READMISSION AMONG INPATIENT PHYSICIANS WITH MENTAL AND/OR ADDICTIVE DISORDERS: A DESCRIPTIVE STUDY OF RISK FACTORS.

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Learning objectives

- To know how often readmission occurs among inpatient physicians when they suffer from an addictive or a mental health disorder.

- To identify risk factors associated with frequent readmissions

- To know the role of a physician’s health program in the development of preventive strategies.
The literature shows that some physicians need to be admitted into a hospitalization unit for substance detoxification or for treatment of a mental disorder but few evidence has been reported among how often they relapse and need to be readmitted
How often do doctors need to be readmitted?

- 1 in 4 monitored physicians with DUD relapse at least once. (Gallegos, MMJ, 1992; Domino, JAMA, 2005)

- 8% of Relapses affecting patient safety (DuPont, Journal of Substance Abuse Treatment, 2009).

- Most relapses of substance abuse occurs in the first two years after the initial treatment. (Gallegos, MMJ, 1992)

- No studies have been published focusing on readmitted inpatients
Reasons for readmission

- Doctors show a tendency to intellectualize their symptoms (McCracken, JAMA. 2010)
- Relapse may be related with re-entry to work or during on call periods (Du Pont et al. Journal of Substance abuse treatment, 2009)
- Patient safety: The success of the physicians health programs is related with an initial intensive residential treatment (Skipper, Journal of Addictive diseases, 1997) a long follow-up and frequent readmissions (Talbott, Principles of Addiction Medicine, 2003)
Looking for risk factors...

- Pretreatment variables are not different among doctors who relapse compared with those who don’t relapse. (Gallegos, MMJ, 1992)

- Outcome of physicians with mild severity of alcohol or drug problems is not different from physicians with multiple treatment admissions. (Morse, JAMA, 1984)

- Relapse among monitored physicians with SUD is related to a major opioid use, family history of SUD and dual diagnosis (Domino, JAMA, 2005)
What doctors say about their relapse...

- Failure to understand and accept the disease
- Denial or loss of control
- Dysfunctional family
- Stress and inability to cope with it
- Isolation
- Untreated secondary addiction (sex, food, work)
- Overconfidence
- Medical problems
- Poor “continuing care” monitoring

(Gallegos, MMJ, 1992)
Objectives

- To describe and analyze variables associated to readmission among a sample of physician specialists treated in the Inpatient Unit of the Integrated Care Program for Physicians (PAIMM) of Barcelona (Spain).
335 consecutive inpatient admissions were evaluated from November 1998 to December 2007.

Readmissions were studied for a period of 11 years: December 1998 to December 2009.
All patients were diagnosed according to DSM-IV criteria.

Demographic and clinical variables were evaluated as well as variables to analyze program performance.

Parametric (t-test, ANOVA) and non-parametric ($\chi^2$) tests and correlations were used to analyze the data.
Variables analyzed (I)

- Demographic:
  - Age
  - Gender
  - Marital status
  - Speciality
Variables analyzed (II)

- Clinical
  - Diagnosis
  - Severity of addictive behaviour (number of drugs abused, age onset addiction, UBEs)
  - Severity of mental disorder (scores in depression and anxiety rating scales, prior suicidal attempts)
  - Personality traits (MCMI-II, Millon)
  - Self prescription
  - Delay in seeking help
  - Prior treatments
  - Family antecedents
Variables analyzed (III)

- Variables to analyze program performance
  - Where the patient come from
  - Mode of access to the Program
  - Therapeutic Contract
1024 Patients admitted to the Program 1999-2007

801 Outpatients

493 Inpatient Treatment

47 Non Specialist
23 Residents
88 Nurses

335 Specialist
Readmission: "New admission after previous inpatient treatment, due to relapse in substance use or severity of psychiatric symptoms"

Early readmission: "Before six months after discharge"

Frequent admission: "Three or more readmission"
Results
# Mean time between readmissions

<table>
<thead>
<tr>
<th></th>
<th>MEAN MONTHS</th>
<th>SD</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>First- Second Admission</td>
<td>20</td>
<td>21</td>
<td>1-102</td>
</tr>
<tr>
<td>Second- Third Admission</td>
<td>15</td>
<td>19</td>
<td>1-97</td>
</tr>
<tr>
<td>Third- Fourth Admission</td>
<td>12</td>
<td>17</td>
<td>1-56</td>
</tr>
<tr>
<td>Fourth-Fifth Admission</td>
<td>6</td>
<td>3</td>
<td>2-11</td>
</tr>
</tbody>
</table>
### Age at first admission and readmission

<table>
<thead>
<tr>
<th>Readmission</th>
<th>Mean years (SD)</th>
<th>Range</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>46.6 (7.8)</td>
<td>29-72</td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>46.7 (8)</td>
<td>31-72</td>
<td>n.s</td>
</tr>
</tbody>
</table>
Gender and readmission

n.s.
Marital Status and readmission

<table>
<thead>
<tr>
<th></th>
<th>Married/partner</th>
<th>Divorced</th>
<th>Single</th>
<th>Widowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>117</td>
<td>63</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>YES</td>
<td>47</td>
<td>40</td>
<td>17</td>
<td>2</td>
</tr>
</tbody>
</table>

P<0.05
Speciality and readmission

\[ \chi^2 = 10.7, \text{ df}=4, \ p<0.02 \]
Readmission by cause of admission

- Alcohol dependence: 93% No, 33% YES
- Mental disorder: 55% No, 25% YES
- Other drug dependence: 34% No, 19% YES
- Dual Diagnosis: 47% No, 29% YES

n.s.
Readmission (%) by DSM-IV-TR Diagnosis of Drug Dependence

- Tobacco: N=224
- Cannabis: N=8
- Stimulants: N=29
- Benzodiazepines: N=43
- Opiates: N=31
- Cocaine: N=33
- Alcohol: N=187

\[ \chi^2 = 4.8, \text{ df}=1; p<0.02 \]
Readmission (%) by DSM-IV-TR Diagnosis Mental Disorders

- Cognitive Disorder: N=13
- Eating Disorder: N=13
- Psychotic Disorder: N=18
- Anxiety Disorder: N=32
- Adjustment Disorder: N=16
- Bipolar Disorder: N=38
- Dysthymia: N=15
- Major Depression: N=67

* $\chi^2 = 5.02; df=1; p<0.02$
Readmission (%) by DSM-IV-TR Diagnosis Axis II Mental Disorders

Borderline Personality Disorder
N=7

Other Personality Disorder
N=27

*$\chi^2 = 5.2; df=1; p<0.03$
### Readmission and severity of addictive behavior

<table>
<thead>
<tr>
<th>SIGNS OF SEVERITY</th>
<th>Mean (SD) Readmission</th>
<th>Statistics</th>
</tr>
</thead>
</table>
| Number of drugs misused (nicotine incl.) | 1.9 (1.1)      | 2.2 (1.2)                | $t = 1.95$  
|                                    | df=333                | $p<0.052$                |
| Cigarettes per day                 | 24.6 (13.3)           | 25.3 (12.6)              | ns          |
| Standard drink per day             | 15 (8.4)              | 14 (8)                   | ns          |
| Smoking onset age                  | 18.6 (6.5)            | 17 (5.5)                 | ns          |
| Drinking onset age                 | 24 (10)               | 25.3 (11.7)              | ns          |
## Readmission and severity of psychiatric symptoms

<table>
<thead>
<tr>
<th></th>
<th>Mean (S D) No Readmission</th>
<th>Mean (SD) Readmission</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI at admission</td>
<td>14,9 (11,2)</td>
<td>13,2 (9,4)</td>
<td>n.s</td>
</tr>
<tr>
<td>STAI-S at admission</td>
<td>54,1 (28,6)</td>
<td>50,6 (29)</td>
<td>n.s</td>
</tr>
<tr>
<td>STAI-T at admission</td>
<td>67,9 (28,6)</td>
<td>62,3 (29,5)</td>
<td>t=-2,7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>df=240</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>p&lt;0,03</td>
</tr>
<tr>
<td>Length of hospitalization</td>
<td>30 (21) days</td>
<td>31,7 (28)</td>
<td>n.s.</td>
</tr>
<tr>
<td>Current Suicidal Behaviour at admission and Past Suicidal Behaviour</td>
<td>n</td>
<td>Readmission n (%)</td>
<td>Statistics</td>
</tr>
<tr>
<td>------------------------------------------------------------------</td>
<td>-----</td>
<td>-------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Current Suicidal thoughts</td>
<td>21</td>
<td>11 (53%)</td>
<td>$\chi^2 = 4.4$; df=1; $p &lt; 0.03$</td>
</tr>
<tr>
<td>Current Suicidal Attempt</td>
<td>21</td>
<td>12 (57%)</td>
<td>$\chi^2 = 6.6$; df=1; $p &lt; 0.01$</td>
</tr>
<tr>
<td>Previous Suicidal behaviour</td>
<td>84</td>
<td>35 (42%)</td>
<td>$\chi^2 = 4.9$; df=1; $p &lt; 0.01$</td>
</tr>
</tbody>
</table>
Self prescription and Readmission

“You’re just fine. This prescription is for me!”
Readmission was not associated with:

- MCMI-II personality scales
- Age onset mental disorder
- Delay in seeking treatment
- Prior Treatments
- Psychiatric Family Antecedents
- SUD Family Antecedents
Readmission and source of patients

Source of patients

<table>
<thead>
<tr>
<th>Source of Patients</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalonia</td>
<td>159</td>
</tr>
<tr>
<td>Rest of Spain</td>
<td>175</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 12.5; \text{df}=1; p<0.0001 \]
Readmission by mode of access to the program

Voluntary: N=237
Non voluntary: N=98

n.s.
**Readmission and Therapeutic Contract**

![Graph showing readmission rates by therapeutic contract status with statistical significance indicated.]

\[ \chi^2 = 5.1; \text{ df}=1; p<0.01 \]
Early readmission

Number cases

- < 6 months: 33 cases
- > 6 months: 77 cases
Early readmission and treatment prior to access to PAIMM

Prior treatment

readmission after 6 months

readmission before 6 months

\[ \chi^2 = 5.4; \text{ df}=1; p<0.01 \]
Frequent Treatment admissions

Two admissions: 58
Three or more: 48
Frequent treatment readmissions and cocaine dependence

\[ \chi^2 = 6.7; \text{df}=1; p<0.01 \]
A third of patients need to be readmitted during follow-up.

Half of patients will be readmitted more than once.

One in four readmissions occurs during the first three months and the rate reaches 70% at second year.

No differences were found concerning age, gender, severity of illness, length of admission, and mode of access to the Program.

Doctors who self-prescribe showed a non significant tendency (p<0.059) to be readmitted.
Readmission was associated with:
- Being separated or divorced
- Being Psychiatrist
- Working in Catalonia
- Cocaine Dependence
- Psychotic Disorder
- Borderline Personality Disorder
- Suicidal Behaviour
- Therapeutic contract

Characteristics associated with earlier readmission were:
- History of prior treatments
Readmission appears to be common in the recovery process of sick doctors. Most of the readmissions occur within the first year of treatment, and doctors under a therapeutic contract are readmitted more often. Since those patients are likely to be those at higher risk of malpractice, special attention should be paid to this group in order to establish the best case-management and follow-up strategies to enhance their chances of recovery while ensuring patients' safety.
Thank You
Grazie
Takk
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DANKE
Merci
Thanks
THANK YOU
Gracias
Thank You
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