage the patient to provide a more in-depth exploration into their own obesities. To better facilitate patient perspective and experiences the interview can take place either in the patient's home or in the clinic. Such in-depth approach has not been previously explored in this community. Quantitatively, a collection of patient demographics and standard health status measurements will be used to see if any of the themes identified through the interviews is related to a particular subset of this population. This study will focus on the young adult population (ages 18-35) who are at the age of when prevalence rate of diabetes begin to increase[7]. It is also the age when patients are able to make more independent decisions about their health choices and behaviors.

Participants:
Ten young adult patients from Humboldt Park, Erie Family Health Center will be recruited for in-depth interviews. Young adult obese patients will be defined as those between the ages of 18 and 35, male and female. Obese patients will be defined as having a Body Mass Index (BMI) over 30. Patients must speak either English or Spanish. A randomly drawn sample of adult Erie patients who live in the Humboldt Park neighborhood (as defined by zip code), and have registered one or more visits in the last 12 months will be identified via Erie's electronic health record system. Patients who have been seen by the interviewer, Julie Lu, within the past year will be excluded. Patients from the randomized sample list will be called until 10 patients are identified and consent to participating in this home-based interview. Confidentiality will be maintained throughout the process and no identifying information will be used unless patient signs a release of waiver form.

*Abstracts longer than one page will not be accepted.
Background

Being uninsured is associated with higher mortality after trauma. With the implementation of the Affordable Care Act (ACA), in Illinois there has been an approximately 25% decrease in uninsured patients.

Objectives

The objective of this study is to evaluate the effect of ACA insurance expansion on disparities in trauma mortality based on insurance status.

Methods

We obtained hospitalization claims data from all non-federal hospitals in Illinois from mid-2010 through first-quarter 2015. Cases were identified as those with trauma-related ICD-9 codes and an E-CODE pertaining major mechanisms of trauma (cut/pierce, fall, gunshot wound, motor vehicle collision, or other blunt injury). We employed Poisson regression adjusted for clustering within hospitals and controlling for age, sex, race, zip code household median income, mechanism of injury, shock, extent of anatomic injury, comorbidities, hospital ED volume, and year of admission.

Results

A total of 87,537 patients met trauma inclusion criteria. The percentage of trauma patients without insurance dropped from approximately 20% to 8% over the study period. Trauma mortality increased among uninsured patients over this time period (Figure 1). The adjusted incidence rate ratio of mortality after trauma was higher 1.19 (95%CI 1.02 to 1.39), among uninsured patients than insured patients.

Conclusion

Uninsured patients suffer increased mortality rates after trauma than insured patients. ACA health insurance expansion resulted in an overall reduction in the percentage of uninsured trauma patients, however the trauma mortality rate within this patient population increased. Disparities in trauma mortality between the insured and uninsured may reflect patient factors, hospital or provider factors, or as yet unmeasured confounders.
Abstracts longer than one page will not be accepted.

Research Day Abstract

Presenting Author:* Betina Yanez, Ph.D.
E-mail:* betina.yanez@northwestern.edu
Position:* Assistant Professor
Abstract Category:* Social Science Research
Principal Investigator:* Betina Yanez, Ph.D.
Department:* Medical Social Sciences

Does this research involve women's health?* Yes

Abstract Title: * Adherence to Endocrine Therapies among Hispanic Breast Cancer Survivors: A Qualitative Analysis

Background: Among Hispanics, the largest and fastest growing ethnic minority group in the United States, cancer is the leading cause of death. Furthermore, breast cancer is also the leading cause of cancer-related death for Hispanic women. Five years of adjuvant endocrine therapy (ET) reduces the risk of breast cancer recurrences by 50%, and the risk of breast cancer mortality by 28% in women with early stage breast cancer who are hormone-receptor positive and non-adherence to ET is a documented concern. Given that adherence to ET for hormone-receptor positive breast cancers (approximately 75% of breast cancers are hormone-receptor positive) is an important determinant of breast cancer recurrence and mortality, identifying barriers and facilitators to adherence to ET is a critical first step towards developing targeted, culturally relevant interventions to reduce disparities in breast cancer among Hispanic women. Methods: We conducted 31 semi-structured, hour-long interviews with English and Spanish-speaking Hispanic breast cancer survivors who were diagnosed with early stage breast cancer and prescribed ET within the past five years. Women were recruited from hospitals in the Chicago area and stratified by adherent or non-adherent to ET. Interviews were audio-recorded, transcribed, and forward and back translated by bilingual research staff. Transcripts were then coded for thematic content using a combination of inductive and deductive approaches by pairs of independent coders using NVivo software version 10.0. Results: Mean age of participants was 55 years and most participants were diagnosed with stage II breast cancer. More non-adherent than adherent participants discussed lack of knowledge or inaccurate knowledge regarding how to take ET (83% vs. 47%), lack of knowledge or inaccurate knowledge regarding the purpose of ET (75% vs. 32%), and low self-efficacy (83% vs. 37%). More adherent than non-adherent participants discussed not having or not being bothered by side effects of ET (95% vs. 67%), fear of recurrence (47% vs. 25%), cost of ET (95% vs. 67%), the importance of their religious beliefs (74% vs. 58%), and psychological benefits of taking ET (26% vs. 17%). Conclusions: Study findings have implications for clinicians recommending ET to Hispanic breast cancer survivors and for researchers seeking to develop culturally adapted interventions to improve adherence to ET among Hispanic survivors.
Abstract Title: Differences in cardiovascular risk factors among South Asians living in Chicago and San Francisco, the Mediators of Atherosclerosis in South Asians Living in America (MASALA) study.

Objectives:
The Mediators of Atherosclerosis in South Asians Living in America (MASALA) study is a community-based cohort of South Asian men and women from the San Francisco Bay Area (SF) in California, and the Chicagoland-area in Illinois, which are home to two of the largest South Asian populations in the United States (U.S). This cross-sectional study examined if there were differences in the baseline clinical and behavioral risk factor profile between South Asians living in SF and those living in Chicago. The goal was to generate insights that could lead to hypotheses about potential environmental influences on South Asian cardiovascular health.

Methods:
The MASALA study is investigating the prevalence, correlates, and outcomes associated with subclinical cardiovascular disease (CVD) in a community-based sample of 906 healthy South Asian men and women ages 40-84 years, from SF and Chicago, without a history of CVD at baseline. Participants in SF were examined at University of California at San Francisco (UCSF) and Chicagoland-area participants at Northwestern University (NWU). Individual-level baseline characteristics between the sites were compared using chi square and t-test methods. Ten-year atherosclerotic cardiovascular disease (ASCVD) predicted risk was calculated using the 2013 Pooled Cohort Equations as a dichotomous variable: 1) low predicted 10-year risk (10-year risk <7.5%), and 2) high predicted 10-year risk (10-year risk ≥7.5% or diabetes mellitus). Lifetime predicted ASCVD risk was based on risk factor burden, and also categorized into 2 groups: 1) Low (<39%) lifetime and 2) High (≥39%) lifetime predicted risk. Adjusted multivariable logistic regression was used to examine the association between study site and 10-year and lifetime predicted ASCVD risk.

Results:
Of the 906 participants in MASALA (mean age 55 years, SD ±9 years), 420 (46%) were women, and more women participated at the UCSF site (50% versus 42% at NWU, p=0.02). Household income was also significantly higher among SF participants than Chicago (71% of SF participants had incomes greater than $100K compared to 54% in Chicago, p-value=<0.001). Education, percentage of time lived in US, dietary patterns and physical activity did not differ significantly between SF and Chicago participants. Chicago participants had higher unadjusted glucose (p=0.0002) and cholesterol levels (p=0.025), and a higher prevalence of prediabetes and diabetes than SF participants (p <0.0001); however, these differences were attenuated after adjusting for age. Adjusted regression models showed no significant difference between SF and Chicago participants for odds of having an elevated 10-year or lifetime ASCVD risk.

Conclusion:
The study shows that despite differences in socioeconomic attainment between participants at the two major metropolitan areas in the US, there were no significant differences in ASCVD risk profiles. The findings may help understand potential environmental influences on cardiovascular health among South Asians in the U.S. Studies including more cities are needed to confirm the findings.
Abstract Title: Physical activity, epigenetic age, and cancer

Summary: Biological measures of aging, such as those measured via epigenetic biomarkers, are important for understanding aging-related diseases such as cancer. Epigenetic aging can be influenced by lifestyle factors, including diet and physical activity. Previously, we found that the discrepancy between epigenetic and chronological ages (Δ_age) can predict the risk of cancer incidence. In this study, we investigated whether physical activity is associated with epigenetic aging and whether (and how) it can modify our previously observed association between Δ_age and cancer risk.

Sample: In the prospective Normative Aging Study (NAS) cohort, 834 blood leukocyte samples were collected from 442 participants free of cancer at up to four follow-up visits. The NAS is a study of healthy aging and aging-related diseases.

Methods: Blood Δ_age was estimated using epigenome data generated by the widely used Illumina 450K array. Physical activity was measured based on the Paffenbarger scale which evaluates the frequency, duration, and intensity of various leisure physical activities. We also derived estimates for Metabolic Equivalent Task (MET)-hours/week. Associations between Δ_age and physical activity were evaluated via linear mixed models and adjusted for chronological age at blood collection, BMI, education, smoking, alcohol intake, Illumina 450K array plate, and estimated blood cell type abundances. We employed time-dependent ROC curves to test Δ_age and physical activity as a predictive biomarker of cancer risk.

Results: We observed that Δ_age was about six months lower (i.e., epigenetically younger) over the follow-up period for each one-fold increase in MET (p=0.003, Figure A). Our Cox model also revealed that physical activity significantly modified the effect of Δ_age on cancer risk. In particular those with higher MET and lower Δ_age at baseline had the lowest risk of cancer incidence (p=0.02). Δ_age and MET jointly achieved >0.95 specificity with 0.80 sensitivity (AUC=0.87, Figure B) in discriminating participants with high and low risk of cancer within 3-5 years.

Conclusion: In summary our results show that physical activity may slow down epigenetic aging and thus potentially protect against cancer development. Δ_age may serve as a minimally invasive blood biomarker for cancer risk assessment and provide important information for cancer prevention.
Research Day Abstract

<table>
<thead>
<tr>
<th>Presenting Author:*</th>
<th>Tessa Owens, BA</th>
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</thead>
<tbody>
<tr>
<td>E-mail:*</td>
<td><a href="mailto:t-owens@u.northwestern.edu">t-owens@u.northwestern.edu</a></td>
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<tr>
<td>Position:*</td>
<td>Research Study Assistant</td>
</tr>
<tr>
<td>Abstract Category:*</td>
<td>Public Health &amp; Social Sciences Research</td>
</tr>
<tr>
<td>Principal Investigator:*</td>
<td>Brian Mustanski, Ph.D.</td>
</tr>
<tr>
<td>Department:*</td>
<td>Department of Medical Social Sciences</td>
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<tr>
<td>Does this research involve women's health?*</td>
<td>No</td>
</tr>
<tr>
<td>Abstract Title:*</td>
<td>Disordered cannabis use and childhood sexual abuse among a cohort of men who have sex with men, ages 16-29</td>
</tr>
<tr>
<td>Keywords:</td>
<td>cannabis use disorders, childhood sexual abuse, YMSM, sexual minority adolescents, CUDIT-R</td>
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Sexual minority male adolescents self-report higher rates of childhood sexual abuse (CSA) as compared to their heterosexual counterparts. Childhood Sexual Abuse is additionally linked to higher rates of substance use in general populations. The authors examined the relationship between reported experiences of CSA and problematic cannabis use among a racially diverse cohort of 600 young males who have sex with males (YMSM). The present analysis assesses history of CSA using six binary endorsement questions regarding past experiences of CSA and problematic cannabis use with the CUDIT-R. Hierarchical regression analyses were performed to test the relationship between CUDIT-R scores and experience of CSA. CSA was significantly correlated to higher CUDIT-R scores after controlling for age, race/ethnicity, and sexual orientation. YMSM meeting clinical cutoff for cannabis use disorder (CUDIT-R score >13) were significantly more likely to report CSA (p=.006). Participants with no history of CSA were less likely to show a CUDIT-R score above the clinical cutoff than were participants who reported CSA. Research indicates that sexual and gender minority young adults are at higher risk of drug abuse and dependence than their heterosexual and cisgender peers, and understanding related interpersonal factors helps inform interventions targeting this population.
Abstract Title: Developing Online Interventions for Teen Depression Using Focus Group Feedback

Summary: There is now emerging research on the utility of Internet interventions in reducing symptoms of depression in adolescents. Patterns of technology use by adolescents may inform the design and development of such online and mobile interventions, especially for teens with mental health issues.

Objective: We conducted focus groups with adolescents to better understand their day to day interactions with smartphones, computers and other devices. Our aim is to gather data on how teens use technology and what they would prefer to see in mental health treatments utilizing technology. We seek to explore how an online intervention for youth could be developed to support teens who have elevated symptoms of depression.

Sample: Participants were selected conveniently through their participation in community youth programs in Chicago. The sample included 18 adolescents between the ages of 16 and 19, 10 males and 8 females. Participants were mostly African American (77%), with white (%17) and mixed race (.05%) participants as well.

Methods: During the summer of 2015, three focus groups were conducted in the Chicago community where small groups of adolescents were consented and asked to fill out a questionnaire before providing qualitative feedback on a beta version of a web app (“ThinkFeelDo”). ThinkFeelDo is designed to harness peer network interactions to teach CBT based mood management skills to adolescents. Survey questions included demographics, mobile phone and computer use (what activities technology is used for, hours of use), and depression symptoms (CES-D).

Results:
Depression symptoms were quite high in this convenient sample of adolescents. Fifty percent of those sampled had a CES-D score of 16 or more (Mean= 16.05, Range 5-31, SD= 7.87).
Responses to types of mobile and computer use were separated into three categories: social use (calls, texts, and social networking sites), entertainment use (games, videos, and music) and practical use (gathering information, scheduling and tracking tasks, purchasing products). Responses indicated that teens use their mobile devices more for social (average of 24 hours per day that social media was used or accessible) and entertainment (average of 12 hours per day) purposes and their computers more for practical purposes (average of 2 hours per day). Both boys and girls spent a similar number of hours in each of the categories. Overall, teens spent the most time on their mobile phones for social networking functions (average of 8.7 hours per day). Results did not indicate a significant correlation between depression symptoms (CESD score) and time spent on mobile and/or computer devices.
When asked to provide social media websites they used, teens most frequently reported using Instagram (17/18), Twitter (14/18), Facebook (11/18), and Snapchat (8/18). A few teens also reported using Pinterest (2/18) and Kik (1/18).

Qualitative feedback from participants interviewed revealed that when seeking emotional support, teens would be most likely to reach out to a friend, or a therapist if applicable. If using an app related to mental health, they would prefer regular, brief, check-ins with the app. If scheduling wellness activities in a mental health-related application, customizable options are preferred (e.g. setting your own notifications, picking your own icon for the site). Finally, teens were split in deciding whether an online intervention would be successful in teaching healthy behaviors, but most agreed a group orientation to the program would lead to a successful start.

Conclusions:
Levels of depression were relatively high in this sample of adolescents. Even in our convenient sample, about half of participants showed moderate levels of depressive symptoms based on their CES-D scores. When it comes to technology, adolescents reported fairly consistent use for social purposes such as calls, texting, and social media. Social uses were equally as prevalent in both genders, suggesting both boys and girls may be interested in interventions that harness a social network. In order to develop effective technology-based interventions for teens, it may be advantageous to design apps that allow teens to interact with each other while learning mood management skills.
Objective: Longitudinal studies of delinquent youth have primarily focused on predicting criminal recidivism using a variety of individual and family risk and protective factors. However, no study has examined whether these same factors are related to broader patterns of psychosocial outcomes as delinquent youth age into adulthood. The current study examines the association between adolescent risk and protective factors in delinquent youth and 8 domains of psychosocial functioning in adulthood.

Sample: Data are from the Northwestern Juvenile Project, a longitudinal study of youth ages 10-18 years and detained at Cook County Juvenile Temporary Detention Center between 1995-1998. The stratified random sample included 1172 males and 657 females (1005 African Americans, 524 Hispanics, 296 non-Hispanic whites, and 4 of other race/ethnicity). Twelve years later, at median age 28 years, 83.1% of the original sample (n=1519) remained.

Method: Project staff conducted face-to-face structured interviews at the Cook County Juvenile Temporary Detention Center (Chicago, Illinois). At follow-up, participants were interviewed wherever they were living, in the community or in correctional facilities. Risk and protective factors assessed at baseline included caregiver deviance, abuse history, foster care, psychiatric disorders, substance use and disorders, gang activity, delinquent activity, cognitive functioning, and incarceration history. Dependent variables were the number and pattern of outcomes in 8 domains: educational attainment, residential independence, gainful activity, desistance from criminal activity, mental health, abstaining from substance abuse, interpersonal functioning, and parenting responsibility. Risk and protective factors and outcomes were assessed with widely-used measures supplemented by correctional records. We controlled for race/ethnicity in regression analyses predicting adult outcomes.

Results: Among females, affective disorders, history of incarceration, and age at first substance use, incarceration, and criminal behavior predicted patterns of positive functioning in young adulthood; these same factors predicted the number of positive outcomes, as did caregiver deviance, having a caregiver to rely on, substance use disorder, marijuana use disorder, and cognitive functioning. Among males, sexual abuse, age at first foster care, and time spent in prison predicted patterns of positive functioning; ADHD, ODD, cognitive functioning, age at first foster care, and incarceration history predicted number of positive outcomes.

Conclusions: There were distinct gender differences in factors associated with adult functioning. Incarceration history and cognitive functioning significantly predicted adult functioning for both males and females. However, whereas caregiver deviance and affective and substance use disorders were predictive for females, disruptive behavior disorders were predictive for males. Early and sustained intervention for deviance and cognitive difficulties are key to improve outcomes for delinquent youth, especially males. Females are likely to benefit from interventions designed to help them to overcome family problems.
Abstract Title: Continuity and Comorbidity of Psychiatric Disorders Among Juvenile Detainees 15 Years After Detention

Summary: Psychiatric disorders are prevalent and highly comorbid among youth in detention; yet little is known about the course of these disorders as youth age. This study examines the continuity and comorbidity of psychiatric disorders as delinquent youth age into young adulthood. Data are drawn from the Northwestern Juvenile Project, the first comprehensive longitudinal study of the health needs and outcomes of 1829 detained youth. We examine gender and racial/ethnic differences in the progression of mood, anxiety, substance use, and disruptive behavior disorders over time. We highlight implications for improving outcomes for delinquent youth.

Objective: This current study describes: (1) the continuity of psychiatric disorders over time; that is, whether youth have the same or different psychiatric disorders as they age; and (2) the comorbidity of psychiatric disorders as delinquent youth age into young adulthood.

Sample: Participants were enrolled in the Northwestern Juvenile Project (NJP), a longitudinal study of 1829 delinquent youth. Participants were randomly sampled from new admissions to the Cook County Juvenile Temporary Detention Center between 1995 and 1998. To ensure adequate representation of key subgroups, the sample was stratified by sex, race/ethnicity (African American, non-Hispanic white, Hispanic, other), age (10-13 years or ≥14 years), and legal status (processed in juvenile or adult court).

Methods: Independent interviewers conducted in-person interviews and assessed mood, anxiety, substance use, and disruptive behavior disorders using the Diagnostic Interview Schedule for Children version 2.3 at detention. Participants were reinterviewed up to 11 times over 15 years wherever they were living. At follow-up, interviewers administered the Diagnostic Interview Schedule for Children version IV, the Diagnostic Interview Schedule IV, and the World Mental Health Composite International Diagnostic Interview. We used logistic regression models to examine the continuity and comorbidity of disorders over time.

Results: Among males, mood and behavioral disorders at detention were associated with mood, anxiety and substance use 15 years later. For example, males with ADHD at detention were 7 times more likely to having any anxiety disorder or PTSD 15 years after detention compared with males who did not have ADHD at detention. Females were likely to have the same disorders at follow-up as in detention; in addition, mood and behavioral disorders predicted an array of other disorders at follow-up. For example, major depression at detention predicted any mood disorder, major depression, any anxiety disorder, ASPD, any substance use disorder, and drug use disorder at follow-up.

Although the prevalence of comorbidity decreased over time, over 1 in 5 males and nearly 15% of females had comorbid disorders 15 years after detention. Females were more likely to have a comorbid disorder at baseline compared with males (OR 1.64; 95% CI, 1.11-2.42), but gender differences diminished as youth aged. Throughout the follow-up period, non-Hispanic whites were more likely to have comorbid disorder than minorities. Compared with African Americans, Hispanics were more likely to have comorbid disorders as youth aged.

Discussion: Although the prevalence of disorders and comorbidity generally decreased over time, the mental health needs of detained youth continue to be more prevalent than in the general population. There is also substantial continuity of disorders. These results highlight the need for early and sustained mental health interventions for juvenile detainees, specifically targeting disruptive behavior disorders and depression. Wraparound-services—a process of organizing and coordinating services for children and families with complex needs—or other flexible and comprehensive systems of care—are critical to reduce the mental health needs of juvenile detainees as they enter adulthood.
AIM: The aim of this poster is to evaluate the concordance of self-reported drug use with non-self-report measures (urine drug screenings) in a sample of 16-29 year old Young Men who have Sex with Men (YMSM, N=524). An additional aim is to compare concordance rates by age, with the hypothesis that younger participants will be less likely to self-report drug use. Past research indicates that multiple measurement methods for drug use increase validity, and that underreporting of self-report drug use is common. Limited research conducted with sexual minority youth indicate both over and underreporting on different drug use measures.

OBJECTIVE: To compare self-report illicit drug use responses to urine drug screens in a YMSM cohort.

SAMPLE: This study analyses a cohort study of young men who have sex with men between the ages of 16 to 29 in Chicago (N=524). Participants were recruited through various methodologies and reported either a sexual minority orientation or sex with men within the past year. Over half of the sample is age 18-24, with 13% ages 16 and 17 and 12% over age 25.

METHODS: Participants are interviewed twice a year over the course of five years. During each interview session, they complete a computerized self-interview, which asks about illicit drug use. If participants endorse use in the past six months, they are asked the following: “Please tell us how many days it has been since you have last used each drug listed below.” A urine-based drug screen is then completed via a Single Drug Test Card for MDMA and a five-panel One Step Drug Screen test card for marijuana, cocaine, opiates, amphetamines, methamphetamine, and benzodiazepines.

RESULTS: Concordance summary sentence. In this analysis, participants underreport Opiates, Methamphetamine, and Benzodiazepines. Interestingly, participants overreported use of Marijuana, MDMA, and Cocaine, although some of the discrepancy may relate to the short detection period of the urine screen (ranges from 1 to 3 days for most drugs, 5 to 90 days for Marijuana). Sensitivity and Specificity were computed. No significant difference was found in correspondence by age. Similarly to previous studies, we found overreports of Marijuana use.

DISCUSSION: We note the short detection period of the majority of these tests as a contributing factor. Further analysis will consider the effect of Age, Race, and other demographic factors on concordance. Future research may examine concordance over time to understand if underreporting is based on individual factors or recency factors.
Research Day Abstract

Presenting Author: Christian N. Adames, AB
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Position: Data Assistant Associate
Abstract Category: Public Health and Social Sciences Research
Principal Investigator: Gregory Phillips, PhD, MS
Department: Medical Social Sciences

Does this research involve women’s health? No

Abstract Title: Evaluating HIV Prevention Projects in Chicago: Implementation Successes and Challenges Across 20 Community-based Initiatives

Summary: The Center for the Evaluation of HIV Prevention Programs in Chicago (“Evaluation Center”) is funded by the Chicago Department of Public Health (CDPH) to oversee the evaluation efforts of 20 HIV prevention demonstration projects at 15 community-based sites (“grantee sites”), also funded by CDPH, throughout the city. These sites include various community-based organizations, hospitals, clinics, and universities. Ten of these projects are CDC-endorse Effective Behavioral Interventions (EBIs), while the other 10 are locally-developed interventions (“homegrown”). These 20 projects are funded under five CDPH funding categories, which are separated based on prevention with HIV-positive individuals (n=8) and prevention with HIV-negative individuals (n=12). While most sites are focused on prevention with men (MSM), each site has its own defined target population by race/ethnicity, age, risk group, and geographic region. The Evaluation Center’s evaluation plan includes assisting with site-specific evaluation activities, as well as performing overarching evaluation. These overarching evaluation tasks include network analysis to understand the HIV prevention landscape in Chicago, implementation evaluation, simulations & modeling, cost effectiveness analysis of the funded interventions, and outcome evaluation. As a component of our overarching evaluation plan, we conducted an implementation evaluation, whereby we conducted interviews with key project staff at each grantee site, asking questions pertaining to the successes and challenges they faced while implementing their project. We paid particular attention to any adaptations a site made to their intervention; activities during recruitment, delivery, and evaluation; participant feedback; intervention fit; and the role CDPH played in the process. We were interested in determining whether similar response themes were apparent in order to evaluate the process by which HIV prevention programs in Chicago are implemented.

Objective: To determine the key factors related to how HIV prevention projects are implemented and delivered across the Chicagoland community, and to observe similarities and differences in the implementation efforts among grantee sites. We will then code this information in order to determine thematic similarities between responses in order to provide guidance to both grantee sites and CDPH regarding future implementation activities.

Sample: The sample consists of 34 individuals – 17 managers/project directors and 17 field staff – representing all grantee sites.

Methods: The interviews were conducted from September 14th, 2015 to October 29th, 2015, with all but three occurring in-person at a grantee site (two via phone, one in-person at Northwestern). Interviewers used an interview guide that focused on intervention selection and implementation, as well as organizational, programmatic, and staff assessments. After each interview, the interviewer produced a brief summary of the interaction. Then, coding was performed on these summaries, namely the implementation section, which included information on intervention adaptations; recruitment, delivery, evaluation; participant feedback; intervention fit; and the role that CDPH played. We are currently analyzing the data using a content analysis approach. Given the focused nature of the data collection, we developed an initial set of codes based on the interview guide and conducted open coding which informed the initial codebook. Two members of the research team coded the interview summaries using the predetermined codes. After coding is completed, we will conduct mixed method analyses to explore variations in code application as a function of a) type of organization (e.g. CBO, university, hospital, etc.); b) type of intervention (e.g. EBI or homegrown); and c) interviewee characteristics, among other variables.

Preliminary Results: As of the writing of this abstract, we are still in the early stages of data analysis and do not have final results to report. During December 2015, we performed preliminary analysis on manager/director-level interviewee responses as to any issues that pertain to their relationship with CDPH. The grantee sites mostly reported issues regarding project requirements and scopes (n=7; 41.18%), evaluation requirements and data entry (n=5; 29.41%), and mixed feelings regarding project officer support (n=9; 52.94%), with more information in Table 1. As previously mentioned, we are in the process of open coding interviewee responses, which will then be turned into axial codes in order to understand themes within interviewee responses (see Table 2 for an example of preliminary codes).

Conclusions: Once the process of coding is completed, we will highlight the main successes, challenges, and resources utilized in implementation of HIV prevention programs in Chicago. Additionally, the process of coding will give us a clearer picture of the role that CDPH played in project implementation across the city. This information will be utilized to give feedback to grantee sites regarding future project implementation, particularly if differences in responses are seen once we explore variations in responses as a function of type of organization and type of intervention. The Evaluation Center will use these data in assisting with future site-specific and overarching evaluation activities, allowing us to more keenly focus on those challenges experienced. Lastly, we will use this information to give recommendations to CDPH in order to allow them to modify future project and funding protocols to ensure the most efficient and successful implementation of HIV prevention programs.

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<thead>
<tr>
<th>Theme/Axial Codes</th>
<th>Description</th>
<th># of Participants; n (%)</th>
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<tbody>
<tr>
<td>Project Requirements and Scopes</td>
<td>Fulfilling project scopes is proving to be a challenge for grantee sites; CDPH places overwhelming emphasis on scopes – “CDPH’s bottom line is scopes and regions”</td>
<td>7 (41.18%)</td>
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<tr>
<td>Evaluation Requirements</td>
<td>Sites are reporting difficulties with data reporting, which project officers have been supportive in addressing.</td>
<td>5 (29.41%)</td>
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<tr>
<td>Project Officer Support</td>
<td>Sites have reported that project officer is not knowledgeable about project, described project officer as “auditors” only focused on project scopes.</td>
<td>6 (35.29%)</td>
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<tr>
<td></td>
<td>Sites have reported that project officer &amp; prevention team have been helpful and accessible.</td>
<td>3 (17.65%)</td>
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Table 1. Preliminary Analysis of Summarized Interview Data related to CDPH from Manager/Directors

<table>
<thead>
<tr>
<th>Theme/Axial Codes</th>
<th>Description</th>
<th># of Participants; n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention Pressures/Stressors</td>
<td>Funding deficits/cost</td>
<td>Lack of funding led to staffing and intervention delivery difficulties.</td>
</tr>
<tr>
<td></td>
<td>Time Constraints</td>
<td>Start-up lag was evident with sites, particularly homegrown projects.</td>
</tr>
<tr>
<td></td>
<td>Relationship with CDPH</td>
<td>Sites reported lack of personalized assistance from CDPH project officers.</td>
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Table 2. Sample Themes/Axial Code Data Table

*Abstracts longer than one page will not be accepted.
Chicago has one of the highest cancer rates among African Americans and Hispanics/Latinos. In 2015 the NCI funded the Chicago Cancer Health Equity Collaborative (ChicagoCHEC) established to foster meaningful cancer research, education, training and outreach. The Community Engagement Core is charged with establishing programs and processes that promote robust relationships between this partnership and Chicago communities in order to promote cancer health equity.

Methods: Participatory action research and empowerment approaches have been used to establish a solid foundation between the academic institutions and the diverse professional and community organizations including faith-based, cancer advocacy, public health, government, public schools, media and cancer survivors in the planning, development and implementation of research, training and outreach activities. Coalition effectiveness coalition evaluation tools were developed to assess the strength of the partnership.

Results: This partnership is driven by a CSC composed of 22 community and professional partners who have been involved in key activities including the partnership’s public announcement/community press conference, review of pilot and partnership grants, selection of summer research fellows, led the development of community need assessments and planned the first annual cancer research symposium.

Conclusion: Building community, professional and academic partnerships has proven to be the most effective way in sharing institutional and community resources and integrating culture and community’s expertise to address cancer health equity and to train a future team of cancer researchers. Key in this process was the establishment of an infrastructure that called for a strong administrative and management component, leadership, on-going communication, and meaningful participation.
Recruitment of Students into a Cross-Institutional Cancer research fellowship program

ChicagoCHEC is a Triad U54 Partnership between the Robert H. Lurie Comprehensive Cancer Center of Northwestern University, University of Illinois at Chicago, Northeastern Illinois University. Specifically, the Research Education Core of this grant aims to build a pipeline of students, trainees and faculty focused on cancer research that aims to reduce and eliminate cancer disparities. This core integrates its work with three other cores to strengthen and support service learning programs targeting underrepresented minority students to encourage entrance into the science pipeline. It is commonly known the healthcare workforce does not mirror the nation’s diversity.

The Research Education Core initiated the ChicagoCHEC Research Fellows program which is a comprehensive learning experience for undergraduate and postbaccalaureate students at Northeastern Illinois University, University of Illinois at Chicago, Northwestern University, and City Colleges of Chicago who are planning to apply to graduate or medical school. This program is focused on the development of academic, technical, and professional skills in preparation for careers in social, behavioral, and biomedical research and in healthcare. ChicagoCHEC Research Fellows will spend the summer in seminars and research rotations learning from leading scientists. Following the summer intensive program, ChicagoCHEC Research Fellows will have the option to be matched with a research mentor and research project during the academic year.

Research Education Core staff from each of the three institutions advertised the program extensively at each university by drafting flyers, communicating with campus media, engaging in research and career day presentations and direct communication with college and career counselors in various districts. The program currently has 70 completed applications and each application will be thoroughly reviewed by members of the core who have been trained in holistic application review.
Research Day Abstract

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Abstract Category:* Public Health and Social Science Research
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Does this research involve women’s health?* No

Abstract Title:* Relationship Quality of MSM Couples in Monogamous and Non-monogamous Relationships

The focus of the study was on the relationship quality of MSM couples in monogamous (“closed or sexually exclusive”) relationships (n=94), in comparison to MSM couples in non-monogamous (“open or not sexually exclusive”) relationships (n=20). In comparing the two relationships by race, Black participants are significantly more likely to report being in a monogamous relationship than non-Black participants; whereas, White participants are significantly more likely to report being in a non-monogamous relationship than non-White participants. Couples in monogamous agreements had higher scores on most relationship characteristics (trust, duration, and commitment), although there was no significant difference between couples with monogamous and non-monogamous relationships. Almost all men in the study indicated that they were “satisfied” in their relationship. Controlling for relationship length, age, and race, couples in non-monogamous relationships reported higher negative conflict. Negative conflicts can be a product of a partner breaking relationship agreement.