Association of Counselor-Provided SBIRT with Changes in Hospitalizations and Emergency Department Visits

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THE GIST

- Most people with alcohol and drug problems don’t receive needed help
- Through SBIRT (Screening, Brief Intervention, Referral to Treatment) in medical settings, people who need help are more likely to get it
- SBIRT, when conducted by medical staff, is effective for risky alcohol use but has mixed outcomes for alcohol dependence or any level of illicit drug use
- In integrated care, SBIRT is often provided by trained mental health providers; early results show positive outcomes for all types and levels of substance use
- Professional counseling is closely aligned with SBIRT principles; thus, counselor-provided SBIRT may be highly effective, but research hasn’t been done
- SBIRT research focuses on individual changes but should also address outcomes of particular interest to health systems: hospitalizations and ED visits
- This study explores the association of counselor-provided SBIRT with these outcomes
- Cost-benefit analysis may show the economic value of counselor-provided SBIRT for health systems

PUBLIC HEALTH CRISIS: ALCOHOL AND DRUGS

The misuse and abuse of alcohol and illicit drugs are pervasive, costly public health problems in the United States (NIDA, 2018; SAMHSA, 2017a). Despite serious consequences, few people who need treatment for substance use receive it (Grant et al., 2015; Grant et al., 2016). Barriers to treatment-seeking include stigma (Tai & Volkow, 2013) and lack of coordination between medical and mental health providers (Forman, 2016a). The costs to health care systems are substantial, as substance misuse and abuse increases the likelihood of needing expensive medical services such as emergency departments and hospitalizations (Bernardino, Baird, Liu, & Merchant, 2015; Long, et al., 2017).

COUNSELOR-PROVIDED SBIRT: A SOLUTION?

To reduce the treatment gap through early detection, treatment, and referral, substance-related interventions by medical providers are becoming common through the widespread adoption of SBIRT (Agley, et al., 2014). SBIRT by medical providers has demonstrated effectiveness for helping patients of outpatient clinics and emergency departments reduce alcohol misuse (Babor, Del Boca, & Bray, 2017; Jonas, et al., 2012; Schmidt, et al., 2015) but has mixed outcomes for alcohol abuse, illicit drug misuse and abuse, and in inpatient settings (Möge & Watson, 2013; Schmidt, et al., 2015). Higher severity of alcohol and illicit drug use has been associated with worse SBIRT outcomes (Möge & Watson, 2013; SAMHSA, 2013; Schmidt et al., 2015).

Integrated care – medical and mental health care providers in collaborative teams – offers promise for improved outcomes when SBIRT is provided by mental health professionals (Barbosa, et al., 2017; Watkins, et al., 2017). The practice of professional counseling, in particular, seems well-suited for brief interventions and treatment (Babor, Del Boca, & Bray, 2017; CACREP, 2017). Counselor-provided SBIRT may have efficacy for helping people with substance problems other than alcohol misuse. To show effectiveness, outcomes of high value to health systems – hospitalizations and emergency department visits – should be studied (Bray, et al., 2007). Economic analysis of these outcomes will provide important information to health system leaders for making programmatic investment decisions (Drummond, et al., 2015).

COUNSELOR-PROVIDED SBIRT: THREE LITTLE STUDIES

- Program evaluation, n=17 General Medicine hospital inpatients
- 1 in 10 intervention patients readmitted or visited ED with substance abuse present
- 5 of 7 comparison patients readmitted or visited ED with substance abuse present
- Program evaluation, n=50 Trauma, Burns and General Medicine hospital inpatients
- Patients receiving counselor-provided SBIRT had average LOS reductions of 0.6 days
- Predictive modeling with data from randomized controlled trial (n=181) using multinomial logistic regression
- Of 13 variables, with interactions and polynomials, only duration of counseling (total intervention time) predicted reduced alcohol use at 6 months

COUNSELOR-PROVIDED SBIRT: THE BIG STUDY

Research Questions: Is counselor-provided SBIRT in inpatient integrated care settings an effective treatment intervention for reducing hospitalizations and emergency department visits? Are these interventions economically cost-beneficial from a health system perspective?

Setting: large Southeast U.S. health system’s integrated care inpatient units: Trauma, Burns, and General Medicine

Population: ~5,000 adults with known or suspected substance problems identified for counselor-provided SBIRT who received (intervention group) or did not receive (comparison group) SBIRT interventions during 2014 – 2017

Variables: predictor variables interventions, one-year prior hospitalizations and ED visits, substance use type, substance use severity, and inpatient location; outcome variables one-year post hospitalizations and ED visits

Data Analysis: Poisson-family regression equations with frequency counts for hospitalizations and ED visits both with and without ICD substance abuse/dependence/ use coding (one set of equations each); propensity scoring or coarsened exact matching to reduce effects of confounding

Economics: cost-benefit analysis with all-source payments, patient costs, program costs, by type of major payer