

Knowledge, Attitudes, and Practices of Physicians in Tomsk Oblast Tuberculosis Services Regarding Alcohol Use Among Tuberculosis Patients in Tomsk, Russia

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Abstract In recent years, the Russian Federation has seen a dramatic rise in morbidity and mortality from tuberculosis (TB), attributed in part to an increase in alcohol use disorders (AUDs), which are associated with worse TB treatment outcomes. This study describes the knowledge, attitudes and practices of physicians who treat TB patients in Tomsk, Russia. We conducted semistructured interviews with 16 TB physicians and 1 addiction specialist. Interviews were audiorecorded,

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transcribed, translated and systematically analyzed. We identified four key domains: definitions of alcohol use and abuse and physicians' knowledge, attitudes and practices regarding these problems. Physicians described patients as largely pre-contemplative and reluctant to seek treatment. Physicians recognized their limited knowledge in diagnosing and treating AUDs but expressed interest in acquiring these skills. Few options are currently available for treatment of AUDs in TB patients in Tomsk. These findings suggest that Tomsk physicians are aware of the need to engage AUDs in TB patients but identify a knowledge gap that restricts their ability to do so. Training TB physicians to use simple screening instruments and deliver evidence-based alcohol interventions improves TB outcomes among patients with co-occurring AUDs.

Keywords Alcohol · Tuberculosis · Physicians · Russia

Introduction

The impact of alcohol consumption on the declining health of Russians is well documented (Bobak et al. 1999), and alcohol use disorders (AUDs) play a synergistic role in the rising morbidity and mortality associated with co-occurring conditions such as cardiovascular disease (Nilssen et al. 2005; Ryan 1995), human immunodeficiency virus (HIV) (Krupitsky et al. 2006) and tuberculosis (TB) (Ryan 1995). In particular, the rise in prevalence of both TB and AUDs is thought to be driven by the same underlying socioeconomic instabilities witnessed in Russia over the past 15 years (Farmer and Kim 1998; Kimerling 2000; Plavinski et al. 2003; Walberg et al. 1998; Zuger 2000). AUDs and alcohol use are tied to TB treatment outcomes in several important ways (Nelson et al. 1995). First, patients who drink alcohol are at increased risk of hepatotoxicity during TB treatment (Dossing et al. 1996; Fernandez-Villar et al. 2004), leading to increased morbidity and to incomplete treatment (Pablos-Mendez et al. 1997). Persons who use alcohol may also be at increased risk of becoming infected with and dying from TB (Khomenko et al. 1989; Razvodovskii Iu 2004; Zhamborov 1999).

Although the detrimental effects of alcohol use on the Russian population are well known, current AUD treatment options are limited in three important ways. First, there has been an overall decrease in the number of AUD treatment facilities (dispensaries) from the Soviet to the post-Soviet era. Second, there are limited

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opportunities for research and evaluation of existing and new treatment modalities and a general lack of public support in addressing AUDs (Nemtsov 2005). Third, training in TB and narcology (study of alcohol and substance use disorders and their management) are typically nonoverlapping training grounds. For example, medical education training in Siberian State Medical University currently provides 87 hours of course work in pthisiopulmonology and 8 hours in a narcology course. Prior to 1998, only 4 hours of narcology training was provided (S. Yanov, personal communication with T. Mathew, October 2008). Further subspecialization (fellowship) provides the necessary qualifications for working either as a narcologist (addictions specialist) or as a pthisiatrist (TB physician). This includes three options: (1) complete a 1-year internship in required clinical setting (e.g., in pthisiatry clinic/hospital); (2) complete 2 years of *ordinatura* in a clinical setting in the desired specialty; or (3) after completion of either internship or *ordinatura*, engage in 3 years of full-time research in desired specialty field or in a 4-year part-time research program.

Despite these challenges, in Tomsk, Western Siberia, TB services have improved with the implementation of treatment strategies like Directly Observed Treatment–Short Course (DOTS) (World Health Organization 2003) and DOTS-Plus (Farmer and Kim 1998); however, AUDs and alcohol consumption continue to severely compromise TB treatment and are associated with poor TB treatment outcomes (Dewan et al. 2004; Mathew et al. 2006; Shin et al. 2006). The treatment challenges posed by AUDs among TB patients in Tomsk have been acknowledged for more than 30 years (Yanova 1994). Efforts were undertaken in 1987 to address this issue by establishing a specialized closed-door or ‘locked’ unit for treatment of TB in patients with co-occurring AUDs. Yet this specialized unit was closed in 1994 due to the high costs associated with maintaining it. Moreover, many of the patients had active alcohol and substance use, and this led to disruptions of the hospital regimen further compromising treatment potential. Since 1994 one full-time narcologist is on staff at the TB Oblast hospital to provide care (S. Yanov, personal communication with T. Mathew, November 2008). However, given the growing complexity of the problem, novel approaches are increasingly needed. For example, to improve TB outcomes among patients with TB and AUDs, it is suggested that nonaddiction specialists (e.g., TB physicians) become more aware and better skilled at managing co-occurring AUDs (Schoeman et al. 1994). Unfortunately, practitioners who treat TB and other medical problems usually do not address alcohol consumption or diagnoses as part of their routine medical care in Russia (Fleming 1996).

This article provides and interprets qualitative data about the knowledge, attitudes and practices of physicians in Tomsk regarding AUDs in their TB patients. This data can be used in several important ways. First, understanding the current perceptions of TB physicians regarding diagnoses and treatment of AUDs can help bring about integration of AUDs treatment with TB care. Second, this data may illuminate barriers to care for AUDs and possible methods to improve TB treatment programs.

Method

Study Setting

Tomsk is the capital of the Tomsk Oblast (province), located in Western Siberia, with an area of 316,900 km² and a population of 1,060,800. In response to a growing TB epidemic, a DOTS program in Tomsk was started in 1994 (Mawer et al. 2001), and treatment of multidrug-resistant TB (MDR-TB) was initiated in 2000, with technical assistance provided to the Tomsk Oblast TB physicians by the nonprofit organization Partners In Health (Shin et al. 2006). In the DOTS program for drug-susceptible TB, patients receive four first-line anti-TB drugs and are treated for a total of 6 months. Patients with MDR-TB receive second-line anti-TB drugs for 18–24 months. In Tomsk, most patients are hospitalized for at least the first 2–4 months of TB treatment. Subsequent treatment is carried out either at the polyclinic or at the day hospital.

Respondents

A total of 17 physicians were interviewed in the present study: 16 TB physicians and 1 narcologist (addiction specialist). One TB physician declined participation. Each of the participants works at one of three sites where TB care is provided: a TB day hospital, a TB polyclinic, or the Tomsk Oblast TB hospital. A convenience snowball sample was used to identify study respondents.

Interview and Surveys

Verbal informed consent from each participant was obtained prior to interview and all interviews were audiorecorded, transcribed in Russian and translated verbatim into English. Data were obtained by interviewing physicians using a semistructured, open-ended questionnaire. Information gathered included physicians' knowledge, attitudes and practices related to AUDs among TB patients. For the purposes of this study, the physicians' individual subjective definitions of alcohol use and abuse were used to describe alcohol use and abuse among their TB patients. All 17 physicians were interviewed individually in a private setting. All interviews were reviewed and coded using these primary domains by the authors (T.A.M., J.J.F.) trained in ethnography and AUD assessment. These interviews were then again reviewed and coded a second time by the same authors. The procedures were approved by the Partners Human Research Committee in Boston, Massachusetts.

Results

Based on participant observation and key informant interviewing, we identified four main domains for analysis: physicians' (1) definitions of alcohol use and abuse, (2) knowledge, (3) attitudes and (4) practices. The second round of coding included the assignment of subdomains, which are listed in Table 1. The frequencies of each

Table 1 Subdomains with respective response frequencies among tuberculosis (TB) physicians ($N = 16$)

Domain	Subdomain	Responses ($N = 16$)	Frequency (%)
Definitions of AUDs	Drinking more than body weight permits	1	6.3
	Single case (one episode) vs. tradition (multiple uses)	2	12.5
	Diagnosed when patient does not present for medication/visit	5	31.3
	Patient comes in to visit with hangover/physical evidence of alcohol use	12	75
	TB physician visits patient at home and sees patient is drunk	5	31.3
	Patient states he/she drinks alcohol	2	12.5
	TB physician asks patient about alcohol use during initial exam	12	75
	TB physician gets information about patient's drinking from colleagues/nurses	5	31.3
	Prior documentation in clinic charts	3	18.8
Knowledge	TB physician feels inadequate in treating TB and alcohol comorbid state	7	43.8
	TB physician is aware of desensitization/detoxification treatment	9	56.3
	TB physician is aware of rehabilitation treatment	3	18.8
	TB physician is aware of social support groups helping patients (including AA groups)	4	25
	TB physician is unaware of support groups and therefore not able to guide patients	2	12.5
Attitudes	TB physician feels he/she is not responsible for diagnosing AUDs but for identifying them and then referring to narcologist	6	37.5
	TB physician feels only narcologists should be treating these patients	7	43.8
	TB physician feels disinterested in referring patients to narcologists	1	6.3
	TB physician feels alcoholism is a disease	8	50.0
	TB physician feels alcoholism is a habit	5	31.3
	TB physician feels uncomfortable talking about alcoholism to patients	3	18.8
	TB physician feels comfortable talking about alcoholism	11	68.8
	TB physician feels the TB patient does not think he/she has a problem with alcohol use	13	81.3
	TB physician feels a closed-down ward/institution will help treat patients with alcohol use	4	25
	TB physician feels patients need to help themselves too	7	43.8
	TB physician feels the patient feels bored and lonely during TB treatment, so starts drinking	1	6.3
TB physician feels government needs to be involved	1	6.3	

Table 1 continued

Domain	Subdomain	Responses (<i>N</i> = 16)	Frequency (%)
Practices	TB physician repeatedly advises patients to quit alcohol use	8	50
	TB physician involves patient's family in treatment	5	31.3
	TB physician relies on patient's religious belief	1	6.3
	TB physician wants to increase social support for patients, including more access to work rehabilitation	1	6.3
	TB physician wants to increase psychological support for patient	3	18.8
	TB physician reports that invasive methods of treatment are carried out (coding/incision/suturing)	2	12.5
	TB physician does not initiate alcohol counseling when patient is intoxicated	3	18.8
	TB physician does not routinely ask patients about their alcohol use	1	6.3
	TB physician does not have enough time to identify alcohol use	2	12.5
	TB physician practices underreferral or nonsystematic referral to a narcologist	2	12.5
	TB physician states a narcologist is unavailable for patient's treatment	1	6.3
	TB physician starts counseling on other social issues (apart from alcohol use)	5	31.3
	TB physician reports that patient does not want to go to narcologist	8	50
	TB physician reports that patient sells food supplements for alcohol	2	12.5
	TB physician reports that patients receive psychotherapy	2	12.5
TB physician requires police and/or other government help when treating patients with alcohol disorders	8	50	

AUD alcohol use disorder

response that participants mentioned in the subdomain are also included in Table 1. There were many definitions of AUDs, as listed in Table 1. We provide further details, including direct quotations, on subdomains mentioned by at least 50% of the physicians, as well as additional key findings of our interviews.

TB Physicians' Definitions of Patients' Alcohol Use and Abuse

When asked about how they evaluated consumption patterns (e.g., quantity and frequency of alcohol use), participating physicians explained that patients reported intake in vague terms. For example, "How much is 'a little?'... 100–200 grams [milliliters], it can be a glass or so..." Another physician stated, "I don't know about [measuring alcohol intake]. Everything is individual.... Everybody has his

own taste.” Another physician considered body weight of the patient: “A lot depends on the weight of the patient.... On average [people typically consume] probably a bottle [of alcohol], that is, half a liter.... This is not necessarily for one person. If... two of them have drunk a bottle, then [the intake would be] 250 grams [milliliters] alcohol per person.” Thus, definitions of what constitutes a standard drink varied from physician to physician, indicating a need for standardized definitions of consumption and guidelines for its assessment.

TB Physicians’ Knowledge of Alcohol Use and Available Treatment Modalities

Although most TB physicians reported that they felt comfortable talking about alcohol use with their TB patients (11/16, 68.8%), seven (43.8%) of them acknowledged inadequacy in their knowledge and skills in effectively treating patients with TB and co-occurring alcohol problems. In fact, some reported an initial hesitation in addressing alcohol use with their patients. As one physician described:

When you take an ordinary, socially adapted individual away from his ... community, and put him in a TB hospital, it turns into a tragedy. If I ask this patient about drinking alcohol, I could simply open that way. This topic will simply provoke a negative attitude toward the TB doctor. So, at first I tend to avoid a detailed search into the matter. Of course, when I see that the patient tries to break the rules and starts drinking alcohol, abusing alcohol, I think it is time to do all that I can.

Physicians also reported awareness of patients obtaining alcohol even while hospitalized in the TB hospital. As one noted, “They go out to buy alcohol; they bring the alcohol to the ward and put it on the table. They arrange some food and start drinking right in the ward. They do it at any time—day or night.” Another stated: “Moreover, they sell substitutes, not the pure, natural, good quality alcohol, and patients poison themselves with this stuff. It may have all kinds of admixtures in it, it’s not alcoholic intoxication. This stuff drives patients to a somewhat crazy state, when they can do almost anything.” Physicians reported that episodes of drinking in the hospital often occur on days when patients get their financial support:

We have a real catastrophe on the day they get their pensions. You see, it’s terrible. They don’t want to buy something to eat—fruit, vegetables or meat. They buy alcohol, and there’s nothing we can do about it, because all these shops with alcohol are open 24 hours a day. We have the [hospital] doors closed, we have windows with bars, but they even jump down from the second floor. They climb down using sheets....

TB physicians also reported that although patients receive nutritional support as part of TB treatment, sometimes patients trade their food packets for alcohol. One physician reported:

Everything they get to eat is packed, so they can sell it. We’ve tried to open the cans so that they wouldn’t be able to sell it... so that patients would [eat] their rations. But patients raised a roar: “Why do you open them? I, for

instance, wanted to have my condensed milk boiled, and you give me a can that is open! I wanted this and that....” So we gave it up because they claim we are violating human rights. They know their rights pretty well, but not their obligations and duties. Their rights they do know well enough!

The majority (9/16, 56.3%) of TB physicians demonstrated an awareness of alcohol detoxification treatment variously defined as infusion therapy with glucose, vitamins (including vitamins B and C) and benzodiazepines. Yet only three TB physicians (19%) were aware of any rehabilitation or follow-up treatment available in Tomsk, and only four of the physicians interviewed (25%) were aware of support groups, including Alcoholic Anonymous, as a form of treatment for AUDs.

Thus, TB physicians are aware of patients’ easy access to alcoholic beverages, and the challenges this poses in treatment of AUDs among TB patients. And although TB physicians have tried to decrease the consumption of alcohol by their patients, they have faced resistance from their patients. Despite their awareness of problematic alcohol use among their patients, the physicians remain relatively unaware of potential treatment options available to them.

TB Physicians’ Attitudes to Patients’ Alcohol Consumption

Half of the participating TB physicians (8/16) felt that alcoholism is a disease, compared to five (31.3%) who considered it to be a habit (three did not address this issue). One physician considered drug addiction as the bigger problem and said, “Drug addiction is the most terrifying thing... alcoholism is nothing! You sleep off your drunkenness and that’s it....” Most physicians felt that their patients did not consider themselves alcoholics (13/16, 81.3%). As one volunteered, “Many [patients] believe alcohol facilitates process dissolution,” referring to the notion that, since alcohol is a disinfectant, it should help in the resolution of pathological processes like TB. In other words, some TB patients feel that alcohol will cure TB. Another respondent stated, “Many of our patients don’t think about it. They don’t see alcohol abuse as a problem at all. They do not accept the fact of alcohol abuse and its negative influence on their life. They do not see the problem.”

Given that TB physicians have tried different methods to address AUDs in their patients, but only see very marginal success, they expressed frustration with the widespread nature of this condition. As one stated, “We can’t close all the stores and shops that sell drinks. We appealed to the police many times about it but haven’t received any help.... They said that as long as spirits can be bought, they are going to sell them, that’s all. And that’s our problem.” Some reported emotional and physical burnout. “I cannot stand such dissipated, disobedient people. They don’t want to be treated. I visit them and cannot attract them to get treatment. Then, I get tired, and I don’t want to see any of them.” Another noted, “Well, time passes, time cures, as they say.... I’m getting sick. You see, I have already been on sick leave. After you are sick, on sick leave, then you recover, and again come to work.” Frustration and burnout among TB physicians are compounded by low wages. One physician reported: “It is a huge emotional burden for the doctor.” Another elaborated:

We don't receive any material satisfaction from this work. We have such poor material status, for the amount of emotional energy that I spend on the patient for the money that I receive. I can't take a vacation.... It seems that I work at my loss.... I would have a rest for one week, take a vacation, and then return to work for one year.

Despite these challenging working conditions, physicians demonstrate a strong commitment to their patients. For example, one physician reported, "If we TB doctors speak rudely to the patient, then he will not come back.... Of course our main goal is to cure [him], to bring him back to the community as a healthy person." Another noted, "If there is no material satisfaction, then it would be good to get moral satisfaction, because you've helped the person, called him, treated him. [When] he thanks you, it warms your heart."

TB Physicians' Practices Connected to Patients' Alcohol Use

Assessment

Physicians reported diagnosing AUDs based on their clinical encounter with the patient as opposed to using a systematic screening instrument. The most common ways of identifying AUDs was by observing physical signs of alcohol use (12/16, 75%) and asking patients about alcohol use during their initial patient evaluation (12/16, 75%). As noted by one respondent, an AUD is identified when there is

... objective evidence because the patient comes for evaluation and sometimes he has elementary evidence. There is the smell of alcohol on the patient, for example, if he drank the day before. Sometimes, for example, if he has been drinking for long time, there is objective evidence like withdrawal syndrome, such as a hand tremor or high blood pressure. The patient feels bad, he has fatigue, or for example, skin redness.

Another noted, "First of all it is the smell of alcohol from a patient. Well, his habitus is untidy. It means that he doesn't comply with the treatment regimen." Another respondent noted, "Sometimes when you open a ward door [to a patient's room in the hospital], the vapor of alcohol blows into your face, or you see the patient drunk as a skunk, or as we say, he shows symptoms of alcoholic intoxication with such a smell that is almost impossible to vent out of the room...." Other means of diagnosing patients with AUDs included noting their failure to come to clinic appointments (5/16, 31.3%) and witnessing an intoxicated patient during home visits (5/16, 31.3%). As one physician noted, "They may come in just tipsy, but once they are on a binge, they do not come for treatment at all."

Treatment

Half of the physicians reported advising their patients repeatedly to stop drinking during TB treatment (8/16, 50%). One physician described talking with patients about alcohol use and its detrimental effect on TB treatment outcomes stating,

“‘Why are you drunk?’ We explain the situation to the patient.... ‘You’re in the hospital under treatment. You have this and that; you were lucky to get enrolled in this program. You should appreciate it’—and so on. We tell him about the advantages of this program, how much it costs....” Physicians acknowledge that this type of counseling often does not help their patients. “You know, in general they react not too badly. They promise [to stop drinking]. In general, alcoholics, they are friendly. But when you try to talk with them several times on this theme, then they become aggressive, like ‘I do what I want to do!’” The lack of impact of repeated advice on alcohol outcomes is attributed by the TB physicians, in part, to the fact that the patients themselves do not believe that alcohol consumption negatively affects their TB or treatment outcomes.

Both the TB physicians and the narcologist were asked to describe alcohol interventions currently available for treatment of their patients. Treatment was divided into two categories: (1) detoxification, described previously as the infusion of normal saline, vitamins and use of sedatives, and (2) rehabilitation, or the management of a patient to reduce alcohol consumption or avoid relapse. The most common rehabilitation intervention reported by physicians was aversion therapy, or the use of medications that induce an unpleasant sensation when alcohol is ingested. The intent of this treatment is to discourage patients from drinking. The narcologist is the primary prescriber of these treatments, and the most commonly used medications are disulfiram and metronidazole. Another treatment described and commonly practiced in Tomsk was “implantation or method of instrumental psychotherapy,” which often involves the use of placebo. As stated by one physician, “We used the implants, the drug was called Esperal (disulfiram). We had the implants produced in France and in Russia.... [Currently, due to lack of availability] we rarely perform implantation, only when the family gets it [disulfiram implants]. More often we implant a placebo.” Placebo implantation is

... nothing but a few catgut stitches. The method of instrumental psychotherapy, which we use, requires a psychological impact on the patient. He is told that on an appointed date he will undergo an operation, that he will receive a ‘super-implant.’ Many of [the patients] have heard about implants before. Some of them do believe in it, others don’t. But those who do believe and come and ask for it, we know they are psychologically prepared for it. Our job is to prepare the patient for manipulation, to explain the effect of the so-called implant. We play our role in the show, we do not fake it, even with placebo. In order to increase the effect, we sometimes use Pyrogenal that provokes temperature rise, so that the patient feels that there is something wrong with him. Or we can introduce some medications, such as Cordiamin intravenously, or calcium chloride, or magnesium... [for] their effect, the feeling of heat. These are the medications that give such a sensation. So after the manipulation we give the patient some alcohol to inhale or to wash his or her mouth. When they develop a reaction to the injection, they are told that this is the effect of implant triggered by alcohol. When they feel heat, mild pain, and irritation, the doctor explains that the implant effect is dose-related. Thus we make them fear the consequences of drinking, promising it to be much worse or even

fatal—a lethal outcome. This method is very effective in susceptible people.... we implant placebo in alcoholics with TB and without it too.

Referral

Many TB physicians observed that patients are often resistant to being evaluated by a narcologist (8/16, 50%). As one TB physician noted, “[They say,] ‘Why do you refer me there? I don’t drink!’” Another physician stated:

Unfortunately, you know, as a rule, [patients] do not want to go there. Those who are domestic drinkers come at least for doctor’s appointments and receive treatment, those who suffer from alcohol dependence syndrome, those who drink hard.... [But,] they do not think that they need a narcologist’s consultation or [alcohol] treatment.

Given that TB physicians in general can seek the help of police to locate patients when they miss TB treatment, half of the physicians (8/16, 50%) have turned to policemen for getting patients back to TB treatment. As one reported, “My main request is for them [the police] to speak with my patient and help me while they are talking to him to involve the patient in treatment.” Another noted: “[When a police officer] talks to a patient, [when] the patient sees a police officer in uniform, he has an absolutely different attitude toward them because our patients are usually registered with the police, and they try their best. They obey the police, yes.” Inside the hospital, physicians can request police help for security issues. “If a patient begins to breach compliance, we have a red button. When we press it, a police squad comes and ‘cleans house.’ Well, they conduct an educational conversation, drive out all strangers, because... if there are some festivities in the department, strangers may come from all different places, [who are] not patients at all.” Some physicians did feel that police assistance was not enough to address this widespread epidemic, and expressed a desire for other legal recourses to mandate TB treatment.

Discussion

This study reveals several interesting findings about the approach toward and management of AUDs by TB physicians and narcologist in Tomsk. First, alcohol use and alcohol problems are assessed chiefly among heavy drinkers only. There are several reasons for this: some TB physicians regard alcohol use as a “habit,” and not a disease or disorder, and diagnosis is only made in instances with clear evidence of active drinking, alcohol intoxication and problematic use. Further, while most TB physicians do ask about alcohol consumption, no routine or standardized screening methods are used. Thus, patients who are at risk of developing abuse or dependence may not be identified, and preemptive treatment and counseling may not be offered to the groups at risk.

Second, physicians often feel that patients do not consider themselves to have an alcohol use problem and, therefore, are unwilling to adhere to referral recommendations or see a narcologist for treatment. If true, such attitudes may reflect an early

stage of behavioral change (e.g., precontemplation) (Prochaska et al. 1992) among patients with TB and co-occurring AUDs. The finding that many physicians and patients regard alcohol use as a habit rather than a disease or behavioral problem perhaps reflects a larger minimization of the importance of viewing alcohol use and AUDs as health problems requiring medical treatment.

Another important finding is that the knowledge and skills of TB physicians in treating AUDs are restricted, in large part because narcologists, and not TB physicians or general practitioners, are responsible for the diagnoses and management of AUDs. Indeed, most TB physicians were not completely aware of existing alcohol treatment options in Tomsk. Fortunately, TB physicians recognized this deficiency and expressed interest to learn more. Furthermore, despite the challenges and frustrations faced by providers, most informants described a strong commitment to their patients.

Current treatment measures for AUDs in Tomsk are widely considered ineffective. TB physicians expressed a desire for increased social and legal measures to enhance patient treatment. Both the narcologist and the TB physicians described a heavy reliance on treating AUDs with aversion therapy using medications such as disulfiram, metronidazole and placebo implantation. These methods differ from alcohol interventions available and used in other countries. Another barrier to effective treatment is the limited drug availability and high cost of medications, which must be bought by the patients themselves.

This study has some limitations, given that the sample size is small and is a convenience sample rather than a random selection. In addition, these participants may not be representative of TB physicians in other parts of Russia. However, this small study serves as a useful first step and tool to guide development of more formal questionnaires that could be applied to larger populations. Another limitation of this study is its reliance on self-reported attitudes and behaviors of physicians, which, as has been suggested, may not accurately reflect what is actually practiced (Saitz et al. 2002). Furthermore, the physician participants may have subjective bias on addressing the issue of AUDs more broadly. For example, these biases may be attributed to the physician-centered treatment approach in which the physicians were trained, physician-perceived low levels of patient literacy and minimal financial support for their work, which contributes to emotional and professional burnout. Other factors that may have influenced physicians' perceptions include an incomplete understanding of the etiology and clinical presentation of AUDs and consideration of AUDs as a behavior of a person as opposed to a medical condition or disease with available treatments. The use of participant observation in the present study, however, provided for direct witnessing of some events described and, thus, allowed for triangulation of the data and increased validity.

Despite these limitations, this study had several key findings. Many patients were described to be in a precontemplative stage of behavior change (i.e., most did not overtly acknowledge a problem with alcohol or any intention to change their drinking) and were therefore reluctant to be evaluated by a narcologist. TB physicians expressed a strong commitment to their patients and a keen interest in learning more about addressing and treating AUDs among TB patients. Based on these findings we have worked with the Tomsk TB and alcohol services to implement the following improvements in patient care.

1. TB physicians have implemented a systematic screening instrument for all new TB patients—the Alcohol Use Disorders Identification Test (AUDIT) (Babor et al. 2001; Mathew et al. 2009a, b). This instrument can be used to identify hazardous and harmful patterns of alcohol consumption and provide a preliminary diagnosis of abuse or dependence. Diagnosing patients at risk for developing alcohol abuse or dependence could facilitate alcohol interventions when alcohol problems are at a less severe stage. Such screening can also prompt more in-depth evaluation of alcohol problems and their consequences. Ongoing education of providers is aimed at identifying an AUD as a medical disease and not merely a social habit.
2. We are working to introduce evidence-based interventions to treat AUDs. First, providers are being educated on existing resources, such as rehabilitation programs and support groups. Because patients rarely express interest in seeing a narcologist, and TB physicians are motivated to be more involved in the management of AUDs, TB physicians will be trained to administer Brief Interventions to address alcohol use, while seeing patients for their TB treatment. The most salient ingredients in our physician training model include both didactic instruction and practical experience with the transtheoretical model of change (with emphasis on understanding the stage of change variable) (Prochaska et al. 1992), motivational interviewing style and skills (Miller and Rollnick 2002) and the A's construct (“assess,” “advise,” “agree,” “assist” and “arrange” [Glyn and Manley 1989]), which has been endorsed by the United States National Institute on Alcohol Abuse and Alcoholism (NIAAA 2003) for use among primary care physicians treating patients with AUDs.
3. We have worked with the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) to provide free AUD treatment to TB patients with AUDs. We hope that the elimination of prohibitory patient costs will not only increase patient willingness to engage in alcohol treatment but also increase the willingness of TB physicians to refer these patients to specialized care.

The Tomsk TB physicians continue to address this formidable issue among their TB patients despite facing many daily challenges and logistical barriers. Based on this study we determined that pharmacotherapy may be acceptable to both patient and physician. Thus, we are exploring the feasibility of administration of naltrexone singly or in combination with behavioral therapy for treatment of AUDs during TB treatment. With regard to the latter, it is hypothesized that the nonconventional behavioral interventions will be better tolerated and therefore more effective when couched in the framework of a conventional treatment approach.

To facilitate this, we are now conducting a pilot study in the use of naltrexone concomitantly with anti-TB medications. The physicians of the Tomsk TB-Alcohol Working Group are also implementing a Phase III trial supported by the U.S. NIAAA, to determine optimal treatment strategies for AUDs—pharmacotherapy and behavioral therapy during routine TB care. Results of this work could have a significant impact in improving our understanding of implementing effective strategies in treating co-occurring AUDs and TB not only in Tomsk Oblast, but also in other settings with a high prevalence of both these disorders.

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