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Feasibility of audit methods to study access to substance use treatment

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ABSTRACT

Audit studies represent an emerging method for examining disparities in access to care, like substance use treatment, whereby fake patients (i.e., actors) attempt to procure a service with one or more characteristics isolated across condition. This allows for manipulation of variables, like insurance status, that are normally fixed or impossible to standardize with precision when studying actual patients. This pilot study explored whether these methods were feasible for the examination of community-based substance use treatment access. Masked telephone calls ($n = 48$) were made to providers ($k = 8$) in a single city seeking an appointment. A male and female "patient" made calls in three insurance status conditions: no insurance, state-funded insurance, and private insurance. All other subject characteristics were held constant. Results showed an audit design to be a feasible method for examining disparities in access and demonstrated substantial barriers to voluntary treatment. Implications and future directions are discussed.

1. Introduction

Disparities in access to outpatient primary and specialty care, like substance use treatment, are a serious public health problem and a major contributor to broken continuity of care and overuse of emergency departments nationwide. A wealth of observational and correlational research has shown that access to and quality of substance use care differs across patient demographic characteristics (e.g., Brady & Ashley, 2005; Cheng & Lo, 2010; Mojtabai, Olfson, & Mechanic, 2002; Ojeda & McGuire, 2006; Skinner & Mayer, 2007; Sterling, Weisner, Hinman, & Parthasarathy, 2010). An emerging method for examining these disparities in access is through the use of audit designs (Broderick et al., 2009).

Audit studies, as defined here and in previous publications, are experimental studies using deception where research confederates (i.e., actors) serve as fake patients attempting to procure a good or service with one or more patient characteristic isolated and manipulated (Broderick et al., 2009). These studies are closely related to research using unannounced standardized patients (USPs; e.g., Luck, Peabody, Dresselhaus, Lee, & Glassman, 2000; Rosenhan, 1973; Zabar et al., 2009; for a review, see Siminoff et al., 2011), with the primary difference being that audit studies are conducted from a distance (e.g., telephone, email) and USP studies involve face-to-face contact. While requiring considerable effort, expense, and risk of detection, the audit study approach is innovative and offers some advantages over traditional epidemiological and observational approaches, in that it allows for the direct manipulation of variables that are normally fixed traits or which have been impossible to standardize with precision when studying actual patients, such as addiction severity, patient sex, and insurance status. The current study is the first to investigate the feasibility of incorporating audit methodologies into the study of access to substance use treatment.

The overwhelming majority of studies that examine the influence of patient characteristics on access to treatment, or treatment outcomes in general, rely on observational study designs with complicated and potentially problematic (see Miller & Chapman, 2001) statistical methods to control for extraneous preexisting conditions. This leads to questions of residual confounding and concerns that unknown, unmeasured confounding factors can account for the observed relations. It is likely one reason results from epidemiological and cohort-type studies are so often inconsistent and difficult to replicate (Peng, Dominici, & Zeger, 2006). Audit studies circumvent this issue of control by artificially creating "patients" for whom there are no preexisting differences beyond the experimentally manipulated characteristics. By doing this, researchers can directly infer causal relationships between independent variables and outcomes of interest as they occur in the "real world".

Because deception is a key, the resulting data from audit studies are an uncensored picture of reality that is not sullied by experimenter artifacts, like social desirability, experimenter demand, and outright lying. Audit methods are particularly powerful in assessing how people and systems handle stigmatized conditions or issues for which a strong "fake good" response bias exists (Leite & Cooper, 2010), for example, how providers treat patients of differing sex and insurance status.

Audit studies have been used in sociological research to examine discrimination, whether intentional or unintentional, in the availability

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of housing, credit, and/or employment (Fix & Turner, 1998). For example, in one study, two resumes were sent seeking the same employment, with the only difference being the extent to which the name sounded stereotypically White or African-American (Bertrand & Mullainathan, 2004). Results indicated that resumes with more "White sounding" names received approximately 50% more callbacks than resumes with more "African-American sounding" names. By allowing for the manipulation and isolation of salient demographic characteristics (race/ethnicity), potential confounding explanations for disparities (i.e., experience level, education, strength of references) were eliminated, such that the causal nature of previously observed differences were displayed.

In clinical healthcare research, a small but growing group of studies have been used to examine the availability of appointments for common medical maladies (Medicaid Access Study Group, 1994), follow-up appointments following urgent ambulatory care (Asplin et al., 2005; Vieth & Rhodes, 2008), pediatric specialty care (Bisgaier & Rhodes, 2011), emergency dental care (Bisgaier, Cutts, Edelstein, & Rhodes, 2011), and for depression (Rhodes, Vieth, Kushner, Levy, & Asplin, 2009) based on insurance status. The Medicaid Access Study Group (1994) published a study in which they sought to examine access to appointments by telephone for lower back pain, dysuria, or sore throat across "patients" who were either Medicaid recipients or privately insured. They found that 60% of private practices provided appointments for patients with private insurance within 2 days, but only 26% of these practices provided the same service for Medicaid recipients. Moreover, 63% of private practices specifically stated the reason for denying appointments was that they did not accept Medicaid.

A study published by Asplin et al. (2005) found similar estimates when examining new "patients" following a visit to the emergency department seeking an appointment within in a week for a potentially more urgent complaint (i.e., serious pneumonia, accelerating hypertension, or possible ectopic pregnancy) than discussed in the Medicaid study. However, results remained largely the same, such that 64% of privately insured "patients" obtained an appointment within 1 week, whereas only 34% of Medicaid patients and 25% of uninsured patients who offered to arrange payment were able to obtain one (Asplin et al., 2005). A subsequent secondary analysis of these data (Vieth & Rhodes, 2008) found additional, non-insurance barriers to treatment, including requiring patient to call back later (e.g., voice mail, clinic closed) and other telephone problems (e.g., clinic telephone out of order).

The study by Rhodes et al. (2009) represents the first attempt to use the audit study methodology in the area of mental health. Their study examined access to a mental health appointment within 2 weeks of a hypothetical referral from an emergency department for the treatment of depression. Results of this study illustrated substantial difficulties contacting service providers, as 45% of calls to a mental health clinic went straight to an answering machine (Rhodes et al., 2009), whereas only 8% of calls made to a medical clinic for the physical complaints used in the previous study (Asplin et al., 2005) went to an answering machine. Of those who were able to speak with a receptionist, 67% of privately insured patients were able to schedule an appointment, compared to only 33% of Medicaid recipients. When taking into account calls that went to an answering machine, these success rates dip to 22 and 12%, respectively. Similar estimates were observed in a smaller audit study examining access to pediatric depression (Bisgaier & Rhodes, 2011).

The purpose of the current study is to build upon this emerging literature by utilizing audit methodology to examine differential access to community-based substance abuse treatment. Examining access to substance use treatment differs from previously studied substantive areas in that substance use treatment varies greatly by substance, some providers only treat a subset of abuse disorders (e.g., alcohol only), differing outpatient and inpatient services are often available, additional pre-appointment measures are frequently required (e.g., urine screening), and the legal system is often associated with treatment referrals and mandates (Substance Abuse and Mental Health Services Administration, Office of Applied Studies, 2009). As such, the current study aims to address the important step of establishing the feasibility of using audit methods in this specific area of study.

Given the pilot nature of the proposed study and the above mentioned clinically-related audit studies, we focused exclusively on insurance status and "patient" sex as predictors of access to treatment for heroin addiction. Heroin was chosen in the current study in order to examine treatment access within one of the more salient and addictive illicit drugs of abuse (Nutt, King, Saulsbury, & Blakemore, 2007). Given sufficient feasibility, future studies may seek to examine a host of additional variables that might impact access to substance use treatment using similar methods (e.g., substance used, symptom severity). Results of this study can inform both private and public policy initiatives aimed at improving the continuity and quality of care for all patients, particularly the underserved, across the health care system.

2. Methods

Masked telephone calls (i.e., caller ID blocked) were made to eight treatment providers in the vicinity of a mid-sized city in the Northeastern U.S. Each provider was specifically focused on substance use treatment, with six treatment clinics and two substance abuse hospitals/centers represented. Outpatient services were available from each provider, with inpatient services available from three. Callers always requested outpatient services. Providers were chosen to be locally representative of substance use treatment facilities available to potential patients.

Each provider was called a total of six times over the span of 10 months. The callers posed as current drug abusers seeking an appointment for heroin cessation treatment within 1 week. All calls were made between 10:00 AM and 6:00 PM on weekdays. False European American-sounding names and local/semi-local phone numbers were generated for each call using www.fakenamegenerator.com as suggested by Siminoff et al. (2011), and false addresses were created using street names that did not exist in the area. Names, phone numbers, and addresses were reused if not required in the previous call (e.g., if phone number was not asked for on call X, it would be reused on call x + 1) in order to enhance efficiency. No social security numbers or insurance policy numbers were provided. If this information was required to proceed, callers politely ended the call.

A male and female caller made calls to providers in each of three insurance status conditions: no insurance, state-funded insurance, and private insurance (i.e., Blue Cross Blue Shield), such that the total number of calls made was 48. Two pilot calls were made by each caller to other substance use treatment providers for training purposes. Callers spaced out their calls to each provider, such that there was at least a 10 day gap between calls in order to avoid alerting the providers. Data from the calls were entered directly into Research Electronic Data Capture (REDCap; Harris et al., 2009), and calls were audio taped so the caller could refer back while entering data.

The goal of each of the calls was to confirm availability of an appointment for drug (i.e., heroin) cessation treatment within 1 week. If no appointment was available, callers asked for the reason why. If appointments were available outside of 1 week, callers would ask if there was any way that it could be sooner. If not, callers would ask for the reason why. If an appointment was available, callers confirmed that the appointment was available and that their insurance (or lack thereof) was accepted. They then politely ended the conversation (e.g., "Ok. I need to think about this some more. I'll call back later."). No appointments were scheduled. Callers recorded quantitative results of the call (e.g., appointment availability,