

- supplementation with folate and/or multivitamins for preventing neural tube defects. *Cochrane Database Syst Rev* 2001;(3):CD001056.
22. Nilsson TK, Yngve A, Böttiger AK, Hurtig-Wennlöf A, Sjöström M. High folate intake is related to better academic achievement in Swedish adolescents. *Pediatrics*. 2011;128 (2):e358–e365; DOI: 10.1542/peds.2010-1481.
 23. Breimer LH, Nilsson TK. Has folate a role in the developing nervous system after birth and not just during embryogenesis and gestation? *Scand J Clin Lab Invest*. 2012;72(3):185–91. doi: 10.3109/00365513.2012.657230. Epub 2012 Feb 6.
 24. Breimer LH, Nilsson TK. Dags att jubilera: ryggmärgsbräck kan förebyggas. *Läkartidningen*. 2016;113:DS37.
 25. Forgács, A. (2015). Quotations from Endre Czeizel's autobiography, 2015;16:14 [online] [cited 2017 March 18]. Available from: <http://ripost.hu/cikk-czeizel-endre-legnagyobb-alma-beteljesuletlen-maradt>
 26. Laurence, KM, Carter C, David P. Major central nervous system malformations in South Wales. Incidence, local variations and geographical factors. *Br J Prev Soc Med*. 1968 Jul;22(3):146–60.
 27. Schorah C. Dick Smithells, folic acid, and the prevention of neural tube defects. *Birth Defects Res A Clin Mol Teratol*. 2009 Apr;85(4):254–9. doi: 10.1002/bdra.20544.
 28. Harper P. Interview with Professor K M Laurence Friday 23rd July 2004 [online] [cited 2016 Apr 12]. Available from: <https://genmedhist.eshg.org/fileadmin/content/website-layout/interviewees-attachments/Laurence,%20Michael.pdf>
 29. Cochrane AL. Effectiveness and Efficiency: Random Reflections on Health Services. Report on randomized controlled trials (RCTs). *The Nuffield Provincial Hospital Trust*. 1972.
 30. Canadian Task Force on the Periodic Health Examination. Task Force Report: The periodic health examination. 2. 1987 update. *CMAJ*. 1988 Apr 1;138(7):618–26.
 31. U.S. Preventive Services Task Force (USPSTF). *Guide to clinical preventive services: report of the U.S. Preventive Services Task Force*. DIANE Publishing; 1989. ISBN 978-1-56806-297-6.
 32. Oxford Centre for Evidence-Based Medicine – levels of evidence (March 2009) [online] [cited 2016 Apr 12]. Available from: <http://www.cebm.net/oxford-centre-evidence-based-medicine-levels-evidence-march-2009/>
 33. Ridker PM, Danielson E, Fonseca FA, Genest J, Gotto AM Jr, Kastelein JJ, Koenig W, Libby P, Lorenzatti AJ, MacFadyen JG, Nordestgaard BG, Shepherd J, Willerson JT, Glynn RJ; JUPITER Study Group. Rosuvastatin to prevent vascular events in men and women with elevated C-reactive protein. *N Engl J Med*. 2008 Nov 20;359(21):2195–207. doi: 10.1056/NEJMoa0807646. Epub 2008 Nov 9.
 34. Breimer LH, Mikhailidis DP. Trials by independent expert bodies. *Arch Intern Med*. 2010 Dec 13;170(22):2042; author reply 2043–4. doi: 10.1001/archinternmed.2010.457.
 35. Mulinare J, Cordero JF, Erickson JD, Berry RJ. Periconceptional use of multivitamins and the occurrence of neural tube defects. *JAMA*. 1988;260(21):3141–5.
 36. Smithells RW, Sheppard S, Schorah CJ, Seller MJ, Nevin NC, Harris R, Read AP, Fielding DW. Possible prevention of neural tube defects by periconceptional vitamin supplementation. *Lancet*. 1980 Feb 16;1(8164):339–40.
 37. Laurence KM. Towards the prevention of neural tube defects. *J R Soc Med*. 1982 Sep;75(9):723–8.
 38. Liu S, Joseph KS, Luo W, León JA, Lisonkova S, Van den Hof M, Evans J, Lim K, Little J, Sauve R, Kramer MS; Canadian Perinatal Surveillance System (Public Health Agency of Canada). Effect of folic acid food fortification in Canada on congenital heart disease subtypes. *Circulation*. 2016 Aug 30;134(9):647–55. doi: 10.1161/CIRCULATIONAHA.116.022126.
 39. Laurence KM. Folic acid to prevent neural tube defects. *Lancet*. 1991;338(8763):379. [Letter].
 40. Smithells RW, Sheppard S, Schorah C J, Wild J. Folic acid to prevent neural tube defects. *Lancet*. 1991;338(8763):379–80 [Letter].
 41. Vergel RG, Sanchez LR, Heredero BL, Rodriguez PI, Martinez AJ. Primary prevention of neural tube defects with folic acid supplementation: Cuban experience. *Prenat Diagn*. 1990 Mar;10(3):149–52.
 42. Harris J. Ethical problems in the management of some severely handicapped children. *J Med Ethics*. 1981 Sep;7(3):117–20.
 43. Lorber J. Ethical problems in the management of some severely handicapped children. Commentary 1 and reply. *J Med Ethics*. 1981 Sep;7(3):120–22.
 44. Anscombe GEM. Ethical problems in the management of some severely handicapped children. Commentary 2. 1981 Sep;7(3):122–23.
 45. Cusine DJ. Ethical problems in the management of some severely handicapped children. Commentary 3. 1981 Sep;7(3):123–24.
 46. Gostin L. A moment in human development: legal protection, ethical standards and social policy on the selective non-treatment of handicapped neonates. *Am J Law Med*. 1985;11(1):31–78.
 47. Pruitt LJ. Living with spina bifida: a historical perspective. *Pediatrics*. 2012 Aug;130(2):181–3. doi: 10.1542/peds.2011-2935. Epub 2012 Jul 23.

Ethical management of substance use disorders: the Indian scenario

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Abstract

Substance use disorders are among the most prevalent and emergent public health problems in India. The treatment of individuals with these disorders is associated with many ethical dilemmas. Due to the pervasiveness of substance use disorders, the majority of mental health professionals working in the area of addiction medicine face several ethical dilemmas. When discussing substance use disorders, it must be borne in mind that there are important differences between India and the western countries in terms of the social and cultural aspects, as well as the legislative framework and healthcare delivery system. In this paper, we discuss the common ethical dilemmas that practitioners of addiction medicine face when dealing with patients with substance use disorders. We use the principlist approach defined by the four ethics principles – autonomy, beneficence, non-

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Table 1 Various bioethics principles and their application in substance use disorder treatment	
Ethical principles	Application in substance use disorder treatment
Autonomy	A patient who has repeatedly been involved in road traffic accidents and has liver cirrhosis related to alcohol use refuses treatment for alcohol use disorder. Should the patient be treated against their will?
Beneficence	A patient has been receiving treatment for opioid use disorder on an outpatient basis for a few months, but is unable to abstain. Should the patient be treated with opioid agonists, especially if they are concerned about becoming "dependent" on the treatment?
Non-maleficence	A patient with chronic pain and a history of opioid dependence asks for higher doses of opioid agonists. Should the treating physician restrict the dose of the medication to prevent the possibility of diversion?
Justice	A patient who is suffering from alcohol dependence, and in whose case in-patient treatment has been unsuccessful several times, is denied admission because it is felt that someone else should be given a chance for treatment.
Respect for people	A member of the military with a history of severe depression and chronic pain, due to injuries he suffered during war, is denied his opioid medications 4 days in advance of his scheduled dispensing and is referred to as "nashedi" (drug addict).

maleficence and justice – to deliberate upon these dilemmas and how they may be resolved. Further, we emphasise the need to sensitise practitioners to the importance of giving due consideration to the ethical aspects in their clinical work.

Introduction

Substance use disorders are among the most common psychiatric disorders across various countries, including India(1,2). The substances abused may be licit (like alcohol and tobacco) or illicit (like cannabis, cocaine and heroin). Substance use disorders not only have an impact on the personal life of the user, but have also been found to be related to various problems, including suicide and crime, which are important public health concerns (3, 4). The treatment of individuals with substance use disorders throws up specific challenges, some of them ethical. Specific nuances must be considered when applying the principles of medical ethics to the clinical treatment of "patients" with substance use disorders (5, 6). Some of the situations in which such ethical issues arise are highlighted in Table 1. These situations are broad clinical scenarios that have been encountered in clinical practice in

addiction medicine.

Given the pervasiveness of substance use disorders, it is possible that most mental health professionals and other healthcare professionals have faced the ethical dilemmas related to the treatment of these disorders. Substance use disorders and their treatment are embedded in a complex social, religious, cultural and political matrix. The legislative framework for treatment and the healthcare delivery system in India is different from that in the western countries. For example, many western countries have a provision for court-mandated treatment of people who have repeatedly committed the offence of drunken driving (7), whereas India has no such provision. Also, in India, the family members have considerable influence in the care process, while in the West, the focus is on patient autonomy. In India, therefore, the treating team becomes accountable to the patient's family members, especially when they have coerced the patient to seek care. This paper attempts to address the common ethical issues faced by healthcare professionals in the field of addiction medicine. We discuss common clinical scenarios using the four principles of bioethics, with the caveat that each clinical situation is unique and aspects pertinent to that scenario need to be deliberated upon.

Privacy and confidentiality

Case 1: "A 28-year-old married male visited a substance use treatment facility. He had been using 'smack', an impure form of heroin that is used widely in north India, in a dependent pattern. For the last few years, he had started injecting himself with buprenorphine. He even shared his needles with his drug-using peers. His family members, including his wife, were unaware of his habit. At the treatment facility, he was advised to get himself tested for HIV, and he was found to be positive. The patient asked the clinician not to disclose his substance use problems and HIV status to his family members, including his wife."

The case brings out a common ethical dilemma pertaining to the treatment of substance use. Similar problems may arise during the treatment of other medical disorders, such as HIV infection without associated substance use, and drug-resistant tuberculosis. Privacy and confidentiality are important to the patients' sense of self, as the terms of their relations with others depend on them. The issue of confidentiality is important, especially in the Indian context, because of the stigma associated with substance use disorders (8). Religious beliefs, cultural values, political policies and legal views all add to the stigma attached to substance use disorders in countries like India, where substance use is still considered a moral flaw. This stigma affects various aspects of substance use disorders, including their diagnosis, care for the patient, treatment, funding and education. Stigma also affects the recovery of individuals with substance use disorders (9). In Indian society, the family members of substance users are often the driving force behind their treatment (10). Given the rather cohesive family structure, it is not uncommon for the family members to request the treating physician to disclose the

patient's problems, even though the patient would not want them to know about the details of their substance use. While such concerns on the part of family members are not limited to India, they are accentuated in the Indian setting due to the agrarian society, which perpetuates a joint family system characterised by familial cohesion rather than an individualistic outlook. In such situations, clinicians are torn between their duty to the patient (autonomy, privacy and confidentiality), and their duty towards others at risk (justice, truth-telling).

One of the options would be for the clinician to disclose the matter to the family members. This would be in congruence with the principles of beneficence towards potentially unaware family members, and social justice. However, given the possibility of family conflict due to the disclosure of a stigmatising illness, disclosure would be against the principle of non-maleficence, ie *primum non nocere* or "first do no harm". From the utilitarian perspective, the risk of harm in terms of familial strife needs to be balanced with the degree of benefit that would accrue with preventive measures and early treatment of family members, if necessary. From the Kantian perspective, which suggests that some forms of conduct are obligatory irrespective of the consequences, telling family members who are at risk would be the right approach. The other option in such a scenario would be to respect the patient's wishes and disclose the matter only when they explicitly express the desire to have it disclosed. Such a response would respect the patient's autonomy. From the perspective of beneficence, this might be beneficial to the patient in terms of preventing the possibly adverse familial and social consequences of telling the family members about the stigmatising illness.

There are several other scenarios in which ethical dilemmas related to the patient's confidentiality may arise. There are times when patients who have strained family relations ask their clinicians to "doctor the records" or to keep what Geppert and Bogenschutz (5) refer to as a "shadow chart". Such actions, though aimed at "helping" the patient, may put the clinician on a slippery slope that might lead them to commit other indiscretions.

Specific issues arise when the patient reports or confesses to a crime to a treatment provider. The clinician is not bound to report the crime in all instances, but has been mandated to report circumstances in which there is a serious and identified risk to a specific person and/or community as per the code of ethics of the Medical Council of India. For example, in India, the knowledge of specific crimes against children has to be reported under section 21 (1) of the Protection of Children from Sexual Offences Act of 2012 (11). Whether the information shared with a physician about substance use by drivers or pilots should be shared with the regulatory and licensing authorities is another matter. Therein lies the question of balancing the confidentiality of the patient and the potential harm to travellers, whose lives may be jeopardised due to substance use by the pilot/driver.

Autonomy and informed consent for treatment

Case 2: "A person with a history of multiple episodes of haematemesis has been admitted to the gastroenterology ICU for the fifth time in the last six months, but refuses to undergo treatment for his alcohol dependence. The person repeatedly gets into violent brawls with family members, as well as outsiders, under the effects of liquor. He has met with an accident while driving his bike in an inebriated condition. Attempts to engage him in meaningful treatment for his substance use problem have failed."

The ethical principle of autonomy suggests that the patient's consent be taken for any type of treatment for their substance use problem. The underlying assumption is that the individual's capacity to make their own decisions is intact, and they have the voluntarism to act on the information given to them. Decisional capacity is the patient's ability to comprehend the information given, communicate a choice, weigh the potential risks and benefits, and appreciate the effects of these choices on their life course/prognosis (12). Voluntarism, which is the capacity for self-determination without undue coercion, is a must. Craving, withdrawals, habituation and many other factors may affect the motivation of patients and can reduce their decisional capacity to exercise their free will (13). Sometimes, patients have to be admitted to treatment facilities without their explicit concurrence, to minimise the risk of harm to themselves and others (14). It must be noted that not all patients who are forcibly admitted to treatment facilities find their participation in the treatment coercive, while on the other hand, many self-referred patients may identify psychological pressures as coercing their treatment for substance use (15).

In the above case, the treating team considers treatment to be in the best interest of the patient, but the patient refuses treatment. From the perspective of utilitarianism, the ends justify the means, ie providing treatment to such individuals not only helps them to understand the consequences of their substance use problems, but may also help them to stop using the substance. From the utilitarian perspective, treating non-consenting substance users is justified as it serves the purpose of helping them quit using the substance. It would also serve the purpose of justice, as it would no longer be necessary to spend limited resources on repeatedly handling medical crises among a selected few patients. However, treating non-consenting substance users would be inimical to their autonomy. An analogy can be drawn with patients with other psychiatric disorders, such as schizophrenia or bipolar disorder; some of these patients are admitted against their will when they pose an imminent risk to themselves or others. In such cases, the clinician acts in the best interest of the patient and is able to steer the patient away from a crisis. Can a similar logic be extended to patients with substance use disorders, with the patients being provided help temporarily, especially when their actions are harmful to themselves? Probably, it is best to reserve a custodian approach for situations in which other sincere efforts to engage the patient, such as through motivational interviewing, have failed.

In India, a peculiar situation exists in “rehab” centres, which provide treatment to patients at the behest of their family members, in a restrictive environment and without their assent. Due to the heavy-handed approach of the centre, the authorities are able to keep patients in the centre for several weeks or months to ensure that they abstain from substance use. Such coercive admissions at the request of the family members, who pay for the patient’s upkeep, are congruent with the principle of beneficence (ie benefit of the patient), but they severely restrict the patient’s autonomy, sometimes to the extent that the patient develops feelings of resentment and mistrust towards the family and treatment providers. In these situations, it might be prudent to discuss the reasons for prolonged admission with the patient, and enlist their cooperation to develop a plan for the treatment of substance use.

Another important factor in relation to consent to treatment is the concept of “advance directive” in mental health. This is especially important because according to India’s new mental healthcare bill, conditions associated with alcohol and drug abuse also come under the purview of mental illness. According to this bill, every person has a right to make a written statement specifying the way he/she wishes to be (or not be) cared/treated for their mental illness (14). Ethical challenges may arise, for example, in the case above, if an advance directive specifies refusal of treatment, when the patient’s condition would improve with treatment. In such scenarios, it would be better to initially provide non-coercive treatments, such as brief interventions and motivational interviewing, and avoid forcible admission when the person refuses to comply with the treatment.

Surreptitious treatment with medications also constitutes coercive treatment, although in a veiled manner. The use of disulfiram is an important example of surreptitious treatment. Disulfiram is among the most effective treatments for patients with alcohol use disorder and is widely used, especially in countries such as India (16). It acts as a deterrent agent, precipitating an unpleasant disulfiram ethanol reaction when a person on this medication consumes alcohol. The use of this medication appeals to Indian clinics since patients’ family members are available for supervision. Sometimes, in the case of patients who are averse to treatment, the family members ask the treating physician to use disulfiram (17). The use of disulfiram in patients who are unsuspecting and poorly motivated may be harmful, leading to symptoms such as vomiting, dizziness and headache, and may even have a potentially fatal outcome (18,19). In the case of other patients who are unwilling to submit to any medical intervention, treatment with disulfiram may help reduce alcohol consumption.

Treatment of dual diagnosis patients

Dual diagnosis patients are those who, apart from substance-related illness, also suffer from another psychiatric illness, such as psychosis or mania. The treatment of such individuals also poses an ethical dilemma to mental health professionals, as highlighted in the following case example.

Case 3: “A 23-year-old male with a history of cannabis dependence was taken to a substance use disorder treatment facility by his parents. Upon detailed interviews, it was found that the patient also suffered from psychosis, ie auditory hallucinations, delusions of persecution and disorganised behaviour. Further, he had been violent towards his family members, having inflicted grave injuries on them over the last six months. His history suggested substance-induced psychotic disorder. The patient was admitted in a ward (against his will) and treated with antipsychotics. The symptoms subsided, but the patient refused treatment for his cannabis use.”

The issues that this case raises are the similar to those that arose in cases 2 and 3. These include autonomy, coercive treatment, and justice. The principles of beneficence and non-maleficence would suggest the need for treatment by coercion, especially during the early course of the illness when the potential for harm was high due to psychosis. However, whether the patient should be treated for substance use when they are still suffering from active psychotic symptoms is open to debate. In the absence of treatment for substance use, the psychotic symptoms could recur, and attention must be paid to this. However, when the patient has recovered from the psychosis and their capacity to take decisions is intact once again, it is problematic to decide whether the patient should be treated for the problem of substance use against their will. The best approach would probably be to provide them with the least restrictive and least coercive treatment possible (for example, non-pharmacological treatments such as motivational interviewing during every contact), and to encourage the patient to continue with the treatment during each visit.

Social justice

Social justice is defined as consistency and equity in treatment, and access to resources based on some uniform norms (6). Generally speaking, it refers to the uniform distribution of resources for the greater common good, rather than investing resources for the care of a select few. Challenges arise when public health professionals have to decide on the comparative allocation of funds to two different public health problems that may be common and important in their own right, for example, immunisation coverage and tuberculosis control programmes.

Mental illnesses, though common, are generally allocated a disproportionately low fraction of the resources (20). This holds good for the treatment of substance use disorders as well. Thus, substance use disorders may not be a priority area in public healthcare settings, and there may be a general reluctance to treat individuals with these disorders. Such issues come to the fore when planning the scaling up of two or more programmes with competing interests. For example, publicly funded agonist maintenance programmes, which provide controlled amounts of medically supervised opiates for the treatment of opioid dependence, may have to pitch further to get grants, even though such programmes have demonstrated efficacy in improving the outcomes of patients with opioid dependence. Another important issue is the need for prisons to have facilities for the treatment of substance use, as a significant proportion of inmates suffer from substance use disorders (21).

Faith healing practices and alternative medicine

Faith healing practices are fairly common in the Indian subcontinent and are used to treat various diseases (22). Spirituality-based approaches to substance use treatment have been found to be complementary to evidence-based medical practice. Western data suggest that many people with substance use problems, including heroin injectors, use complementary and alternative medicine techniques, such as religious healing (23,24). Although Indian data are scarce, it is not uncommon in substance use practice to come across patients or their family members who report going to faith healers for problems related to substance use. The ethical dilemma arises when such patients or their relatives seek permission to go out and perform some *puja* (ritual) or visit some *dargah* (shrine) to remedy the problem. Although a practitioner who accepts such a request is respecting the patient's autonomy, there is a possibility of non-maleficence (ie breaching the tenet of "do no harm") when a practitioner endorses a potentially harmful faith healing practice. The practitioner may allow non-invasive faith healing practices which might be of some benefit to the patient, ie the placebo effect associated with such a practice may help alleviate the patient's distress (25). The clinician must try to make the patient aware of the potential harm of such interventions. Decisions should be taken carefully after considering all the nuances of the alternative interventions and their effect on medical treatment.

Misuse of opioids for chronic pain

Among the most vexing problems in the management of substance use disorders is the inappropriate use of opiates that potentially produce dependence in patients with pain, especially in those with chronic/non-malignant pain. The ethical dilemma involved is the provision of relief to the suffering patient (beneficence) versus the risk of opioid dependence or possible diversion (non-maleficence). Diversion here refers to the transfer of any legally prescribed controlled substance from the individual for whom it was prescribed to another person for any illicit use. Pain is something which is difficult to define and measure. Hence, one has to believe what the sufferer reports. However, a patient's requests for increasing doses of pain-relieving opiates can lead to a clash, with the physician suspecting that the patient's purported need for pain relief is just a way of misusing the pain-relieving opiates. A patient may be given the benefit of the doubt when he/she reports pain (respect for patients), though when diversion is detected, it must be tackled seriously. The issue becomes more complex when painkillers are prescribed for patients with a previous history of opiate dependence. Patients with opiate dependence have lower pain tolerance and decreased pain relief with medications. This often leads to under-treatment of pain in such patients. This is compounded by the patient's belief that taking adequate amounts of narcotics would be construed as a sign of weakness. In such situations, collaboration between pain specialists and addiction psychiatrists would be helpful, and a detailed psychiatric work-up focusing on cognition may be necessary.

Treatment of children and adolescent substance users

Childhood and adolescence are usually the time when substance use is initiated. Children and adolescents represent a vulnerable population who experiment with substances, and some of them might develop dependence. A major issue in the treatment of substance users in these age groups pertains to their ability to consent. Usually, consent for the treatment of children and adolescents is obtained from their parents or legal guardians. The parents might take the child or adolescent to the treatment facility against their wish. The provision of treatment at the behest of the parents may be construed as coercive treatment. At the same time, parents and guardians are responsible for the care of their wards, and should prevent the development of substance use disorders. Hence, children and adolescents who use substances might best be treated in the least restrictive and least coercive manner, while at the same time, their parents' concerns should be kept in mind. Additional problems arise when parents want to know what the adolescent has disclosed to the treatment providers regarding issues relating to substance use and other matters. Here, too, though the treating team should respect the parents' concern, it should pay attention to the privacy of the child or adolescent, and refrain from volunteering information which may be detrimental to the therapeutic relationship.

Conclusion and future directions

The field of addiction medicine has its own, specific ethical dilemmas. These dilemmas need to be tackled carefully, on a case-to-case basis. The issues may relate to different aspects of medical ethics, including autonomy, beneficence, non-maleficence and justice. Though these issues are encountered in routine clinical practice, there are few opportunities to discuss them in clinical and academic fora.

There is a need to sensitise professionals who treat patients with substance use disorders to the various nuances of ethics and the ethical dilemmas they may face, especially in the Indian scenario. Such dilemmas may be clarified through empirical evidence and conceptual progress. The coming decades will see the emergence of new ethical challenges in the treatment of substance use disorders, considering the extensive research taking place in the field of addiction medicine. Further, healthcare trainees from different domains should be involved in discussions on decision-making in the face of an ethical dilemma. It would be useful to develop a casebook of ethically challenging situations that collates the experiential knowledge of the peer community of addiction specialists. Practitioners of addiction medicine require sound guidance on clinical ethics, and clinical ethics should be included in the curricula of programmes teaching addiction medicine.

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References

1. Vega WA, Aguilar-Gaxiola S, Andrade L, Bijl R, Borges G, Caraveo-Anduaga JJ, DeWit DJ, Heeringa SG, Kessler RC, Kolody B, Merikangas KR, Molnar BE, Walters EE, Warner LA, Wittchen HU. Prevalence and age of onset for drug use in seven international sites: results from the international consortium of psychiatric epidemiology. *Drug Alcohol Depend.* 2002;68(3):285–97.
2. Murthy P, Manjunatha N, Subodh BN, Chand PK, Benegal V. Substance use and addiction research in India. *Indian J Psychiatry.* 2010 Jan;52 (Suppl 1):S189–99. doi: 10.4103/0019-5545.69232.
3. Rehm J, Taylor B, Room R. Global burden of disease from alcohol, illicit drugs and tobacco. *Drug Alcohol Rev.* 2006;25(6):503–13.
4. McGinnis JM, Foege WH. Mortality and morbidity attributable to use of addictive substances in the United States. *Proc Assoc Am Physicians.* 1999;111(2):109–18.
5. Geppert CMA, Bogenschutz MP. Ethics in substance use disorder treatment. *Psychiatr Clin North Am.* 2009;32(2):283–97. doi: 10.1016/j.psc.2009.03.002.
6. Gillon R. Medical ethics: four principles plus attention to scope. *BMJ.* 1994;309(6948):184–8.
7. Dill PL, Wells-Parker E. Court-mandated treatment for convicted drinking drivers. *Alcohol Res Health.* 2006;29(1):41–8.
8. Mattoo SK, Sarkar S, Nebhinani N, Gupta S, Parakh P, Basu D. How do Indian substance users perceive stigma towards substance use vis-a-vis their family members? *J Ethn Subst Abuse.* 2015;14(3):223–31. doi: 10.1080/15332640.2014.980960. Epub 2015 Jun 26.
9. Link BG, Struening EL, Rahav M, Phelan JC, Nuttbrock L. On stigma and its consequences: evidence from a longitudinal study of men with dual diagnoses of mental illness and substance abuse. *J Health Soc Behav.* 1997;38(2):177–90.
10. Sarkar S, Patra BN, Kattimani S. Substance use disorder and the family: An Indian perspective. *Med J Dr DY Patil Univ.* 2016;9:7–14. DOI: 10.4103/0975-2870.172413
11. Government of India. The Protection of Children From Sexual Offences Act, June 19, 2012. New Delhi:GoI;2012.
12. Appelbaum PS. Clinical practice. Assessment of patients' competence to consent to treatment. *N Engl J Med.* 2007;357(18):1834–40.
13. Sjoerds Z, Luigjes J, van den Brink W, Denys D, Yücel M. The role of habits and motivation in human drug addiction: a reflection. *Front Psychiatry.* 2014;5:8. doi: 10.3389/fpsy.2014.00008. eCollection 2014.
14. Janssens MJ, Van Rooij MF, ten Have HA, Kortmann FA, Van Wijmen FC. Pressure and coercion in the care for the addicted: ethical perspectives. *J Med Ethics.* 2004;30(5):453–8.
15. Wild TC, Newton-Taylor B, Alletto R. Perceived coercion among clients entering substance abuse treatment: structural and psychological determinants. *Addict Behav.* 1998;23(1):81–95.
16. Garbutt JC, West SL, Carey TS, Lohr KN, Crews FT. Pharmacological treatment of alcohol dependence: a review of the evidence. *JAMA.* 1999;281(14):1318–25.
17. Sarkar S. Surreptitious use of disulfiram. *Indian J Med Ethics.* 2013 Jan-Mar;10(1):71.
18. Manjunatha N, Vidyendaran R, Rao MG, Kulkarni GB, Muralidharan K, John JP, Amar BR, Jain S. Subacute vocal cord paralysis, facial palsy and paraesthesias of lower limbs following surreptitious administration of disulfiram. *J Neurol Neurosurg Psychiatry.* 2010;81(12):1409–10. doi: 10.1136/jnnp.2009.190397. Epub 2010 Jun 18.
19. Dixit V, Karia S, Kalra G. Catatonia due to surreptitious administration of disulfiram: a case report. *J Subst Use.* 2014;19:181–3. DOI: 10.3109/14659891.2013.768711
20. Tomlinson M, Lund C. Why does mental health not get the attention it deserves? An application of the Shiffman and Smith framework. *PLoS Med.* 2012;9(2):e1001178. doi: 10.1371/journal.pmed.1001178. Epub 2012 Feb 28.
21. Jhanjee S, Pant S, Girdhar NK, Sethi H, Gunasekaran Rengaswamy R, Jain R, Sarangi J. Opioid substitution treatment in Bihar prisons, India: process of implementation. *Int J Drug Policy.* 2015;26(9):890–1. doi: 10.1016/j.drugpo.2015.05.016. Epub 2015 Jun 6.
22. Sarkar S, Sakey S, Kattimani S. Ethical issues relating to faith healing practices in South Asia: a medical perspective. *J Clin Res Bioeth.* 2014;5:190. doi:10.4172/2155-9627.1000190.
23. Galanter M. Spirituality and addiction: a research and clinical perspective. *Am J Addict.* 2006;15(4):286–92.
24. Barry DT, Savant JD, Beitel M, Cutter CJ, Moore BA, Schottenfeld RS, Fiellin DA. Use of conventional, complementary, and alternative treatments for pain among individuals seeking primary care treatment with buprenorphine-naloxone. *J Addict Med.* 2012;6(4):274–9. doi: 10.1097/ADM.0b013e31826d1df3.
25. Sarkar S, Seshadri H. Dealing with requests for faith healing treatment. *Indian J Med Ethics.* 2015;12(4):235–7.

Ethical perspectives and ramifications of the Paolo Macchiarini case

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Abstract

The Paolo Macchiarini case has several ethical ramifications. Professor Macchiarini, formerly of the Karolinska Institutet (KI), became famous for the tracheal surgeries he conducted between 2008 and 2014. His rapid rise to fame was followed by an almost equally rapid fall from grace as official reports, articles in newspapers and television programmes revealed

several aspects related to misconduct in his curriculum vitae, professional practices and publishing-related activity. Formal misconduct reports issued by four KI co-workers in late 2014, then again in 2016, coupled with social scandals, including the tricking of a famous US television newscaster into a false marriage, a previous arrest in Italy for apparent bribery, and acute narcissism, all tainted Macchiarini's legend. In the short space of just two years, Macchiarini was no longer remembered for the revolutionary changes he had claimed to have brought about in stem cell research and regenerative medicine. Instead, at least seven dead patients later, Macchiarini faces potential aggravated manslaughter charges and an uphill battle to save his published research, now shrouded in scandal and scientific doubt, from being retracted and scratched out from the list of verified medical science. This paper examines some of the possible ethical ramifications of the Macchiarini case.

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