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**A survey of attitudes towards patient substance abuse / addiction in the
Emergency Center**

By

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Submitted : 15th August 2011

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DECLARATION BY AUTHOR

I, Robert Roman Kalebka, do hereby declare that, unless otherwise specified or referenced, the following dissertation is the product of my original research that was undertaken as part of my fulfilment of my academic obligations in the pursuit of my qualification.

I further declare that no part of this work has ever been submitted for publication or otherwise.

Signed on 15th August 2011 at Sea Point

Dr RR Kalebka (author)

Witness

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University of Cape Town

PART A

**Protocol submitted to Department Research Committee
and Ethics committee**

University of Cape Town

Research Proposal

May 2010

A survey of attitudes towards patient substance abuse / addiction in the Emergency Center

by

Dr RR Kalebka (MBChB)

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University of Cape Town

Internal Supervisor: Dr S.R. Bruijns

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Background

Emergency care centers in South Africa are inundated with patients who suffer from diseases which span across a wide disease and injury spectrum. It is of utmost importance that shop floor clinicians have the skill, knowledge and clarity of mind to recognize and manage different pathologies. One of these pathologies, substance abuse (which includes alcohol) is a recognized psychiatric diagnosis and is classified as such in the DSM IV. (1) Local emergency care centers are often the first contact that patients with substance abuse or related problems make with the public health system. Despite emergency centers not always appearing to be the optimal setting for the level of care that substance abusing patients require, they have however been identified as appropriate settings for the detection of substance abuse.(2)

Negative attitudes that clinicians may have towards substance abusers can adversely affect the quality of care they provide to this patient population.(3-6) These negative attitudes may arise as result of training deficiencies.(7) Specific problems that arise may include delays in diagnosis, altered treatment plans and improper referrals.(4) A need for training and formulation of protocols and guidelines with respect to identification and management of substance abuse in the Emergency center has been identified in the literature.(8)

An American survey of trauma surgeons in 2000 found that with more patients being screened for alcohol abuse in trauma departments, widespread education on screening and intervention was necessary to facilitate the process. (9) A study in Michigan in 2000 found that the majority of emergency physicians supported brief interventions for alcohol abuse and dependence recognition; however, the time constraints of a typical emergency center patient encounter were an obstacle. (10) Training in substance abuse management, attendance of twelve step meetings- whether as observer or patient- has been associated with higher attitude scores and a more positive attitude towards this disease.(11) This can only translate to improved disease screening, assessment, care and safe disposal. Screening and brief intervention, have been shown to be effective in reducing alcohol consumption in the primary care setting.(12 – 14) According to reports from the Institute of Medicine and the National Institute of Alcohol Abuse and Alcoholism there is scientific justification for routine alcohol screening and counseling in trauma centers in the USA.(15) Whether this can be extrapolated into the emergency department setting is a matter of debate with conflicting outcomes in a number of well designed studies. Merely screening and analyzing patients may possibly influence change in their hazardous behavior.(16)

So what are the obstacles to effective care and management of patients with substance abuse issues, aside from the fact that the identification of a substance abuse disorder is challenging at the best of times? In many cases cognitive factors and time factors have been cited as obstacles to addressing substance abuse in the emergency department, but not lack of motivation. (17) Physicians generally accept the responsibility of addressing these issues with patients themselves however many feel that they require some form of training to assist them with this. (18)

Emergency department staff, including clinicians, cares for substance abusers on a daily basis despite the majority not having any formal training regarding drug and alcohol abuse. (8) Failure to screen and manage substance abuse for whatever reason- be it lack of logistical support or a nihilistic approach to addiction- is to the detriment of the patient and a significant burden on health resources.

Aim & Objective

This study aims to determine the attitude of newly qualified emergency physicians and emergency medicine registrars to patient substance abuse and addiction issues in South Africa's emergency care centers.

- To determine the attitude of newly qualified emergency physicians and emergency medicine registrars towards patients with substance abuse disorders.
- To make recommendations regarding curriculum amendments based on the results of the study

Methods

A questionnaire based prospective survey will be aimed at emergency medicine registrars and junior consultants (post 2007) of academic Emergency Medicine institutions in South Africa.

Inclusion criteria

- Junior consultant emergency physicians (graduated in or after 2007)
- Current Emergency Medicine Registrars
- Supernumerary registrars who have worked in South Africa for six months.

This will be a convenience sample. It is expected that a large number of respondents will be from Cape Town as the Division of Emergency Medicine is the largest in the country with almost double the number of trainee emergency physicians than the rest of the country combined

The expected numbers are as follows:

- 42 registrars and 20 junior consultants in the Cape Town area.
- 19 registrars and 1 Junior consultant in Gauteng
- 1 registrar in Limpopo and 2 registrars in Kwa Zulu Natal

Exclusion criteria

- Incomplete questionnaires
- Refusal to complete questionnaire

Data will be collected using a modified questionnaire which will include the previously validated Substance Abuse Attitude Survey (Chappel et al., 1985) (19) The questionnaire will incorporate a five point Likert scale.

The questionnaire will be distributed to registrars during local academic meetings.

- Cape Town: The principal investigator will distribute questionnaires and collect responses in a collection box.
- Clinicians in other major institutions: A registrar representative in Pretoria will receive the questionnaires by DHL courier, distribute questionnaires and collect. The completed forms will then be sent by DHL courier to the author who will place them in the collection box with the other forms.
- The remainder of potential respondents who do not attend regular meetings will be sent the questionnaire by post with a separate reply envelope addressed to the author with no details of the respondent. This will be sent back to the author by pre paid postage. The completed form will then be placed with all the others.

The principal investigator will maintain telephonic contact with the regional co coordinator/s until the responses are received from those particular regions by courier. The individual respondents who receive pre addressed reply envelopes will be reminded by email and finally by telephone call to submit their responses if necessary. Once the author is satisfied that all responses have been received the collection box will be opened and analysis will commence.

The Substance Abuse Attitude Survey was designed to measure health professional's attitudes towards substance abuse and it identifies five attitude subgroups: treatment intervention, treatment optimism, permissiveness, non moralism and non stereotypes. Data will be entered into an Excel database for analysis. Descriptive statistics will be performed utilizing mean, median values, standard deviation, variance and range.

Ethical Considerations

An introductory letter and consent form containing instructions will be handed out with the questionnaire. Subjects will be given the opportunity to study the contents and ask questions. A contact number will be available for those receiving the questionnaire by post. This will be stated in the introductory letter. Completed forms will not contain any identifiable information of subjects such as: name, address, date of birth, staff or student numbers. Completed forms will be stored in the collection box described, which will be kept in a lockable room in the offices of the division of emergency medicine in Karl Bremer hospital. Only the principal investigator will have access to the forms.

The Substance Abuse Attitude Survey focuses exclusively on physician attitudes towards patients with substance abuse. There are no questions which can professionally or personally implicate the responder in any way with regards to current, previous or even indirect personal involvement with substance abuse of any kind.

Permission to utilize the Substance Abuse Attitude Survey tool has been granted as noted in release letter.

Budget

Stationary printing costs	R800
Courier costs/Postage	R1200
Telephone	R100
Statistician	<u>R1000</u>
Total + 10 %	R 3410

Proposed Time line

Proposal submission to Division Research Committee end March 2010
Submission of study Protocol to Departmental Committee at UCT June 2010
Ethics committee submission end June 2010
Submission of D2a forms to Post Graduate Office July 2010
Commencement and completion of data collection after ethics submission and approval.
Data analysis commencing in January/Feb 2011

Dissemination of findings

Submissions will be made to a peer reviewed journal for publication

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Appendix 1

Research information sheet

A survey of attitudes towards patient substance abuse / addiction in the Emergency center

Researcher: Dr RR Kalebka MBChB (EM Registrar)

Introduction

You have been selected to participate in the above mentioned questionnaire based survey. As a newly qualified consultant and registrar in emergency medicine you will be closely involved in the management of emergency centers and formulation of treatment protocols.

Substance abuse and addiction issues remain an enigma for shop floor clinicians who do not have the time or necessary infrastructure to deal with these difficult and often frustrating problems.

The fact remains however that these patients entry into the health system is often justifiably or not through an emergency center.

Substance abuse presents in numerous guises be it an intoxicated trauma patient, a cocaine induced chest pain, a parasuicide or as part of a psychiatric dual diagnosis.

Purpose of the study

To ascertain the attitudes of emergency physicians towards substance abuse/addiction issues.

Procedure

Included in this handout is a demographics questionnaire as well as the Substance Abuse Attitude Survey designed by Chappel et al in 1985.

The demographics questionnaire is multiple choice based.

The responses to the survey are likert scale based agree – disagree statements to 50 simple questions.

Please read the questions carefully and circle your answer of choice.

The questionnaire has to be completed immediately and handed in to the research representative.

If you have received the study by post please send it in the prepaid and preaddressed envelope provided.

Completion of the survey should not take more than 30 minutes of your time

Please answer as honestly as you can and refrain from discussion/research as this will affect the results of the study.

To maintain anonymity please do not identify yourself in any way on the questionnaire or pre paid envelope.

Risks and benefits

You will not be requested directly or indirectly to disclose any information that may compromise you or anyone else professionally or personally.

The questionnaire is anonymous and will be used for statistical analysis only.

You will receive no direct benefit or financial compensation for completing the survey.

Participant's rights

Completing the questionnaire is voluntary.

Please sign in the space provided .on the BOTTOM left hand corner to indicate you have understood the above mentioned and that you are willing to participate in the study.

Further information/complaints/queries

Signature :

Dr RR Kalebka

Tel 082 3303627 email: Robert_kalebka@yahoo.com

Appendix 2

Demographics questionnaire

MALE FEMALE

HOW FAR ARE YOU IN THE PROGRAMME?

1 2 3 4 5 Junior consultant

CLINICAL YEARS OF POST MBChB GRADUATE EXPERIENCE

1 - 5 6 - 10 > 10

HAVE YOU ANY PROFESSIONAL EXPERIENCE IN THE SUBSTANCE ABUSE FIELD ?

No

Yes

Formal training/ courses

Self study

HOW OFTEN DO YOU MANAGE PATIENTS WHO YOU STRONGLY SUSPECT HAVE SUBSTANCE ABUSE PROBLEMS (INCLUDING ALCOHOL)?

Hardly ever Infrequently Almost daily More than 1/day

Consider the following statement:

Brief intervention has reduced alcohol consumption in some well-designed ED studies but not in others. Bernstein. JAnn emerg med vol 51 no6 751 - 754

ASSUMING ADEQUATE RESOURCES AND STAFFING, IF YOU ARE A CLINICAL MANAGER IN AN EMERGENCY CENTER WOULD YOU BE WILLING TO SCREEN APPROPRIATE PATIENTS FOR ALCOHOL ABUSE AND PROVIDE BRIEF INTERVENTIONS AS INDICATED .

Yes

No

Appendix 3

Substance Abuse Attitude Survey

Instructions:

This survey has been designed for the purpose of assessing attitudes useful in the education of physicians and other health care professionals.

Indicate your degree of agreement or disagreement by circling your answer.

There is no right or wrong answers so work quickly and do not worry over every item.

1. Alcohol is an effective social relaxant.

Strongly agree Agree uncertain disagree strongly disagree

2. Marijuana should be legalized.

Strongly agree Agree uncertain disagree strongly disagree

3. Any drug can be safely used by a person who is mentally healthy.

Strongly agree Agree uncertain disagree strongly disagree

4. Almost anyone would turn to drugs if their problems were great enough.

Strongly agree Agree uncertain disagree strongly disagree

5. Alcohol is a food, not a drug

Strongly agree Agree uncertain disagree strongly disagree

6. Physicians are an important source of drugs for most users.

Strongly agree Agree uncertain disagree strongly disagree

7. Marijuana use leads to mental illness

Strongly agree Agree uncertain disagree strongly disagree

8. Heroin is so addicting that no one can really recover once he/she becomes an addict

Strongly agree Agree uncertain disagree strongly disagree

9. Smoking leads to marijuana use which in turn leads to hard drugs.

Strongly agree Agree uncertain disagree strongly disagree

10. Clergymen should not drink in public.

Strongly agree Agree uncertain disagree strongly disagree

- 11 Alcoholism is associated with a weak will.
Strongly agree Agree uncertain disagree strongly disagree
12. All heroin use leads to addiction
Strongly agree Agree uncertain disagree strongly disagree
13. Daily use of one marijuana cigarette is not necessarily harmful.
Strongly agree Agree uncertain disagree strongly disagree
14. Physicians should not smoke tobacco in front of their patients.
Strongly agree Agree uncertain disagree strongly disagree
15. People who use marijuana usually do not respect authority.
Strongly agree Agree uncertain disagree strongly disagree
16. The laws governing the use of marijuana and heroin should be the same.
Strongly agree Agree uncertain disagree strongly disagree
17. Angry confrontation is necessary in the treatment of alcoholics or drug addicts.
Strongly agree Agree uncertain disagree strongly disagree
18. Using any hard drugs shortens ones life span.
Strongly agree Agree uncertain disagree strongly disagree
19. Tobacco should not be smoked in the rooms where non smokers are present
Strongly agree Agree uncertain disagree strongly disagree
20. Weekend users of drugs will progress to drug abuse.
Strongly agree Agree uncertain disagree strongly disagree
21. Tobacco smoking should be allowed in high schools.
Strongly agree Agree uncertain disagree strongly disagree
22. Anyone who is clean shaven with short hair probably doesn't use illegal drugs.
Strongly agree Agree uncertain disagree strongly disagree

23. Family involvement is a very important part of the treatment of alcoholism or drug addiction

Strongly agree Agree uncertain disagree strongly disagree

24. Alcohol is so dangerous that it could destroy the youth of our country if it wasn't controlled by the law.

Strongly agree Agree uncertain disagree strongly disagree

25. A physician who has been addicted to narcotics should not be allowed to practice medicine again.

Strongly agree Agree uncertain disagree strongly disagree

26. Recreational drug use precedes drug abuse.

Strongly agree Agree uncertain disagree strongly disagree

27. Lifelong abstinence is a necessary goal in the treatment of alcoholism.

Strongly agree Agree uncertain disagree strongly disagree

28. Drug addiction is a treatable illness.

Strongly agree Agree uncertain disagree strongly disagree

29. Alcoholism is a treatable illness

Strongly agree Agree uncertain disagree strongly disagree

30. Street pushers are the initial source of drugs for young people.

Strongly agree Agree uncertain disagree strongly disagree

31. Personal use of drugs should be legal in the confines of one's own house.

Strongly agree Agree uncertain disagree strongly disagree

32. People who dress in hippie style clothing usually use psychedelic drugs.

Strongly agree Agree uncertain disagree strongly disagree

33. A hospital is the best place to treat an alcoholic or drug addict.

Strongly agree Agree uncertain disagree strongly disagree

34. Group therapy is very important in the treatment of alcoholism and drug addiction.

Strongly agree Agree uncertain disagree strongly disagree

35. Most alcohol and drug dependant persons are unpleasant to work with as patients.
Strongly agree Agree uncertain disagree strongly disagree
36. It can be normal for a teenager to experiment with drugs
Strongly agree Agree uncertain disagree strongly disagree
37. Once a person becomes drug free through treatment; he can never become a social user.
Strongly agree Agree uncertain disagree strongly disagree
38. Paraprofessional counselors can provide effective treatment for alcohol or drug users.
Strongly agree Agree uncertain disagree strongly disagree
39. Long term outpatient treatment is necessary for the treatment of drug addiction.
Strongly agree Agree uncertain disagree strongly disagree
40. An alcohol or drug dependant person who has relapsed several times probably cannot be treated
Strongly agree Agree uncertain disagree strongly disagree
41. Marijuana use among teenagers can be healthy experimentation
Strongly agree Agree uncertain disagree strongly disagree
42. Urine drug screening can be an important part of drug abuse treatment
Strongly agree Agree uncertain disagree strongly disagree
43. Physicians who diagnose alcoholism early improve the chance of treatment success.
Strongly agree Agree uncertain disagree strongly disagree
44. Alcohol and drug users can only be treated by specialists in that field.
Strongly agree Agree uncertain disagree strongly disagree
45. The best way for a physician to treat an alcohol or drug dependant patient is to refer them to a good treatment program
Strongly agree Agree uncertain disagree strongly disagree
46. Persons convicted of the sale of illegal drugs should not be eligible for parole.
Strongly agree Agree uncertain disagree strongly disagree

47. Chronic alcoholics who refuse treatment should be legally committed to long term treatment
Strongly agree Agree uncertain disagree strongly disagree

48. An alcohol or drug dependant person cannot be helped until he/she has hit "rock bottom"
Strongly agree Agree uncertain disagree strongly disagree

49. Once an alcohol or drug dependant person is abstinent and of all medication no further contact with a physician is necessary.
Strongly agree Agree uncertain disagree strongly disagree

50. Parents should teach their children how to use alcohol.
Strongly agree Agree uncertain disagree strongly disagree

University of Cape Town

PART B

Literature Review

University of Cape Town

Literature Review

Substance related disorders are recognized psychiatric diagnoses and are classified as such in the Diagnostic and Statistical Manual IV. Substance abuse is a maladaptive pattern of mood and /or mind altering substances use that results in clinically significant impairment or distress as manifested by failure to fulfill personal obligations; use under hazardous circumstances; legal problems and continued use despite adverse consequences. Substance dependence is characterised, among other things, by the development of tolerance as manifested through increased consumption of the substance in question to achieve the desired effect(1). Hospitals across South Africa and in the first world are inundated with patients suffering from conditions associated with or caused by substance abuse.(2-5) It is inevitable that contact with health services be made through an emergency centre (EC) at some point.

It is reported that trauma and violence are often related to some form of substance abuse (Table 1). Alcohol has been found to be a significant risk factor of intentional and unintentional injuries presenting to trauma units. This, to a somewhat lesser extent, also applies to illicit drugs.(6) The Cape Metropol Study of 1990 revealed an injury mortality rate double that of the global rate.(7) Substance abuse and alcohol are recognized as major contributors to this statistic. This naturally has a significant economic impact in terms of utilization of health resources, loss of manpower and premature death. Although alcohol seemed to predominate, other substances were already playing an increasing impact on the trauma scene at the turn of the century, with distinct usage patterns in certain areas. Noticeably, there has also been a trend to increasing use of hard drugs such as crack, heroin and cocaine.(8) Substance abuse is a significant risk factor in homicide with more than half (52.9%) of homicides in urban South Africa in 2001 tested positive for alcohol.(9) In the 1990 Cape Metropol Study 63.6% of interpersonal violence and 75 % of all homicides were alcohol related. (7) In South Africa nearly half (46.5%) of drivers killed in motor vehicle collisions in 2001 were above the stipulated legal limit.(10) A study in the Johannesburg Hospital Trauma unit concluded that alcohol and cannabis intoxication was a significant risk factor and contributed strongly to the trauma burden. Of just over one hundred patients studied, 59 % of patients tested positive for alcohol and just over 43 % tested positive for cannabis.(2) Substance abuse particularly cannabis, methaqualone and methamphetamines are sharply on the rise in Cape Town. Parry et al discovered that the use of cannabis and methaqualone for 2001 was significantly higher than earlier studies in 1997. (11) Cannabis and methaqualone were the primary substances of abuse in patients presenting to treatment centers in the Cape Town area between 1999 and 2000.(12)

There has also been a trend of increasing methamphetamine use as indicated by the Medical Research Council report in 2007. In the latter half of 2002 thirteen patients sought treatment at specialist centers with methamphetamine as a primary substance of abuse. In 2006 this figure rose to 1184. (13) A cross sectional survey of randomly selected schools in the Cape Town area by Pluddeman et al found that 9 % of adolescents had tried methamphetamine at least once. (14) The South African Community Epidemiology Network on Drug Use (SACENDU) found that alcohol is still the most common form of substance used by patients presenting to treatment centers across the country except for the Western Cape where 42 % of patients reported methamphetamine as their primary drug of abuse.(15)

Table 1. Extent of substance abuse in South Africa

Date	Main findings
2001	Parry et al found that the use of methaqualone and methamphetamines were significantly higher than earlier studies in 1997. (11)
2002	63.6 % of interpersonal violence and 75 % of all homicides were alcohol related. (7)
2002	Cannabis and methaqualone were the primary substance of abuse presenting in treatment centers around Cape Town between 1999 and 2000. (12)
2002	Alcohol was involved in 52.9% of homicides in urban South Africa. (9)
2004	Alcohol and cannabis intoxication contributing substantially to the trauma burden at the Johannesburg General Trauma Unit. 59 % and 43% of just over one hundred patients tested positive for alcohol and cannabis respectively.(2)
2007	A trend of increasing methamphetamine use with 1186 of patients seeking treatment in rehabilitation centers in 2006 compared to 13 patients in 2001. (13)
2010	A random survey in Cape Town schools revealed that 9 % of adolescents had tried methamphetamine at least once. (14)

The burden of substance abuse is not evident only in patients admitted to trauma units. The South African Mental Health Care Act No. 17 of 2002 stipulates that patients presenting with acute psychiatric conditions are assessed and stabilized in the EC to exclude organic causes and stabilization prior to referral to a psychiatric assessment team. Some designated regional and district hospitals and their respective EC's are plagued by lack of infrastructure and staff when dealing with these patients.(16)

By 2006 cannabis was the second most common substance of abuse among patients in treatment centers across the country, the exception being the Western Cape.(15) A number of studies have identified cannabis as a risk factor for developing psychiatric disorders. A systematic review of population based longitudinal studies and case control studies with longitudinal designs by Moore et al revealed an association between psychosis and cannabis use. (17) Most studies showed a 50-200% increase of psychosis in heavy users. A pooled analysis showed a 40% increase risk of psychosis in people who had used cannabis in the past. Almost all the studies in this review reported an increase of affective disorders in patients using cannabis although the association was less robust. Bhana et al. reported a high rate of psychiatric presentations with cannabis related disorders in the Cape Town and Port Elizabeth area since July 1997. (12) A retrospective chart review of psychiatric admissions at Tygerberg Hospital in Cape Town from January to June of 2002 was compared with a corresponding period in 2006 by Vos et al. A significant increase in admissions of patients using substances was found among adults and adolescents. The methamphetamine users were also more likely to present with psychosis and aggression.(3) The disability adjusted life year (DALY) is a measure of overall disease burden expressing the number of years lost due to disability, disease and death.Schneider et al attempted to estimate the disease burden caused by alcohol in South Africa with their analysis. (18) The DALY's were associated with a variety of medical conditions including ischemic heart disease, cerebrovascular accidents, hypertensive disease, cirrhosis, certain neoplasms, epilepsy, depression, alcohol use disorders and intentional and unintentional injuries. They also included fetal alcohol syndrome and low birth weight .They found that alcohol was associated with approximately 7.1% of all deaths and 7% of total DALYs in 2000. Methamphetamine abuse has also been linked to acute myocardial infarctions, ischaemic strokes, subarachnoid and intracerebral hemorrhages and cardiomyopathy. (19-21)

It has been suggested in previous studies that the field of addiction is not adequately addressed during the training of medical students (Table 2). This means that graduates have insufficient knowledge and training in the field of addiction and substance abuse when they enter clinical practice. Research has also shown that the attitudes towards substance abusers and addiction problems becomes increasingly negative as the students progress through their training. Although these deficiencies are being addressed, considerably more work needs to be undertaken in this regard.(22-28) Negative attitudes may often be established in the clinical instruction of medical students by clinical supervisors who themselves have a poor understanding of their substance abusing patients.(29)

A number of barriers have been identified in the literature which make successful integration of a substance abuse or addiction component into the curriculum difficult. Among these are lack of time, interdepartment coordination, availability of supervisors and accessibility to suitable treatment centers.(26) Geller et al. pointed out that lack of adequate curricula, knowledge as well as exposure to end stage addiction were important considerations in fostering negative attitudes among physicians towards substance abusers.(30)

Although there is a recognized need for education of physicians in the substance abuse/addiction field, implementation of training guidelines in the medical school, residency and post residency programmes has not been fully realized.(31,32) As a result of curriculum deficiencies, physicians may have an inadequate foundation in the basic biological factors which drive the pathology thus preventing physicians from adopting the disease model of addiction.(26)

In 1989 the the Committee on Alcohol and Drug Education in Medical Schools (CADEMS) was founded and the Australian and New Zealand medical schools agreed on a common set of learning objectives for undergraduates. A prospective cohort study in four medical schools across New Zealand between 1999 and 2001 by Cape G et al explored the attitudes, knowledge and skills of second year medical students with regards to working with substance abuse as their training progressed. (33) The students were reassessed again in their fourth and sixth year of study. Knowledge and skills of the medical students increased with the years of study, with higher scores reported for students who drank alcohol themselves. The majority of students 57% were also more optimistic about the effectiveness of alcohol and drug interventions at the end of their training. As training progressed, however, the students felt less effective in their role of helping patients with substance abuse issues. This may not reflect perceived lack of knowledge by the student but perhaps a deeper understanding of the complexity of the problem. Medical students displayed higher attitude scores for non stereotypes, treatment intervention, treatment optimism and non moralism after completing a course on substance abuse. (34) Gopalan et al. emphasized the need to sustain and consolidate the advances made in the pre-clinical addiction curricula as students entered their clinical years of study with additional courses and programs.(35)

Chappel et al postulated that physicians who regularly manage and interact with patients with substance abuse disorders demonstrate better attitudes.(36) A survey of anesthesiologists in Wisconsin revealed differences in attitude between academic anesthesiologists and their private practice counterparts. (37) The former displaying higher scores on the permissiveness, treatment intervention and non moralism criteria questions. Of note is that academic practitioners reported a higher exposure to substance abuse patients. Specialists in the psychiatry and internal medicine field, who in their daily practice were more likely to encounter and manage substance abuse and alcohol problems, were more positive in their approach and also more optimistic about a favourable outcome than anesthesiologists or surgeons.(38)

Table 2 Literature highlights regarding training in substance abuse management

Date	Main findings
1985	Physicians who regularly manage and interact with substance abuse patients displayed better attitudes.(36)
1987	Medical students displayed higher attitude scores following a substance abuse course.(34)
1987	Medical and psychiatric specialists were more positive in their approach than their surgical and anesthetic counterparts.(38)
1989	Lack of curricula, knowledge and exposure fostered negative attitudes towards substance abuse patients by physicians.(30)
1992	A need for sustained consolidation following pre clinical instruction on substance abuse identified.(35)
2001	Curriculum deficiencies identified in lack of adoption of disease model of addiction by clinicians.(26)
2002	Differences in attitude towards addiction between academic and non academic anesthesiologists, the former interacting more with these patients and having better attitude scores.(37)
2006	Improved knowledge and skills among medical students reported with drug and alcohol education.(33)

Physicians may be hesitant to approach the topic of substance abuse for fear of offending their patient. This may be particularly applicable to the private health care sector. Danielson et al. surveyed the trauma surgeon community in 1996 and found that 30% of clinicians who did not screen patients were of the opinion that patients would be offended.(39) This compared to the clinicians who screened their patients of which 10.3% felt that their endeavours would be deemed as intrusive by patients. In contrast, Schermer et al. found favourable patient participation in screening and interventional strategies with regards to alcohol abuse in trauma patients. Of the 150 trauma patients surveyed 70 % were successfully screened of which 45% screened positive for problematic alcohol use. Language problems and injury severity precluded most abstainees from being surveyed and there was only one patient who refused.(40)

Physicians with a personal history of addiction have been shown to display more optimal attitudes towards their patients with similar problems. A substance abuse attitude survey by May et al. revealed that personal experience of substance abuse as well as formal training and/or some involvement with substance abuse groups and affected close relatives was associated with higher attitude scores. (37) Personal experience with addiction may however have its drawbacks. The medical community is not immune to substance abuse and addressing abuse issues with patients may result in the physician confronting his own denial, something he or she may want to avoid.(41,42) Logistical issues also play an important role in preventing the emergency care physician from addressing addiction issues in the EC. The brief nature of the physician – patient encounter puts the emergency department and hence the emergency physician at a particular disadvantage. (43,44)

Despite ECs not always appearing to be the optimal setting for the level of care that alcohol abusing patients require, they have however been identified by Gentilello et al as appropriate settings for the screening of alcohol abuse, particularly in the trauma setting.(45) Screening and brief intervention, have been shown to be effective in reducing alcohol and drug consumption in the primary care setting. Further extrapolation, on which patients will benefit most

and under what circumstances, is required however.(46-48) According to reports from the Institute of Medicine and the National Institute of Alcohol Abuse and Alcoholism there is scientific justification for routine alcohol screening and counseling in trauma centers in the USA.(49) Whether this can be extrapolated into the EC setting is a matter of debate with conflicting outcomes in numerous studies. Merely screening and analyzing patients may possibly influence change in their hazardous behaviour.(50)

Direct questioning about substance abuse is often unreliable as has been found in some studies across different patient profiles.(51-53) A wide variety of objective assessment methods and instruments have been devised in the past to detect alcoholism.(54) Some of the currently used scales include the relatively simple CAGE questionnaire which is an acronym of its four questions enquiring whether patients have felt the need to cut down on their drinking, have they been annoyed about criticism of their alcohol use, have felt guilty about drinking and whether they have used alcohol as an "eye opener" in the morning. (55) Others include the AUDIT (Alcohol Use Disorders Identification Test), the MAST (Michigan Alcohol Screening Test), the DAST (Drug Abuse Screening Test) questionnaires and the more complicated SASSI-3 (Substance Abuse Subtle Screening Inventory-3).(56-59) Direct scales addressing alcohol abuse namely the AUDIT, CAGE and MAST depend on the replies of patients to direct questions relating to their use of alcohol. These scales are therefore dependant on the honesty of patients to be effective as screening tools. In order to reduce falsification so called direct and indirect scales have been described.(54,59) The SASSI-3 instrument however consists of ninety three questions making its application to a busy EC rather dubious. Furthermore there is no empirical evidence to support its superiority in detecting substance abuse disorders.(60) Erroll Yudko et al assessed the DAST in 2006, including the shortened versions thereof and reported not only adequate reliability, sensitivity and specificity but also ease of administration. (61)

There are limitations of the existing direct scales such as CAGE and MAST as these questionnaires are designed to detect severe forms of alcohol disorders i.e. harmful or dependant drinking or frank alcoholism. The AUDIT questionnaire is able to detect hazardous drinking behaviour and assesses consumption, alcohol related problems as well as dependancy.(56) A prospective questionnaire based study by McCusker et al identified the advantage of using AUDIT questionnaire over CAGE as a screening tool.(62) The study however was performed on patients admitted to the medical ward so it raises the question whether this would be applicable to the EC. The use of the DAST is also problematic as it is a highly face valid instrument, which may be a problem since it assesses a socially undesirable trait. Respondents may choose not to implicate themselves and fake some of their answers accordingly. (61) A prospective descriptive study by Peden et al. found that patients were more likely to disclose alcohol use than they were about their use of drugs. The study recommended that the CAGE questionnaire be incorporated into the assessment of trauma patients where possible as it was easy to administer and yielded useful information. (4)

Urine drug screen tests may provide additional information when dealing with suspected substance abuse and although individual tests are inexpensive, widespread application may become prohibitive. Furthermore they may not detect all substances of abuse so it may be difficult to "rule in" or "rule out" the presence of substance abuse. Eisen et al. conducted a prospective cohort study in two academic ECs to determine whether results of urine toxicological screening assays would alter patient management. They found that qualitative drug urine testing in the EC rarely changed patient disposition and management.(63)

Is there a role for EC based brief interventions with regards to substance and alcohol abuse? Brief interventions have essentially six elements as described by Miller and Sanchez. (64) This may be incorporated into the acronym FRAMES: Feedback to the patient of assessment results, emphasis on personal Responsibility to change harmful habits, Advice to stop or reduce substance intake, a Menu of alternative strategies, an Empathic, non-confrontational delivery and encouragement of Self-efficacy for change. One of the earlier randomized controlled trials by Longabaugh et al. in 2001 involving 539 hazardous drinkers in the emergency room found that patients who received brief intervention and a "booster session " at a later time had reduced alcohol related adverse events compared to the control group and those who received the brief intervention only.(65) Gentilelo et al. found statistically significant decreased alcohol consumption after one year in the brief alcohol intervention group in their randomized controlled trial in a level 1 trauma center. The beneficial effects were only notable in the mild to moderate severity drinkers. Patients with existing markers for severe alcohol abuse for ,example prior alcohol treatment, did not benefit from the intervention.(66) A meta-analysis by Wilk et al. in 1997 reviewed twelve randomized controlled trials and found that heavy drinkers receiving brief interventions were two times more likely to moderate their drinking when compared to the control group. (67) Unfortunately their findings may not be applicable to the EC as seven of the RCT's were outpatient based and the rest were inpatient trials. A systematic review and meta-analysis by Harvard et al. showed that EC brief interventions did not significantly reduce the frequency or amount of alcohol use at twelve months. The effect at three and six months was inconclusive. However, reduction of alcohol related injury at six and twelve months was demonstrated.(68) Brief and less costly treatment modalities appear to be at least as effective in undifferentiated alcohol problems and may show a similar impact to that of more extensive interventions. They may also enhance effectiveness of subsequent treatment. (69) Some studies have also suggested that screening and brief interventions may have different effects on different groups of patients with substance and alcohol misuse. Further EC studies would be required to delineate the group of patients that may benefit the most from these interventions.(70)

Some well-designed studies dispute the effectiveness of brief interventions as whole. Daeppen et al. concluded from a randomized controlled clinical trial that a 10 minute brief motivational intervention made no difference to the subsequent ethanol consumption and health resource utilization.(71) Brief interventions may not be effective or appropriate in entrenched substance dependency. (72) Still, an adverse event following substance abuse and subsequent contact with medical services may in some cases be enough to discourage or moderate further substance use. In the first randomized clinical trial of brief interventions for cocaine, ecstasy and crack users in England, the authors suggest that the process of study recruitment may in itself give patients an opportunity for self-reflection and result in subsequent modification of hazardous behavior, in this case excessive stimulant drug abuse. There was no significant difference in abstinence from ecstasy and crack cocaine use between the control and experiment groups. Both groups, however, reported reductions in their stimulant use.(73)

Project ASSERT (Alcohol and Substance abuse Services and Educating providers to Refer patients to Treatment) is a program developed for substance abuse education and referral of patients to a suitable facility. The suitability of the model to the EC was tested in a metropolitan trauma center at the Boston Medical Center in the United States between March 1995 and February 1996. Briefly, four stages were implemented namely: identification of candidates , informed consent and assessment with the AUDIT and DAST-10, brief negotiated interview and referral. Of 7118 patients screened (18 % of total emergency department visits), 2931 were found to have a potential alcohol or drug abuse problem. Of these 37% (1096) chose to enrol in the study. Only 245 patients were available for follow up assessment. Despite the low followup, the subsequent

visits revealed a significant reduction in harm as measured by a reduction in quantity and frequency of drug and alcohol use ($p < 0.05$). The problem with the study was mainly two fold, lack of a control group which was not permitted by the Center for Substance Abuse Treatment (CSAT) and the low follow up rate. Thirty four percent of patients had no telephone number or fixed abode, issues which may be expected when dealing with these patients. (74)

Care in ECs is focused on presenting symptoms and subsequent physical consequences of substance abuse. Furthermore repeat presentations of chronic end stage disease create a perception of futility in emergency physicians treating these patients.(75) Obtaining detailed histories of consumption may be cumbersome and time consuming with the added problem of patient denial. This has partially been resolved by implementation of screening questionnaires, some of which can be completed in minutes. (76) EC staff frequently encounter patients with substance abuse issues despite the majority not having any formal training regarding drug and alcohol abuse (43) Recruitment of specialized staff in emergency departments, so called Alcohol Health Workers, during daytime hours may have a beneficial effect on emergency care personnel. This improves staff morale and makes disposition of these patients a less daunting prospect.(77)

Summary

From review of local and international literature it is evident that substance abuse impacts significantly on utilization of health resources with involvement of most specialties. The problem may even be underestimated due to the elusive nature of addiction and unwillingness of patients to admit to substance abuse for fear of repercussions.

The issue of substance abuse and addiction may not enjoy the same attention during the training of students and residents that other pathologies do. Although some efforts are being made to address the above issue, there may still be some deficiencies on medical school and even postgraduate level.

Numerous studies have shown that clinicians who interact with substance abuse patients on a regular basis and therefore probably have a better understanding of the pathophysiology of the illness have better attitude scores. In the literature presented, emergency front room personnel have mostly constructive attitudes towards the illness. Time constraints as well as lack of logistical support make addressing addiction and substance abuse in the front room a difficult prospect. No ideal detection tool has been identified although the use of simple screening questionnaires has been advocated by many authors.

Brief intervention has been supported by many studies as a means of encouraging patients to diminish their use of substances in the short term. Some studies suggest that the screening process itself may be beneficial and offer patients the opportunity of self-reflection and behaviour modification. EC staff have an opportunity to identify substance abuse issues and to initiate the process of intervention. This would facilitate referral and improve patient outcome in the long run.

Aims

To ascertain the attitudes of emergency physicians to substance abuse and to explore their willingness to implement brief motivational intervention in the EC.

Objectives

Use the SAAS to determine the attitudes of emergency physicians and specialist registrars to substance abuse.

As part of the survey, determine emergency physicians and specialist registrars' willingness to implement brief motivational interventions in the EC.

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PART C

Submission to peer reviewed journal

University of Cape Town

A survey of attitudes towards patient substance abuse / addiction in the Emergency Center

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Author contribution :

RRK was primarily responsible for the idea, design of the study and data acquisition. SRB and DjvH made substantial contributions to the editing, structure and presentation of the data in their capacity as primary and co – supervisor respectively. All authors proof read and approved the final version for submission.

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A survey of attitudes towards patient substance abuse / addiction in the Emergency Center

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Abstract

INTRODUCTION: Hospitals across South Africa are inundated with patients suffering from conditions associated with substance abuse. It is inevitable that contact with health services be made through an emergency centre (EC) at some point. This study aims to assess the exposure and attitudes of emergency physicians to substance abuse and addiction in major South African academic ECs.

METHODS: A prospective survey based on the Substance Abuse Attitude Survey (SAAS) was conducted in a convenience sample of eighty five emergency physician registrars and junior consultants in Cape Town, Gauteng, Limpopo and Kwa Zulu Natal. Respondents were targeted during academic meetings and by post.

The survey consisted of a brief demographics questionnaire and tested agreement of fifty statements using a Likert scale as presented in the SAAS. Five pre-defined attitude subgroups were evaluated: permissiveness, nonstereotypes, treatment intervention, treatment optimism and non moralism.

RESULTS: There was an 81.2 % (n = 69) response rate with the bulk of the response from Cape Town. Despite receiving very little formal instruction in addiction and substance abuse issues a majority of emergency physicians were in daily contact with substance abuse related cases. The respondents scored high in the treatment optimism and intervention criteria showing a positive and constructive approach to addiction and substance abuse. There was a homogenous response to the non moralism, non stereotype and permissive criteria questions. The vast majority of emergency physicians were in favor of brief interventions in the EC assuming the existence of adequate resources

CONCLUSIONS: The emergency physicians surveyed considered addiction and substance abuse as a treatable illness and recognized the importance of a holistic approach in its management. Although the willingness to initiate therapeutic measures in the EC exists, more training in this field may be beneficial.

Introduction

Substance related disorders are a recognized psychiatric diagnosis and are classified as such in the Diagnostic and Statistical Manual IV.⁽¹⁾ Hospitals across South Africa and across the world are inundated with patients suffering from conditions associated with or caused by substance abuse.⁽²⁻⁵⁾ It is inevitable that contact with health services be made through an emergency department at some point. Research over the last decade has shown an upsurge of substance related disorders across South Africa and particularly in the Western Cape.⁽⁶⁻⁹⁾ Alcohol has been found to be a significant risk factor of intentional and unintentional injuries presenting to trauma units. This, to a somewhat lesser extent, also applies to illicit drugs.^(2,10-12)

In comparison to other chronic illnesses, the issue of substance abuse and addiction may not enjoy the attention it deserves during the training of students and residents.⁽¹³⁾ Graduates may have insufficient knowledge in the field of addiction when they enter clinical practice. Lack of comprehensive curricula, knowledge and exposure fosters negative attitudes towards substance abuse patients.⁽¹⁴⁾ A number of barriers have been identified in the literature which make successful integration of a substance abuse or addiction component into the curriculum difficult. Among these are lack of time, coordination between departments, availability of supervisors and accessibility to suitable treatment centers.⁽¹³⁾

Although some efforts are being made to address this, there may still be some deficiencies on medical school and postgraduate level. Research has shown that clinicians who interact with substance abuse patients on a regular basis and have a better understanding of the illness have a better attitude towards treating substance abuse.^(13,15-17)

Emergency centre personnel have been found to have mostly constructive attitudes towards the illness although temporal limitations as well as lack of logistical support make addressing addiction and substance abuse in the front room a difficult prospect.^(18,19) Brief intervention has been supported by many studies as a means of encouraging patients to diminish their hazardous use of substances in the short term.^(20,21) Front room personnel have a unique opportunity to identify substance abuse issues and to initiate the process of intervention.⁽²⁾ No ideal detection tool has been identified although the use of simple screening questionnaires has been advocated by many authors.^(4,22) This would hopefully facilitate appropriate referral and improve patient outcome.

The main objectives of the survey were to explore the attitudes of emergency physicians to substance abuse and gauge their willingness to implement brief interventions in the emergency centre.

Methods

A questionnaire based prospective survey on a convenience sample of emergency medicine registrars and junior consultants in academic institutions across South Africa was conducted. All current emergency medicine registrars and supernumerary registrars who had been practicing in South Africa for six months or more were included. Junior consultant emergency physicians who graduated in or after 2007 as well as emergency medicine registrars who had completed their rotations and were attempting their exams were eligible to participate in the survey.

Incomplete questionnaires, unreturned questionnaires and refusal to complete questionnaire formed the basis for exclusion from the study.

Data collection was achieved as follows:

- In Cape Town, the research information form (Appendix 1) and the questionnaires (Appendix 2 and 3) were handed out at an academic meeting and the responses were collected in sealed envelopes. The research information form, which was also the consent form, was collected separately. Anonymity of the respondents was thus ensured. In the Gauteng province, a similar process was followed by representatives (both registrars) in Pretoria and Johannesburg who received the surveys by a commercial courier and distributed them at academic meetings.
- Postal questionnaires were sent to registrars in Kwa Zulu Natal and Limpopo (n = 3), registrars who had completed the program after 2007 but were attempting their final exams (n = 5) and consultants who completed their masters and moved into the private sector in the Cape Town area (n = 3).

The postal questionnaires were identical to the ones distributed at academic meetings with the addition of a prepaid self-addressed envelope which the respondents could use to return the survey after completion. No details of the respondent were required on the return envelope. Completion of the survey and postage implied consent to participate in the study.

A brief demographic survey, composed by the author, was attached to the survey (Appendix 2). This included amongst others duration of training, previous experience in substance abuse, degree of exposure to substance abuse and willingness to implement interventional measures in the emergency center. The rest of the questionnaire contained the validated Substance Abuse Attitude Survey (SAAS).⁽¹⁵⁾ The survey consists of fifty questions, the response of which is based on a five point Likert scale (Appendix 3). Respondents were asked to circle their favoured response. With the exception of questions 1, 3, 4, 5, 6 and 14, the rest of the questions were associated with a particular attitude subgroup.(Table 1)

Table 1.

Attitude subgroups identified by the SAAS :	
Permissiveness	Implies the acceptance by the individual that substance use may be considered within a continuum of normal human behaviour
Treatment intervention	Is related to what extent the individuals perceived substance abuse in the context of treatment
Treatment optimism	Describes the respondents perception of a successful outcome
Non-stereotyping	Displays the degree of non reliance of the individual on popular stereotypes of substance abuse users
Non-moralism	The avoidance of a moralistic perspective when considering substance abusers

During data capture, each answer was weighted as described in Table 2. Higher scores indicate a positive tendency. Respondents were blinded to the scoring

Table 2: The two types of weighting used in describing responses

Weight score

Strongly agree	agree	unsure	disagree	Strongly disagree
1	2	3	4	5

Reverse weight score

Strongly agree	agree	unsure	disagree	Strongly disagree
5	4	3	2	1

The data was manually entered by the author into a Microsoft® Office Excel 2003© spreadsheet for analysis. The statistical analysis was performed by the Center for Statistical Consultation in Stellenbosch. Initially means, confidence intervals, medians, minimum, maximum, quartile ranges and standard deviations were calculated utilizing descriptive statistics with STATISTICA© (data analysis software system) Statsoft, Inc (2011) version 10. Frequency tables were utilized to assess the percentage of respondents agreeing, disagreeing or displaying uncertainty to the stated questions in the SAAS. Due to the ordinal nature of the data, means and confidence intervals were not made use of. Medians were utilized to describe the central tendency. Due to small sample size subgroup analysis was not performed.

Selected questions for discussion were tabled verbatim under their specific criteria as shown in the results section (Table 8–12). To simplify interpretation in the table section the five point Likert format were condensed into a three point format. Thus the “strongly agree” and “strongly disagree” categories were incorporated into the “agree” and “disagree” categories respectively.

Anonymity of the respondents was ensured and each directly approached respondent signed consent to participate in the survey. It was assumed that the receipt of a completed survey from a mail recipient implied willingness (and therefore consent) to participate in the survey and this was accepted by the ethics committee. The SAAS focuses on physician attitudes towards patients with substance abuse. There were no questions which could professionally or personally implicate the responder with regards to personal involvement with substance abuse. Permission to utilize the SAAS tool was granted by the original authors. This study was also granted ethical approval by the research ethics committee of the University of Cape Town (HREC REF:334/2010)

Results

The response rate was 81 (n = 69) out of a total of 85 questionnaires sent. The bulk of the respondents 71% (n = 49) were from the University of Stellenbosch (US) and Cape Town (UCT) as depicted in Table 3

Table 3 Descriptive Statistics of survey completion

	n = 85	
Total number of Questionnaires distributed		
University	Survey completed	
	n	%
University of the Witwatersrand (Wits)	15	100
University of Pretoria (UP)	5	100
Limpopo Province	0	0
Kwa Zulu Natal	0	0
University of Cape Town (UCT) and Stellenbosch(US)	49	79
Total	69	81

Three UCT / US registrars did not return the surveys handed out in the academic meeting. One registrar left the program and one registrar changed direction of study.

No postal surveys were returned. These included:

- Surveys from Limpopo province(n = 2) and Kwa Zulu Natal (n = 1)
- Registrars who had completed the program (n = 5)
- Consultants in private practice (n = 3)

The bulk of the respondents were registrars with 17% representing the junior consultants. The majority of respondents had six or more years of post-graduation clinical experience (Table 4)

Table 4 Descriptive Statistics of respondents

Level of training	n	%
Consultant	12	17
Registrar:	57	82
1. First year	16	23
2. Second year	14	20
3. Third year	13	18
4. Fourth year	13	18
5. Fifth year	1	1
Experience	n	%
> 10 years post graduate	10	14
6 – 10 years post graduate	33	47
< 6 years post graduate	26	37

The majority of respondents reported no professional experience in substance abuse field (Table 5)

Table 5 Professional experience in substance abuse field

	n	%
None	46	66
Self-study	21	30
Formal courses	2	2

The frequency of exposure to substance abuse on a national level is shown in table 6. The majority of respondents from Cape Town showed daily exposure to substance abuse patients.

Table 6 Frequency of exposure to substance abuse nationally and by region.

	More than once a day		Daily		Infrequently/ Hardly ever	
	n	%	n	%	n	%
All Respondents	14	20	41	59	14	20
UCT / US respondents	12	25	31	63	6	8
UP and Wits	2	10	10	50	8	40
Other regions did not contribute to the sample and are thus omitted						

A majority of emergency physicians and trainees, 86 % (n = 60) indicated that they would implement brief interventional strategies in their emergency centre assuming adequate resources.

Substance Abuse Attitude Survey Results

Treatment intervention, treatment optimism and permissive criteria question scores were more conclusive than the fairly homogenous responses to the non moralism and non stereotype questions as shown in Table 7.

Table 7 Summary of category median scores

Category	Median score (Range 1 – 5)
Permissive	2.3
Non stereotype	3.1
Non Moralism	3
Treatment intervention	4
Treatment optimism	3.6

Respondents tended towards the non permissive spectrum with a median score of 2.3.

Table 8 shows responses to the more clinically relevant questions selected from the permissive criteria question pool.

Table 8 Selected individual permissive category questions

	Agree		Uncertain		Disagree	
	n	%	n	%	n	%
2 Marijuana should be legalized	12	17	9	13	48	69
13. Daily use of one marijuana cigarette is not harmful	9	13.	10	14	50	72
27. Lifelong abstinence is a necessary goal in treatment of alcoholism	53	76.	7	10	9	13
37. Once a person becomes drug free through treatment; he can never become a social user	38	55.	14	20	17	24

Non stereotype and non moralism questions yielded a fairly homogenous response with median scores of 3.1 and 3 respectively. Table 9 and 10 shows selected questions from these criteria.

Table 9. Selected individual non stereotype category questions

	Agree		Uncertain		Disagree	
	n	%	n	%	n	%
7. Marijuana use leads to mental illness	55	79	9	13	5	7
22. Anyone who is clean shaven with short hair probably doesn't use illegal drugs.	0		3	4	66	95
32. People who dress in hippie style clothing usually use psychedelic drugs.	3	4	8	11	58	84
33. A hospital is the best place to treat an alcoholic or drug addict.	2	2	8	1	59	85

Table 10. Selected individual non moralism category questions

	Agree		Uncertain		Disagree	
	n	%	n	%	n	%
17. Angry confrontation is necessary in the treatment of alcoholics or drug addicts.	7	10	5	7	57	82
18. Using any hard drugs shortens ones life span.	55	79	9	13	5	7
24. Alcohol is so dangerous that it could destroy the youth of our country if it wasn't controlled by the law	57	82	7	10	5	7

The majority of physicians agreed with most of the statements regarding treatment intervention with some responses shown in Table 11. This category scored highest with a median score of 4. Higher scores of these criterion questions revealed a strong positive response in perceiving substance abuse in the context of treatment and intervention.

Table 11. Selected individual treatment intervention category questions

	Agree		Uncertain		Disagree	
	n	%	n	%	n	%
23. Family involvement is a very important part of the treatment of alcoholism or drug addiction	68	98	0	0	1	1
34. Group therapy is very important in the treatment of alcoholism and drug addiction.	61	88	6	8	2	2
38. Paraprofessional counsellors can provide effective treatment for alcohol or drug users.	61	88	7	10	1	1

Treatment optimism criteria question scores revealed a median score of 3.6 with higher scores indicating treatment optimism. Table 12 shows the selected individual questions.

Table 12. Selected treatment optimism criteria questions

	Agree		Uncertain		Disagree	
	n	%	n	%	n	%
28. Drug addiction is a treatable illness.	65	94	3	4	1	1
29. Alcoholism is a treatable illness	66	95	2	2	1	1
35. Most alcohol and drug dependant persons are unpleasant to work with as patients.	38	55	6	8	25	36

Discussion

The response rate was acceptable to render results valid (Table 3). Responses were received from both institutions where registrars and consultants attended regular academic meetings. No postal surveys were returned however these generally portend a poor response rate.⁽²³⁾ We did not consider it a detriment to the validity of our study given the small number. The low number of consultant responses can be partially explained by the fact that some consultants were included in the postal survey. Furthermore the consultant and registrar pool is currently small in South Africa as the specialty of Emergency medicine is a recently established one.⁽²⁴⁾ There was an even distribution of registrar experience within the program with the four year-groups roughly split into four even camps. It was encouraging to see a fairly experienced sample (Table 4).

The respondents are in frequent contact with substance abuse patients (Table 6). Substance abuse is often difficult to detect by physicians⁽²⁵⁾ and exposure frequency may thus have been underestimated by respondents. Lack of data from the emergency departments across South Africa makes it impossible ascertain the approximate prevalence of substance abuse in our emergency centres. Despite the finding that our respondents are frequently exposed to patients with substance abuse issues, the majority do not have any experience in the field of addiction with only two registrars reporting some form of formal training (Table 5). This brings to question whether the emergency physician group surveyed is sufficiently equipped to adequately deal with substance abuse patients. A large proportion of the Western Cape group reported frequent exposure to substance abuse patients. The legacy of the “dop system” and the upsurge of methamphetamine abuse particularly in the Western Cape may be responsible for the high number of alcohol and substance abuse the Cape Town respondents deal with in their emergency centres.^(7,26-29) The South African Stress and Health study revealed that the Western Cape has significantly higher rates of substance related problems.⁽³⁰⁾

Our respondents tended towards the non permissive spectrum. The majority disagreed with the legalization of marijuana. Marijuana abuse is prevalent in South Africa with at least one major trauma centre showing a high prevalence of cannabis use in patients.⁽²⁾ The importance of complete abstinence were not fully appreciated by some respondents in this survey (Table 8). This is in conflict with Alcoholics Anonymous⁽³¹⁾ who advocate complete abstinence from drugs and alcohol as a requirement for successful long term recovery from drug and alcohol addiction. According to Scott et al. longer periods of abstinence from drugs were associated with a reduced risk of mortality.⁽³²⁾ There are selected cases of “successful “ substance use among addicts and alcoholics but the majority of well controlled studies are in favour of complete abstinence.⁽³³⁾ Kelleher et al. conducted a similar survey among emergency department staff with 81.6% and 79.7% agreeing to abstinence in alcoholics and addicts respectively.⁽¹⁸⁾

The non stereotype and non moralism criteria questions as a group yielded fairly homogenous responses. The majority of respondents agreed that cannabis use may lead to mental illness; this is in line with numerous studies suggesting such an association.⁽³⁴⁾ The high prevalence of cannabis using psychiatric patients across South Africa likely predisposes the respondents to this opinion.⁽³⁵⁾ The registrars did not consider external appearance as a discriminator in identifying substance abuse in patients (Table 9) Substance abusers may be very functional in the early stages of addiction and bear no semblance to the stereotypical image of a using addict.⁽¹⁾ As shown by question 25 in the questionnaire (Appendix 2) which reads “ A physician who has been addicted to narcotics should not be allowed to practice medicine again.” the using addict may very well be a colleague. The majority disagreed that a hospital was the best place to treat alcoholics and addicts. Emergency units and hospitals are not staffed to provide the intensive psychotherapy and support that substance abuse patients require. Most respondents agreed with the necessity of legislature

to control alcohol consumption. This is hardly surprising considering the large number of alcohol related injuries and deaths across South Africa that invariably present to the emergency departments.^(11,12,26,36) Respondents were largely not in favour of angry confrontation as part of therapy towards substance abusers. This is in line with the guidelines of brief interventions as described by Miller and Sanchez.⁽³⁷⁾

Respondents considered addiction as they would any other illness i.e. that it is treatable. This reflected by the largely positive responses to the treatment intervention criteria questions. This was comparable to the findings of Kelleher et al. in their study among emergency department staff.⁽¹⁸⁾ The respondents in our survey appreciated the importance of group therapy, para-professional counsellors and family involvement in the treatment of substance abuse (Table 11). The study respondents scored relatively high in treatment optimism. An overwhelming majority of physicians considered alcoholism and drug addiction as an illness from which recovery is possible. The above mentioned may facilitate early referral and therapy which has been shown to improve outcomes.⁽³²⁾ Most respondents in our survey, however, found alcohol and drug dependant patients unpleasant to work with (Table 12). Looking more closely at the numbers however, one gets the impression that there is not an overwhelming majority with this view and may represent a modicum of tolerance by emergency physicians. One may also argue that the emergency physicians interaction with these patients is generally brief as they are usually referred to social services or a psychiatric observation area⁽³⁾

The majority of respondents would implement brief interventions strategies in their emergency room given adequate resourcing. A survey of emergency physicians in Michigan (USA) found 51.3% supported brief interventions while 33.1 % were neutral on the issue.⁽¹⁹⁾ How, one wonders, opinions would change in a busy understaffed and under-resourced ED which unfortunately is today's reality.

Limitations

A small sample size was inevitable given the national number of consultants and trainees in emergency medicine. No valid comparisons could be made between registrars and consultants due to the small number of respondents from the latter group. The survey was questionnaire based and therefore reliant on self assessment which may be inherently flawed due to lack of objective measurement. The results of the study cannot be generalized across the country due to the predominance of respondents from the Cape Town region. It does however give an indication of the attitudes in the province with the highest prevalence in alcohol and drug abuse and are therefore likely relevant. Further research would be useful.

Recommendations

Implementation of brief motivational interventions may be considered in the South African context. This is supported by the emergency physicians and trainees surveyed who mostly displayed willingness and a constructive and positive attitude towards addiction and substance abuse. Training at either under- or postgraduate level would better equip doctors in assisting patients with dependency problems and should be considered.

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Dr M Moola , Senior Emergency Medicine Registrar (Gauteng): distribution of questionnaires

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PART D

APPENDICES

University of Cape Town

Appendix 1

Research information sheet

A survey of attitudes towards patient substance abuse / addiction in the Emergency center

Researcher: Dr RR Kalebka MBChB (EM Registrar)

Introduction

You have been selected to participate in the above mentioned questionnaire based survey. As a newly qualified consultant and registrar in emergency medicine you will be closely involved in the management of emergency centers and formulation of treatment protocols.

Substance abuse and addiction issues remain an enigma for shop floor clinicians who do not have the time or necessary infrastructure to deal with these difficult and often frustrating problems.

The fact remains however that these patients entry into the health system is often justifiably or not through an emergency center.

Substance abuse presents in numerous guises be it an intoxicated trauma patient, a cocaine induced chest pain, a parasuicide or as part of a psychiatric dual diagnosis.

Purpose of the study

To ascertain the attitudes of emergency physicians towards substance abuse/addiction issues.

Procedure

Included in this handout is a demographics questionnaire as well as the Substance Abuse Attitude Survey designed by Chappel et al in 1985.

The demographics questionnaire is multiple choice based.

The responses to the survey are likert scale based agree – disagree statements to 50 simple questions.

Please read the questions carefully and circle your answer of choice.

The questionnaire has to be completed immediately and handed in to the research representative.

If you have received the study by post please send it in the prepaid and preaddressed envelope provided.

Completion of the survey should not take more than 30 minutes of your time

Please answer as honestly as you can and refrain from discussion/research as this will affect the results of the study.

To maintain anonymity please do not identify yourself in any way on the questionnaire or pre paid envelope.

Risks and benefits

You will not be requested directly or indirectly to disclose any information that may compromise you or anyone else professionally or personally.

The questionnaire is anonymous and will be used for statistical analysis only.

You will receive no direct benefit or financial compensation for completing the survey.

Participant's rights

Completing the questionnaire is voluntary.

Please sign in the space provided .on the BOTTOM left hand corner to indicate you have understood the above mentioned and that you are willing to participate in the study.

Further information/complaints/queries

Signature :

Dr RR Kalebka

Tel 082 3303627 email: Robert_kalebka@yahoo.com

Appendix 2

Demographics questionnaire

MALE FEMALE

HOW FAR ARE YOU IN THE PROGRAMME?

1 2 3 4 5 Junior consultant

CLINICAL YEARS OF POST MBChB GRADUATE EXPERIENCE

1 - 5 6 - 10 > 10

HAVE YOU ANY PROFESSIONAL EXPERIENCE IN THE SUBSTANCE ABUSE FIELD ?

No

Yes

Formal training/ courses

Self study

HOW OFTEN DO YOU MANAGE PATIENTS WHO YOU STRONGLY SUSPECT HAVE SUBSTANCE ABUSE PROBLEMS (INCLUDING ALCOHOL)?

Hardly ever Infrequently Almost daily More than 1/day

Consider the following statement:

Brief intervention has reduced alcohol consumption in some well-designed ED studies but not in others. Bernstein. JAnn emerg med vol 51 no6 751 - 754

ASSUMING ADEQUATE RESOURCES AND STAFFING, IF YOU ARE A CLINICAL MANAGER IN AN EMERGENCY CENTER WOULD YOU BE WILLING TO SCREEN APPROPRIATE PATIENTS FOR ALCOHOL ABUSE AND PROVIDE BRIEF INTERVENTIONS AS INDICATED .

Yes

No

Appendix 3

Substance Abuse Attitude Survey

Instructions:

This survey has been designed for the purpose of assessing attitudes useful in the education of physicians and other health care professionals.

Indicate your degree of agreement or disagreement by **circling** your answer.

There is no right or wrong answers so work quickly and do not worry over every item.

1. Alcohol is an effective social relaxant.

Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**

2. Marijuana should be legalized.

Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**

3. Any drug can be safely used by a person who is mentally healthy.

Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**

4. Almost anyone would turn to drugs if their problems were great enough.

Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**

5. Alcohol is a food, not a drug

Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**

6. Physicians are an important source of drugs for most users.

Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**

7. Marijuana use leads to mental illness

Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**

8. Heroin is so addicting that no one can really recover once he/she becomes an addict

Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**

9. Smoking leads to marijuana use which in turn leads to hard drugs.

Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**

10. Clergymen should not drink in public.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
11. Alcoholism is associated with a weak will.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
12. All heroin use leads to addiction
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
13. Daily use of one marijuana cigarette is not necessarily harmful.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
14. Physicians should not smoke tobacco in front of their patients.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
15. People who use marijuana usually do not respect authority.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
16. The laws governing the use of marijuana and heroin should be the same.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
17. Angry confrontation is necessary in the treatment of alcoholics or drug addicts.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
18. Using any hard drugs shortens ones life span.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
19. Tobacco should not be smoked in the rooms where non smokers are present
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
20. Weekend users of drugs will progress to drug abuse.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
21. Tobacco smoking should be allowed in high schools.
Strongly agree **Agree** **uncertain** **disagree** **strongly disagree**
22. Anyone who is clean shaven with short hair probably doesn't use illegal drugs.

Strongly agree Agree uncertain disagree strongly disagree

23. Family involvement is a very important part of the treatment of alcoholism or drug addiction
Strongly agree Agree uncertain disagree strongly disagree

24. Alcohol is so dangerous that it could destroy the youth of our country if it wasn't controlled by the law.
Strongly agree Agree uncertain disagree strongly disagree

25. A physician who has been addicted to narcotics should not be allowed to practice medicine again.
Strongly agree Agree uncertain disagree strongly disagree

26. Recreational drug use precedes drug abuse.
Strongly agree Agree uncertain disagree strongly disagree

27. Lifelong abstinence is a necessary goal in the treatment of alcoholism.
Strongly agree Agree uncertain disagree strongly disagree

28. Drug addiction is a treatable illness.
Strongly agree Agree uncertain disagree strongly disagree

29. Alcoholism is a treatable illness
Strongly agree Agree uncertain disagree strongly disagree

30. Street pushers are the initial source of drugs for young people.
Strongly agree Agree uncertain disagree strongly disagree

31. Personal use of drugs should be legal in the confines of one's own house.
Strongly agree Agree uncertain disagree strongly disagree

32. People who dress in hippie style clothing usually use psychedelic drugs.
Strongly agree Agree uncertain disagree strongly disagree

33. A hospital is the best place to treat an alcoholic or drug addict.
Strongly agree Agree uncertain disagree strongly disagree

34. Group therapy is very important in the treatment of alcoholism and drug addiction.
Strongly agree Agree uncertain disagree strongly disagree

35. Most alcohol and drug dependant persons are unpleasant to work with as patients.
Strongly agree Agree uncertain disagree strongly disagree

36. It can be normal for a teenager to experiment with drugs
Strongly agree Agree uncertain disagree strongly disagree

37. Once a person becomes drug free through treatment; he can never become a social user.
Strongly agree Agree uncertain disagree strongly disagree

38. Paraprofessional counselors can provide effective treatment for alcohol or drug users.
Strongly agree Agree uncertain disagree strongly disagree

39. Long term outpatient treatment is necessary for the treatment of drug addiction.
Strongly agree Agree uncertain disagree strongly disagree

40. An alcohol or drug dependant person who has relapsed several times probably cannot be treated
Strongly agree Agree uncertain disagree strongly disagree

41. Marijuana use among teenagers can be healthy experimentation
Strongly agree Agree uncertain disagree strongly disagree

42. Urine drug screening can be an important part of drug abuse treatment
Strongly agree Agree uncertain disagree strongly disagree

43. Physicians who diagnose alcoholism early improve the chance of treatment success.
Strongly agree Agree uncertain disagree strongly disagree

44. Alcohol and drug users can only be treated by specialists in that field.
Strongly agree Agree uncertain disagree strongly disagree

45. The best way for a physician to treat an alcohol or drug dependant patient is to refer them to a good treatment program
Strongly agree Agree uncertain disagree strongly disagree

46. Persons convicted of the sale of illegal drugs should not be eligible for parole.

Strongly agree Agree uncertain disagree strongly disagree

47. Chronic alcoholics who refuse treatment should be legally committed to long term treatment

Strongly agree Agree uncertain disagree strongly disagree

48. An alcohol or drug dependant person cannot be helped until he/she has hit "rock bottom"

Strongly agree Agree uncertain disagree strongly disagree

49. Once an alcohol or drug dependant person is abstinent and of all medication no further contact with a physician is necessary.

Strongly agree Agree uncertain disagree strongly disagree

50. Parents should teach their children how to use alcohol.

Strongly agree Agree uncertain disagree strongly disagree

University of Cape Town

Appendix 4

African Journal of Emergency Medicine (AfJEM)

GUIDANCE FOR AUTHORS

BEFORE YOU BEGIN

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