The association of combat exposure and injuries with behavioral health problems among enlisted female Army members returning from Iraq or Afghanistan

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Background: The association between combat exposure and injuries with behavioral health problems among female Army members returning from Iraq or Afghanistan has been well studied, yet few studies examine separately the exposures and problems reported by females. This study explores the postdeployment self-report of combat exposure and injury and the postdeployment behavioral health screening results of Army women.

Materials and methods: Using longitudinal data from The Substance Use and Psychological Injury Combat Study, we selected a sample of enlisted female Army members returning from Afghanistan or Iraq in FY2008–2011, who completed a health questionnaire within 60 days of their deployment end date (N = 42397; 6.6% of cohort). Combat score was constructed as an ordinal variable (0–3) based on four items: being wounded, injured, assaulted, or hurt; encountering dead bodies/seeing people killed; firing a weapon; and being in danger of being killed. Multivariate logistic regression models examined how combat score, demographic, and deployment characteristics predicted posttraumatic stress disorder (PTSD), depression, and at-risk drinking. Models were stratified by component: Active Duty (AD) and National Guard/Reserves (NG/Rs).

Results: A substantial number of females reported being injured, wounded, assaulted, or hurt (17% of AD and 29% of NG/Rs). Over 14 percent reported encountering dead bodies/seeing people killed, 1 percent fired a weapon, and 19 percent were in danger of being killed. Approximately 12 percent had a combat score of 2+. In all models, female members with combat exposure had increased odds of behavioral problems. There was a dose-response relationship, such that as combat score increased, the odds of each behavioral problem increased. The risk was most striking for PTSD. Among AD females, those with a combat score of 1 had 4.4 times the odds of having PTSD compared to those with a combat score of 0 (95% confidence interval: 3.82–4.98). The odds increased to 20.6 for those with a combat score of 3. Results were similar for NG/R women.

Conclusions: Combat injury while deployed may be greater than expected among enlisted female Army members, particularly among NG/Rs. Even those with a score of 1 on a four-item combat scale had a significant increase in odds of PTSD. A high proportion of females who deploy to combat zones may benefit from early intervention to promote postdeployment health and reduce long-term behavioral health problems.

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While some participants benefitted from psychotropuc medication, others perceived taking medication as being weak.

**Conclusions:** Both cultural and practical considerations were discussed as barriers for access to mental health care utilization among Asian-American women. Shame and stigma were found to be dominant cultural barriers, even though all participants in the study are children of immigrants, who were either born in the United States or grew up in the United States since childhood. A lack of mental health professionals who can truly understand their culturally specific needs was identified as a major practical barrier. In order to address the alarming problem of substance use and mental health issues among this population, efforts should be targeted towards reducing the shame and stigma in health-care utilization and creating culturally specific interventions for Asian-American women.

**Reference**

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**A3**

"Sounds like CSI": How consumers of adolescent substance use disorder treatment perceive the term "evidence-based practice"

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**Background:** Recent attempts to increase the utilization of evidence-based practice (EBP) by adolescents with substance use disorders (ASUDs) have included direct-to-consumer marketing and educational materials [1]. For instance, both the National Institute on Drug Abuse and the American Psychological Association’s Division of Child and Adolescent Psychology have developed educational websites for parents of ASUDs that encourage them to seek out those treatments designated as EBP. These educational materials are based on the assumption that ASUDs and their parents will understand the concept of EBP and view the concept favorably. This study aimed to test this assumption and explore how ASUDs and their parents perceive, understand, and react to the concept of EBP.

**Materials and methods:** Qualitative focus groups and individual interviews with 29 parents and 24 ASUDs were conducted across a range of treatment settings. Discussions explored four themes: a) familiarity with the concept of EBP; b) assumptions about what EBP means; c) impressions of EBP after reading a common definition; and d) recommended terms to describe EBP in educational materials. Participants’ responses were transcribed verbatim and qualitatively analyzed by two independent coders.

**Results:** Only two of the 53 participants had ever heard the term EBP and only one was able to define it correctly. Common assumptions about the term “evidence-based” were that it referred to treatment based on the adolescent’s medical history, legal evidence of the adolescent’s substance use, or the clinician’s prior experience. After reading a common definition of EBP used by national organizations, many participants expressed concerns that the approach sounded inflexible. Multiple participants said that they would prefer a therapy approach described as “individual” or “varied” over an approach described as EBP. Terms the participants recommended to educate potential treatment consumers about EBP included “proven,” “successful,” “better,” and “therapy that works.”

**Discussion:** Results of this study indicated that consumers of ASUD treatment had low familiarity with the concept of EBP, incorrect assumptions about what it meant, and negative impressions of the concept even after reading a common definition. Key clinical implications of this study are that attempts to educate treatment consumers about EBP should use the phrase “evidence-based” with caution and emphasize the flexibility of the approach.

**Reference**

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**A4**

A new behavioral health services cascade framework for measuring unmet addiction health services needs and adolescent offenders: conceptual and measurement challenges


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Juvenile Justice-Translational Research on Interventions for Adolescents in the Legal System (JJ-TRIALS) is a cooperative implementation science initiative launched by NIDA in July 2013. The project seeks to reduce unmet substance use disorder needs for delinquent youth under community supervision by assisting juvenile justice (JJ) agencies in their efforts to implement best practices and improve service utilization along a behavioral health services cascade (screening, assessment, referral, initiation into treatment, and retention in treatment). Although many youth under JJ supervision have substance use and associated mental health disorders, there are numerous gaps in the identification of these problems and referral to appropriate services. Linkages between the JJ and behavioral health systems can be problematic because of the lack of shared mission, limited training of JJ staff on behavioral health issues, and limited sharing of information across service systems. Ideally, JJ staff will screen and assess youth for substance use and related disorders, and refer them to appropriate evidence-based treatment when needed; the youth should initiate treatment and be retained for a clinically effective period. The ultimate goal is to maximize the proportion of substance-involved youth identified and retained in treatment. Based on the HIV services cascade, we developed a conceptual framework, the Behavioral Health Services Cascade. This framework provides a useful heuristic for visualizing and measuring movement through the continuum of services. It illustrates the level of unmet needs at different points and provides a measurement framework for tracking improvements in reducing unmet needs. The model helps agency staff and leadership and policymakers understand the sequential and related stages of the services continuum and identify stages linkage points that may need improvements. In the main JJ-TRIALS protocol, we are using the cascade framework to: 1) monitor and evaluate the primary outcome of reducing unmet service needs; 2) use local data to populate the cascade and provide feedback to agencies for need assessments and site feedback reports; and 3) help site staff select and monitor strategic goals to reduce gaps in one or more component of the cascade. We will also be developing measures related to the quality of the services delivered at each point in the cascade. Some challenges being addressed include: 1) defining and collecting consistent measures across multiple states and counties; 2) inconsistency in data availability across sites, especially on treatment engagement and continuing care; and 3) accounting for multiple and sometimes nonlinear processes at different points in the cascade.

**Acknowledgements:** The authors would like to acknowledge the contributions of JJ-TRIALS Juvenile Justice Partners for their efforts in developing all aspects of the study protocol. Funding supported by the National Institute on Drug Abuse.

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**A5**

Early findings from a project aimed at implementing mobile health technology for addiction in primary care

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Early findings from a project aimed at implementing mobile health technology for addiction in primary care
Background: More than two-thirds of individuals with a substance use problem have seen a primary care provider in the previous 6 months. However, these substance use disorders often go unrecognized or without treatment due to a lack of optimized assessment and intervention models with which primary care providers are comfortable. As national guidelines call for improved integration of addiction treatment into primary care settings, mobile technology may provide an invaluable tool to primary care providers in assisting their patients in recovery and in improving the efficiency and effectiveness of office visits for these patients. This paper will describe preliminary qualitative data and the early experience with integrating Seva, a suite of mobile technological applications to support recovery, at two Federally Qualified Health Centers (FQHCs).

Methods: Semistructured interviews were conducted with FQHC patients with substance use disorders at two study sites (Madison, WI: n = 12; Missoula, MT: n = 5) to identify potential strengths and concerns of Seva in addressing substance use problems in primary care. Focus groups were conducted with clinic staff (Madison, WI: n = 20; Missoula, MT: n = 8) to identify strengths and concerns from their perspectives. Notes taken during development meetings between clinic and research teams also provided qualitative data.

Results: From the clinic perspective, qualitative data indicated the importance of: 1) administrative buy-in; 2) identification of an organizational champion for the intervention; 3) education of clinic staff regarding the research and its importance; 4) achieving a detailed understanding of clinic workflows; 5) the need for transparency regarding the types of information patients enter into Seva that will potentially reach their health-care providers and their medical record; 6) existing gaps in the system that mobile technology might fill for patients in recovery (e.g., providing support for addicted patients living in rural areas, or patients with chaotic lives); and 7) actively addressing concerns of the health-care team regarding the impact of the technology upon workflow. Patient participants expressed concerns regarding confidentiality (primarily from law enforcement and payers) and their desire for access to a support network that is not actively using. Patients viewed Seva features such as recovery meeting times/locations, skills training, and discussion boards (and the network they provide) as strengths.

Conclusions: Clinicians and patients share the core goals of patient recovery, but they have different needs and different concerns. Implementation will have to address both perspectives. Detailed knowledge of clinic workflows is a key component of implementing patient care innovations on the clinic side, as is minimizing the burden of data collection and monitoring to busy primary care providers. Early dialogue with clinic staff, patients, and administration has been invaluable in achieving understanding of how the technology might facilitate the management of patients in recovery.

Trial registration: ClinicalTrials.gov NCT01963234.

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A6

Thirty-day hospital re-admission for Medicaid enrollees with schizophrenia: the role of patient comorbidity and local health-care systems

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Background: Early re-admission after hospitalization is an increasing focus of health-care policy because it results in high costs and often reflects opportunities for improving treatment quality. The goal of this study is to examine the relationship between 30-day mental health/substance use disorder hospital re-admission for persons with schizophrenia, and patient characteristics, hospital utilization, and community treatment quality and capacity.

Materials and methods: Observational study of schizophrenia-diagnosed enrollees having ≥ 1 behavioral health hospitalization in 2005 from 18 state Medicaid programs (N = 28083). Regression models examined the relationship between 30-day behavioral health hospital re-admission, enrollee characteristics (demographic and comorbidity), and county-level indicators for: 1) quality of care (antipsychotic and behavioral health visit continuity, behavioral health visit within 7 days post-hospitalization); 2) behavioral health hospitalization (length of stay, admission rates); and 3) treatment capacity (e.g., population-based estimates of outpatient providers/clinics).

Results: Fifty-one percent of the study population had a co-occurring substance use disorder; nearly 47 percent had a co-occurring chronic general medical condition. Enrollee comorbidity was associated with higher predicted probability of 30-day behavioral health re-admission, particularly for enrollees with substance use disorders (predicted probability [95% CI] = 23.9% [21.5%–26.3%]) versus without (14.7% [13.9%–15.4%]). Chronic medical conditions were associated with increased re-admissions in a dose-response manner (e.g., ≥ 3: 25.1% [22.1%–28.2%] versus none: 17.7% [16.3%–19.1%]). Higher county rate of behavioral health visits within 7 days post-hospitalization was associated with lower re-admission for individual enrollees (e.g., for county rates of 7-day follow-up of 55% versus 85%, re-admission predicted probability = 16.1% [15.6%–16.4%] versus 13.3% [12.9%–13.6%]). In contrast, higher county rate of behavioral health hospitalization was associated with higher re-admission probability for individual enrollees (e.g., for county admission rates 10% versus 30%, re-admission predicted probability for an individual = 11.3% [11.0%–11.6%] versus 16.7% [16.4%–17.0%]).

Conclusions: Efforts to reduce 30-day psychiatric re-admissions should focus on comorbid substance use and general medical care coordination, as well as factors that contribute to hospitalization in general and improving transitions to community care. Comorbid substance use disorders were particularly prominent in 30-day behavioral health re-admission—patients with comorbid substance use disorders had a 63.7 percent higher predicted probability of 30-day re-admission compared to those without. These findings demonstrate the substantial role of comorbid substance use disorders in behavioral health 30-day re-admissions. They also highlight an opportunity for Medicaid policy to influence improved access to substance use disorder treatment, including its coordination with behavioral health and general medical care, in an effort to reduce 30-day re-admission for individuals with severe mental illness.

A7

The comparative costs of implementing in-person and computerized interventions to enhance treatment receipt among drug-involved probationers

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Background: MAPIT is a three-arm randomized controlled trial assessing in-person Motivational Interviewing (MI) condition versus computerized (MAPIT) condition versus control. Our goal is to estimate the costs and cost-effectiveness for the study. We present preliminary findings on the startup costs and the implementation costs of the two intervention conditions, MI and MAPIT. To our knowledge, there is no published study of the cost-effectiveness of MI as a pretreatment intervention in a criminal justice setting. Similarly, there is no evidence to date on the cost-effectiveness of relevant web-based interventions in a criminal justice setting. An important contribution of this study is that it will address these significant gaps in the literature.
Methods: The economic perspective—which determines whose costs are included—is that of the criminal justice system. The costs of the two interventions were assumed to be in addition to the control-arm costs. Implementation costs for both interventions were estimated by tracking the time interventionists spent on appointment reminders for both the MI and MAPIT arms was 113 minutes; the time oversleeping delivery of a MAPIT session was 21 minutes; and the time delivering an MI session was 53 minutes. The costs per protocol of MAPIT and MI were $76 and $137, respectively.

Conclusions: Preliminary results suggest that using a computerized approach (MAPIT) to deliver the intervention is cheaper than using in-person counselors (MI). However, MAPIT costs were higher than anticipated, in part because of the relatively large amount of time spent on appointment reminders and oversleeping delivery of that intervention. Before drawing any conclusions for clinical practice, it is important to combine costs and outcome data in cost-effectiveness analyses, which is a planned next step.

Trial registration: NCT01891656.
precisely. To some researchers "access" refers to entry into or use of a health-care system, while to others it characterizes factors influencing entry or use. [1] This paper studied accessibility as it refers to entry into or use of a health-care system by measuring geographic accessibility from the location of clients (opioid-dependent individuals) to preventive and treatment facilities for substance use disorders (SUDs), mental health, and HIV/AIDS.

Materials and methods: The study population is opioid-dependent clients (N = 530) screened for an ongoing study of opioid substitution therapy (OST) in Washington, DC. There were three major methodological steps. First, the study geocoded and mapped the spatial distribution of clients’ self-reported neighborhood of residence (algorithmically moved to a nearby location to protect privacy) and health-care facilities specific to their addiction and comorbidities. The facilities included centers for prevention, OST (buprenorphine and methadone), and recovery from SUDs, mental health, STI clinics and HIV/AIDS, harm reduction sites (needle exchanges), and community support (counseling centers, AA, and NA meetings). Second, the study used geostatistical methods to measure accessibility (distance and travel time) from the location of clients to the health-care facilities. Third, the study constructed Addiction Severity Index scores using client questionnaires to measure correlations between opioid users and treatment services.

Results: The majority of the opioid-dependent clients were located in the south-central and southern parts of the District, with significantly higher concentration in the southeast. On the other hand, the preventive and treatment centers for SUDs and mental health issues were concentrated in the south-central region with fewer substance abuse services, OST providers (Figure 1), mental health services, and AIDS drug assistance program-affiliated pharmacies in the southeast. Furthermore, there was only one site for needle exchange in this area. The results indicate that health care services needed by opioid-dependent clients with their comorbidities are not geographically accessible to those clients.

Conclusions: Often times, it is the individuals with the greatest need for addiction and related health-care services who are the ones with the least geographic accessibility to those services. These findings highlight the need for more careful consideration of geographic accessibility and neighborhood-level contextual barriers in evaluating and planning access to addiction and related health-care services.

Reference

Figure 1(abstract A10)
Background: Medication for treatment of alcohol and opioid use disorders decreases relapse rates and increases long-term recovery. Inclusion of medications in treatment plans, however, may be a complex process for addiction treatment centers. Sustaining use of medications requires additional well-organized and concerted efforts. Qualitative interviews explore implementation and sustainability strategies and barriers encountered by participating providers to promote adoption of medication for opioid-alcohol-dependent patients.

Methods: The study included nine intervention sites, four nonintervention sites, and a large commercial health plan. Intervention sites received training, implementation support, and participated in qualitative interviews, while comparison sites only participated in interviews. Qualitative interviews extracted data about strategies utilized to implement and sustain the use of medications in each site.

Results: Ten specific implementation and sustainability strategies were identified: 1) communicate the benefits and impact of medication to clients; 2) involve staff in the change process to promote buy-in and use of medication to support recovery; 3) involve senior leadership and board support; 4) develop systems to track medication outcomes; 5) integrate medication use into organizational culture and mission; 6) enhance interagency collaboration and payer relationships; 7) dedicate resources to support medication use; 8) develop policies and procedures to support medication use; 9) provide staff training; and 10) identify a sustain champion.

Conclusions: Like other organizational changes, efforts to implement and sustain changes for the use of medication to support recovery required complex interventions and, in some programs, change in organizational philosophy. Participating programs employed multiple strategies requiring coordination across multiple internal and external stakeholders. They needed staff training, access to prescribers, financing to pay for prescribers, and in some programs, required linkages with pharmaceutical companies. To be successful, treatment providers must devise an effective implementation and sustainability plan.

Teaching and learning styles in quality improvement: Identification and impact on process outcomes

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Background: A quality improvement collaborative uses multiple approaches, including coaching, to teach the necessary skills to the change leader in an effort to teach them quality improvement skills and to enhance their knowledge acquisition in order to implement effective organizational changes. However, little is known about the individual teaching and learning styles of the coach or change leader and how a particular style or a match between teaching and learning style influence quality improvement outcomes. This study builds on the NIAA-Tx200 results. It seeks to answer two research questions: 1) What are the learning and teaching style typology in a quality improvement collaborative? 2) How do levels of convergence and divergence between staff learning style and coach teaching style influence the outcomes in a quality improvement collaborative?

Methods: The Grasha-Riechmann Student Learning Style survey and Teaching Style Inventory, developed and validated within the field of educational research, were modified to identify the individual teaching and learning styles of participants in a quality improvement collaborative. Change leaders, executive sponsor, and coaches were invited to complete the surveys. Using NIAA-Tx200 results, each outcome (wait time, continuation, and admissions) was classified as improved or not improved for each site. A pooled factor effect backwards stepwise elimination regression model explored the relationship between the different styles and the NIAA-Tx200 outcomes.

Results: Coaches (n = 17) in a QIC exhibit similar teaching styles identified in an educational setting. The learning style of change leaders (n = 77) in a quality improvement collaborative differs from how students learn in an education setting. Results indicate the presence of 10 different learning styles. The regression results indicate that higher competitive leader learning styles scores is associated with lower wait-time improvements (F = 2.26; p = 0.075) for providers in the learning session intervention. Higher expert and personal model teaching styles are associated with wait time improvements for the coaching and combination arm (F = 3.13; p = 0.01). Coaches with higher expert teaching style scores showed greater admission improvements in the coaching intervention arm (F = 2.42; p = 0.052).

Conclusions: The preliminary results suggest that certain individual teaching and learning styles influence organizational outcomes for certain interventions within a quality improvement collaborative. Further research is required to understand how teaching and learning styles interact to influence outcome improvement. The findings could suggest how to tailor a quality improvement collaborative to improve outcomes.

Teaching and learning styles in quality improvement: Identification and impact on process outcomes

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Background: Persons with alcohol use disorders benefit from continuing care, but few receive aftercare or ongoing monitoring after completing an episode of addiction treatment. A recent randomized controlled trial (RCT) demonstrated that a smartphone intervention provided effective continuing care for alcohol use disorders. The Addiction-Comprehensive Health Enhancement Support System (A-CHESS), which provides relapse prevention services including psychoeducation, communication, support, and electronic monitoring, significantly reduced risky drinking days and increased abstinence over 12 months following discharge from residential treatment. While smartphone interventions appear to be an effective mechanism for delivering continuing care, it may also be of interest to harness this technology to facilitate engagement in formal or “traditional” face-to-face treatment for addiction. We sought to evaluate the feasibility of using smartphone interventions to facilitate engagement in formal continuing care for alcohol use disorders.

Methods: We conducted secondary analyses of the A-CHESS open-label RCT, which recruited 349 patients with alcohol use disorders from residential treatment programs. Participants were randomized to A-CHESS plus treatment as usual or treatment as usual at discharge. In semi-structured interviews, an adapted version of the Treatment Services Review assessed outpatient and residential addiction treatment utilization at baseline, 4, 6, and 12 months. We described outpatient and residential addiction treatment utilization at each interview and used chi-square tests to evaluate differences in treatment engagement between A-CHESS recipients and controls.

Results: Participants were 80 percent white, 39 percent female, and had an average age of 38 years. Most participants (62.5%) had comorbid drug use. Participants who received the A-CHESS intervention had higher rates of outpatient treatment attendance at each follow-up interview compared to controls, with significant differences observed at 8-month (29.5% vs. 18.5%; X^2[1, N = 297] = 4.856; p = 0.030) and 12-month (25.7% vs. 14.5%; X^2[1, N = 281] = 5.6; p = 0.025) follow-ups. Differences in return to residential treatment were not statistically significant at any follow-up.

Conclusions: Smartphone interventions hold promise as both a mechanism for providing continuing care and promoting engagement in formal outpatient treatment for alcohol use disorders. Future research should evaluate ways to use smartphones to reach out to more segments of the population of persons with alcohol use disorders with untreated treatment needs.

Trial registration: ClinicalTrials.gov NCT01003119.
ClinicalTrials.gov NCT01963234.
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A14
Competency-based SBIRT training for health-care professionals: nursing and social work students
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Background: Most health-care professional training programs lack educational curricula on substance use disorders and strategies for early intervention or referral to treatment. The University of Missouri-Kansas City Screening, Brief Intervention and Referral to Treatment (UMKC-SBIRT) training project educates baccalaureate nursing, advanced practice nursing, and master’s of social work students through didactics threaded throughout coursework; role-plays with classmates and faculty; standardizes patient practice; and offers clinical experience to help students achieve competency.

Methods: In year one of the training grant, students completed surveys prior to, immediately after, and 30 days after SBIRT training. Surveys covered attitudes and knowledge. Skills were assessed by expert coding of an audiotaped interaction with a standardized patient actor using an SBIRT fidelity scale. Qualitative feedback regarding training experience, knowledge, and attitudes was collected at post-training focus groups.

Results: Students showed increased knowledge of SBIRT, improved perceptions toward working with patients who use substances, increased comfort in dealing with substance use issues, and progress in developing skills to provide SBIRT interventions.

Conclusions: Training on SBIRT can be readily implemented into nursing and social work education, improving future health professionals’ perceptions and providing a valuable skill through which they can help patients lead healthier lives.

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A15
“There’s an app for that” — A novel tool to help community correction populations learn strategies to decrease HIV risk behaviors after release
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During the first 5 years of the Disease Risk Reduction Project, an in-prison intervention curriculum was developed and tested that focused on decreasing risky sexual and drug use behaviors after release. The WaySafe intervention curriculum was delivered during the 2 months prior to release from incarceration. Compared to the control group, those in WaySafe showed greater gains on all composite measures (e.g., HIV knowledge confidence, avoidance of risky sex, avoidance of risky drug use, HIV testing awareness, and risk reduction skills). In addition, WaySafe was followed by a take-home workbook to be completed post-release. The goal of the take-home assignment was to reinforce skills and strategies learned through WaySafe during the offenders’ transition back into the community.

With lessons learned from the take-home assignment, as an important next step, the current project is focusing on adapting and delivering the intervention curriculum in community correction populations. Because computerized interventions have demonstrated promising results with substance abuse treatment [1], the new StaySafe intervention is formatted as an engaging computer-driven program. Computer applications in these treatment setting studies were found to be similarly or more efficacious than traditional counselor-led treatment sessions [1]. These findings suggest adoption of new technologies to deliver treatment. StaySafe will incorporate the same evidence-based cognitive principles as WaySafe in 12 self-paced modules that can be self-administered during the first 6 months under community supervision. This presentation will provide an overview of the computerized StaySafe approach and discuss the technological development of StaySafe elements. We will demonstrate the use of computerized, interactive, cognitive mapping strategies for presentation of ideas within the program as well as strategies for eliciting participant input and responses, including strengths and weaknesses of different response strategies (e.g., recording audio responses, using a keyboard or touchscreen to type responses, writing responses on the touchscreen, or choosing a response from a predetermined, pull-down list). Examples of several StaySafe computerized elements will be demonstrated.

Trial registration: Clinicaltrials.gov NCT01900210.

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Reference

A16
How did you know you got the right pill? Prescription opioid identification and measurement error in the abuse deterrent formulation era
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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A16

Background: Self-report of nonmedical prescription opioid use (NMPU) is a cornerstone of drug abuse surveillance, policymaking, and treatment service planning, but misclassification creates bias and may confuse or undermine NMPU estimates [1]. We detected old OxyContin (OC) abuse reports long after a reformulated version (OP) was released (August 2010). This study explored sources of possible NMPU misclassification and proposed solutions.

Materials and methods: A mixed-methods approach identified demographic, behavioral, and cognitive factors influencing endorsement of old formulations in: a) multivariable regression analyses of NMPU data from the ASI-MV surveillance program [2] examined predictors of endorsing old (vs. new) formulations during the post-reformulation period (n = 8032); b) prevalence estimates of OC availability from an online recreational drug user forum survey (fall 2013; n = 459); and c) semistructured interviews (n = 29) among residential and outpatient substance abuse treatment program clients reporting past 2-year use of OC/OP. A coding guide identified patterns and themes of misidentification in transcribed interviews.

Results: From December 2010 to January 2014, 57 percent of ASI-MV respondents reporting any OC/OP indicated OC use. In multivariable analyses, OC reporting was greater among Black users (p < 0.05) who were not primarily opioid abusers (p < 0.10), and increased over time among people using opioids as prescribed (p < 0.01). Early post-reformulation, OC use was endorsed by users aged 21–34 and people having recently initiated heroin, but trends reversed over time (p < 0.05). Online forum users reporting NMPU also reported obtaining OC during fall 2013 (18.5%). Qualitative analyses indicated that source of drug identification knowledge, trust and relationship with their drug source, context in which the drug was obtained, and motivations for NMPU contributed to misidentification of OC/OP and other products. “Counterfeits” were noted as a common element of the illicit market and may partially explain endorsement rates, especially early post-reformulation, when street prices for the old formulation (and counterfeits) were high. Cognitive factors such
as lacking images (front, back, dosage) and labels, confusion between generics and branded products, and literacy level suggest item-level modifications.

Conclusions: Possible misclassification of O/COP and other prescription opioids may be as high as 20 percent among NMUPS and is higher among younger users and limited NMUP experience. Findings have implications for surveillance, policy evaluations, and research using self-reported NMUP. Suggestions include presenting: 1) pill images within a compound in a single view, 2) key milligram increments, 3) street terminology, 4) pill images to scale, both sides, correct coloring, and markings.

References

A17 Health-care reform and its anticipated impact on the capacity of addiction health services to implement integrated care practices
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Purpose: To examine providers’ interpretation of their external environment and anticipation of how the ACA will affect AHS structure, organization, and capacity to deliver integrated care to an increasingly diverse population.
Methods: We relied on data collected in 2013 from a purposively selected group of 30 AHS providers in Los Angeles County, California. Semi-structured interviews were conducted with managers prior to enactment of ACA. Data were transcribed, coded, and analyzed using ATLAS.ti software. We relied on an intercoder approach to identify, synthesize, and summarize main themes from interviews.
Findings: Five main themes showed that ACA design criteria were disconnected from expectations to increase access and standards of care. Providers were concerned about how public and private insurance expected to achieve workforce professionalization, while also weakening the role of current staff with recovery practice experience. Service delivery was expected to broaden, yet the managed-care model used in public health insurance coverage would reduce service intensity and have a limited impact on disparities. Providers anticipated that they would not have the capacity to implement prevention and integration of mental health and primary care, as required by the ACA. Overall, providers had not enacted changes and stressed their need for a coherent action plan to improve standards of care and reduce disparities as mandated by the ACA.
Conclusions: These findings provide an initial view of provider interpretations, expectations, and reactions to a new health care environment. Implications for advancing public health services and systems research are discussed.
Acknowledgements: This study was funded by the National Institute on Drug Abuse (R21DA035634-01).

A18 Implementation of comprehensive services as a mediator and race and ethnicity as a moderator of access and retention in addiction health services
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Background: Increasing evidence has suggested that well-resourced programs are more likely than low-resourced programs to deliver comprehensive care to individuals with co-occurring conditions and achieve greater client access and retention. But there is limited understanding of the service delivery process that allows high-capacity programs to reduce their wait times for treatment entry and their rates of dropout.
Purpose: To examine the indirect association of program capacity factors with wait time and retention via mental health and HIV prevention services in publicly funded addiction health services (AHS).
Methods: We conducted multilevel cross-sectional analysis of 108 publicly funded program data merged with Los Angeles County Participant Reporting System data from 2010 to 2011 for 13,478 adults entering AHS. Multilevel negative binomial regression models were used to test direct and indirect relationships between program capacity and days to enter treatment (wait time) and days in treatment (retention).
Findings: Findings show that compared to Whites, Latinos and African Americans served in high-capacity programs reported shorter wait times and higher retention rates. As hypothesized, the role of HIV testing and mental health service coordination played an indirect role in the relationship between program capacity and shorter wait times.
Conclusions: Findings suggest that coordinated comprehensive services in AHS may contribute to reduction of outcome disparities in access to care. Delivery of comprehensive care may allow programs to develop effective networks to reduce wait time. Implications for health-care reform implementation and program planning are discussed.
Acknowledgements: This study was funded by the National Institute on Drug Abuse (R21DA035634-01).

A19 Organizational capacity to eliminate outcome disparities in addiction health services
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Background: Identifying provider characteristics associated with greater capacity to implement new practices geared toward reducing the disparities gap in health-care services has become a chief priority. Yet, there is limited information on conceptual frameworks and methodologies to understand key organizational factors associated with positive client outcomes.
Purpose: To evaluate program capacity factors associated with client outcomes in publicly funded substance abuse treatment in one of the most populous and diverse regions of the United States.
Methods: Using multilevel cross-sectional analyses of program data (n = 97) merged with client data from 2010 to 2011 for adults (n = 8599), we
examined the relationships between program capacity (leadership, readiness for change, and Medi-Cal payment acceptance) and client wait time and retention in treatment.

**Findings:** Acceptance of Medi-Cal was associated with shorter wait times, whereas organizational readiness for change was positively related to treatment duration. Staff attributes were negatively related to treatment duration. Finally, compared to low program capacity, high program capacity was negatively associated with wait time and positively related to treatment duration.

**Conclusions:** Program capacity, an organizational indicator of performance, plays a significant role in access to and duration of treatment. Implications for reducing disparities under the current health-care reform context are discussed.

**Acknowledgements:** This study was funded by the National Institute on Drug Abuse (R21DA035634-01).

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**A20**

Using technology to promote integration of care

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This work focuses on the role that technology can play in integrating addiction, mental health, and medical care services. Behavioral health is being integrated into primary care, spurred by the promise of improved patient outcomes and cost savings. Integration enables providers to care for the whole patient—who often has co-occurring behavioral and physical illnesses. Integration requires change of both organizations and individuals, and technology can play a key role in facilitating both. Technology makes more data available to clinicians and provides tools (such as prediction models, decision-support protocols, and dashboards) to understand clinical data. Among individuals, technology can help patients, family members, and clinicians stay informed and engaged in treatment. Technology can: 1) help identify optimal combinations of interventions for different combinations of conditions; 2) include a greater number of conditions in screening; 3) send reminders and alerts based on data from sensors; and 4) make chronic disease self-management more effective. This study presents a systematic review of the literature on the use of mobile health technology for the treatment of alcoholism; the relationship between utilization of mobile health technology and in-person care; early findings from a project aimed at implementing mobile health technology for addiction; and the role of telemedicine in aiding access to medication-assisted treatment for opioid dependence.

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**A21**

Methodological challenges and issues of recruiting for mental health and substance use disorders trials in primary care

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**Background:** Poor recruitment to controlled trials is a frequently reported problem. Challenges related to study design, communication, participants, interventions, outcomes, and clinician workload hinder recruitment, and the effectiveness of interventions used by trialists to increase recruitment rates is unknown.

**Objectives:** To explore the methodological challenges and issues in recruiting for mental health and substance use disorder trials in primary care, and to consider how these methodological challenges can be addressed.

**Method:** The presentation will recount the authors’ experience of recruiting for cluster randomized trials in primary care. Methodological challenges, such as clarity of instruction, patient characteristics, patient-doctor relationship, effects of intervention on patients and clinic, and personal benefits for clinicians will be described. The authors will consider how these might relate to and be used for peer learning and peer support in primary care research.

**Conclusion:** The presentation will conclude with an overview of how lessons learned from past studies may be used to improve recruitment for trials of mental health and substance use disorders in primary care.

**Acknowledgements:** Grants support from the Irish Research Council: Supporting empirical research and capacity building on brief interventions, and their delivery in primary care (PINTA-TOUR), and ELEVATE: Irish Research Council International Career Development Fellowship – co-funded by Marie Curie Actions (ELEVATEPD/2014/6). GS’S time is partly funded through the MRC grant “Development of a Methodology Hub for the island of Ireland” (G0901530).

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**A22**

Co-occurring mental illness in emergency department and hospital inpatient encounters related to substance abuse in Maryland

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**Background:** Mental illness and substance abuse are highly comorbid conditions. At the individual level, symptoms of one can influence symptoms of the other and therefore demand treatment approaches specific to the combination of substance abuse and mental illness. At the population level, co-occurring substance use and mental illness challenge public health prevention efforts and decrease treatment system effectiveness. However, due to the scarcity of integrated data, there has not been a thorough understanding of co-occurrence of substance use and mental illness. This study examines prevalence and trends of mental illness among substance abuse-related emergency department (ED) and hospital inpatient encounters.

**Methods:** This descriptive study used data from the 2008 to 2012 Maryland Health Services Cost Review Commission (HSCRC), which contain medical record abstracts and billing information from inpatient admissions, ED visits, outpatient surgeries, and clinic visits from all Maryland hospitals. Because HSCRC data are reported at the encounter-level, they may include multiple encounters by the same patient. Only ED and hospital inpatient encounters were analyzed for this study. Encounters related to substance abuse (including alcohol, opioids, sedative-hypnotics, and other psychotropic agents) were identified using an associated International Classification of Diseases, 9th revision (ICD-9) codes (alcohol/drug dependence and abuse 303-305.93; alcoholic chronic conditions 357.5, 425.5, 535.1, 790.1, 790.3; alcohol/drug poisoning 965.x, 967-970.9, 980.x, E850-E860.0, E939.4, E950.xx, E962.0, E980.x) listed as any of the discharge diagnoses. Co-occurring mental illness was identified from the same record using ICD-9 mental disorder codes.
The total number of substance abuse-related ED and inpatient encounters increased from 128,941 in 2008 to 156,142 in 2012. ED encounters as a proportion of total encounters grew from 43 percent to 55 percent (p = 0.001) and started exceeding inpatient encounters in 2011. ED encounters were more likely younger (mean_{ED} 39 vs. mean_{inpatient} 45 years-old) and male (male_{ED} 65% vs. male_{inpatient} 62%), while inpatient encounters were more likely nonwhite (nonwhite_{ED} 44% vs. nonwhite_{inpatient} 47%). Prevalence of co-occurring mental illness among substance abuse-related encounters increased from 53 percent to 57 percent for ED (p < 0.001) and from 78 percent to 79 percent (p < 0.025) for inpatient encounters. The increasing trends were driven by the increasing co-occurring mental illness in alcohol abuse ED encounters and in alcohol and opioid abuse inpatient encounters.

**Conclusions:** This analysis demonstrated the feasibility of using hospital encounter data to identify co-occurrence of substance use and mental illness, thereby improving prevention and intervention efforts. Both the proportions of substance abuse-related ED and inpatient encounters with co-occurring mental illness increased in recent years in Maryland. Findings suggested ED encounters are more likely younger, male, and white race. Future public health interventions should attend to the different population characteristics in substance abuse cases presenting to different settings when developing prevention strategies.

**A24**
Implementing alcohol screening and brief intervention in primary care: identifying barriers, proposing solutions

**Background:** Alcohol screening and brief intervention (SBI) can reduce heavy and harmful alcohol use [1-5]. The strongest evidence for SBI effectiveness is in primary care settings where meta-analyses studies show 10–30 percent reductions in alcohol consumption at 12 months [4,5].

Over the past decade, there have been significant efforts to support the adoption and implementation of SBI in generation health-care settings, including $305 million in SBI service and training grants from the Substance Abuse and Mental Health Services Administration (SAMHSA), and approximately $17 million per year from the National Institute on Alcohol Abuse and Alcoholism for more than 40 SBI studies. In addition, numerous individual state initiatives have focused on SBI dissemination. Nonetheless, a recent Centers for Disease Control and Prevention survey found alcohol SBI is rarely performed [6]. Only 1 in 6 adults reported they had talked with a health professional about their alcohol use in the past year [6]. The present study uses data from two SAMHSA-funded projects to identify barriers to widespread implementation of SBI and propose potential solutions.

**Methods:** Data are from two separate and distinct sources. Data from specialists performing SBI in an emergency department (ED) setting with over 4800 patients over 12 months are used to estimate potential revenues generated. Family medicine and internal medicine residents in four clinics were administered questionnaires before SBI training and one year later. These data are used in reporting residents’ confidence in performing SBI, level of importance placed on SBI, and residents’ individual drinking behavior. Results: Barriers to SBI implementation include low reimbursement rates and limited payers for SBI codes, restrictions on who can bill SBI codes, restrictions on same-day billing for mental health and primary care services, and minimum time requirements for billing that are much longer than time requirements for tobacco cessation. Additionally, existing Medicaid codes are not active in many states. Revenue estimates from the ED study found revenues generated would not sustain specialist-delivered SBI, with eight FTE specialists generating approximately $65,000 per year. While SBI training for residents results in increases in knowledge and confidence, most studies show little change in delivery of brief interventions [7-9]. Results from resident questionnaires indicate residents are more comfortable addressing patients’ drug use than alcohol use. One possible contributing factor is residents’ own drinking behavior. Residents’ past-year binge drinking rate (49.7%) is 20 percentage points higher than among other adults age 25–35.

**Conclusions:** Based on existing literature and results from these two projects, we recommend formal recognition and credentialing of health promotion specialists who would be able to bill SBI codes. Specialists should be cross-trained to provide other billable services to make the position more sustainable. Policy changes should be enacted to address the aforementioned billing issues. Absent policy changes, technology may present an attractive alternative. High rates of screening are possible when screening questions are integrated into electronic health records. Computer and web-based brief interventions have shown promising results in clinical trials and could be implemented as a first step in a stepped-care SBI model, resulting in significant cost savings.

**References**

Results: Generally speaking, the workflow process did not vary substantially across settings: existing clinical processes, health information technology, and patient characteristics drive subtle differences in workflow. Co-location of SBIRT providers and integration with electronic health records lead to efficient service delivery patterns. Interruptions of SBIRT service delivery by health-care providers, patient variation and length of stay, and the necessity of substance abuse reporting by patients pose challenges to a stable workflow. Incentive programs to help integrate the SBIRT into settings appear to be effective.

Conclusions: SBIRT workflow is being adapted to efficiently operate within medical settings, illustrating that the integration of behavioral health and medical care services is being performed successfully. The presented workflow diagrams and described variations have implications for health administrators and treatment providers on the ways to implement, manage, and model an SBIRT program to fit within any medical setting. Provisions within the Patient Protection and Affordable Care Act of 2010 call for the integration of behavioral health and medical care services, and the SBIRT workflow demonstrates potential of successful integration.

A26 Social representations of alcohol use among women who drank while pregnant

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A substantial number of women consume alcohol while pregnant, thereby putting their unborn fetus at risk for developing a fetal alcohol spectrum disorder (FASD) [1]. Despite the fact that some of the highest rates of FASDs in the world have been reported in the Western Cape of South Africa [2,3], little research looks at the experiences of pregnant women who drink and what influences their alcohol use. Gaining insight into the social and psychological processes that contribute to risky drinking during pregnancy will help in guiding interventions that aim to prevent prenatal alcohol use, thereby preventing the occurrence of FASDs [4,5].

Using a qualitative approach, 13 semistructured interviews were conducted in a Western Cape community with women who consumed alcohol during their pregnancy, and two focus group discussions with community members. Data collection aimed to elicit how these women and members of their community construct and make sense of alcohol use [6]. The interview and focus group data were analyzed using thematic decomposition analysis [7]. Alcohol use was consistently represented as a social activity that was heavily integrated by peers. Implicit in these constructions was the notion that heavy drinking is a norm within this particular community. Although prenatal alcohol use was stigmatized, it was also understood by the pregnant women and community members as a way of dealing and coping with difficult domestic problems, such as infidelity. For some pregnant women, these problems coupled with the social nature of drinking contributed to their alcohol use throughout their pregnancy. For other pregnant women, access to social support and the desire to have a healthy baby and be a responsible mother contributed to a decision to stop drinking.

Future interventions should take the social context of drinking into account, and rather than ignoring it—as most interventions do—use it to not only shift the social norms that surround heavy alcohol use, but also to support pregnant women to stop drinking. Prevention and intervention initiatives should also take a nonjudgemental and supportive approach that focuses on capitalizing on the moment of pregnancy and on teaching psychosocial skills that enable pregnant women to manage their problems effectively.

Acknowledgements: We would like to extend our thanks to the Foundation for Alcohol Related Research for providing access to the study participants and for all their support in the research process. We would also like to thank the National Research Foundation of South Africa for their financial contribution, the participants for sharing their stories, and Professor Leslie London from the University of Cape Town for originally proposing the research study.
Decreasing women drinking before and after pregnancy recognition among South African women: The moderating role of traumatic experiences.

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Background: Addiction is associated with medical consequences, due to direct drug effects, poor adherence to health-care recommendations, and poor quality of care. But little is known about how the spectrum of illicit drug use in primary care patients affects quality of medical care measures for chronic conditions. The objectives of this study were to determine the association between drug use (drug, frequency of use, and severity) and quality measures indicating failure to meet criteria for good blood pressure (BP) and blood glucose (BG) control among primary care patients identified by screening as using illicit drugs who also have hypertension and/or diabetes.

Materials and methods: The study population was adult patients presenting for primary care visits in an urban, safety-net hospital with recent illicit drug use or prescription drug misuse identified by screening and either hypertension or diabetes mellitus. The outcomes were failure to control: a blood pressure (primary), defined as systolic BP of 140 or higher or diastolic hypertension or diabetes mellitus. The objectives of this study were to determine the association between drug use (drug, frequency of use, and severity) and quality measures indicating failure to meet criteria for good blood pressure (BP) and blood glucose (BG) control among primary care patients identified by screening as using illicit drugs who also have hypertension and/or diabetes.

Results: Overall, 40 percent (66/164) of the sample with hypertension failed to meet criteria for BP control and 42 percent (26/62) of those with diabetes failed to meet criteria for BG control. No significant associations were detected for any measure of drug use and BP or BG control, except those reporting cocaine use had higher odds of failing to meet criteria for BG control compared to those reporting marijuana use (adjusted odds ratio (AOR) 9.8, 95% CI 1.9, 41.9). Higher severity of drug use was associated with higher odds of failing to meet criteria for BG control in an unadjusted model (OR 3.1, 95%CI 1.0, 9.2); however, this association was not significant after controlling for age, gender, and race/ethnicity.

Conclusions: In this cohort of primary care patients with drug use, type of drug but not frequency of use or severity was significantly associated with failure to meet quality criteria for control of hypertension and diabetes.

Trial registry: Trial registration identifying number NCT00876941.

A28 Integrating addiction medicine training into medical school and residency curricula

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Background: The Affordable Care Act (2010) brings an opportunity to increase the integration of addiction treatment into the health-care system. With the anticipated expansion of addiction care services in primary care, challenges, such as workforce training, can be expected. This presentation discusses challenges and opportunities for addiction medicine training of primary care professionals in Ireland, Canada, and Portland, Oregon.

Objectives: To explore ideas for integrating addiction medicine education into medical school, fellowship, and residency curricula and to consider how implementation barriers can be addressed.

Method: The presentation will outline the setup and content of some of the current addiction medicine education in medical schools and residency programs in Ireland, Canada, and Portland, Oregon. Examples from three educational initiatives will be used to generate ideas applicable to each setting and help overcome integration barriers: the St. Paul’s Hospital Goldcorp Addiction Medicine Fellowship (http://www.addictionmedicinefellowship.org), the feasibility study on alcohol SBIRT for opioid agonist patients in Ireland (PINTA), and the team-based SBIRT Oregon project (http://www.sbirtoregon.org). Scenarios that illustrate implementation strategies, such as educational outreach visits to practitioners—based on overcoming obstacles to change—and facilitators of integrating addiction medicine education into medical school and residency curricula, will be described.

Conclusion: The presentation will conclude with an overview of how initiatives in which the authors have been involved may be used to improve addiction medicine education.

Acknowledgements: Grants support from the Irish Research Council: Supporting empiric research and capacity building on brief interventions and their delivery in primary care (PINTA-TOUR), and ELEVATE: Irish Research Council International Career Development Fellowship – co-funded by Marie Curie Actions (ELEVATEPD/2014/6).

A29 Designing the optimal JI-TRIALS study: EPIS as a theoretical framework for selection and timing of implementation interventions

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References
A30

Sober living houses: research in northern and southern California
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Background: Sober living houses (SLHs) are peer-managed residences that require sobriety and household participation among residents who rent rooms on a monthly (indefinite) basis and otherwise live normal lives according to personal schedules and needs. The houses do not provide counseling or services, but regular attendance at 12-step or other types of mutual help groups is generally required. Approximately 1000 sober living houses, members of two state-wide organizations, operate in California to serve a large and complex population. This presentation provides an overview of work conducted to date studying sober living houses in Northern and Southern California.

Methods and results: In a study of SLHs in Northern California, 300 residents were followed for 18 months after entry. Our research found that neighbors and key informants (e.g., criminal justice, housing and political officials) were highly supportive of SLHs. Findings showed resident improvement in a variety of areas, including drug and alcohol use, employment, psychiatric symptoms, and arrests, with improvements that were maintained over the course of the study period. Although residents on parole and probation had substance use reductions that were comparable to voluntary residents, they had far more problems maintaining employment, higher rates of re-arrest and incarceration, and lower attendance to self-help groups. An ongoing randomized clinical trial in Southern California (anticipated N = 330 residents; 50 houses) is currently examining the effectiveness of an intervention to improve access to services and reduce HIV risk among sober living house residents on parole or probation. Residents randomized to the treatment condition receive a Motivational Interviewing Case Management (MICM) intervention specifically targeted to the problems presented for each resident. The list of potential problems that MICM can address is extensive and aims to help in a variety of problem areas inclusive of: 1) adapting to the sober living house environment; 2) complying with parole and probation; 3) finding and maintaining work; 4) successfully accessing and retaining services; 5) addressing HIV risk, testing, and treatment; 6) mobilizing personal and informal resources; and 7) managing setbacks (e.g., relapse, loss of housing, loss of work). Study participants are being tracked over a 12-month time period and are assessed on criminal justice, HIV risk, and drug and alcohol outcomes.

Conclusions: Sober living houses play an important role in helping individuals in their recovery from substance abuse, and providing additional services in these houses (MICM) to increase access to formal services may further enhance outcomes for high-risk populations.

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A31

The association of deployment and behavioral health problems with positive drug tests among Army members returning from Iraq or Afghanistan
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Background: Problems associated with alcohol and drug use are a critical area for intervention development within the Department of Defense (DoD). Little is known about the impact of deployment on illicit drug use. This study is the first to study drug use problems with objective drug test data among military members returning from deployment.

Materials and methods: Using longitudinal data from The Substance Use and Psychological Injury Combat Study, we identify predictors of testing positive for one or more drugs post-deployment among 306,345 enlisted Army active-duty (AD) members returning from Iraq or Afghanistan in FY2008–2011. Subsample analyses examine findings from those members who completed a follow-up questionnaire approximately 6 months after the deployment (n = 262846). Urinalysis tests for metabolites of cocaine, heroin, THC, and/or amphetamines are routinely and randomly tested by the military’s drug test program. These data were examined to estimate the percent of the sample with any positive drug test 6 months and up to 3 years post-deployment (follow-up). Demographic and deployment characteristics and self-report of post-deployment problems were examined as potential predictors of a positive drug test.

Results: Of AD enlisted members returning from deployment, 2.7 percent had a positive drug test during follow-up (95% confidence interval: 2.68%–2.80%), and the median number of specimens tested during the period was 1. Members screening positive for behavioral health problems were more likely to have a positive drug test than those who screened negative: PTSD 4.2 percent versus 2.2 percent; depression 4.8 percent versus 2.1 percent; suicide ideation 6.8 percent versus 2.3 percent; and 6+ alcoholic drinks daily 7.3 percent versus 2.3 percent (unadjusted comparisons; p < 0.0001 for all). Multivariate models controlling for demographic characteristics identified the following predictors associated with an increased odds of a positive
drug screen: combat specialist occupation, short deployment (11 months or less), or no prior deployment. Conclusions: Preliminary findings suggest that enlisted Army active duty members who are at risk for poor outcomes post-deployment can be identified, and there appears to be an increased risk associated with characteristics of the deployment, in addition to demographic characteristics known to be associated with drug use. Early identification and intervention with enlisted members experiencing post-deployment problems may be useful in enhancing health and reducing drug use after deployment.

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A32

Staying safe in the community: adaptation of WaySafe to help probationers make better decisions about their health risks

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Transition from incarceration to the community is a critical time for offenders, especially those with substance abuse problems. Many succumb to temptation to return to drug use and possibly risky needle sharing, and engaging in risky sex activities. This critical time period entails substantial health risks for the offender as well as significant risks to public health.

Well-established and consistent use of HIV/HSV/HCV risk reduction prevention programs with continuity of care do not exist in most criminal justice treatment systems because of lack of policy development and integration between institution and community-based corrections, health, and social service agencies. Interventions targeting re-entry are crucial because of the likelihood for risk behaviors to increase upon return to the community. Approaches for community correction populations are needed that have the capability of addressing motivational, social, and cognitive deficits.

This presentation discusses an approach to translating ideas from the prison-based WaySafe curriculum into community settings for probationers who have recently completed residential, intensive outpatient, or prison-based substance abuse treatment. The adapted intervention, StaySafe, will be based on evidence-based cognitive principles, including TCU Mapping Enhanced Counseling techniques designed to improve decision-making skills regarding health risk behaviors during the critical first 6 months under community supervision. It is being designed to be self-administered by participating probationers during downtime, either prior to or following meetings with their probation officers.

An important goal in the adaptation and testing of StaySafe is to have a sustainable, evidence-based product for probation departments that can be administered with minimal staff training and time that is engaging and easy to use by probationers, requires minimal maintenance, and is free to probation departments (other than the cost of the touch-screen computers). In this presentation, we describe the StaySafe intervention and the adaptation process from a prison-based group curriculum to a community corrections-based individualized approach. The adaptation process borrows ideas from the ADAPT-ITT framework [1]. We will describe initial results from focus groups and interviews with probationers and probation officers on problems and successes in probation, logistical issues with delivering interventions in probation settings, and results of a “theater” test of elements of StaySafe to gauge participant reactions.

Acknowledgements: Funding for this study was provided by the National Institute on Drug Abuse, National Institutes of Health (NIDA/NIMH) through a grant to Texas Christian University (R01DA025885; Wayne E.K. Lehman, Principal Investigator). Interpretations and conclusions in this paper are entirely those of the authors and do not necessarily reflect the position of NIDA/NIMH or the Department of Health and Human Services.

Reference

A33

What predicts continued substance use among probationers?

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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A33

Background: Because of the strong connection between substance use and criminality, one primary aim of probation is to suppress substance use as a way to reduce criminal behaviors. This study examines individual factors that lead to different types of continued substance use while on probation, among a group of people participating in a randomized clinical trial.

Methods: Substance-using probationers (N = 194) completed baseline and 2-month follow-up interviews. Probationers averaged 35 years-old and were predominately male (69%) and non-white (79%). Measures included demographics (e.g., age), treatment/use experience (e.g., ASI drug score), psychosocial functioning (e.g., self-esteem), and criminal justice experience (e.g., lifetime arrests). Hard drug use included opiates, cocaine, barbiturates, amphetamines, hallucinogens, and inhalants. Multinomial regression models examined the relationship between these factors and different category of continued substance use: no use (reference category); hard drug user; marijuana or significant alcohol users only.

Results: Using nested multinomial regression models, researchers determined that the best fit model included age, recent homelessness, consequences of substance use, prior lifetime treatment, age of first illegal drug use, family and peer drug use, type of substance use at baseline, ASI alcohol and drug scores, hostility, criminal cognitions, and drug-testing probation condition. Multinomial regression results revealed that being younger (Exp(B) = 0.94, p = .04), recently homeless (Exp(B) = 0.27, p = .03), having an increased ASI alcohol score (Exp(B) = 66.43, p = .01), or having no drug-testing requirement (Exp(B) = 4.09, p = .01) were more likely to have continued marijuana or significant alcohol use. Probationers who reported more consequences from substance use (Exp(B) = 1.06, p = .02), not being an alcohol/marijuana user only at baseline (Exp(B) = 22.09, p = .03), having an increased ASI drug score (Exp(B) = 209.69, p = .02), or having increased criminal cognitions (Exp(B) = 5.69, p = .05) had increased odds of continued hard drug use.

Conclusions: During the early period of supervision, there appears to be a limited suppression effect on substance use, given that only 46 percent of the substance-use probationers reported continued use in the 60 days following probation. Identifying probationers who are most at risk for revocation due to continued substance use can assist probation agencies in targeting probationers with the most effective services. These findings support the importance of early screening using risk/needs assessments to determine an individual’s risk of continued substance use and thus potential probation failure.

Trial registration: NCT01891656.

A34

Community involvement in a juvenile partner justice behavioral health

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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A34

Service organizational implementation trial: The U.S. juvenile justice system has a number of possible behavioral health service community
Injection of Xylazine mixed with heroin associated with poor health outcomes and HIV risk behaviors in Puerto Rico

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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A35

Background and purpose: Recent studies of injection drug users (IDUs) in Puerto Rico indicate widespread use of xylazine, also known as horse tranquilizer. Xylazine (a veterinary analgesic/sedative) mixed with heroin and cocaine. Research shows that xylazine contributes to more severe symptoms of withdrawal. This study explored the association between use of heroin+xylazine and poor health outcomes, including hepatitis C and HIV risk among Puerto Rican drug users.

Methods: Data from 451 Puerto Rican drug users were gathered by bilingual Spanish and English in-person surveys between 2007 and 2013. Study participants were recruited in areas of San Juan, Rio Piedras, and Ponce where drug users were known to gather. Study eligibility was verified by screening their age (18 or older) and current substance use. Participants received a code based on date of birth and mother’s name to prevent the same respondent from taking the survey multiple times. The study included questions from the Substance Abuse Mental Health Services Administration, Government Performance and Results Act questionnaire and a revised National Institute on Drug Abuse-validated Addiction Risk Behavior Assessment battery. The questionnaire was translated to Spanish, back-translated, and adapted for Puerto Ricans. Bivariate analyses explored the association between heroin+xylazine use and poor health outcomes (self-reported poor health status, being diagnosed with hepatitis C, and HIV risk behaviors). Logistic regression analysis compared the risks associated with using heroin+xylazine and health outcomes, controlling for demographic factors that were significant at the bivariate level.

Results: Incidence of having injected heroin+xylazine were high (73.4%) and 67.4 percent of the sample had injected xylazine mixed with heroin within 30 days of the interview. Seventy-nine percent of IDUs were male; 54 percent did not have a high school diploma, and 81 percent were homeless or in temporary housing. Heroin+xylazine users were more likely to report lower health status, stating poor or fair health as opposed to good or excellent health (OR = 2.85; CI 1.22–6.68) than those who had never used heroin+xylazine (p < .05). Xylazine mix users were also more likely to report being diagnosed with hepatitis C (OR = 1.90; CI 1.13 – 3.18; p < .05). Substrate users who mixed xylazine+heroin were also significantly more likely to have participated in HIV risk behaviors such as injecting more than 5x/day (OR = 9.57; CI 4.72 –19.39; p < .001), sharing works (OR = 2.73; CI 1.34–5.57; p < .05), injecting others (OR = 5.79; CI 2.59–12.98; p < .001), and being injected by others (OR = 5.27; CI 2.36–11.77; p < .001).

Conclusions and implications: Self-reported poor health outcomes and HIV risk behaviors are significantly associated with heroin+xylazine use. The migratory pattern of Puerto Rican IDUs traveling to and from the USA mainland, possibly carrying xylazine, will likely increase the need for the HIV, substance abuse, and hepatitis C prevention efforts in both geographic locations.

A36 Opiate-use patients attending residential treatment: characteristics, outcomes, and implications for practice

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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A36

Background: As opiate use has increased, there has been a corresponding increase in the number of opiate users presenting for treatment. Questions regarding the challenges of treating opiate users in residential treatment remain largely unanswered. This study seeks to determine what, if any, meaningful differences exist between opiate and non-opiate users, as well as within opiate users who enter voluntary, private, or residential dual-diagnosis treatment, and the impact of any differences relative to treatment motivation, length, and outcomes.

Materials and methods: Data for this study were drawn from 1972 individuals, utilizing the Addiction Severity Index, the Treatment Service Review, the University of Rhode Island Change Assessment, and a satisfaction measure. Interviews were conducted at program intake, and 1 and 6-month interviews post-discharge.

Results: The results suggest that although there are similarities there are also some important differences in characteristics, motivation, completion, engagement, retention, levels of satisfaction, and post-treatment service use. Additional analyses were conducted when significant within-group differences by age for opiate users were revealed.

Conclusions: Results suggest different strategies within treatment programs may provide benefit in targeting the disparate needs of younger opiate users. Outcome results at 6 months for all groups demonstrated significant improvement over pretreatment, suggesting that abstinence-based treatment can be an effective form of treatment for opiate users.

A37 Pardon our dust: remodeling care to serve you better

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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A37

Overview: The Oregon Health Plan (Medicaid), a national leader in health-care transformation, contracts with 16 regional Coordinated Care Organizations (CCOs) to provide integrated medical, behavioral, and dental care in patient-centered primary care homes. The transformation seeks increased access to primary care, better control of health-care cost increases,
and improved health outcomes using global budgets and shared savings to promote quality of care rather than quantity of care.

Methods: A mixed-methods analysis assesses the implementation of CCOs and the impacts on treatment for alcohol and drug use disorders through qualitative Interviews with stakeholders in each CCO and quantitative analysis of Medicaid encounter data.

Results: During the first year of implementation, qualitative interviews with the 16 CCOs and participating addiction treatment programs suggest little systematic attention to addiction treatment issues. Baseline data on screening for alcohol and drug use (less than 3% of adult patients have a CPT code for screening) suggest CCOs have not yet incorporated screening and intervention services into clinical practice. There is little change, moreover, in the use of medications to treat alcohol and drug use disorders and in the number of patients treated for alcohol and drug use disorders. A stakeholder observed in a public meeting, “Usually when a clinic remodels, there is a sign asking patients to ‘Pardon our dust: Remodeling to serve you better.’ The Oregon Health Plan is undergoing a major transformation without signs alerting patients about the changes.”

Conclusions: Oregon’s ambitious agreement with the Federal Government seeks to reduce its rate of spending growth by 2 percentage points without diminishing the quality of care. This arrangement represents one of the most significant efforts to slow health spending and transform the delivery system. Many of the highest cost patients have untreated mental health, alcohol, and drug use disorders. The Oregon health-care transformation offers opportunity to facilitate integrated care for mental health and substance use disorders. Slow implementation and organizational reluctance to change appear to inhibit progress.

Acknowledgements: Supported through an award from the National Institute on Drug Abuse (R33 DA035640).

A38 Validation of computer self-administered screening and assessment tools to identify unhealthy substance use in medical patients Jennifer McNeely1, Sheila Strauss2, Charles M Celada3, John Rotrosen4, Ananne Ramautar1, Derek Nelson1, Marc N Goureевич1
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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A38

Background: Substance use frequently goes undetected in medical settings, in part due to lack of an efficient approach to screening and assessment. To address this, we developed computer self-administered tools, which could be completed prior to the medical encounter, to screen for unhealthy use of tobacco, alcohol, illicit drugs, and prescription drugs.

Methods: We developed a four-item screener called the Substance Use Brief Screen (SUBS), and a brief assessment that is an audio computer-assisted self-interview version of the Alcohol, Smoking, and Substance Involvement Screening Test (ACASI ASSIST). Adult patients were recruited consecutively from a safety net primary care clinic. Participants completed the SUBS and ACASI ASSIST in English using a touchscreen tablet computer, followed by interviewer-administered reference standard measures. We evaluated the sensitivity and specificity of the SUBS for detecting past-year unhealthy substance use, and the concordance of ACASI ASSIST responses with the previously validated interviewer-administered ASSIST.

Results: Among the 390 participants, prevalence of unhealthy substance use was 31 percent for tobacco, 17 percent for alcohol, and 22 percent for other drugs. Sensitivity and specificity of the SUBS for detecting past year unhealthy use were: tobacco 99 percent and 91 percent (AUC = .95); alcohol 94 percent and 68 percent (AUC = .81); and drugs (illicit or prescription) 86 percent and 89 percent (AUC = .87). Sensitivity was lower for prescription drugs (56%) than for illicit drugs (80%). The ACASI ASSIST demonstrated excellent concordance with the SUBS (Kappa = 0.83) with the ASSIST in identifying moderate to high-risk substance use, though illicit drug use was more frequently reported on the ACASI ASSIST. The median time required to complete the ACASI ASSIST was 3.7 minutes (range 0.7–15.4), and 53 (13.5%) participants required assistance using one or both tools. Eighty-five percent of participants said they either preferred the computer to an interviewer, or had no preference.

Conclusions: The SUBS and ACASI ASSIST appear to offer an accurate, feasible, and acceptable approach to identifying unhealthy substance use in primary care patients. The SUBS has sufficient sensitivity and specificity to identify patients who have unhealthy alcohol or drug use, and thus require further assessment. Assessment can be reliably performed by the ACASI ASSIST. Both instruments could be completed by patients either in the waiting area or from home using a portal into the electronic health record, with results delivered to the primary care provider at the point of care. Applied in this way, the SUBS and ACASI ASSIST have the potential to ease barriers to implementing substance use screening and assessment in medical settings.

Acknowledgements: Funding: National Institute on Drug Abuse K23 DA030395; NIH/NCATS U1L TR000038; P30 DA011041. Additional funding was by subcontract from the MITRE Corporation, which was contracted by the White House Office of the National Coordinator for Health Information Technology (ONC) and the Substance Abuse and Mental Health Services Administration (SAMHSA). The research does not necessarily reflect the views of NIH/NIDA, the MITRE Corporation, the ONC, or SAMHSA.

A39 Patient-centered care coordination: a qualitative study of the lived experience of residents in Philadelphia recovery homes Jennifer Miles1, Amy A Mencile2, Fred Way3, John Cacciola4
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E-mail: jniles@brandeis.edu
Addiction Science & Clinical Practice 2015, 10(Suppl 1):A39

Background: Individuals struggling with a substance use disorder often have a variety of co-occurring service needs that go unmet due to the difficulty in coordinating these services. As the substance use treatment system moves toward treating addiction as a chronic disease, it will be necessary to develop models for the coordination of general medical and addiction treatment services, coupled with a number of social services. Patient-centered care models are one way of improving care coordination by incorporating the goals as expressed by the patient into the treatment plan, which is then coordinated by all members of the treatment team to surround the patient with all necessary resources [1]. Recovery residences, such as recovery homes in Philadelphia, Pennsylvania, could represent a potentially important mechanism for such coordination that is patient centered by providing a stable, supportive, living environment that promotes access to a variety of community-based resources.

Methods: Using qualitative data from 12 focus groups held with 97 residents in a stratified random sample of Philadelphia recovery homes, the present study provides insight into the potential of these homes to better coordinate care for these individuals and how closely this coordination resembles that of a patient-centered care model. Three independent coders used a manualized coding schema to identify key themes, and consensus was reached when disagreement occurred between codes for any given passage.

Results: Residents reported having access to medical, substance use, and mental health treatment services, as well as access to community-based services aimed at improving other life domains such as employment and education. Residents also reported that living in these homes provided them with additional social support and assisted in the development of life skills. Although many residents reported having a positive experience, the difficulties of living in a recovery residence were also discussed.

Conclusions: Qualitative data presented on the lived experiences of these residents highlight the potential of recovery residences to operate in a way that fits closely with a patient-centered care model, and potentially improves access to vital treatment and support services. The need for additional research, as well as policy implications related to the need for standardization of these homes and the potential for inclusion of these residences in the continuum of care for substance use treatment, are discussed.
The pressing shortage of buprenorphine prescribers and the pending role of telemedicine

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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A40

Background: The Drug Addiction Treatment Act of 2000 created an opportunity for primary care physicians and addiction treatment agencies to integrate, as primary care physicians became able to prescribe opiate treatment medications from their practices. Fourteen years later, a National Institute on Drug Abuse evidence-based practice implementation trial in Ohio is finding that physician capacity is becoming a primary barrier to use of buprenorphine. This presentation will document: a) the degree of the physician capacity barrier for specialty addiction treatment providers wanting to expand their buprenorphine programs; b) strategies being considered to overcome this barrier, including telemedicine; and c) what workflow challenges implementation of telemedicine can expect (based on the experience of a Veterans Administration [VA] telemedicine study and qualitative analysis of telemedicine implementation in several facilities).

Methods: The mixed-methods approach documents physician capacity limitations and to what degree telemedicine is being considered to remedy physician capacity shortfalls. Data collection includes written surveys from 47 treatment centers; qualitative interviews with 39 treatment centers; and patient simulations of VA telemedicine programs. For the data analysis, summary statistics are provided, including characteristics of organizational participants and buprenorphine prescribing patterns. The qualitative inductive analysis is designed to identify contextual and process factors that affect telemedicine implementation.

Results: Fifty percent (sample = 42) of Ohio treatment providers report lack of access to buprenorphine-prescribing physicians as a barrier to implementation and expanded use of buprenorphine. Thirty-eight percent of those identifying this barrier consider telemedicine as an option to access physician prescribers. Barriers to telemedicine implementation are technology incompatibility; inability for telemedicine sites and specialty treatment providers to agree on dosing protocols (including diversion prevention expectations); and workflow interruptions that occur due to patient and clinical information not being effectively transferred between telemedicine sites and community treatment providers. Organizational strategies to overcome lack of physician capacity and telemedicine implementation challenges are discussed.

Conclusion and implications: The lack of physician-prescribing capacity for buprenorphine is preventing this evidence-based practice from achieving higher penetration rates among specialty treatment providers. Telemedicine provides one solution to re-allocate the distribution of this scarce resource. However, there will also be challenges in implementing telemedicine that need to be understood, and evidence-based strategies need to be developed to overcome these challenges. Successful use of telemedicine may ultimately lead to greater integration between primary care and specialty addiction treatment.

Trial registration: Clinicaltrials.gov NCT01702142.

Acknowledgements: The author thanks Jee-Seon Kim, Andrew Quanbeck, Terry Patel-Porter, Sandy Starr, Carol Sherbeck, Mark Zehner, and Dennis McCarty for their contributions to this research.

| Table 1 (abstract A41) Demographical information of individuals recruited from September 2012 to July 2014 |
|-----------------|-----------------|-----------------|
| Attended clinic | Did not attend clinic |
| N   | Percentage | N   | Percentage |
| Number of individuals recruited | 68 | - | 27 | - |
| Mean age (SD) | 37.3 (11.1) | 34.4 (10.2) |
| Race | | | |
| African American | 26 | 38 | 14 | 52 |
| Caucasian | 36 | 53 | 13 | 48 |
| Asian | 1 | 2 | 0 | 0 |
| Other | 5 | 7 | 0 | 0 |
| Ethnicity | | | |
| Hispanic | 6 | 9 | 22 | 81 |
| History of intimate partner violence | 42 | 62 | - | - |
| History of child abuse | 19 | 28 | - | - |
Although the association between mental health and substance use disorders is well documented, the recent mandate by the Substance Abuse and Mental Health Services Administration to better integrate prevention, treatment, and recovery efforts for both conditions challenges the outcomes of the quality of life assessment in New York City outpatient and opioid treatment programs. The Affordable Care Act and the Medicaid redesign in New York City offer opportunities to explore alternative methods for measuring the effectiveness of behavioral health interventions. Quality of life (QOL) measures have been underutilized in substance use disorders treatment (SUDT). The objective of this study was to determine how a validated QOL instrument could be used in SUDT as a measure of health-related patient outcomes.

**Background:** The Affordable Care Act and the Medicaid redesign in New York City offer opportunities to explore alternative methods for measuring the effectiveness of behavioral health interventions. Quality of life (QOL) measures have been underutilized in substance use disorders treatment (SUDT). The objective of this study was to determine how a validated QOL instrument could be used in SUDT as a measure of health-related patient outcomes.

**Methods:** NYC outpatient drug treatment (DT) and opioid treatment programs (OTP) were invited to participate in a pilot evaluation. Newly admitted patients completed counselor-administered surveys at admission, and 90 and 180 days. Surveys included demographic (gender, age, race, language) and clinical items (homelessness, criminal justice involvement, mandated treatment, major health conditions, substance of choice, frequency of use) in addition to the World Health Organization QOL instrument, the WHOQOL-BREF [1]. The WHOQOL-BREF is a 26-item, validated questionnaire that measures QOL in four domains: physical, psychological, social, and environment. Domain-specific QOL scores were calculated, transformed, and compared with healthy and chronically ill populations from the literature [2]; scoring was on a scale of 0 to 100 for each domain. We compared mean domain scores between baseline and follow-up intervals for available participants, and by demographic and clinical characteristics using ANOVA and t-tests. We examined change in QOL scores among OTP participants stratified by major health conditions.

**Results:** Between July and September 2013, 1269 newly admitted patients were surveyed. Follow-up surveys were completed for 616 patients at 90 days (49%) and 336 at 180 days (26%). See Table 1 for demographic characteristics. NYC SUDT participants had lower mean QOL scores in the psychological and physical domains than healthy U.S. adults, and higher.
Comparison of baseline QOL domain scores in SUD population to healthy and chronically ill U.S. adult populations in the literature [2].

<table>
<thead>
<tr>
<th>Demographic characteristic</th>
<th>n</th>
<th>%</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>Race</td>
<td>317</td>
<td>25</td>
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<tr>
<td>White</td>
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<tr>
<td>Homeless</td>
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<td>23</td>
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<tr>
<td>Any criminal justice involve</td>
<td>302</td>
<td>24</td>
</tr>
<tr>
<td>Major physical or mental health condition</td>
<td>736</td>
<td>58</td>
</tr>
</tbody>
</table>

Table 1(abstract A43) Participant Demographic Characteristics (N = 1269)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Baseline (n = 1262)</th>
<th>90 Day (n = 616)</th>
<th>180 Day (n = 336)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>62</td>
<td>64</td>
<td>66</td>
</tr>
<tr>
<td>Psychological</td>
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<td>65</td>
<td>69</td>
</tr>
<tr>
<td>Social</td>
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<td>61</td>
<td>64</td>
</tr>
<tr>
<td>Environmental</td>
<td>58</td>
<td>60</td>
<td>63</td>
</tr>
</tbody>
</table>

* t-tests were used to examine differences in mean domain scores between baseline and 90 days, and between baseline and 180 days. Changes in mean QOL scores were significant from baseline to 90 days (p < .05) and from baseline to 180 days (p < .05) in all domains

Table 2(abstract A43) Domain-specific mean QOL scores at baseline, 90, and 180 days*

Aim: Research suggests that Latino immigrant men face difficulties in adapting to life in the United States. One of the ways Latino men cope with these stressors is with heavy alcohol use. The aim of this study was to assess the feasibility of culturally adapted screening and brief intervention (SBIRT) to reduce heavy alcohol use in this population.

A44 Building sustainable SBIRT in an integrated hospital system in New York

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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A44

Screening, Brief Intervention, and Referral to Treatment (SBIRT) for substance use has received a great deal of empirical support. Despite the evidence for effectiveness of SBIRT and a compelling rationale for its integration into health-care settings, the circumstances under which it is likely to be implemented and sustained remain elusive. In this project, SBIRT was implemented into emergency departments (EDs) and primary care practices (PCPs) within a large, integrated health system in New York serving areas heavily affected by Hurricane Sandy. The SBIRT model was implemented in the following way: 1) Front-line staff (e.g., nurses and medical office administrators) administered a five-item SBIRT prescreen for alcohol, drug, and tobacco use to all patients during triage; 2) If a positive prescreen resulted, a health educator conducted a full screen using the AUDIT and/or DAST-10; and 3) The health educator conducted a brief intervention and referral to addiction treatment as indicated by the full-screen score. To assist in building the SBIRT process into the normal site workflow, prescreening questions were integrated into the electronic medical record (EMR) in a user-friendly way for front-line staff to administer. The EMR automatically scored the prescreen. As of May 2014, SBIRT was implemented in three EDs and two PCPs within the health system, with services starting on 12/1/13. Implementation was evaluated by reviewing EMR data as well as patient data collected at each site. Approximately 13000 patients were prescreened (13% positive). More women than men were prescreened (61% female), and there was a significant older population (9% were 18–24; 39% were 55 or older), as well as diversity in ethnicity (24% Latino) and race (19% African American). Almost 900 full screens were conducted (50% positive), which resulted in 284 brief interventions and 149 referrals to brief or formal addiction treatment. Further analysis revealed that multiple substances were an issue for many patients. For example, 20 percent of patients were positive on both the AUDIT and the DAST-10, and 39 percent of patients who full-screened positive for drugs or alcohol also screened positive for past-year tobacco use. Severity of full-screening scores was greater in the ED setting as compared to the PCP setting. Thirty-nine percent of patients who full-screened positive reported marijuana use in the past 30 days, and 14 percent were daily marijuana users. Overall, results suggest that SBIRT was successfully implemented in several busy sites within this large health system.

Acknowledgements: This project is funded by the Substance Abuse and Mental Health Services Administration, grant number: SUD79T025102.

A45 Vida PURA: feasibility of culturally adapted screening and brief intervention for Latino day laborors

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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A45

Aim: Research suggests that Latino immigrant men face difficulties in adapting to life in the United States. One of the ways Latino men cope with these stressors is with heavy alcohol use. The aim of this study was to assess the feasibility of culturally adapted screening and brief intervention (SBIRT) to reduce heavy alcohol use in this population.
We conducted qualitative interviews with Latino day laborers and social services to inform the cultural adaptation of screening and brief interventions. Interviews and focus groups were conducted by trained bilingual research staff. Recordings were transcribed; then transcripts were coded and analyzed in Atlas.ti. Each transcript was coded by two members of the research staff. Case summaries and coded quotations were reviewed for prevalent themes. Themes were used to identify sources of mismatch between traditional screening and brief intervention (SBI) and the target population. The adapted intervention was then pilot-tested to assess the feasibility and potential effectiveness. In the pilot test, 104 men were screened using the AUDIT, and men with a score ≥ 6 were offered a brief intervention (56%). Those receiving an intervention completed follow-up surveys at 2 and 8 eight weeks. Alcohol use was assessed using the AUDIT and 14 day timeline follow-back.

Results: Findings from the qualitative interviews indicated that unhealthy drinking was common among Latino day laborers. Their drinking was related to and helped relieve immigration-related stressors. Men preferred to receive information from trusted providers in Spanish. They faced many barriers to accessing health and social services, and few culturally appropriate alcohol-related services existed. Based on these findings, we adapted SBI to incorporate the social and cultural context of Latino day laborers. SBI was provided in a community setting (at a day-labor worker center) by bilingual community health workers. Men were receptive to SBI during the pilot test. Results from the pilot test confirmed that unhealthy alcohol use was prevalent (average of 8.5 drinks per drinking day and 4 drinking days in past 14 days among intervention group). We were able reach 62 percent of the men at the 2 week and 57 percent at 8 week follow-up. Mean AUDIT scores among those receiving the intervention went from 18.7 at baseline, to 13.5 at 2 weeks, and 14.8 at 8 weeks.

Conclusions: Our results suggest that Latino immigrant men have patterns of unhealthy alcohol use and are an underserved population. Evidenced-based interventions conducted in clinical settings, such as screening and brief intervention, may be more efficacious for Latino day laborers if conducted by community health workers in community settings where men more frequently seek services. Our findings can be used to further test culturally adapted SBI to prevent and reduce unhealthy alcohol use in this vulnerable population.

Methods: We conducted qualitative interviews with Latino day laborers and social services to inform the cultural adaptation of screening and brief interventions. Interviews and focus groups were conducted by trained bilingual research staff. Recordings were transcribed; then transcripts were coded and analyzed in Atlas.ti. Each transcript was coded by two members of the research staff. Case summaries and coded quotations were reviewed for prevalent themes. Themes were used to identify sources of mismatch between traditional screening and brief intervention (SBI) and the target population. The adapted intervention was then pilot-tested to assess the feasibility and potential effectiveness. In the pilot test, 104 men were screened using the AUDIT, and men with a score ≥ 6 were offered a brief intervention (56%). Those receiving an intervention completed follow-up surveys at 2 and 8 eight weeks. Alcohol use was assessed using the AUDIT and 14 day timeline follow-back.

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* (p<.05).

Figure 2(abstract A43) Change in 3 QOL domains over time among OTP participants by major health conditions*

A46

Optimizing continuity-of-care opportunities to reduce health risks: shared qualitative perspectives from CJDATS 2 research
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Current Texas Christian University (TCU) research focuses on reducing risk for relapse and other health-related behaviors associated with HIV, HBV, and HCV. The WaySafe curriculum was developed for prisoners in the last phase of their substance abuse treatment before transitioning back to the community, and was designed to improve decisionmaking and recognizing and planning for risky situations. A critical next step is to shift the setting from incarceration to a community setting with probationers during the high-risk transition period after release from prison or completion of residential or intensive outpatient substance abuse treatment. Literature supports the importance of prevention programs [1] as part of the continuity-of-care for offenders and probationers in addressing some service gaps (in the continuum), which are widely recognized to reduce the likelihood of successful client outcomes [2,3].

The purpose of this presentation is to provide evidence from the recently completed second phase of the Criminal Justice Drug Abuse Treatment Studies (CJDATS 2), with insight from key stakeholders that informs the relevance of continuity-of-care and the significant role that community corrections and community-based health-care agencies fulfill in transitioning probationers from incarceration to home. These qualitative results come from two protocols conducted as part of CJDATS 2: HIV Services and Treatment Implementation in Corrections (HIV-STIC) and Medication-Assisted Treatment in Community Corrections Environments (MATICCE). The organizational-level findings reflect the opinions and views of criminal justice personnel and health-care providers—agencies in partnership with TCU in HIV-STIC and MATICCE. In CJDATS 2, stakeholders participated in an implementation research initiative, utilizing a change team strategy to identify and implement improvements to service delivery. In both HIV-STIC...
and MATICE, the services delivery continuum incorporated elements of prison-based services and transition to community-based services in their respective areas. Qualitative results highlight the important contributions of community correction agencies, their direct contact to probationers, and their ability to facilitate linkages to service providers. Findings are discussed, emphasizing the importance of staff commitment and interorganizational relationships in continuity-of-care from prison to community as essential components to optimizing services to probationers.

Acknowledgements: This study was funded by a grant (#3U01DA016190-08) to TCU (Kevin Knight, Principal Investigator) from the National Institute on Drug Abuse, National Institutes of Health (NIDA/NIMH), with support from the Center for Substance Abuse Treatment of the Substance Abuse and Mental Health Services Administration, the Centers for Disease Control and Prevention, the National Institute on Alcohol Abuse and Alcoholism (all part of the U.S. Department of Health and Human Services); and from the Bureau of Justice Assistance of the U.S. Department of Justice. The content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies.

References


A47

Factors associated with trajectories of women's quality of life and association with substance use 12 months post-treatment

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Background: Quality of life (QOL) has become an increasingly recognized component of recovery for women with substance use disorders (SUDs) [1-3]. However, little is known about different trajectories of QOL among women with SUD over time. This study: a) identified heterogeneous QOL trajectories; b) examined predictors related to QOL trajectories; and c) investigated associations between QOL trajectories and substance use 12 months post-treatment intake.

Methods: Data were collected from 377 women at three county-funded treatment programs. Women were interviewed at week 1, and at 1, 6, and 12 months post-treatment intake (81% retention). The World Health Organization Quality of Life Measure (abbreviated version) assessed QOL over time. Latent Class Growth Model (LCGM) was performed to identify QOL trajectories of underlying subgroups of the women. The model fit was evaluated by the Bayesian Information Criteria and the sample sizes of the smallest class. Multinomial logistic regression explored demographic, clinical, and personal network factors associated with the QOL trajectories. Lastly, we explored the relationship between the QOL trajectories and substance use over 12 months.

Results: The majority of participants were African American (60%), received government assistance (72.5%), and had co-occurring mental and substance use disorders (73.4%); 42 percent used alcohol and/or drugs during the 12 month follow-up period. Mean QOL at intake was 61.2 (SD = 15.62). LCGM indicated three different trajectories in QOL (Figure 1): a) consistently high QOL (n = 108; 28.6%); b) consistently moderate QOL (n = 212; 56.2%); and c) consistently decreasing QOL (n = 57; 15.1%). Multinomial logistic regression results (Table 1) shows that higher levels of trauma symptoms were associated with increased odds of belonging to the decreasing QOL group compared to either high QOL group or the moderate QOL group. Higher levels of abstinence self-efficacy and greater number of close network members were associated with decreased odds of belonging to the decreasing QOL group. Compared to the moderate QOL group, a greater number of critical network members were associated with increased odds of belonging to the decreasing QOL group. The decreasing QOL group was more likely to use substances at 12 months post-treatment intake (OR = 3.48; 95% CI = 1.62, 7.50) compared to the high QOL group.

Conclusions and implications: Findings highlight three distinctive QOL trajectories and their association with substance use treatment outcome. Fifteen percent of the women had consistently low levels of QOL, which decreased over time and increased odds of substance use post-treatment, suggesting this group may need targeted intervention and follow-up.

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References


A48

Benzodiazepine prescribing patterns and drug overdose mortality among individuals receiving opioid analgesics

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Background: Drug overdose mortality, particularly involving opioid analgesics, has risen steadily over the past two decades and is now the leading cause of injury death in the United States. Benzodiazepines are commonly prescribed concurrently to individuals receiving opioid analgesics. Little is known about the association between benzodiazepine-prescribing patterns and overdose mortality in those receiving opioid analgesics. We aimed to study the association between benzodiazepine prescription history, dose, type and dosing schedule, and the risk of drug overdose mortality among individuals receiving opioid analgesics.

Materials and methods: This was a case-cohort study utilizing Veterans Health Administration (VHA) administrative data. Participants were all individuals who died of a drug overdose (n = 3236) while receiving opioid analgesics and a random sample of individuals (n = 404725) who received VHA medical services and opioid analgesics between fiscal years 2004 and 2009. Benzodiazepine prescription history, dose, type, and dosing schedule were determined by dispensation data from the VHA's Pharmacy Benefits Management Services. Benzodiazepine prescription history was categorized as periods of time when individuals were currently prescribed, formerly prescribed, or not prescribed benzodiazepines. Drug overdose mortality was based on cause of death information from the National Death Index. Associations between benzodiazepine prescription history, dose, type and dosing schedule, and overdose mortality were examined using Cox proportional hazards models.

Results: Twenty-seven percent of individuals who received opioid analgesics also received benzodiazepines during the study period. Approximately half of the drug overdose deaths (n = 1162) occurred during periods when individuals were concurrently receiving benzodiazepines and...
opioids. Risk of overdose death increased based on benzodiazepine prescription history: formerly prescribed versus not prescribed, adjusted hazard ratio (HR) = 2.22 (95% confidence interval [CI]; 1.95–2.52; absolute risk difference approximation [ARDA] = 0.12%); currently prescribed versus not prescribed, adjusted HR = 3.59 (95% CI, 3.24–3.97; ARDA = 0.25%). Risk of overdose death increased as daily benzodiazepine dose increased. When compared to clonazepam, temazepam was associated with a decreased overdose risk; adjusted HR = 0.73 (95% CI; 0.56–0.95; ARDA = 0.03%). Benzodiazepine dosing schedule was not associated with overdose risk.

Conclusions: Among individuals receiving opioid analgesics, receipt of benzodiazepines was associated with an increased risk of drug overdose death, and these risks were generally consistent at all levels of opioid dose. The risks and benefits of benzodiazepine-prescribing in this population warrant further evaluation.

### Table 1 (abstract A47) Results of multinomial logistic regression

<table>
<thead>
<tr>
<th></th>
<th>Decreasing QOL vs. High QOL (ref)</th>
<th>Moderate QOL vs. High QOL (ref)</th>
<th>Decreasing QOL vs. Moderate QOL (ref)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
</tr>
<tr>
<td>Treatment Modality</td>
<td>1.73 (0.65, 4.59)</td>
<td>0.78 (0.41, 1.49)</td>
<td>2.22 (0.98, 5.04)</td>
</tr>
<tr>
<td>Unstable Housing</td>
<td>2.41 (0.84, 6.85)</td>
<td>1.27 (0.57, 2.82)</td>
<td>1.90 (0.85, 4.25)</td>
</tr>
<tr>
<td>Dual Disorder</td>
<td>0.99 (0.34, 2.92)</td>
<td>1.07 (0.58, 1.99)</td>
<td>0.93 (0.35, 2.45)</td>
</tr>
<tr>
<td>Trauma Symptoms</td>
<td>1.08 (1.06, 1.11)</td>
<td>1.03 (1.02, 1.05)</td>
<td>1.05 (1.03, 1.07)</td>
</tr>
<tr>
<td>Abstinence Self-Efficacy</td>
<td>0.97 (0.95, 0.99)</td>
<td>0.98 (0.96, 0.99)</td>
<td>0.99 (0.98, 1.01)</td>
</tr>
<tr>
<td>Substance using Alters</td>
<td>1.01 (0.92, 1.11)</td>
<td>1.05 (0.99, 1.12)</td>
<td>0.97 (0.89, 1.04)</td>
</tr>
<tr>
<td>Concrete Support</td>
<td>0.95 (0.88, 1.03)</td>
<td>1.00 (0.95, 1.05)</td>
<td>0.95 (0.89, 1.02)</td>
</tr>
<tr>
<td>Sobriety Support</td>
<td>0.98 (0.89, 1.08)</td>
<td>1.03 (0.97, 1.11)</td>
<td>0.95 (0.88, 1.03)</td>
</tr>
<tr>
<td>Reciprocal Relationship</td>
<td>0.93 (0.84, 1.03)</td>
<td>0.97 (0.92, 1.04)</td>
<td>0.96 (0.88, 1.04)</td>
</tr>
<tr>
<td>Very Close Alters</td>
<td>0.86 (0.78, 0.94)</td>
<td>0.93 (0.88, 0.98)</td>
<td>0.92 (0.85, 1.02)</td>
</tr>
<tr>
<td>Critical Alters</td>
<td>1.04 (0.95, 1.13)</td>
<td>0.95 (0.89, 1.01)</td>
<td>1.09 (1.004, 1.18)</td>
</tr>
</tbody>
</table>

Note. Boldface indicates statistical significance at alpha level of .05
Background: Historically, social work education (SWE) has not included formal and in-depth training to address substance use in either coursework or fieldwork. Health-care reform offers promise to integrate medical and behavioral health through employment of social work professionals. It is critical that screening, brief intervention, and referral to treatment (SBIRT) be incorporated as basic skills for all trainees, and other evidence-based practices be offered in SWE [1] to ensure an adequate work force. This project describes design, implementation, and learner satisfaction of an adolescent SBIRT curriculum at Simmons School of Social Work (SSW) in partnership with Boston Children’s Hospital (BCH), through a Substance Abuse and Mental Health Services Administration (SAMHSA)-funded SBIRT training grant. We ask the question: “Are brief workshops and intensive practice courses feasible and acceptable methods of training social work students?”

Methods: Participants were faculty members (n = 18), field advisers (n = 17), and master’s-level social work students (n = 34) at SSW. Training consisted of an SBIRT workshop offered to all faculty, field advisers, and students, which consisted of 3 core components: 1) impact of alcohol and marijuana on the developing adolescent brain; 2) adolescent SBIRT overview; and 3) brief motivational interventions. A social work practice course on the biopsychosocial dynamics of substance use assessment and treatment was also offered as an elective. The course incorporated the SBIRT workshop, observation at the BCH Adolescent Substance Abuse Program, and skill-based role play. We evaluated learner satisfaction in the workshop and practice course through the Government Performance and Results Act (GPRA) [2], administered immediately after training. For students in the practice course, we also administered the SSW course evaluation (25 items) at the end of the course.

Results: Participants (N = 69) reported high rates of satisfaction and utility of training on the GPRA. More than 85 percent agreed/strongly agreed on 7/7 items immediately post-training, including that training was relevant to both substance abuse treatment and their career, enhanced their skills, and would benefit their clients. Students in the practice course reported high rates of satisfaction on 11 items across five social work core competencies [3] (Engage, Assess, Intervene; Social Justice; Critical Thinking; Ethics and Professionalism). In the SSW survey, neurobiology and motivational interviewing were frequently cited as most helpful content to development as a professional social worker. One student said, “I finally feel like I know what I am doing thanks to the role plays we did in class.”

Conclusion: Brief workshops and intensive practice courses are feasible and acceptable methods of incorporating substance use training into SWE. Acknowledgements and funding: The authors would like to thank Julie Lunstead, MPH for her contributions to this abstract. This material was developed [in part] under grant numbers T010267 and T025389 from SAMHSA, U.S. Department of Health and Human Services. The views, policies, and opinions expressed are those of the authors and do not necessarily reflect those of SAMHSA or HHS.

References

A50 Mobile delivery of alcohol treatment: a systematic review of the literature
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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A50

Background: While research supports the effectiveness of continuing care in addiction treatment, the field has historically offered little ongoing support to patients (whether outside of clinic walls during treatment or after patients complete treatment). Mobile technology may make it possible to provide both self-management help and continuing care more widely. This paper seeks to explore the following questions about mobile applications intended for patients recovering from alcohol addiction:
1. What mobile health applications to treat alcoholism exist in the peer-reviewed literature?
2. Are the applications integrated with in-person treatment or other aspects of the health-care system?
3. Are the applications theoretically informed and effective?
4. What are the challenges and opportunities facing mobile health for alcoholism?

Methods: Mobile applications for recovery from alcohol addiction were identified by searching electronic databases of the research literature. The search of electronic literature databases was done using a combination of two keyword sets: (1) “App” or “Apps” or “mobile application*” or “mobile health*” or “mhealth*” or “text*” or “texting*” or “text message*” or “message*” or “smartphone*” or “iPhone*” or “Android*” or “mobile device*” and (2) “alcohol addiction” or “alcohol abuse” or “alcohol dependence*” or “alcoholic*” or “alcohol*” or “alcohol* recovery” or “sobriety*” or “sober*” or “addiction* recovery.” Two researchers independently reviewed the abstracts and selected articles in which mobile applications were mentioned as interventions used to assist recovery from alcohol addiction.

Results: The researchers reached consensus on 20 articles to include in the review. These articles describe 13 unique mobile systems. They categorized systems in three sets: 1) text-messaging monitoring and reminder systems; 2) text-messaging intervention systems; and 3) comprehensive recovery management systems. The mobile health systems studied cover a broad spectrum of complexity, from relatively simple texting-based monitoring and reminder systems, to comprehensive recovery management support systems. In general, the less complex texting-based systems were designed with minimal theoretical grounding. As more intervention functions were added in more complex systems, communication, behavioral, and social support theories were increasingly brought to bear. Systems that rely primarily on texting have the advantage of being inexpensive, widely available (given the nearly universal penetration of basic mobile phones), and easy to operate for both senders and receivers of text messages. These characteristic make it relatively simple to incorporate texting technology into existing treatment. While texting systems have the advantage of being easy to use, the tradeoff is that they do not appear to be as effective as enhanced systems that use smartphone technology. One explanation for the greater effectiveness of a comprehensive application is that it can provide more modes of treatment and more tools, thereby better addressing individual preferences, leading to better learning and more lasting recovery.

Conclusions: Mobile health technology presents opportunities for better integration of care, but execution and implementation remain major obstacles. Researchers will be challenged to stay abreast of the rapid pace of technological change as they seek to develop and test mobile health technologies.

Trial registration: ClinicalTrials.gov NCT01963234. ClinicalTrials.gov NCT01003119. ClinicalTrials.gov NCT01702142. Grant support: NIAAA SR01AA017192-05. NIDA 1R34DA036720-01A1. NIDA 5R01DA034279-05. NIDA SR01DA030431-03. Acknowledgements: The author thanks David H Gustafson, Lisa A Marsch, Fiona McTavish, Randall T Brown, Marie-Louise Mares, Roberta Johnson, Joseph E Glass, Amy K Atwood, Helene McDowell, Andrew Isham, and Judy Ganch for their contributions to this research.

A51 Delivery and payment reform in Massachusetts: substance use disorder treatment organizations’ perspectives
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Background: Historically, social work education (SWE) has not included formal and in-depth training to address substance use in either coursework or fieldwork. Health-care reform offers promise to integrate medical and behavioral health through employment of social work professionals. It is critical that screening, brief intervention, and referral to treatment (SBIRT) be incorporated as basic skills for all trainees, and other evidence-based practices be offered in SWE [1] to ensure an adequate work force. This project describes design, implementation, and learner satisfaction of an adolescent SBIRT curriculum at Simmons School of Social Work (SSW) in partnership with Boston Children’s Hospital (BCH), through a Substance Abuse and Mental Health Services Administration (SAMHSA)-funded SBIRT training grant. We ask the question: “Are brief workshops and intensive practice courses feasible and acceptable methods of training social work students?”

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References
Background: The Affordable Care Act and many states’ health-care reforms present opportunities and challenges for the substance use disorder (SUD) treatment system. These reforms foster the implementation of new payment and delivery system models that emphasize care coordination and make providers more responsible for patients’ clinical management and costs. Bundled payments, a predeterminated fee or budget that includes the prices of a group of services that would typically treat an episode of care in a defined period of time, are considered one of the most promising new payment models. Bundled payments for SUD treatment have the potential to improve care coordination, implementation of evidence-based practices, and engagement in outpatient treatment; reduce readmissions to detox; make care more patient-centered; and cover treatment services that are not traditionally reimbursed. The objective of this study was to obtain SUD treatment organizations’ perspectives on health-care reform and the design of bundled payments for SUD treatment.

Methods: Organizational interviews were conducted with eight SUD treatment organizations in Massachusetts, with a total of 22 executive, clinical, and financial leaders. Organizations were selected using a purposive sampling procedure. Thirty- to 90-minute interviews were conducted with 1–4 participants at each of the three organization types of interest: a) detoxification services only (n = 1); b) detoxification and outpatient services (n = 4); and c) outpatient services only (n = 3). Interviews addressed the challenges and opportunities of Federal and state health reforms and the design of SUD bundled payments, including patients’ paths through the treatment system, which services should be included, and the length of a treatment episode. Data were analyzed using a framework analysis approach, an ideal analysis method for policy research.

Results: Preliminary themes emerging from providers are concerns about low reimbursement rates, how to integrate with the general health-care system, the need to improve outpatient treatment engagement, facilitating the relationship between detox and outpatient providers, and concerns about financial accountability.

Conclusions: Bringing SUD treatment organizations’ perspectives into the conversation about the role of SUD treatment in health-care delivery and financing transformations is critical to understanding the context of the health-care system in Massachusetts. The results of this study provide important information about how the SUD treatment system is responding to health-care reform and about the design and feasibility of bundled payments for SUD treatment. The results will also be used to design bundled payments for SUD treatment using claims and administrative data. These will be the first bundled payments for SUD treatment and have the potential to be used in health-care practice and in further research to improve the health and health care of individuals with alcohol use disorders.

Acknowledgements: This study is supported by the National Institute on Alcohol Abuse and Alcoholism institutional training grant (1T32AA007567) and individual predoctoral fellowship (1F31AA023711-01).

Methods: Direct service providers (N = 120) from four addiction services organizations in a large Midwestern city responded to a survey assessing provider morale, organizational learning climate, agency expectations for EBP use, agency resources for EBP use, and provider attitudes towards EBP use. Difference scores between provider- and agency-level factors were computed to model provider-agency fit. Linear regression models were accounted for in all analyses, but were determined to be insufficiently sensitive in modeling the curvilinear (inverted U-shaped) relationships expected in this study. Therefore, quadratic regression analyses were conducted to more adequately model the level of the dependent variables across the entire “fit continuum.”

Results: Misfit between agency expectations and provider attitudes and between agency resources and provider attitudes were associated with poorer provider morale and weaker organizational learning climate. For all hypotheses, the curvilinear model of provider-agency misfit significantly predicted provider morale and organizational learning climate (Figures 1 and 2). Morale and climate outcomes were most negative when addiction service providers had positive EBP attitudes, but perceived that their respective agency’s expectations and resources were not supportive of EBP use.

Conclusions: This research benefits from a strong theoretical framework, consistent findings, and significant practical implications for substance abuse treatment agencies. Provider morale and organizational learning climate are important indicators of successful EBP implementation. Comprehensive attempts to strengthen these outcomes must consider both provider- and agency-level characteristics regarding EBP use.
Managers and supervisors should consider conducting periodical self-assessments of their agency’s cultural predispositions toward EBP implementation (e.g., communicated expectations, supportive resources, technical assistance) and addiction service providers’ openness, abilities, and general attitudes towards using EBPs. Organizational efforts to more closely align provider attitudes and agency priorities will likely constitute a key strategy in fostering the implementation of EBPs in addiction services organizations.

References

A53
Adapting contingency management to link and retain HIV-infected transgender women of color in HIV care
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Addiction Science & Clinical Practice 2015, 10(Suppl 1):A53

Background: HIV prevalence among transgender women is estimated to be 50 times greater than that of nontransgender adults, and yet HIV-positive transgender women exhibit low rates of linkage to and retention in HIV primary care, trends which are exacerbated among substance-using and minority transgender women. Transgender women experience a number of psychosocial challenges specific to their gender identification, including discrimination, stigma, prejudice, stigmatization, and social/economic marginalization. Such issues stand as obstacles to engagement and retention in medical care, substance abuse treatment, and mental health and social services. Transgender women report discrimination and/or blatant verbal abuse at standard health-care facilities. In response to this health disparity, The Alexis Project combines an innovative application of Contingency Management (CM), in conjunction with Peer Health Navigation (PHN), to improve linkage to and retention in HIV primary care, and achieve viral load suppression among HIV-infected transgender women of color in Los Angeles County.

Methods: Between February 2014 and February 2016, the study will enroll 140 HIV-infected transgender women of color who have either: 1) never been in HIV care; 2) have dropped out of HIV care; or 3) are nonadherent to current HIV medications. Data collection began in February 2014; current enrollment is N = 34. During the course of the 18-month intervention, participants can earn CM rewards for confirmed linkage to HIV primary care (i.e., first HIV care appointment), retention in HIV care (i.e., quarterly HIV care appointments), and reaching HIV milestones (i.e., fill antiretroviral [ART] medication prescription, medication adherence as confirmed by log reductions; HIV viral load suppression). If a participant attends all of her HIV care visits and reaches each verified HIV milestone, she can earn $500 in CM rewards over the 18-month intervention.

Results: To date, most participants self-identified as African American/ black (47.1%), Hispanic/Latino (32.4%), or multi/other (17.6%), and the mean participant age was 35.4 (SD = 7.6). Less than half of the participants graduated from high school (44.1%), half reported current homelessness (50%), and slightly over half reported a prior AIDS diagnosis (52.4%). Most reported using Medicare/Medicaid/other public insurance (79.4.1%), and/or attending a community or county clinic to receive health care (50%), and just over one-third reported receiving HIV primary care in the previous 6 months (38.1%). In the past 6 months, 47.1 percent reported using methamphetamine, 27.3 percent reported ever using an amphetamine, 25 percent reported using cocaine, and lifetime injection drug use was 17.7 percent. Slightly under half (42.9%) reported having ever been on ART. To date, 66.7 percent of the participants have been linked into HIV care (i.e., attended their first HIV care appointment), 41.2 percent have received their initial laboratory results and filled their ART prescription. The mean enrollment-to-linkage time has been 22.4 days (SD = 31.4; range = 0–148 days).

Conclusions: Preliminary data indicate that CM, in combination with PHN, will be effective in linking HIV-infected transgender women of color into HIV primary care. Longitudinal data of retention in care and ART medication adherence will provide further indication of whether this novel application of CM can produce viral load suppression and improve the health outcomes of HIV-infected transgender women of color.

A54
The Vivitrol pilot program (VPP): initial quantitative findings from an extended-release naltrexone study
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Background: In 2010, the FDA approved the use of extended-release injectable naltrexone (Vivitrol®) for the treatment of opioid dependence. Preliminary evidence from prior studies indicates that monthly injections of Vivitrol are effective in treating opioid dependence after initial detoxification. This longitudinal exploratory study measures demographics, medication adherence, sobriety (urinalysis), utilization of care, and mental and emotional states in patients who were treated for opioid dependence with injectable naltrexone at an addictions stabilization center.

Materials and methods: Participants involved in the VPP completed surveys upon intake and before and after each monthly injection. Participants included patients who completed detoxification and initiated injectable naltrexone treatment (n = 71) compared to patients who dropped out of the protocol against medical advice (AMA) (n = 73). Data were analyzed using STATA (v12); Pearson’s chi-square and Fisher’s exact tests for categorical variables; and t-tests for continuous variables.

Results: Quantitative results indicate that more patients who completed detoxification and received at least the first injection had previous medication-assisted treatments (MAT) program experience compared to patients who left AMA (72% vs. 58%). Participants with prior knowledge of injectable naltrexone were more likely to complete detoxification and receive an injection compared to treatment-naïve patients (61.19% vs. 45.07%). Patients were more likely to engage in group sessions with each injection (first injection 33%; second 82%) Between the first and second injections, the percentage of participants receiving emergency care decreased (35.29% vs. 27.91%).

Conclusions: The findings from this study indicate that previous knowledge of extended-release naltrexone and prior MAT experience may influence the initiation and commitment to use of this MAT. Patients who remained in the program engaged more actively in group sessions, had higher senses of control over their drug use, and had lower rates of utilization for urgent care.

A55
WaySafe: improving decisionmaking around health risk behaviors for prisoners transitioning back to the community
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Many individuals enter the U.S. prison system with a history of high-risk drug and sexual practices, which are two primary contributors to the high rates of HIV and hepatitis cases among this population. As these individuals return to the community, they are likely to continue high-risk behaviors, making it critical that decisionmaking programs designed to reduce risky behaviors be instituted during incarceration close to their release. Prior research on Texas Christian University (TCU) Mapping-Enhanced Counseling (included in the National Registry of Evidence-based Programs and Practices as an evidence-based practice) has identified its utility for improving decisionmaking, communication, problem exploration, and personal planning through the use of graphical representations designed to help clients “see” the links and relationships among thoughts, ideas, feelings, and behaviors. It serves as an important tool for helping move traditional, public health-focused educational
efforts toward a more comprehensive approach that addresses the challenges of personal decisionmaking around sex and drug use behaviors. The TCU Disease Risk Reduction (DRR-1) project developed and tested an intervention, WaySafe, designed to increase positive decisionmaking skills among offenders for healthy living, including skills for reducing disease risk behaviors. WaySafe uses TCU Mapping-Enhanced Counseling to focus on the cognitive aspects of risky sexual and drug use behaviors during re-entry to improve problem recognition, commitment to change, and strategies for avoiding behavioral risks of infections. WaySafe includes six 1-hour, highly interactive sessions to increase motivation and planning. A total of 1398 incarcerated offenders from eight different correctional facilities in two states participated in the study during the last phase of their in-prison substance abuse treatment prior to transition back to the community. All participating offenders completed baseline surveys and then were randomly assigned to the WaySafe intervention or treatment as usual (TAU). At the completion of the 6-week WaySafe curriculum, participating offenders completed follow-up surveys. Baseline and follow-up surveys included measures of knowledge, confidence, and motivation regarding general HIV information, risky sex and drug use, what to do if exposed, and general life skills. Results supported hypotheses that offenders in WaySafe improved significantly more than TAU clients on knowledge, attitudes, and behavioral intentions to avoid risks. Finding new methods to reinforce the lessons learned in the community is a critical next step, because these changes in attitudes and intentions will degrade over time with the stress and pressures of transitioning from prison to the community. Reinforcing lessons learned while offenders are currently facing risky situations may be helpful.

**Trial registration:** Clinicaltrials.gov NCT01900210.

**Acknowledgements:** Funding for this study was provided by the National Institute on Drug Abuse, National Institutes of Health (NIDA/NIMH) through a grant to Texas Christian University (R01DA025885; Wayne E.K. Lehman, Principal Investigator). Interpretations and conclusions in this paper are entirely those of the authors and do not necessarily reflect the position of NIDA/NIMH or the Department of Health and Human Services.

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**A56**

**Influence of alcoholism and gender on the relationship between personality and drinking motivation**

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**Background:** Alcoholic men and women tend to have differential patterns of associated comorbid psychiatric disorders, distinct cognitive and emotional abnormalities, and varying corresponding structural and functional brain abnormalities. Further, although converging, there remain gender differences in sociocultural norms related to alcohol use behaviors. As such, men and women may be motivated to use and abuse alcohol for different reasons. Previous literature has suggested a role for personality in drinking motives, but this relationship generally has been assessed as a risk factor for adolescents and young adults rather than in an adult population. The goal of the present study was to determine how alcoholism and gender are related to the associations between personality traits and drinking motivation.

**Methods:** Participants included 67 abstinent long-term alcoholic adults (31 women) and 66 age-equivalent nonalcoholic controls (31 women). Personality characteristics were assessed with the 57-item Eysenck Personality Questionnaire-Revised Short Scale, which includes extraversion, neuroticism, psychoticism, and lie scales. To evaluate drinking motivation, participants completed the 20-item self-report Drinking Motives Questionnaire Revised (DMQ-R), an instrument developed for use in adolescents that recently has been validated for adults. The DMQ-R assesses frequency of motives for drinking alcohol falling into the categories of enhancement, social, conformity, and coping.

**Results:** Both alcoholic men and women scored higher than their respective same-sex controls on the personality trait of neuroticism, while controls of both genders scored higher than alcoholics on the lie scale. Alcoholic women additionally scored higher than control women on psychoticism. Women scored higher than men on neuroticism, particularly among alcoholics, and men scored higher than women on psychoticism, particularly among nonalcoholics. Data are available in terms of length/coverage and administration options, including clinician versus self-administration. In Ontario, Canada, we have pilot-tested an assessment tool designed for clinician administration (the GAIN-Q3-MI) with the aim being to replace a suite of tools suitable for self-completion. Feedback from the agencies involved in the pilot testing raised concerns about the impact on agency waiting lists if the treatment network was to move to a clinician-administered option. The present project was a small-scale experiment of face-to-face versus self-administration of the GAIN tool, intended to assess differences in data quality and completeness, staff feedback on pros and cons, and client feedback on acceptability of the alternative methods of administration.

**Methods:** Thirty-eight eligible adult clients presenting at a community addiction agency for assessment and treatment were randomly assigned to either self-complete the GAIN-Q3 MI on a laptop (n = 19) or have a clinician administer the GAIN-Q3 MI (n = 19). Clients were then asked to complete a survey on their assessment experience. The final sample for analysis was 35 participants; 18 self-administered and 17 clinician-administered. Data were analyzed using a self-generated validity report, which summarizes data inconsistencies identified during the test administration, and time taken to complete the assessment were collected.

**Results:** There was a small statistically significant difference between groups in errors identified—the self-administered \( \bar{x} = 3.61 \) (SD = 2.30) and the clinician-administered \( \bar{x} = 2.21 \) (SD = 1.58). These differences between
groups were particularly salient in the risk behaviors domain ($t(35) = -2.77$; $p = .009$). No significant difference was found between groups in terms of completion time ($t(34) = -1.88; p = 0.07$). The majority of clients in each group found their method of administration acceptable (82.4% of self-administered; 87.5% of clinician-administered). Interestingly, a client with hearing impairment commented positively on the self-administered version since an interpreter was not needed. Feedback from staff was positive on the self-administration option.

**Conclusions:** The current study shows that the self-administration option provides an effective means for clients to self-complete the GAIN-Q3 MI with the use of technology. To facilitate the process of self-administration, it is recommended that a separate self-administered version of the GAIN-Q3 MI be produced and clinician support provided to facilitate interpretation when needed, especially for reporting of risk behaviors.

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**A58 Estimating capacity requirements for substance use treatment systems: a population-based approach**

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**Background:** Treatment system planning and resource allocation is hampered by the lack of systems-level data and planning frameworks. We developed and pilot-tested a needs-based planning model for substance use services and supports that aligns with the estimated needs of the population of local health regions, takes a broad systems approach beyond the specialized sector, and yields estimates of required treatment capacities for service categories along the continuum of care.

**Method:** Using national population survey data, we estimated, for 94 regional planning areas in Canada, the number of people in need of substance use treatment within a given year, based on five ‘tiers’ of problem severity. We then estimated the probable help-seeking population for each level of severity, based on a synthesis of the literature. Working with a national expert consensus panel, we estimated the optimal trajectory of clients across several defined categories of treatment services organized by level of care. Integrating steps 1–3 yielded the number of people to plan for in each service setting. We piloted the model in nine Canadian jurisdictions, conducting gap analyses that compared the projected and actual service utilization, and supplemented by stakeholder feedback and local indicators of need, such as wait lists and referral data.

**Results:** The model development process and gap analyses at the nine pilot sites yielded important results for local planners, but with national implications. Results indicated that the capacity of moderate-intensity services is adequate in many regions, but that larger gaps exist in low-threshold services (e.g., home-based/mobile withdrawal management) and high-intensity services (e.g., medical inpatient services for high-complexity cases. These results and their implications were validated by stakeholders in the pilot sites.

**Conclusions:** The needs-based planning model appears to have value in identifying local gaps in services, but regional context must be taken into account when applying the model to local jurisdictions. The piloting process highlighted a national need for systematic screening and brief intervention processes in the nonspecialized sector to improve early identification and referral of clients. We anticipate that the model will serve as a valuable tool for system planners to use in discussions and decisions about funding and resource allocation. Next steps include model adjustments using more precise regional data, developing a separate component for opiate substitution, a youth version, and incorporating the model into a larger needs assessment process. Comparable work is underway in other countries (e.g., Australia, Brazil, UK), providing opportunities for international knowledge exchange.

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**A59 Gender dimorphism of white matter integrity assessed by diffusion tensor magnetic resonance imaging in abstinent alcoholic men and women**

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**Background:** Alcoholism is a debilitating disorder associated with widespread cognitive and neurological abnormalities. However, there is limited scientific literature evaluating gender-specific similarities and differences in microstructural white matter pathology associated with alcoholism. In our prior work, we used diffusion tensor magnetic resonance imaging to examine the integrity of white matter fiber tracts in the brains of abstinent alcoholic (ALC) men compared with nonalcoholic (NC) men. We found that ALC men had decreased fractional anisotropy (FA) within white matter fiber tracts connecting to frontal and limbic networks, primarily of the right hemisphere (Harris et al., 2008). In the current project, we sought to confirm our prior findings in abstinent ALC men and, additionally, examine whether different white matter abnormalities were present in abstinent ALC women.

**Methods:** As determined by our manual inspection, 60-direction high-quality diffusion tensor imaging images were acquired from 30 abstinent (at least 4 weeks) ALC participants (21 women) and 25 NC controls (17 women). Tract-based spatial statistics tools included in FSL 5.0 were used to analyze a tensor model that yielded regional FA values for each participant. To examine the effects of gender, we built a 2 X 2 ANOVA design with three planned comparisons of primary interest: ALC group-by-gender interaction, ALC women versus NC women, and ALC men versus NC men.

**Results:** We observed FA deficits in ALC men relative to NC men, with a similar effect size and variability as observed in our prior study. In contrast, ALC women displayed strikingly greater FA values compared to NC women in widespread white matter regions, including most principal long-association fiber tracts. Also, they had greater FA for local white matter architecture in the dorsolateral and ventral prefrontal regions, as well as the sublenticular extended amygdala. When controlling for multiple comparisons, the higher FA observed in ALC women remained significant. For many regions, group-by-gender interaction effects were observed. However, likely due to the small sample sizes for men, the interaction effects did not survive threshold-free cluster enhancement, the correction procedure for multiple comparisons used in these analyses.

**Conclusions:** These results suggest antithetical gender abnormalities in white matter tracts of ALC brains. Whereas abstinent ALC men displayed deficits consistent with our prior study, our new findings for abstinent ALC women demonstrated increased FA values. These distinct patterns of white matter abnormalities point toward a differential underlying neural basis for gender-specific propensity and/or sequelae to long-term alcoholism, and suggest implications for further investigation of possible gender-specific approaches to prevention and treatment.

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**Reference**

Examining factors associated with treatment completion in a community-based program for individuals with criminal justice involvement

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Background: Drug court provides community-based treatment to individuals with substance abuse problems involved in the criminal justice system. The program offers comprehensive treatment as an alternative to incarceration.

Past research has suggested there are sociodemographic and other personal characteristics that may impact an individual’s success in this type of program. The purpose of the current study is to examine factors associated with treatment completion among a random sample of program participants.

Methods: A stratified random sample (n = 534) was selected from the total participants in Kentucky Drug Courts (KDC; N = 4881) from July 1, 2006, to January 1, 2011. The stratification was utilized to ensure participants were selected from all KDC sites, proportionate to the percentage the site represented of the total KDC population. Data utilized for these analyses were gathered from: the baseline assessment at program entry (a modified version of the Addiction Severity Index (ASI); [1]) and the KDC Management Information System, which contains comprehensive information on services and activities during program participation. The majority of the sample was male (60.3%) and, on average, about 30 years old (mean = 29.5; SD = 8.7).

Results: Overall, of the 534 individuals selected as part of the stratified random sample, 36.3 percent were program graduates (n = 194). Enter binary logistic regression was utilized to examine factors associated with program completion. There were several variables positively associated with program completion including: increased age (p < .001, reporting race as Caucasian (p = .015), being single/never married (p = .004), no past history of alcohol/drug treatment (p = .019), not reporting a pension for psychiatric disability (p = .007), no referrals to short-term residential treatment (p = .033), and not having any programmatic sanctions (p = .002). There were several variables negatively associated with program completion including: having less than a high school diploma (p = .038), being unemployed (p = .011), no referrals to outpatient substance abuse treatment (p < .001), and number of positive drug tests (p = .019).

Conclusions: Understanding factors associated with program completion is important for multiple levels of programming. First, identifying characteristics of individuals most associated with program graduation can help with targeting screening and program assessment. Further, identifying characteristics of individuals most associated with program noncompliance can help with identifying individuals most at risk within the program to develop appropriate treatment and service planning.

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Reference

A61 Client involvement in a web-based intervention targeting substance abuse treatment in the criminal justice system

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Background: Although substance use is common among people in the U.S. criminal justice system, only a minority of probationers actually initiate treatment.

Methods: This presentation discusses preliminary data from a randomized controlled trial that is testing the use of a two-session, web-based intervention and an in-person counselor-driven intervention to increase motivation for substance abuse treatment among people on probation.

Results: This study uses data from the first 84 clients who completed the web-based program. The data provided from this study covers probationer involvement with the MAPIT intervention in relation to early goal planning and electronic reminder selection on positive 2-month outcomes. In terms of early goal planning, clients were most likely to select goals such as “Make a list of things I could do to stay sober” (62%); “Write down the date and time of my first PO visit” (52%); and “Get a binder to keep my probation documents in” (50%). In terms of reminder preference, 51 percent wanted to receive text or email reminders about their goals (31% requested text; 20% requested email). Most clients wanted reminders early in the week, and in the morning. Women, low/moderate risk, and older clients (> 35 years old) were more likely to ask for reminders. Those who selected to receive email reminders selected the greatest number of goals (M = 5.3) compared to those who chose text (M = 4.1) or no reminder (M = 3.0), F(2, p = .004). In terms of positive 2-month outcomes, probationers in the email reminder group were significantly more likely to be abstinent and were significantly more likely to initiate treatment at follow-up (t4 = 6.25, df = 2, p < .05 and t5 = 6.51, df = 2, p < .05, respectively), compared to the text reminder and no reminder groups. Early signs of non-responding were indicated by participants choosing the minimum number of goals (2), not selecting to receive electronic reminders, and not complying any goals by visit two, and were indicative of poorer outcomes.

Conclusion: Probation offenders have a variety of reasons for wanting to finish probation and complete treatment. Clients are able to identify specific goals for the next month, and most clients want to be reminded about those goals. This information can assist probation agents in helping clients to identify ways to be more deliberate in achieving early probation goals.

Trial registration: NCT01891656.

A62 Adolescent SBIRT implementation in pediatric primary care: results from a randomized trial in an integrated health-care delivery system

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Background: Substance misuse by adolescents is associated with significant mortality and morbidity [1-9]. In spite of growing evidence on the effectiveness of Screening, Brief Intervention and Referral to Treatment (SBIRT) for adolescents [10-25], it has not been widely implemented in pediatric health-care settings. We describe implementation findings from a trial of different modalities of SBIRT for adolescents during primary care well-visits.

Materials and methods: We randomized pediatricians (N = 52) from a general pediatrics clinic in an integrated health-care delivery system to three study arms: a “PCP” arm, where pediatricians were trained to deliver SBIRT; a “BHC” arm, where providers referred adolescents who endorsed alcohol or drug (AOD) use or mood symptoms to a behavioral health clinician for SBIRT; and a usual care (UC) arm, where providers had access to assessment tools in the electronic health record (EHR), and referral resources, but were not trained in SBIRT. We wanted to determine if the initial screening, problem identification, brief intervention, and referral to treatment rates. Brief interventions could focus on alcohol and other drug (AOD) use, mental health (MH), or both problems.

Results: During the study period there were 8981 well visits; 73 percent of these received initial screening. Initial screening rates were significantly higher in both intervention arms, compared to the UC arm (p < .05).
A higher percentage of patients endorsed mood symptoms in the PCP arm (16.4%, BHC = 12.6%, UC = 13.7%; p < .001); endorsement of AOD symptoms did not significantly differ across arms. Approximately 30 percent of teens in each arm were candidates for further assessment, having endorsed at least one of the five AOD or mood risk behaviors (e.g.). The percentage of patients endorsing any mood symptoms, who were further assessed per the established SBIRT protocol, was significantly higher in the BHC arm compared to the PCP arm (p < .001); further assessment per the protocol among those with any AOD symptoms was significantly higher in the PCP arm (p < .001). Among those eligible, 25.8 percent in the BHC arm, 16.5 percent in the PCP arm, and 1.8 percent in the UC arm received a BI (p < .001). The percentage of BIs containing any AOD content was significantly higher in the PCP arm compared to the BHC arm (92.6% vs. 59.1%), and the BHC arm delivered more BIs with any MH content (81.8% vs. 10.3%), both p < .001.

Conclusions: The two intervention arms demonstrated better implementation of different SBIRT components. Findings illustrate challenges to addressing adolescent behavioral health needs inherent in the different models.

References
A64
Primary care provider experience and social support among homeless-experienced persons with tri-morbidity
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Background: Persons living with mental illness, substance use disorder, and medical conditions, or “tri-morbidity,” have complex health needs. Tri-morbidity may be common among those who are homeless, and who face considerable obstacles to obtaining the high-quality, patient-centered health care and strong social support they need.

Measures: Tri-morbidity was operationalized as meeting the following criteria: 1) probable mental illness or major psychiatric distress, based on reporting a diagnosis of post-traumatic stress disorder or schizophrenia, having ever taken psychiatric medication for a significant period of time, or a score of 3+ on the Colorado Symptom Index (range: 5–70) [1]; 2) lifetime moderate- or high-risk alcohol or illicit drug use, as measured using the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) v. 3 [2]; and 3) reporting at least 1 of 14 physician-diagnosed chronic medical conditions.

Primary care experience was measured using the Primary Care Quality-Homeless (PCQ-H) tool (range: 1–4) [3]. Social support was measured using the “strong ties” scale (range: 3–15) [4], which queries the degree to which persons are bothered by not having a close companion, enough friendships, or people to whom they feel close.

Methods: Patients (N = 601) from five geographically diverse primary care sites (four from the Department of Veterans Affairs [VA] and one health care for homeless program) were surveyed. Pearson’s chi-square, correlations, and t-tests assessed bivariate relationships. Multiple linear regression tested whether tri-morbidity predicted lower social support, compared to those without tri-morbidity, controlling for characteristics associated with strong ties.

Results: Tri-morbidity was present in 39 percent of this sample of primary care-engaged, homeless, and formerly homeless persons (Table 1). Associated characteristics are shown in Table 2. Primary care experience was positive overall, as well as on all four subscales, and did not differ for persons with tri-morbidity (all p > .15). In the multiple regression model, persons with tri-morbidity had lower levels of social support (about 1.2 points on the strong ties scale; p < .0001) than those without tri-morbidity, controlling for financial hardship, minority, employment, and housing statuses; PCQ-H score; and having a live-in partner.

Conclusions: Tri-morbidity was common in this sample of primary care-engaged formerly and currently homeless persons. Despite their increased complexity, the patient-reported primary care experience was not worse in the presence of tri-morbidity. Their lower social support, even compared to other homeless-experienced patients, might be relevant for primary care providers’ treatment plans.

Acknowledgments: This research was supported by the VA Veterans Health Administration, Health Services Research & Development Branch Award (IAR A07-069-2) and National Institute on Drug Abuse (NIDA) T32 Award (DA01035). The content is solely the responsibility of the authors and does not necessarily represent the official views of NIDA, the National Institutes of Health, or the VA.

References

Table 1 (abstract A64) Tri-morbidity among Primary Care-Engaged Formerly and Currently Homeless Persons (N = 601)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probable mental illness or major psychiatric distress</td>
<td>428</td>
<td>71</td>
</tr>
<tr>
<td>Lifetime moderate- or high-risk alcohol or illicit drug use</td>
<td>357</td>
<td>59</td>
</tr>
<tr>
<td>At least 1 chronic medical condition</td>
<td>537</td>
<td>89</td>
</tr>
<tr>
<td>Tri-Morbidity (All of the above)</td>
<td>233</td>
<td>39</td>
</tr>
</tbody>
</table>

Table 2 (abstract A64) Bivariate Comparisons of Characteristics by Tri-morbid Status (% and Means) (N = 601)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Tri-morbid</th>
<th>Not Tri-Morbid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Care Experience and Social Support</td>
<td>3.13</td>
<td>3.16</td>
</tr>
<tr>
<td>Social support (“strong ties” scale mean)</td>
<td>9.16</td>
<td>10.64*</td>
</tr>
<tr>
<td>Live-in partner (%)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Socioeconomic Status (%)</td>
<td>63</td>
<td>70</td>
</tr>
<tr>
<td>Housed</td>
<td>54</td>
<td>68*</td>
</tr>
<tr>
<td>Working full- or part-time</td>
<td>13</td>
<td>22*</td>
</tr>
<tr>
<td>Hard to pay for basics</td>
<td>75</td>
<td>64*</td>
</tr>
<tr>
<td>Patient at VA Primary Care Site (%)</td>
<td>63</td>
<td>70</td>
</tr>
<tr>
<td>Demographics</td>
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<tr>
<td>Gender (% male)</td>
<td>84</td>
<td>86</td>
</tr>
<tr>
<td>Minority (% non-white)</td>
<td>70</td>
<td>69</td>
</tr>
<tr>
<td>Average age</td>
<td>51.5</td>
<td>54.1*</td>
</tr>
</tbody>
</table>

* p < .05

and does not necessarily represent the official views of NIDA, the National Institutes of Health, or the VA.

A65
Assessment and staff perceptions of mental health and substance use disorders integration in primary care
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Background: Due to health-care reform, the integration of behavioral health (substance use disorder and mental health) services into primary care settings has taken on increased urgency. Project Care is an innovative county-funded integration initiative in Kern County, California, which uses a screening, brief intervention, and referral to treatment (SBIRT) model to build capacity for behavioral health care in two federally qualified health centers and one county medical center’s outpatient clinic. Implementation strategies included funding to implement SBIRT reimbursement for the provision of two services (e.g., physical and mental health) in the same day, monthly provider meetings, trainings, technical assistance, and feedback in the form of evaluation reports to participating sites. As part of the program, assessments were conducted to measure integration progress.

Methods: Repeated assessments of integration were conducted using the Dual Diagnosis Capability in Health Care Settings index (DDCHCS), which is a standardized organizational-level measure comprised of seven dimensions (e.g., program structure, clinical process—assessment, training), as well as surveys measuring staff perceptions of integration. Both types of assessments included baseline and yearly follow-ups at nine participating centers.
Significant improvements in participating organizations’ DDCHCS overall mean scores were observed over time (p < .0001) after accounting for differences in organization, with the greatest change occurring between the baseline and first follow-up assessments. Similarly, average staff ratings of medical staff’s effectiveness with behavioral health, communication between medical and behavioral health staff, and helpfulness of behavioral health services all showed significant increases (p < .05) from baseline to the first and second follow-up assessments.

Conclusions: Most of the improvement in both the DDCHCS scores and staff survey ratings was observed between the baseline and first follow-up assessments. Overall, improvements shown at the first follow-up were maintained at the second follow-up. Results indicate that organizational capacity to deliver integrated services and staff satisfaction with integrated behavioral health care increased over time, and suggest that integration is feasible and acceptable.

Acknowledgements: This study was supported by the California Department of Health Care Services (DHCS, D. Urrada, PI) and Kern County Medical Health (KCMH; R. Rawson, PI). Special thanks to the Project Care participants. The opinions, findings, and conclusions stated herein are those of the authors and not necessarily those of the DHCS, KCMH, or UCLA.

Client involvement in motivational interviewing sessions targeting substance abuse treatment in the criminal justice system
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Background: Motivational interviewing (MI) is a counseling technique used to elicit change by exploring an individual’s desire and commitment to making changes. In this study, probation clients are randomized to a two-session MI intervention occurring approximately 3–4 weeks apart. The first session primarily focuses on building motivation to change substance use, engage in treatment, and make other changes to improve probation outcomes; the second session focuses on goal setting and social support.

Methods: This paper examines responses from 96 clients who completed the first counselor-driven MI session. Researchers extracted client reasons associated with commitment to probation and treatment. Analyses matched the clients’ responses to the MI session with quantitative data on demographics, criminal justice risk factors, and criminal history.
incarceration and offering potential relief to courts and better outcomes for offenders) with linkages to health care has the potential to reduce costs by addressing the underlying physical, mental, and behavioral health issues keeping individuals in the justice system.

We describe a diversion pilot program and our observations thus far. In partnership with Brown University and The Center for Prisoner Health and Human Rights, Justice Assistance, a nonprofit organization in Cranston, Rhode Island, received support from the Rhode Island General Assembly to develop a program to reduce the Rhode Island awaiting population by linking participants to community-based health care. The pilot program developed, Office of Community Alternatives (OCA), tests an intensive case management model. MAPIT (Motivational Assessment Program to Initiate Treatment) is an Internet-based motivational interviewing program piloted as a component of the OCA program.

Objective and measures: To determine OCA feasibility at the superior court level, we explore: whether clients engage in treatment; levels of support from courts, the offices of the public defender and attorney general; whether clients return to prison; how much time case managers spend with clients; and client satisfaction with MAPIT.

Observations: As of October 1, 2014, 25 individuals were enrolled in the OCA. Twenty-five clients completed a substance use assessment; 13 completed a mental health assessment; 10 completed a physical health assessment; 22 received treatment, and 24 began treatment. Nine individuals were terminated from the OCA due to noncompliance. Eight of those terminated returned to the adult correctional institute with new charges, while one is out with a bench warrant. Three clients completed the OCA program. None of those who have completed the program have recidivated.

Given the unprecedented collaborations in support of this program, there has been a high level of scrutiny over the referral process. This has significantly slowed enrollment. Recent discussions make us hopeful that in the future we can establish strict eligibility criteria.

Next steps: We hope to conduct qualitative interviews with clients and stakeholders, and begin evaluating impacts of OCA and MAPIT.

A69

Defining quality indicators for practices, instruments, and programs across the JJ-TRIALS behavioral health services cascade

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In order to address JJ-TRIALS goals of: a) improving behavioral health services for youth with substance use problems; and b) advancing the investigation of implementation efforts in the field of behavioral health, the JJ-TRIALS Workgroup on Evidence-Based Practices (EPA) was first charged with defining quality indicators for practices and programs. We limited that effort to programs, practices, and instruments relevant to the steps in the Behavioral Services Cascade (Screening, Referral and Linkage, Assessment, Prevention and Psychosocial Treatment) for five identified clinical problem areas (Substance use disorder, ADHD, Trauma exposure, HIV risk). Problem areas were selected as those of moderate prevalence among adolescents in community justice systems with problem substance use. Quality indicators were consistent with the AACAP Practice Parameters Clinical Standard, as reflecting either “rigorous empirical evidence” or “overwhelming clinical consensus” (American Academy of Child and Adolescent Psychiatry, 2013). In a series of directed literature reviews, we catalogued evidence-based programs and instruments addressing these problem areas that had been identified as most strongly supported by existing systematic reviews (e.g., SAMHSA, 2011) and then categorized them into tiers, based on their applicability for JJ-TRIALS efforts (e.g., number of TRIALS problem areas addressed, administration format, delivery setting, instrument type). These reviews are psychometrically sound screening instruments (3 tiers), 16 sound assessment instruments (4 tiers), 43 EB prevention programs (3 tiers), and 39 EB treatment programs (3 tiers). While the evidence base regarding programs that focus on cross-system linkage (e.g., from screening in a probation setting, with a subsequent referral to a behavioral health provider) is less established, EPA was able to designate three tiers of such programs, defined both by their soundness and their applicability to juvenile justice community settings. As a second set of quality indicators, we considered core content components (that may cut across particular instruments or programs). For assessment, these included eight elements essential for clinical treatment planning for adolescents (e.g., family relationships, readiness for change; American Society of Addiction Medicine, 2013). For treatment programs, these included treatment modalities identified as effectively addressing one or another of the TRIALS problem areas (e.g., CBT; Chorpita, et al., 2011). A final quality indicator for assessment and treatment considered procedural elements (that relate to how an instrument or program is used by a service provider), such as manualization, staff training, and fidelity monitoring (e.g., Brannigan, 2004; Howell & Lipsey, 2012). EPA workgroup products will be incorporated into future JJ-TRIALS training efforts: they will be used to generate menus of high-quality instrument and program options to help juvenile justice partners and the behavioral health agencies with which they collaborate to set implementation goals for participation in JJ-TRIALS.

Acknowledgements: The authors would like to acknowledge the contributions of the JJ-TRIALS Existing Practices Assessment Workgroup efforts in defining quality indicators for practices and programs. Funding was supported by the National Institute on Drug Abuse.

A70

Offender assessment, case planning, and referral to community-based treatment: effects of a structured process improvement initiative

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In order to address the JJ-TRIALS goals of a) improving behavioral health services for youth with substance use problems; and b) advancing the investigation of implementation efforts in the field of behavioral health, the JJ-TRIALS Workgroup on Evidence-Based Practices (EPA) was first charged with defining quality indicators for practices and programs. We limited that effort to programs, practices, and instruments relevant to the steps in the Behavioral Services Cascade (Screening, Referral and Linkage, Assessment, Prevention and Psychosocial Treatment) for five identified clinical problem areas (Substance use disorder, ADHD, Trauma exposure, HIV risk). Problem areas were selected as those of moderate prevalence among adolescents in community justice systems with problem substance use. Quality indicators were consistent with the AACAP Practice Parameters Clinical Standard, as reflecting either “rigorous empirical evidence” or “overwhelming clinical consensus” (American Academy of Child and Adolescent Psychiatry, 2013). In a series of directed literature reviews, we catalogued evidence-based programs and instruments addressing these problem areas that had been identified as most strongly supported by existing systematic reviews (e.g., SAMHSA, 2011) and then categorized them into tiers, based on their applicability for JJ-TRIALS efforts (e.g., number of TRIALS problem areas addressed, administration format, delivery setting, instrument type). These reviews are psychometrically sound screening instruments (3 tiers), 16 sound assessment instruments (4 tiers), 43 EB prevention programs (3 tiers), and 39 EB treatment programs (3 tiers). While the evidence base regarding programs that focus on cross-system linkage (e.g., from screening in a probation setting, with a subsequent referral to a behavioral health provider) is less established, EPA was able to designate three tiers of such programs, defined both by their soundness and their applicability to juvenile justice community settings. As a second set of quality indicators, we considered core content components (that may cut across particular instruments or programs). For assessment, these included eight elements essential for clinical treatment planning for adolescents (e.g., family relationships, readiness for change; American Society of Addiction Medicine, 2013). For treatment programs, these included treatment modalities identified as effectively addressing one or another of the TRIALS problem areas (e.g., CBT; Chorpita, et al., 2011). A final quality indicator for assessment and treatment considered procedural elements (that relate to how an instrument or program is used by a service provider), such as manualization, staff training, and fidelity monitoring (e.g., Brannigan, 2004; Howell & Lipsey, 2012). EPA workgroup products will be incorporated into future JJ-TRIALS training efforts: they will be used to generate menus of high-quality instrument and program options to help juvenile justice partners and the behavioral health agencies with which they collaborate to set implementation goals for participation in JJ-TRIALS.

Acknowledgements: The authors would like to acknowledge the contributions of the JJ-TRIALS Existing Practices Assessment Workgroup efforts in defining quality indicators for practices and programs. Funding was supported by the National Institute on Drug Abuse.

Background: CJDATS-2 (Criminal Justice Drug Abuse Treatment Systems), a 5-year multisite national research collaborative funded by the National Institute on Drug Abuse (NIDA), targeted implementation of evidence-based approaches for assessing and treating drug abuse within criminal justice settings. The Organizational Process Improvement Intervention, one of the major projects within the collaborative, was an intervention designed to improve the assessment of prisoners, the development of case plans for community services, the transfer of this information to community treatment agencies, and the use of the case plans by community treatment agencies that provide the recommended services. A local change team (LCT) consisting of criminal justice and community treatment staff and a facilitator conducted an organizational needs assessment and then identified and implemented targeted process improvement goals over an 18 to 24-month period.

Methods: A Staff Perceptions of Assessment survey was administered to correctional and treatment personnel (n = 1509) at 21 sites randomly assigned to an early (experimental) or delayed (control) start condition. We hypothesized that the experimental sites would show greater improvement in staff perceptions of assessment practices than control sites (H1), and that any observed experimental effects would be sustained during a 3-month follow-up period (H2). Hierarchical linear models with repeated measures were used to examine impacts on four dimensions of assessment: measurement and instrumentation (MI), integration with the case plan (ICP), conveyance and utility (CU), and service activation and delivery (SAD). Organizational characteristics were examined as covariates to control for differences across the 21 research sites. Two planned contrasts were used to test the intervention and sustainability hypotheses. As opposed to omnibus F-tests for interaction terms, planned contrasts isolate the appropriate study condition x interval mean comparisons and provide more statistically powerful tests. Sequential Bonferroni comparisons adjusted for inflated type I error rates due to multiple comparisons. Semistructured interviews were conducted with members of the LCT and agency staff (n = 213), who were potentially affected by changes to the assessment process.

Results: Significant intervention and sustainability effects were found for MI, ICP, and SAD. Contrary to expectations, no significant effects were found for CU. Qualitative analyses suggested that the ability of the LCT to impact intra-agency policy may in part explain the stronger implementation outcomes in the MI and ICP domains. The CU and SAD domains were more
dependent on inter-agency activities, making it more difficult to enact proposed changes.

Conclusions: It is feasible to use implementation strategies to improve evidence-based assessment practices for offenders exiting correctional systems and re-entering the community. Intra-agency assessment activities that were more directly under the control of correctional agencies were implemented more effectively. Activities in domains that required cross-system collaboration were not as readily implemented, although longer follow-up periods might afford detection of stronger effects. Such collaboration may require greater trust and reciprocity between agencies, which takes time to develop. Further efforts to improve interagency collaboration may be a prerequisite for improved conveyance and use of assessment information.

A71 Characterizing opioid use disorder patients who have received medication trials with both buprenorphine and methadone
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Since the approval of buprenorphine for treatment of opioid use disorder (OUD) in 2002, it has become increasingly likely that some individuals with OUD will have been treated with both buprenorphine and methadone at different points in time. However, this emergent group of patients has not been well described. We completed a retrospective cohort study of individuals at the Cincinnati Veterans Administration with treatment episodes for both buprenorphine and methadone and compared this group with those who received treatment with buprenorphine only or methadone only. Between January 1, 2006, and May 1, 2014, 163 veterans had both buprenorphine and methadone treatment episodes for OUD. We extracted information from the local administrative and pharmacy databases to describe these individuals. Individuals with treatment episodes for both medications had significantly higher levels of comorbidity with other substance use disorders (specifically, alcohol, benzodiazepine, cannabis, and cocaine use disorders) as well as mood and anxiety disorders than those who received either buprenorphine or methadone only. They also used a disproportionate amount of urgent and emergency services compared to individuals prescribed either buprenorphine or methadone only (mean of 17.8 billable days versus 11.3 for buprenorphine only and 10.4 for methadone only, p < 0.0001). We conclude that these patients represent a treatment-resistant group that would benefit from earlier identification and more intensive intervention.

A72 Implementation of nasal naloxone across health-care settings: a case report from Ohio
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Drug overdose is now the leading cause of injury death in the United States, surpassing deaths from motor vehicle accidents in 2008 [1]. Naloxone, a short-acting mu opioid receptor antagonist, can reverse an opioid overdose and save a life. [2] Opioid overdose prevention programs (OOPPs) provide education on overdose prevention and some have begun to distribute naloxone. As of June 2010, there were an estimated 188 OOPPs operating in the United States [3]; despite the fact that Ohio has one of the highest overdose fatality rates, there were no OOPPs at that time. The purpose of this study is to: 1) describe overdose prevention education and/or naloxone distribution programs in Ohio across various health-care settings; and 2) identify implementation barriers. A two-page survey was emailed to known Ohio OOPPs and snowball sampling was used to identify other programs. OOPP staff were contacted by phone to confirm their interest in study participation, and 19 of 21 programs completed the survey and are included in this analysis. As of October 2014 these 19 OOPPs were operating in 14 Ohio cities. The primary funding sources were: 1) Ohio Department of Health; 2) Interact for Health (a foundation serving southwest Ohio); and 3) other local public and private agencies. Overall, these programs have distributed 1935 naloxone kits and reported 152 confirmed overdose reversals. There was significant expansion of OOPPs in Ohio after the passage of House Bill 170 in 2014, which removed criminal and civil penalties for clinicians that prescribe naloxone and bystanders that administer naloxone. Identified barriers to OOPPs include: 1) cost in terms of both the provision of naloxone kits and the operational costs associated with prescribing naloxone; 2) stigma of addiction and perceptions of naloxone as a harm reduction strategy that would enable continued drug use; 3) legal/administrative concerns related to possession and distribution of naloxone; and 4) lack of standardized protocols or models that would facilitate operational integration of OOPPs into existing programming. In conclusion, OOPPs have recently expanded significantly in Ohio. Additional research is needed to determine whether this expansion is associated with a decrease in overdose fatalities.

References

A73 A multisite randomized controlled trial of VA integrated and enhanced referral behavioral health models on alcohol misuse in older male veterans
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Background: Despite frequent primary care visits, older veterans may have unmet behavioral health needs regarding alcohol misuse. Identification of alcohol misuse and referral of older veterans seen in primary care to behavioral health care can decrease at-risk drinking and assist in determining effective interventions for older veterans with problem drinking. This study examined the effect of integrated and enhanced referral behavioral health models on alcohol misuse among older veterans.

Methods: This was a secondary analysis of data collected at five Department of Veteran Affairs (VA) Medical Centers as part of the Primary Care Research in Substance Abuse and Mental Health for Elderly study, a multisite randomized controlled trial. The sample included 1222 older male veterans who were randomly assigned to integrated or enhanced referral behavioral health care at VA primary care clinics with 6 to 12-month follow-up. Brief alcohol treatment was provided to at-risk drinkers by behavioral health providers either co-located within primary care clinics (integrated treatment model) or a separate location offering transportation assistance and coordinated care between behavioral health providers and primary care physicians (enhanced referral model). Alcohol misuse included both at-risk drinking for older adults (> 1 drink daily) and problem drinking assessed (problem drinking ≥ 3 affirmative responses). Both behavioral health models required a minimum of one treatment session, with no maximum number of sessions over a 6-month period. After 6 months, attendance at treatment sessions was voluntary.

Results: At baseline, 55.8 percent (n = 438) reported at-risk drinking and of those, 46.1 percent (n = 200) reported problem drinking. At 6 months, 21.1 percent (n = 234) reported at-risk drinking and of those, 41.4 percent (n = 150) reported problem drinking. At 12 months, only 36.3 percent (n = 89)
reported problem drinking. Bivariate analyses revealed no significant differences between behavioral health models in at-risk and problem drinking over time. Generalized linear mixed modeling revealed treatment and time effects were significant for at-risk drinking after controlling for VA site, race, education, employment, and depressive symptoms. Treatment and time effects were significant for problem drinking after controlling for VA site, race, and depressive symptoms. The treatment x time effect was non-significant for at-risk and problem drinking.

Conclusions: Both integrated and enhanced referral behavioral health models were effective in reducing at-risk drinking among older male veterans seen in VA primary care clinics with follow-up over 12 months. However, the integrated model was more effective, and the enhanced model in reducing problem drinking. Screening and brief intervention for alcohol misuse in primary care can be cost effective by reducing service utilization and potentially result in a medical cost offset. Based on primary care protocols, VA health administrators and policymakers should determine which treatment model is best for their patients, providers, and infrastructure. Future research should focus on multiple processes of both behavioral models to determine their effect on alcohol misuse in older veterans.

A74 Perceived need for HIV testing among rural and urban African American cocaine users

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Background: Incidence rates of HIV continue to be disproportionately high among African Americans compared to other races, especially in the South. Although we have some information about testing among African Americans, most surveys do not include homeless, impoverished, or other disenfranchised and therefore hard-to-reach groups, many of whom may be particularly high-risk for HIV infection, and few studies have compared HIV testing among rural and urban African Americans. The purpose of this study, therefore, is to address this gap by systematically examining perceived need for HIV testing among rural as compared to urban African American cocaine users.

Methods: This is a cross-sectional, community-based study of 400 not-in-treatment African American cocaine users residing in selected rural and urban areas of Arkansas. We used respondent-driven sampling methods to fill our sample. Face-to-face computer-assisted interviews were conducted in study offices lasting 1½ – 2 hours. A logistic regression model was used to examine the association between perceived need for HIV testing and rural/urban residence, while controlling for demographic and clinical characteristics. Covariates in the model included: demographics (age, gender, education, health insurance), clinical characteristics (lifet ime drug abuse treatment, lifetime mental health treatment, routine health-care visit in past year, general health status, ever being tested for hepatitis C or gonorrhea, number of times tested for HIV), access factors (ease of access to HIV testing, availability of HIV testing, skepticism towards medical care, stigma for HIV testing) and behavioral risk factors (perceived risk of acquiring HIV, number of sex partners, inconsistent condom use, ever trading sex for foods or drugs).

Results: We did not find significant differences among rural and urban African American cocaine users' perceived need for HIV testing. Female gender, perceived risk for acquiring HIV, stigma, and receipt of testing for other sexually transmitted diseases were each positively and significantly related to perceived need to be tested for HIV for multivariate regression analysis in which all other variables were held constant. Receipt of routine medical care in the past year, being tested for HIV from 3–5 times, and skepticism towards medical care were negatively and significantly related to perceived need for HIV testing. Behavioral risk factors or general health status were not significantly associated with perceived need for HIV testing. Access to testing was not perceived as a significant barrier to testing.

Conclusions: All participants were not-in-treatment, non-injecting drug users, and most reported engaging in risky sex behaviors; however, risky behavior was not associated with perceived need to be tested for HIV. This research underscores the need to reframe HIV prevention programs targeting African American substance users to separate the importance of testing from risky behaviors and to frame testing as taking care of oneself and one's health.

A75 Investigating treatment satisfaction and progress for offenders referred to community-based drug addiction treatment

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Background: The current study used a multilevel modeling technique to examine the influence of client-level factors and counselor-level variance on treatment satisfaction and progress for offenders referred to community-based drug addiction treatment.

Materials and methods: The sample included 90 male participants (64 of which completed follow-up) and seven counselor participants (i.e., four females and three males) from community-based treatment in a Midwestern metropolitan area. Hierarchical linear modeling was conducted to examine the influence of victimization and violence history, psychiatric disorders (i.e., anxiety, depression), social functioning (i.e., social support, self-esteem), drug use severity, and treatment motivation on treatment satisfaction and progress after controlling for counselor-level variances. Hierarchical linear modeling also was employed to test the mediation of treatment satisfaction on the relationship between client-level factors and treatment progress.

Results: Results indicated that higher levels of anxiety and depression were associated with a lower level of treatment satisfaction, and more social support was associated with increased satisfaction. Despite the non-significant relationship between treatment motivation and satisfaction, the influence of treatment motivation on treatment satisfaction was different across counselors. With regard to treatment progress, higher levels of depression predicted a decrease in progress, whereas more social support and treatment motivation were associated with an increased amount of treatment progress. Treatment satisfaction mediated the relationship of depression and social support with treatment progress, whereby a lower level of depression and more social support were associated with a higher level of treatment satisfaction, which in turn predicted a greater amount of client self-reported treatment progress.

Conclusions and implications: The findings collectively underscore the importance of integrated interventions, social support, treatment motivation, and satisfaction on treatment outcome. Clinically, these findings emphasize the importance of: 1) incorporating psychological interventions into substance use treatment plans; 2) providing social support and increasing treatment motivation; and 3) enhancing treatment satisfaction in an effort to improve treatment outcome.

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Cite abstracts in this supplement using the relevant abstract number, e.g.: Yang et al. Investigating treatment satisfaction and progress for offenders referred to community-based drug addiction treatment.