



# The Feasibility of a New Intake Routine to Assess Substance Use Disorders by Means of a Structured Interview

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**Abstract:** A structured interview, ADDIS (Alkohol Drag Diagnos Instrument), designed to assess substance use disorders, was included as a part of the intake protocol in a department of orthopedics at a general hospital. To evaluate both the effectiveness and feasibility of the new procedure, the attitudes of 29 staff members were sampled during follow-up interviews. In addition, a questionnaire was sent to 254 patients to examine their opinions about the interview. The staff made a global evaluation of the new routine on a 10-point scale, ranging from completely negative (1) to completely positive (10). The mean rating was 8.2 (range 5-10). The evaluations made by the staff members in the interviews were very positive. Of the 254 patients, 177 (70%) returned the questionnaire. More than 90% of the patients appreciated being asked about their use of analgesics and sedatives, and 77% felt it was positive to be asked about their alcohol use. The result of the patient questionnaire supports the feasibility of the routine, suggesting that a structured interview can be included in the intake protocol in order to improve the assessment of substance use disorders. © 1997 Elsevier Science Inc.

## Introduction

In Sweden, it has been estimated that 1/6 to 1/8 of the alcoholics are known to the authorities [1,2]. The rest are so-called hidden alcoholics who rarely seek treatment for their alcohol problems, but they do seek help for different illnesses that often are related to high alcohol consumption [3,4].

Consequently, most alcohol researchers agree, many patients visiting general hospitals and pri-

mary care outpatient departments have underlying alcohol problems and staff members rarely have effective protocols in place to detect them. The failure to identify patients with hidden alcohol problems leads to unnecessary investigations and inadequate treatment programs [5-8].

Reid et al. [9] reported that only 27.5% of the doctors in primary care identified high risk consumers among their patients. Bell et al. [10] noted that doctors do not inquire about alcohol consumption in about 40% of their patient visits. Their study showed that references to alcohol-related problems were made for only 21% of known high risk consumers. Hamilton and Menkes [11] found that only 37% of all acute orthopedic admissions had an adequately recorded drinking history. Patients are not questioned about alcohol consumption partly because of lack of knowledge and negative attitudes [6,12,13].

Although resistance among hospital staff to question patients about their alcohol and drug use has been reported [11,14], there are reasons to believe that such questioning is a positive approach to examining more carefully the alcohol/drug habits of their patients. Graham [15] reported that when a life-style risk assessment was performed routinely, physicians identified 90% of the alcoholics admitted to a medical-surgical service. The risk assessment program was economical and well received by the patients, the hospital staff, including physicians, and the hospital administration.

One way to improve the assessment of alcohol/drug problems is to use a structured interview technique, which elicits information in a uniform and

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reliable manner. The SUDDS (Substance Use Disorder Diagnostic Schedule), developed by Hoffmann and Harrison [16] is a structured interview designed to give information essential to the diagnosis of substance use disorders in accordance with DSM-III-R criteria [17]. The SUDDS provides a total symptom picture plus an indication of when each symptom was first experienced. The SUDDS is translated and adapted to Swedish conditions and the Swedish name is ADDIS—Alkohol Drog Diagnos Instrument. It includes 99 direct, event-oriented questions and takes 45 to 90 minutes to administer. The SUDDS/ADDIS has been used in research as well as in clinical practice [18,19].

The primary aim of the present study was to evaluate the feasibility for staff and patients of using a structured interview, ADDIS, to assess substance use disorders among patients admitted to an orthopedic clinic. Since the routine was complemented after half a year with educative lectures for the patients about addiction, a secondary aim was to elucidate the effects of the education on the feasibility.

## Method and Materials

The study took place during 1992, in a department of orthopedic rehabilitation at a general hospital. The hospital specializes in rehabilitation of patients whose medical conditions have resulted in some disability or temporary inability to work. Patients are referred from other hospitals and private physicians for further evaluation and treatment. The ADDIS, a structured interview for the assessment of substance use disorders, was introduced as a part of the intake procedure for patients admitted to the orthopedic wards.

After 6 months, the routine was complemented with patient education, comprising general information about medications (especially analgesics and sedatives), and how dependence can develop with continuous use of these drugs.

### *Staff Members*

The staff comprised 30 people; 5 doctors, 12 nurses, 2 nurses' aids, 10 hospital orderlies, and 1 medical secretary. No staff member refused to take part in the study, but one person could not be reached. Twenty-nine staff members were included in the study, 23 females and 6 males, with the mean age of 41 years, (range 24-62 years). Twenty-four of the staff members had received an in-service education

in the alcohol/drug field, including the ADDIS educational program, before the introduction of the new routine.

### *Patients*

Of the 265 patients [163 (61.5%) females and 102 (38.5%) males] admitted to the department during 1992, 247 (92%) completed the ADDIS interview. (The uncompleted interviews were due to early procedure problems.) No patient refused to be interviewed. The mean age was 42 years (range 19-68). The most common diagnoses among the admitted patients were myalgia, myositis, unspecified pain in the muscles (36%), and distortion in the neck (whiplash included) (29%). Eighty of the patients (33%) fulfilled the criteria for substance use disorders. Of those, 14% met the criteria for dependence/abuse of alcohol, 7% for dependence/abuse of sedatives, and 22% for dependence/abuse of analgesics [20].

### *Feasibility*

Structured interviews were conducted by one of the authors (B.J.) to evaluate attitudes of staff members to the ADDIS routine. The interview of staff members was comprised of 10 questions, some related to specific issues and some open-ended. For example, one question concerned the attitude towards the decision to incorporate the ADDIS into the intake routine; another concerned changes in staff members' views of substance use disorders in general. The staff members were also asked their opinions concerning the patients' attitudes towards the ADDIS interview. Finally, staff members were asked to make a global evaluation of the new routine on a 10-point scale, where 1 was completely negative and 10 completely positive. Two-thirds of the staff members were interviewed over the phone, the remaining at the hospital.

### *Questionnaire*

To evaluate the attitudes of the patients, 254 questionnaires were sent to all patients interviewed. Eleven patients could not be traced. The questionnaire comprised 18 questions (see appendix) concerning: 1) how the patient experienced being interviewed with ADDIS (questions 2, 3, 4, 15), 2) how he/she perceived the information from the hospital staff about alcohol and drugs (questions 1,

5, 6, 7, 8, 12), and 3) whether any alcohol/drug habits changed after the hospital stay (questions 16, 17). Questions 9 and 14 were included to evaluate the validity of the patients answers. The response set was based on a Likert-like scale where 1 indicated "very bad" and 5 indicated "very good."

*Statistical Methods*

Means and the 95% confidence intervals were calculated, and significant differences at the 5% level were regarded when the confidence intervals for two separate groups did not overlap.

**Results**

A total of 70% (177) of patients answered the questionnaire. An analysis of the dropouts showed no differences concerning diagnosis of dependence/abuse among the group at large, the answering group, and the dropouts. There were more men and younger persons in the dropout group. A comparison was made between the group that responded immediately and the groups that returned their

questionnaires after one or two reminders. No significant differences were found. Of the dropouts, 25% (22 patients) were randomly selected for a further reminder and 12 patients answered. Their answers did not differ from the other groups in any significant way.

*The Patient Questionnaire*

Subanalyses were made according to sex, age, substance use disorders diagnosis and treatment contact before or after the educational program was given (first or second half of the year). No differences were found according to sex or age. No significant differences according to mean were found between the patients that met the criteria for substance use disorder compared with those patients who did not meet the criteria.

Although the means of the total group showed an overall positive attitude from the patients (Table 1), there were significant differences between the patients hospitalized the first half of the year (before the educational program) compared with the second half of the year. Means for the group treated after the educational program suggested a signifi-

**Table 1.** Patients' evaluation of being asked about their alcohol/drug habits when admitted to a department of orthopedic rehabilitation

| Question                                     | Mean for the total | Mean 1st half of the year | Conf. int. 95% | Mean 2nd half of the year | Conf. int. 95% |
|--|--------------------|---------------------------|----------------|---------------------------|----------------|
| 1 Reasonable explanation from the staff      | 4.3                | 4.1                       | 3.9-4.4        | 4.6                       | 4.4-4.8*       |
| 2. Experience of being asked about analgesic | 4.5                | 4.4                       | 4.3-4.6        | 4.7                       | 4.5-4.9        |
| 3. Experience of being asked about sedatives | 4.5                | 4.5                       | 4.3-4.6        | 4.6                       | 4.4-4.8        |
| 4. Experience of being asked about alcohol   | 4.2                | 4.1                       | 3.9-4.3        | 4.3                       | 4.0-4.6        |
| 5. The knowledge of the staff of pills       | 4.2                | 4.0                       | 3.9-4.2        | 4.4                       | 4.3-4.6*       |
| 6. The knowledge of the staff of alcohol     | 4.0                | 3.8                       | 3.7-4.0        | 4.2                       | 4.0-4.4*       |
| 7. Comprehendable information from staff     | 4.1                | 3.9                       | 3.8-4.1        | 4.4                       | 4.2-4.6*       |
| 8. New knowledge during stay at hospital     | 3.3                | 2.8                       | 2.6-3.1        | 4.1                       | 3.8-4.3*       |
| 9. The honesty of co-patients                | 3.5                | 3.5                       | 3.4-3.7        | 3.6                       | 3.4-3.8        |
| 1 The opinion of the alcohol policy          | 4.4                | 4.4                       | 4.2-4.7        | 4.5                       | 4.2-4.7        |
| 1 The attention to excessive drug use        | 4.8                | 4.8                       | 4.7-4.9        | 4.8                       | 4.7-5.0        |
| 1 Personal insight into own habits           | 3.2                | 2.9                       | 2.7-3.2        | 3.6                       | 3.4-3.9*       |
| 1 Information from co-patients               | 1.6                | 1.6                       | 1.4-1.8        | 1.6                       | 1.3-1.8        |
| 1 The positiveness of co-patients            | 3.2                | 3.1                       | 2.9-3.2        | 3.4                       | 3.2-3.6*       |
| 1 Influence on rehabilitation                | 2.5                | 2.4                       | 2.1-2.6        | 2.6                       | 2.2-3.0        |
| 1 Change in alcohol use                      | 1.5                | 1.5                       | 1.3-1.7        | 1.6                       | 1.3-1.9        |
| 1 Change in use of pills                     | 2.5                | 2.4                       | 2.1-2.7        | 2.6                       | 2.2-3.1        |
| 1 Help to future patients                    | 3.6                | 3.4                       | 3.2-3.6        | 3.9                       | 3.7-4.2*       |

The mean is given for the total sample (n = 177) and mean and 95% confidence intervals are given separately for patients' hospitalized first response and second response (before and after the introduction of an educational program). The questionnaire is constructed according to the Likert-scale type with values between 1 and 5.

\*A significant difference at the 5% level is regarded when the confidence intervals do not overlap.

cantly more positive attitude toward how the information was given (question 1), to the knowledge of the staff, and to the knowledge they had received as patients (questions 5, 6, 7, 8). They also valued the personal insight they had gained significantly higher (question 12) and thought that a large number of their co-patients felt positively about the ADDIS interview (question 14). Finally, they had significantly greater expectations regarding the use of this study for future patients (question 18).

More than 90% of the patients in the total group found it good or very good to be asked about analgesics and sedatives (questions 2, 3) and 77% of all patients found it good or very good to be asked about their alcohol use (question 4).

Ten percent of the patients reported big or very big changes in their alcohol use. Among these, patients with a dependence/abuse of alcohol reported a significantly higher mean change (mean 2.5, 95% confidence interval 1.64-3.35) compared with the group that met no alcohol criteria (mean 1.4, 95% confidence interval 1.26-1.61). In the group of patients with an alcohol diagnosis, 33% reported big or very big changes in their alcohol habits compared with 7% in the no diagnosis group. One-third of all patients reported big or very big changes in their use of analgesics/sedatives. The patients with dependence/abuse of analgesics differed significantly from the group that had no such diagnosis (mean 3.6, 95% confidence interval 3.0-4.1 compared with mean 2.1, 95% confidence interval 1.8-2.4). Among those who met criteria for dependence/abuse of analgesics, 63% reported large or very large changes compared with 21% among the patients who did not meet this criteria.

#### *Interview of Staff Members*

The evaluations of the ADDIS procedure made by the staff members were positive. Twenty-one out of 29 staff members had a very positive opinion before they started administering the ADDIS, and two were negative. Six had no known opinion (they were not employed at the time the decision to implement the routine was made). Twenty-six staff members felt that their view of alcohol and drugs had radically changed, especially concerning the analgesics and the sedatives. Twenty persons thought that the patients felt positive about the interview, and only one person believed that the majority of the patients had negative reactions. The mean of the global evaluation for all of the group was 8.2 (range 5-10) (Figure 1). Half of the staff

1 2 3  
Completely  
negative

**Figure 1.** The global evaluation of the staff members to the new routine; the inclusion of a structured interview concerning substance use disorders as a part of the intake routine at a department of orthopedics. 1 = completely negative, 10 = completely positive, n = 29.

mentioned that a very important side effect was a considerably closer contact with and understanding for the patient.

#### **Discussion**

The purpose of the present study was to investigate the feasibility of adding a structured interview (to systematically assess substance use disorders) to the intake protocol of a department of orthopedic rehabilitation. The positive attitude among the staff members to the new routine was clearly indicated in their responses. They reported that the ADDIS interview was helpful in establishing a closer contact with the patients, thus giving them a more complete and comprehensive picture of the patients. Also, the results of the patient questionnaire supports the feasibility of the new routine.

Graham [15] reported that no alcoholic patient objected to the questioning, and in fact, many of them took obvious pleasure in the opportunity to talk with a sensitive, knowledgeable interviewer. This result also was confirmed in this present study. On the subject of how they liked being asked about alcohol and drugs, no significant differences were found between patients with some sort of a substance use disorder diagnosis and patients who met no such criteria.

Although all patients were positive, the significant differences in the attitudes of patients receiv-

9 10  
Completely  
positive

ing education compared with those who did not, support the importance of this component. This result supports the findings of Graham [15] where the majority of patients, both alcoholics and nonalcoholics, enjoyed the interview and regarded it as a positive experience. They also frequently requested and received more information about life-style risk factors.

The third measure chosen as an indication of good feasibility was the number of completed ADDIS interviews, which turned out to be high (92%). No patient refused to be interviewed with ADDIS. The dropouts were concentrated to the first 2 months of the year and were due to early procedure problems.

Although it was not an aim of this study to evaluate any changes in substance use, it is interesting to note that as many as 63% of the patients who met criteria for a dependence/abuse of analgesics gave a subjective report of changes in the use of these substances. It is even more interesting that among patients meeting no criteria for a dependence/abuse of analgesics, a subjective report of changes in use of analgesics/sedatives was made by 20% of the patients. This can be an indication that the ADDIS routine may lead to a growing awareness among patients of the risks of developing a dependency on analgesics and sedatives.

Patton [21] believes that most doctors do not ask about alcohol because of attitudes concerning alcohol problems in general, and uncertainty about their responsibility as doctors to detect alcohol problems among their patients. Of great importance for the positive attitudes among staff members in the present study seems to be the educational program they were offered before the implementation of the routine. Besides a training course in making ADDIS interviews, the staff members were offered educative lectures given by specialists in the field of substance use disorders.

The conclusion of the present study is that it is possible, and even positive, for both staff and patients, to systematically assess substance use disorders by means of a structured interview at departments treating orthopedic problems and chronic pain. Furthermore, the results of the present study underscore the importance of patient education, including information about risk factors associated with the development of substance use disorders.

*We acknowledge financial support from Folksam, thanks to Professor Ake Nygren. We also would like to thank Anders Romelsjo, Ass. Professor, Dept. of Social Medicine, Sundbyberg, for helpful comments on*

*the design of the study, and Paul Babiak, Ph.D., New York, for linguistic revision of the manuscript.*

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## Appendix

### *The Questionnaire Sent to the Patients*

Sex: Man    Woman    Age..

I was at the clinic the        first half of the year 1992. \_\_\_

I was at the clinic the second half of the year 1992. \_\_\_

1. Did the staff give you a reasonable explanation as to why your alcohol and drug habits were examined?
2. How did you experience being asked about your use of analgesics before the start of treatment?
3. How did you experience being asked about your use of sedatives before the start of treatment?
4. How did you experience being asked about your alcohol use before the start of treatment?
5. Do you think the staff had adequate knowledge of pills (sedatives and analgesics) to be able to inform the patients about them?
6. Do you think the staff had adequate knowledge of alcohol to inform the patients about it?
7. Do you think the information from the staff

- about alcohol and drugs was given in any easy, comprehensible manner?
8. Did you learn anything about alcohol and drugs during your stay at the hospital that you did not know before?
9. How many of your co-patients do you think answered the questions in the interview honestly?
10. How did you like the alcohol policy at the clinic which was: "Patients who use alcohol during their stay at the hospital will be sent home?"
11. How did you experience the staffs attention to excessive use of medication, for example, analgesics?
12. Did you personally gain an insight into your own habits through answering these questions?
13. Did any co-patient inform you beforehand about the questions in the interview?
14. How many of your co-patients do you think were positive to the questioning of alcohol and drug use?
15. Do you think your rehabilitation was influenced by the way you answered the questions? If yes, how?.....
16. Has your use of alcohol changed since your stay at the clinic? If yes, how?.....
17. Has your use of pills changed since your stay at the clinic? If yes, how?.....
18. Do you think your answers to this questionnaire will help future patients at the clinic?  
 very bad (1)    bad (2)    neither bad nor good (3)  
 good (4)    very good (5)

The principles of the scale. Negative answers were rated as <3, positive >3.