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Clinical Case Discussion: Screening and Brief Intervention for Drug Use in Primary Care

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primary care; drug use; substance use; screening; brief intervention; motivational interviewing

Introduction

This clinical case involves a man with unhealthy alcohol and drug use who presents for an initial visit to primary care with complaints of heartburn and a recent admission for chest pain. Four expert clinicians contribute their thoughts about the case.

Case Description

A 45 year-old man (Mr. M) hospitalized 3 months prior for chest pain (“noncardiac,” MI ruled out) presents to a primary care physician (PCP) with heartburn worse after meals, and not helped by antacids. He denies weight loss, vomiting or bloody stools/melena. He has some trouble falling asleep because of worries about his job and sometimes forgets to pick up his kids from their activities. He is married and has two children (son age 9, daughter 11), and is a manager at an electronics store. His last visit to a PCP was 10 years ago. His father had a heart attack at age 50. Three years ago he was in a motor vehicle crash and had facial lacerations and rib fractures; urine toxicology was positive for cocaine and tetrahydrocannabinol (THC). Physical examination is notable for blood pressure 152/94 and an S4. An electrocardiogram is normal, and the rapid plasma reagin (RPR), thyroid stimulating hormone, vitamin B12 level, liver enzymes, renal function and complete blood count are normal.

Screening

Primary care presents an opportunity to screen for lifestyle habits that may impair health and provide intervention when warranted. A majority of individuals with substance use problems do not recognize their use as problematic. Based upon considerable empirical support for

screening and brief intervention (SBI) for risky alcohol use, and evidence suggesting that SBI for other drugs may be beneficial (Babor & Kadden, 2005; Madras et al., 2009), Mr. M's primary care clinic uses the NIDA-modified Alcohol Smoking and Substance involvement Screening Test (nm-ASSIST) (<http://www.drugabuse.gov/NIDAMED/screening/>). The nm-ASSIST is an adaptation of the World Health Organization (WHO) developed ASSIST (World Health Organization Assist Working Group, 2002), designed for use in primary care settings. The nm-ASSIST is easily scored, and provides recommendations for intervention based upon drug specific scores. It also includes screening information to identify those who may be hazardous/harmful (versus dependent) drinkers. In this clinic, patients complete the nm-ASSIST "pre-screen," which asks about lifetime use of substances, as part of a self-report intake packet, which is reviewed by the office nurse. Positive endorsement of any pre-screen item leads to completion of the rest of the nm-ASSIST as a nurse administered interview during the review of vital signs, allergies, pain symptoms, medications and other preventive services that might be due.

On the pre-screen, Mr. M indicates lifetime use of alcohol, tobacco, marijuana and cocaine. During the interview, Mr. M states he has used marijuana daily and cocaine monthly in the past three months. He also reports heavy drinking episodes on the days when he uses cocaine. He reports quitting tobacco five years ago. On the nm-ASSIST, Mr. M's receives a cannabis use score of 17 and a cocaine use score of 6. These "moderate risk" (4-26) scores, along with Mr. M's episodic heavy drinking prompt recommendation for a brief intervention. Based upon the results of screening, the nurse conducts a brief intervention with Mr. M prior to the doctor's exam.

Brief intervention-treatment framework

As practiced in Mr. M's clinic, brief intervention consists of one 20-30 minute counseling contact with the office nurse, and the option of a follow-up visit or phone call. Following the intervention, the nurse flags the patient's chart so that the PCP is aware prior to seeing the patient that the brief intervention was conducted. The flag consists of a simple checklist indicating: (1) which substances were reviewed; (2) if a change plan was completed; and (3) if a follow-up visit was scheduled. The nurse applies principles of motivational interviewing (Miller & Rollnick, 2002) to establish a collaborative atmosphere in which the patient is encouraged to discuss his/her substance use in the context of this health visit.

The Intervention

Following the administration of the nm-ASSIST, the nurse asks Mr. M if they can spend a few more minutes discussing his substance use and health. Mr. M is initially reluctant to engage in the conversation, and states that he doesn't perceive his substance use as problematic. The nurse reassures Mr. M that the goal of the discussion is for his health care team to get a better sense of how the patient understands the role that substances play in his life, and how substance use is related to his health. The nurse asks Mr. M to review his current health concerns. Mr. M states that he's had difficulty sleeping and lies in bed worrying about his job security. Since his hospital admission three months ago (and his father's MI at a young age), he's also been concerned about his health and sometimes worries about how his family would cope if he did have a serious health condition. He notes that smoking marijuana provides stress relief. The nurse encourages Mr. M to describe other "benefits" of marijuana use. Mr. M, pleasantly surprised at being asked, states that marijuana helps him fall asleep, and that after he smokes, he feels able to put his worries aside for the evening. The nurse then asks Mr. M to discuss the positive aspects of using cocaine. Mr. M notes that he uses only occasionally with his friends, snorting cocaine and drinking beers while watching sports or playing video games.

After discussing these benefits, the nurse asks Mr. M to describe the “downsides to using.” Mr. M states that in the past few months he has experienced some conflict with his wife over his smoking. The nurse asks for elaboration on these events, including emotional consequences of this conflict. Mr. M also states he doesn't want his kids to pick up his “bad habit”. He also notes that since having a car accident three years ago, he no longer drives after spending time drinking and using cocaine with his friends. In addition, Mr. M mentions that he occasionally noticed his heart “racing” after using cocaine, but it doesn't bother him.

The nurse summarizes the pros and cons of marijuana and cocaine use described by Mr. M, and then asks permission to share information about the possible impact of Mr. M's substance use on his health. The nurse is careful to present the feedback as potentially useful information, rather than a prescription for change. The nurse also points out that Mr. M's current episodic heavy alcohol use also places him at increased risk for accidents, such as his past car accident. The nurse highlights associations between substance use and reported health concerns identified by Mr. M, specifically concerns about his memory and cardiac health. During the delivery of this information, the nurse engages the patient and asks for reactions, comments, and thoughts about what is being presented.

When asked what led to him changing his past behavior, Mr. M endorses finances, concern for his children and his wife's concern as the main reasons he cut back on both drinking and other drug use. He says change was “not too hard” at the time because he was busy working and helping his wife take care of their first child in the evening. After summarizing Mr. M's past change efforts, the nurse asks Mr. M for his thoughts about his current use. Mr. M states that he'd like to cut back on his marijuana but doesn't really see the need to change his cocaine use because it is infrequent. He states he comfortable with his current alcohol consumption. Mr. M and the nurse work on developing a change plan. Mr. M decides to reduce his marijuana smoking by engaging in other stress relieving activities, including spending more time with his children and a friend who doesn't use drugs. He identifies his friend Charlie and his wife as people he can enlist to help with this plan. The nurse expresses appreciation to Mr. M for his involvement in the discussion and offers him a follow-up visit if he thinks it would be helpful to him. Mr. M accepts the offer of a follow-up visit in 2 weeks, to review his progress. The nurse also provides Mr. M with brochures summarizing the health information they discussed (impact of smoking, cocaine, marijuana & alcohol use on the body) and a copy of his written plan for change. The nurse informs Mr. M that his PCP will see their discussion noted in his medical record, and encourages Mr. M to speak to the doctor if he has additional questions.

Follow up visit

Mr. M arrives on time for his follow up visit and reports that he hasn't used cocaine for the past couple of weekends. He's also cut back on his marijuana use to 1-2 evenings. However his drinking increased on weekend evenings. Mr. M states that thinking about smoking marijuana as similar to smoking cigarettes and the possibility of consequences that might affect his children made cutting back “something I want to do;” however he notes that he still struggles to fall asleep at night and has on occasion gone outside to smoke in order to fall asleep.

The nurse and Mr. M review his progress and reformulate his change plan. Mr. M restates his intent to reduce his marijuana use. At the end of the follow up visit, the nurse provides Mr. M with information about brief substance use treatment offered through the hospital, and encourages him to contact the primary care team if he needs additional help making changes.

Record keeping

In addition to the flag created for the doctor, the nurse notes in Mr. M's medical record the results of the substance use screening, Mr. M's intention to cut back on his own, his change plan, and perceived barriers and supports to change. As part of standard practice, Mr. M will be asked about his progress at his next primary care visit, and will be re-screened on an annual basis.

Discussion

Daniel P. Alford, MD, MPH, FACP, FASAM

This case highlights the multiple important opportunities to screen patients for unhealthy substance use in general healthcare settings. Emergency room visits and hospitalizations are likely “reachable moments” (Shanahan, Beers, Alford et al., 2010) for patients with unhealthy substance use, especially when there is a link between their acute illness and their substance use. Prior to his primary care visit, Mr. M had previous emergency rooms visits and a hospitalization. These were all opportunities for healthcare providers to identify and address Mr. M's unhealthy substance use and draw connections between his substance use and his chief complaints (i.e., motor vehicle crash and chest pain). Despite unhealthy substance use being a common problem in general healthcare settings, physicians are often reluctant or are inadequately trained to effectively screen or provide brief interventions (Isaacson, Fleming, Kraus et al., 2000).

An important question when implementing substance use screening and brief intervention (SBI) in general healthcare settings is: who should perform it and when should it take place? During Mr. M's visit to primary care, a nurse administered the screening and brief intervention for those patients who “prescreened” positive. Collaborative care in which staff other than the primary care physician (PCP) screen and counsel patients is certainly one way to lessen the burden of multiple preventive agendas for PCPs. However, in this case, I am concerned about the low PCP involvement. In this SBI, the PCP was informed of the screening results, brief intervention conducted and the patient's plan for change prior to the PCP visit. Ideally, this would be used by the PCP to emphasize the association between the patient's substance use and personally relevant health outcomes, reinforcing the feedback that the patient received, and supporting any change efforts that the patient may wish to undertake; however it is not clear that this occurred. The timing is also an issue in implementing SBI in primary care settings. With valid single item screening tests for alcohol (Smith, Schmidt, Allensworth-Davies et al., 2009) and drugs (Smith, Schmidt, Allensworth-Davies et al., 2010) now available it is feasible to “prescreen” patients before they see their PCP. However for patients prescreening positive, a more extensive screening/assessment (e.g., NIDA-Modified ASSIST) is needed, followed by a brief intervention, all of which can be time consuming. The challenge with the nurse model in this case is how readily it could be implemented in a busy primary care practice where 20-30 minutes before a PCP visit is not available and may interfere with patient flow. Delaying the full screen/assessment and brief intervention until after the PCP visit is one possible solution but risks the patient leaving without having their unhealthy substance use addressed and excludes the PCP from the SBI process.

Finally when a patient such as Mr. M. screens positive for multiple substances (i.e. cocaine, marijuana and alcohol), which substance should the brief intervention focus on? Should it focus on all the substances, or the substance the patient is most concerned about or the substance that is most risky for the patient's health as determined by the healthcare provider? In Mr. M's case, despite having a lower nm-ASSIST score for cocaine, I could argue that his “occasional” intranasal cocaine use is putting his health at grave risk. He likely has preexisting heart disease with his elevated blood pressure and 4th heart sound. Cocaine use can cause increased

myocardial oxygen demand, vasoconstriction, thrombosis and premature atherosclerosis which in combination with his family history of coronary heart disease put him a high risk for having a myocardial infarction (MI) (Lange & Hillis, 2001). The occurrence of MI with cocaine is unrelated to the amount ingested, route of administration, or frequency of use (Lange, 2003). Moreover, the combination of cocaine and alcohol, produces cocaethylene (Laizure, Mandrell, Gades et al, 2003) which increases the risk of cocaine-associated cardiac toxicity. I wonder if Mr. M's comment that he "doesn't see the need to change his cocaine use" because it was "infrequent" was based on not being adequately informed about the potential risks that cocaine poses for him. It would have been helpful to first assess Mr. M's understanding of the potential health risks of his cocaine use prior to offering him feedback and information. While it is important for brief interventions to be patient centered-allowing patients to set goals, it would be unfortunate if the patient chose priorities for change without being fully informed of the risks associated with his/her substance use.

Judith Bernstein, Ph.D., ADN, MSN

Sometime it takes centuries to discover the obvious. As long ago as 1670, the French mathematician Pascal said, "people are generally better persuaded by the reasons which they have themselves discovered than by those which have come into the mind of others." Clinicians spend much valuable time lecturing patients about the negative imperatives for behavior change—risk factors and potential health consequences—but often overlook the uses of patient self-reflection and positive reinforcement. Motivational interviewing provides a toolbox for this type of patient-centered brief intervention in the course of a health care visit. Screening for unhealthy alcohol use is currently recommended in the primary care setting by the U.S Preventive Services Task Force (USPSTF), (United States Preventive Services Task Force, 2004) and moderate effect sizes for reductions in both quantity and alcohol-related consequences are well substantiated by a series of meta-analyses (Kaner et al., 2009). The evidence is not yet in for drug use, but preliminary research and program evaluation findings suggest promise (Bernstein et al., 2005; Madras et al., 2009).

As this case illustrates, motivational interviewing reflects "the rather simple notion that the way clients are spoken to about changing addictive behavior affects their willingness to talk freely about why and how they might change" (Rollnick, 2001). The nurse began by asking permission to discuss the subject, establishing respect for the patient and setting the stage for the patient to be the engine of change. The nurse then elicited the patient's perspective on the pros and cons of his substance use, and only then offered non-judgmental feedback about the possibility of connection between his substance use and his health concerns. If the nurse had begun by asking Mr. M what he understood about the risks of use, resistance and denial might have been encountered. Instead, by starting by eliciting positive effects of drug and alcohol use, the nurse was able to learn about the role cocaine and alcohol played in important relationships, and the patient's use of marijuana for stress reduction. Mr. M was then able to weigh these 'benefits' against risks that he named for himself; the result was a plan for change that he believed he had the capacity to carry out. When he reported at follow-up that he had accomplished some but not all of these goals, he was received with positive reinforcement, rather than embarrassed about having 'slipped.' Brief intervention of this type is not a substitute for specialized treatment in those who exhibit dependence, but it can lead to behavior change over time, especially when reinforced in the context of continued primary care. Mr. M may still need a referral for counseling to examine sleep disruption and stress processing, but he has already changed his thinking about drug use and begun to alter negative health behaviors.

It is important to note that a nurse delivered this intervention. Primary care physicians are often reluctant to begin complex conversations about behavior change because of time pressures. Use of a physician extender, a nurse, social worker or an outreach worker who functions as a

member of the clinical team, could ensure that fulfilling USPSTF (2004) recommendations does not take the 7.4 hours of physician clinical time each day that a landmark time-motion study demonstrated (Yarnall, Pollack, Ostbye et al., 2003). Identification of unhealthy substance use during a clinical visit, followed by intervention to encourage healthier behaviors, is too important an opportunity to miss.

Tibor Palfai, Ph.D.

With empirical support for the use of alcohol screening and brief intervention (SBI) in primary care (Kaner et al., 2009), investigators have adopted similar approaches for drug use with promising results (e.g., (Madras et al., 2009)). Although there are a variety of brief interventions that may be used to address substance use in medical settings (Babor & Kadden, 2005; Kaner et al., 2009), motivational interviewing (Miller & Rollnick, 2002) is particularly well-suited for addressing substance use in the primary care setting where patients often do not identify their substance use as problematic or perceive the need to change. Moreover, motivational interviewing and its adaptations have received empirical support as a brief treatment for illicit drug use and marijuana use specifically (Hettema, Steele, & Miller, 2005).

In this case, the patient presents with hazardous alcohol use, cocaine use, and frequent marijuana use. Among the challenges faced by the nurse is how to enhance motivation to change marijuana use in a patient who appears to view his use as non-problematic, and how to do this in a manner that may be enduring in order to support behavior change (e.g., self-change, linkage to treatment). One of the features of motivational interviewing that makes it particularly valuable for this case is its emphasis on supporting patient autonomy (Markland, Ryan, Tobin, et al., 2005). There is now considerable empirical support for the view that behavior change is facilitated the extent that patients perceive their activity as autonomously controlled (Ryan & Deci, 2008). Autonomous sources of behavior include personally important values, goals and beliefs and reflect the degree to which one experiences an action as willingly chosen. Autonomy support occurs through a number of processes including understanding and acknowledging perspectives, expressing regard, minimizing pressure and control, providing choices and delivering a meaningful rationale for suggestions or requests.

The interview illustrates the variety of ways that the nurse provides autonomy support for the patient through the intervention. As detailed above, the nurse skillfully addresses initial patient reluctance by presenting the interview as a collaborative discussion that is intended to better understand substance use from the patient's point of view. By inviting the patient to first describe his current health concerns, the nurse is able to acknowledge what is most important for the patient, express empathy, and help the patient consider substance use in the context of overall health. The nurse's efforts to support autonomy are evident in the way that feedback about use and information about potential consequences are presented to the patient. These aspects of the intervention, which are common to a number of adaptations of motivational interviewing (Burke, Arkowitz, & Menchola, 2003), may be particularly relevant for patients who are not aware of the association between substance use and presenting health concerns. Appreciating that the delivery of information about negative health effects may be perceived by the patient as an attempt to convince him to change, the nurse asks permission to deliver information about the effects of marijuana and cocaine on health, states that the information may or may not be experienced as important for the patient, and frequently checks with the patient about his perception of the information. Statements that indicate that the nurse values his perspective and appreciates his engagement are particularly important during this part of the intervention.

The nurse also seeks to identify, elaborate upon, and reinforce instances in which the patient has been successful in promoting change. This includes both efforts to identify patient successes to enhance self-efficacy regarding current change, as well as efforts to highlight and

elaborate upon goals and values that have served as important sources of change in the past. As this patient indicates an interest in change, the nurse discusses options about how he might undertake change efforts, and elicits sources of support and barriers to change. In addition, the nurse offers a follow-up session, which is presented as an option that the patient may use if helpful to him. The nurse further emphasizes choice and autonomy in the manner in which the nurse offers a follow-up session in person or by phone. This follow-up session allows the nurse to explore the patient's experience with behavior change and continue support for autonomy while keeping the patient engaged with the change goal in a manner that he has chosen.

Richard Saitz, MD, MPH, FACP, FASM

It is noteworthy that Mr. M's PCP has implemented SBI for drugs. If drug SBI can improve primary care patient outcomes, then s/he will have been at the vanguard of practice. However, all universal preventive practices have opportunity costs, so each new practice should have proven efficacy. Guessing about efficacy, even when the practice seems logical, is not good enough—many good ideas have been later proven ineffective. We know that SBI for nondependent unhealthy alcohol use has modest efficacy (United States Preventive Services Task Force 2004); data are lacking for single primary care visit drug SBI (Saitz et al., 2010). And there are reasons why it may not work, such as severity of those who use certain drugs, patient preferences against being referred to treatment, the wide range of substances used, and the complexity of prescription drug abuse. Brief adaptations of motivational interviewing like those used in this case are most likely to work.

In Mr. M's case, the practice wasn't screening (or its synonym “prescreening,” which has somehow entered the vernacular in SBI programs but has no meaning distinct from “screening”). Screening quickly separates those at risk from those at lower risk and implies the patient is asymptomatic with regard to the target condition. Yet Mr. M had a hospitalization for chest pain, multiple trauma and positive urine drug tests, has insomnia and heartburn, and is sometimes forgetful. Screening was complete (and positive) before any questions were asked during this visit. Appropriate evaluation for Mr. M would include assessment relevant to the differential diagnosis of his symptoms and conditions, including alcohol and other drug use, which can cause or play a role in each.

Fortunately, Mr. M's PCP has implemented the nm-ASSIST, despite its length, need for scoring, less immediately relevant (to screening) questions about lifetime use, and inability to specify whether a patient is drinking risky amounts. Why then, fortunate? Because the benefit of such a tool is the assessment data it provides. Answers to individual questions give the clinician something to discuss. Scores give an estimate of severity, and thus can inform brief intervention goals and urgency. Another fortunate feature of Mr. M's PCP's practice is having a nurse who can do brief counseling. This uncommon setup may be ideal for addressing a range of health behaviors in primary care. If drug SBI is proven efficacious, staff with behavioral expertise could step in following brief (e.g. single question) validated screening. This approach seems most feasible and could result in wider dissemination of SBI.

I was surprised at Mr. M's response to the brief intervention. Although Babor (2004) found efficacy for marijuana brief intervention, their study was of people who sought the intervention. But screening-identified primary care patients often do not perceive consequences or risks, and have little ambivalence about their marijuana use for clinicians to work with. I might have prioritized differently. Mr. M had heartburn and hypertension, which could have been related to alcohol consumption, and chest pain (and possibly premature atherosclerosis) that could have been related to his cocaine use (and heart racing, which was related to it). I might have emphasized the link between these conditions of importance to him, and his alcohol and cocaine use, highlighting the discrepancy between what he values and his use, rather than spend precious time on his marijuana use.

The ability to make links between substance use and medical conditions raises the question of the physician role in SBI. The best evidence for efficacy of alcohol SBI is for a PCP counseling his or her patient on multiple occasions (Whitlock, Polen, Green et al, 2004). If the physician isn't going to do the screening or the brief intervention, they should at least provide feedback and a warm handoff.

Finally, this case hints at another challenge for PCPs and patients. Information in medical records can have impact on insurability and potentially employment if the patient releases their records, which they often must do when applying for benefits. Federal substance dependence confidentiality regulations apply to programs that hold themselves out as providing treatment for addiction. In this case, there is no diagnosis of addiction, and the PCP was not representing the practice as an addiction treatment provider, so the regulations don't apply. The good news is that this PCP will be able to provide safe comprehensive care for the patient including for his substance use and other medical conditions. The bad news is that there will be potentially damaging information in the record. Privacy protections in primary care and addiction treatment programs should be reconsidered to prevent discrimination while encouraging high quality integrated healthcare.

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