# THE PATTERN OF ENGAGEMENT TO CARE AFTER FIRST EMERGENCY PSYCHIATRY VISIT AT AMANUEL SPECIALIZED MENTAL HOSPITAL, ADDIS ABABA,ETHIOPIA

**A Partial Fulfillment of the Post Graduate Program in Psychiatry**


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# ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES SCHOOL OF MEDICINE ,DEPARTMENT OF PSYCHIATRY

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***A Thesis Submitted to the Department of Psychiatry, School of Medicine, College of Health Science, Addis Ababa University in partial fulfillment of the requirements for the Specialty Certificate in Psychiatry***

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# List of Abbreviations

APA – American Psychiatrists Association

ASMH – Amanuel Specialized Mental Hospital

RCP – Royal College of Psychiatrists

CJP - Canadian Journal of Psychiatry

FEP-First Episode psychosis

WHO-World Health Organization

OPD –Out Patient Department

PI -primary investigator

RVI –Retro-viral infection

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**Executive summary**

**Background: -** Aim of this study was to give an overview of how patients were engaging to the service at the Hospital after first emergency visit to identify the gaps in the service and factors associated with disengagement to care. Psychiatric service in Ethiopia has been provided by Amanuel Hospital for the entire country for many years and the service was not yet decentralized well. But there has not been systematic study conducted to see how patients were engaging to care after visit. We believe the findings will help to plan to improve the service and it will also raise questions for further research.

**Objective: -** To describe the pattern of engagement to care after first emergency psychiatry visit at Amanuel Specialized Mental Hospital.

**Methods: -** A retrospective study was conducted involving those who visited emergency outpatient department unit at ASMH from December /2015 to November /2016. Data extraction sheet were used to collect information for the study. All cases who visited emergency OPD of ASMH for the first time during the study period were included for stratified simple random sampling and 385 participants were included in the study. The data sheets were coded and data entry, cleaning and analysis was done using the Statistical Package for the Social Sciences (SPSS) version 20.bivariate and Multivariate logistic regression was done to see socio-demographic and other determinants of disengagement to care

**Results: -**Three hundred and eighty five cases were included in the study. Of these, 57.4% were males. The mean age of the participants was 31 years. In terms of region, majority of the participants (near to 71%) come from either from Oromia (47%) or Addis Ababa (23.6%).In majority of the participants (83.1%) the main reason for emergency visit was either aggression or other behavioral disturbance and near to 76% got diagnosis of non-affective psychotic spectrum disorder. Near to 81% of the participants have disengaged from care and from those who were disengaged 44.5% had no re-visit to the hospital. Among participants 90.3% of female and 77.4% of male who were included in the study disengaged from care. Majority of the participants (75.6%) were seen by Master or BSC psychiatry prescriber's and only 9.9% of the participants were seen by either psychiatrist or psychiatry residents at first visit. Near to 95% of those participants seen by non-psychiatry professionals were disengaged from care.

**Conclusion**: - disengagement from care has deleterious effect on over all prognoses of patients and mental health care system in general. Proper emphasis should be given for psychosocial interventions specially giving due emphasis on psycho-education about illness, lifestyle management, family intervention and support, relapse prevention strategies.

**Recommendation**: - Giving proper psycho-education and patient centered care should be the rule than the exception. Improving the referral system, working in co-ordination and collaboration with other health institutions and religious leaders might help to improve patient care and engagement.

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CHAPTER ONE

## 1.1. Introduction

Engagement has been defined as a complex phenomenon that encompasses factors that include acceptance of a need for help, the formation of a therapeutic alliance with professionals, satisfaction with the help already received and a mutual acceptance of and working toward shared goals.(O'Brien A, Fahmy R, Singh SP;2009)

We know that schizophrenia and other serious mental illnesses generally require ongoing maintenance treatments over the long term to facilitate recovery. As evidenced by treatment recommendations and other clinical guidelines for severe mental illness, there are a number of psychopharmacologic and psychosocial treatments for which there is consistent scientific evidence showing that they improve outcomes. Although the lack of widespread availability of these evidence-based treatments is a significant problem, especially in low income countries like Ethiopia , another challenge that can seriously undermine the effectiveness of evidence-based care for schizophrenia and other severe mental disorders is consumers' disengagement from mental health treatment.(Kreyenbuhl J, Nossel IR, Dixon LB ,2009)

This could lead to devastating consequences including exacerbation of psychiatric symptoms, repeated hospitalizations, first episode or recurrent homelessness, violence against others, and suicide.(Dixon L, Goldberg R, Iannone V,2009)

Individuals living with serious mental illness are often difficult to engage in ongoing treatment, with high dropout rates which may lead to worse clinical outcomes, with symptom relapse and re-hospitalization.
(Lisa B. Dixon, Yael Holoshitz, Ilana Nossel,2016)

Currently, there areno universally accepted definitions for mental health servicedisengagement and engagement, although typically theyare assessed using proxies, such as attendance, treatmentdrop out, therapeutic alliance, and treatment adherence. But engagement to care is a dynamic
phenomenon that changes in relation to stages of treatment
and patient needs, and, also, which takes into consideration
developmental factors.

So, there are several dimensions related to engagement to care. These include:

1. Engagement in relation to the continuum of care:-patients may minimally engage or not engage at the onsetof treatment, after a period of receiving treatment, and (or)during transfer of services
2. Engagement in relation to types of services received: - with case management services, medication interventions, or group therapies
3. Pattern of engagement:- disengaging from services and then re-engaging with services over a period of time
4. Engagement in relation to duration:- length oftime participating in services before beginning to disengage
5. Patient and family perceptions of engagement:- patients may attend appointments and participate in treatment, but may feel disempowered by, or dissatisfied with, the services they receive, which can be a precursor to service disengagement

Among individuals with schizophrenia or other serious psychiatric disorders who have some contact with mental health services, a variety of manifestations of disengagement or drop out from treatment have been described. This has included evaluations of missed initial appointments, referral failures from emergency services, non-adherence with aftercare following psychiatric hospitalization, and various other conceptions of treatment dropout.
It has been said that engagement occurs in the context of an individual's unique personality, social and life circumstances, and symptom burden. . (ShaliniLal, PhD; Ashok Malla, MBBS, FRCPC,2015)
Among few suggested ways that increase engagement to care, one way of engaging patient to care is enhancing a client's experience of mental health treatment and hope for recovery. This can be facilitated by having good therapeutic alliance with the patient and client..(Lisa B. Dixon, Yael Holoshitz, Ilana Nossel,2016)
This is not practical if one patient is seen by multiple personnel within first few encounters to care which is the case in setups like 'Amanuel specialized mental hospital' with limited number of personnel and high number of patients.
Engagement strategies can be targeted to patients, families, service providers, and the system. Among patients and families, engagement strategies can be focused on early assessment of barriers to engagement and enhancing motivation for treatment (for example, perceived need for treatment, confidence in treatment, and perceived ability to participate in treatment).
At the system level, engagement strategies can target the accessibility of services, for example, in relation to transportation assistance, scheduling flexibility, location, and timing of service delivery. (Smith TE, Easter A, Pollock M,2013)
Service providers can be trained on how to assess barriers to engagement with patients and families and how to address these barriers using, for example, brief motivational interviewing techniques.( Miller WR, Rollnick S,2013).

Enhancing service providers' capacities in expressing caring, respectful, and nonjudgmental attitudes toward patients is also identified as a strategy in the qualitative literature to increase engagement

## 1.2. Statement of the problem

As we know although there is an evidence for effective treatments for various mental illness, availability of these evidence-based treatments is a significant problem, especially in low income countries like Ethiopia. Top on this another challenge that can seriously undermine the effectiveness of evidence-based care for severe mental disorders is consumers' disengagement from mental health treatment. Even in high income countries, the rate of disengagement was reported to be as high as 50%; which severely impacts the delivery of effective treatment in need of it. To our knowledge, there has not been any systematic scientific study that saw the pattern of engagement to care after emergency visit to this date in our study area. So aim of the study is to give an overview of how patients were engaging to the service at the Hospital after first emergency visit to identify the gaps in the service and factors associated with disengagement to care. We believe the findings will help to plan to improve the service and it will also raise questions for further research.

## 1.3 Research Objectives

### 1.3.1. General objective

To describe the pattern of engagement to care after first emergency psychiatry visit at Amanuel emergency OPD from December 2015 to November 2016 GC

### 1.3.2. Specific objectives

1. To describe the socio-demographic characteristics of patients presenting to emergency psychiatry clinic for the first time
2. To determine the diagnosis given at first emergency psychiatry visit
3. To assess the prevalence of side effects on subsequent emergency psychiatry re- visit
4. To describe pattern of inpatient admission and stay after first emergency psychiatry visit
5. To assess the pattern of hospital re-visit and duration after first emergency psychiatry visit
6. To assess the prevalence of disengagement from care after first emergency psychiatry visit
7. To describe factors associated with disengagement from care after first emergency psychiatry visit

## 1.4. Definition of terms (Operational definition)

1. Engagement to care: not dropping out from care more than four months at any visit still on follow-up.
2. Disengagement by one month: not showing up for follow-up within a month after first visit or discharge from the hospital and currently not on follow-up. (Operational definition1)
3. Disengagement by four: not showing up for at least four months after first visit or discharge from the hospital and currently not on follow-up (Operational definition2)

4. Disengagement by six: not showing up for at least six months after first visit or discharge from the hospital and currently not on follow-up.( Operational definition3)
5. Re-engagement: disengaged by the above time line definition but still on follow-up.

# Chapter two

## 2.1. Literature review

Service disengagement is a clinical challenge that continues to afflict the mental health care system and disengagement rates in mental health services are higher than those associated with other medical services.(Mitchell AJ, Selmes T;2007)
It has been reported that up to 50% of patients receiving mental healthservices disengage from treatment with adolescents and young adults being particularly at high risk ,contributing to poor outcomes and escalating health care costs.(ShaliniLal, PhD; Ashok Malla, MBBS, FRCPC;2015)

It is estimated that 50% of patients suffering from chronic illness are not taking medication as prescribed after six months (World Health Organization, 2003).

Individuals with serious mental illness have high rates of treatment discontinuation. Between 30–45% fail to attend initial scheduled clinic visits or routinely discontinue treatment, and fewer than 50% receive continuous treatment for 12 months ( Kessler RC,2001)

Epidemiological studies have shown that 33% to 55% of people who meet criteria for an axis I diagnosis (according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition ) have received no mental health care in the past year. Of those who do seek care or are hospitalized, an estimated 24% do not attend treatment sessions as scheduled, 20% drop out of treatment before it is completed, and 18% to 67% do not attend outpatient treatment after hospitalization (Victoria Stanhope, Janis Tondora, Larry Davidson, Mimi Choy-Brown and Steven C Marcus,2015)

Although rates vary across studies, reviews of the literature suggest that up to one-third of individuals with serious mental illnesses who have had some contact with the mental health service system disengage from care(Julie Kreyenbuhl, Ilana R. Nossel, and Lisa B. Dixon, 2009)

A vast body of research spanning the last several decades suggests that far fewer than half of all individuals with serious mental illnesses in the United States who require ongoing mental health treatment are adequately connected to care ( Julie Kreyenbuhl, Ilana R. Nossel, and Lisa B. Dixon; 2009)

Among factors reported to have a negative effect on adherence are greater symptom severity (positive symptoms, especially delusions and paranoia), hostility, poorer cognitive functioning, lower parental social class, less education, medication side-effects, longer duration of untreated psychosis, substance abuse, alcohol consumption, and poor insight. (Edlund MJ, Wang PS, Berglund PA,2002; Lisa B. Dixon, Yael Holoshitz, Ilana Nossel,2016)

Different factors affect patient who was brought to emergency department to end up being admitted in hospital. Among this; Suicidality , drug treatment administered in the emergency department, restraining measures applied, committal ordered under state laws, the diagnosis of dementia, the number of consultations, female gender, referral to hospital by a physician, or the patient presenting at the emergency department unaccompanied are the main factors that favors the indication for inpatient admission. (MarcZiegenbein, ChristophAnreis, Bernhard Brüggen, Martin Ohlmeier and Stefan Kropp,2006)

In a review of the literature by O'Brien et al on treatment disengagement, when asked why they had dropped out of treatment, individuals cited unsympathetic providers, not being listened to, not being able to actively participate in decision making, and being dissatisfied with services as reasons fordisengagement. ( O'Brien A, Fahmy R, Singh SP;2009 )

Study done in Maryland's Medicaid program indicate that approximately half (577 of 1127, or 51%) of young adults did not have an outpatient mental health clinic encounter within 30 days after being discharged from an inpatient mental health stay. (Leslie Marino,2016) Those who did not attend follow-up care were more likely to be black, have a co-occurring substance use disorder diagnosis and not have had any contact with outpatient mental health providers in the public mental health system or received any psychotropic medications in the 6-month period immediately prior to their inpatient discharge(Leslie Marino,2016)

Using data from a community sample in the NCS,Kessler et al found that one-sixth (16.6%) of respondentswho met diagnostic criteria for a serious mental illnesshad dropped out of treatment, defined as having soughttreatment during the prior 12 months but not being intreatment at the time of the interview for a reason otherthan symptom improvement.( Kessler RC, Berglund PA, Bruce ML,2007 )

Among several recent studies that have examined the phenomenon of lack of outpatient follow-up after hospital discharge, rates of failure to attend a first outpatient appointment have ranged from 18%–67%, with a median rate of 58% (Julie Kreyenbuhl1–3, Ilana R. Nossel4, and Lisa B. Dixon ,2009)

Numerous variables may affect level of treatment engagement, including therapeutic alliance, issues of utility (people feel the treatment is not working), accessibility of care which is practical reasons (treatment may be difficult to get to, difficult to schedule), and a client's trust that the treatment will address his/her own unique goals (people feel mistrustful, or coerced).(Lisa B. Dixon, Yael Holoshitz, Ilana Nossel,2016)
A number of studies and reviews provide insight into the characteristics of individuals who fail to engage in mental health treatment and the reasons they give for not remaining in care.

In terms of socio-demographic characteristics, younger age, male gender, and ethnic minority background have been consistently associated with treatment disengagement.( Kessler RC, Berglund PA, Bruce ML,2001 )
Low social functioning and social isolation, as evidenced by not being
married or being out of contact with family, as well as low socioeconomic status, as indicated by low educational attainment and unemployment, have also been linked to dropout. (O'Brien A, Fahmy R, Singh SP,2008)

In terms of clinical characteristics, individuals with a co-occurring serious mental illness and a substance use disorder have very high rates of treatment disengagement, as do individuals with higher levels of psychopathology. (O'Brien A, Fahmy R, Singh SP ,2008)

Particular populations of people have historically been difficult to engage, such as young adults experiencing a first episode of psychosis, individuals with coexisting psychotic and substance use disorders, and those who are homeless.(Lisa B. Dixon, Yael Holoshitz, Ilana Nossel,2016)

Relative to other serious mental illness diagnoses, a diagnosis of schizophrenia has been found to be associated with lower rates of treatment disengagement, although it is unclear to what extent this might be related to the symptoms or course of the illness or to efforts of the treatment system to increase outreach and engagement efforts for patients with schizophrenia.( O'Brien A, Fahmy R, Singh SP,2008;Kreyenbuhl J, Nossel IR, Dixon LB,2009)

Research suggests that approximately one third of young adults experiencing a first psychotic episode delay treatment for 1-3 years. Further, 80% drop out within the first year of care. .(Lisa B. Dixon, Yael Holoshitz, Ilana Nossel,2016)This high attrition rate highlights the inherent difficulties in engaging young people in care. Multiple causes for early dropout from treatment or disengagement have been offered, including poor alliance, mistrust of the system, and poor insight into the need for treatment.

Other than those mentioned above several clinical and family factors also influence disengagement:-

- Among this for FEP include duration of untreated psychosis, symptom severity, insight, diagnoses of non-affective psychosis, forensic history, substance use, and the presence of family support. (ShaliniLal, PhD; Ashok Malla, MBBS, FRCPC 2015)

Within the broader mental health literature, ethnic minority background and social deprivation (for example, homelessness) are commonly reported socio-demographic factors associated with service disengagement.(ShaliniLal, PhD; Ashok Malla, MBBS, FRCPC,2015)

Chapter three

## 3.1. Methods

**Study design*:*** - This was a prospective cross sectional hospital based study

**Study period*:*** - Data were collected from September 16 to October 26, 2017

## Study Setting

Ethiopia, located in the Horn of Africa, is the second most populated country in sub-Saharan Africa, with >100million inhabitants, of whom >80% live in rural areas. Addis Ababa is the capital city of Ethiopia, with a population of over 3 million, according to the 2007 population census, and an annual estimated growth rate of 3.8% per year.

Amanuel Specialized Mental Hospital is Ethiopia's largest and the only specialized and referral public mental health hospital. Currently the hospital is under the federal ministry of health. The hospital has more than 242 beds and offers diagnosis and treatment for approximately more than 10,000 in-patients and out-patients a year. Services are given in different case teams each led by a Psychiatrist. One of such case teams is the emergency case team which is led by two senior Psychiatrists, 12 nurses, 4 masters and 2 BSC psychiatry prescribers. The emergency case team has one emergency outpatient case team plus female and male emergency wards. The hospital receives patients who are referred from across the country, as well as patients from Addis Ababa.

## 3.2. Study population

All patients with first ever presentation to the emergency outpatient department of Amanuel Specialized Mental Hospital and registered on the mandatory handwritten register between December, 2015 to November, 2016 and fulfilled all the inclusions criteria

### 3.2.1. Inclusion Criteria:

Those patients who were recorded on the mandatory emergency OPD Registry, whose date of first emergency visit was between December, 2015 to November, 2016 and got psychiatric clinical diagnosis or seizure disorder

Repeated entry of the same patient on different dates will be cross checked with their charts to see if the patients re-visited emergency OPD more than once and registered as new patient.

### 3.2.2. Exclusion Criteria:

Patients, who visited emergency OPD before December, 2015 and after November, 2016 will be excluded from the study

Patients who visited emergency OPD between January 2016 and December 2016 but got non- psychiatric clinical diagnosis other than seizure disorder

## 3.3. Sample Size

- Sample size (n) is determined using single population formula with the following assumption:

  - 95% -CI ;Z-value = 1.96; Margin of error (E) = 5%; Prevalence (p) = 50%; Where n = required sample size; $n = [Z^2 \times P \times (1-P)]/E^2$, $n = [1.96^2 \times 0.5 \times 0.5]/0.05^2 = 384.16$

The required sample size of 385 was selected over the study period of one year from total study population of 1,793 new cases seen at emergency OPD

## 3.4. Variables

### 3.4.1. Independent variables:-

Socio demographic characteristics

- Age Sex
- Marital status Educational status
- Address in region Occupational status

Other Independent Variables

- Duration of the illness
- Diagnosis at first visit
- Substance abuse reported at any visit
- Intervention given at first visit
  - ✓ Medication given at first visit
  - ✓ Admission at first visit
  - ✓ Documented psycho education at first visit
- Side effect after administrations of medication
- Clinicians attended the patient at first visit
- Season at first visit

3.4.1. Dependent variables:-Disengagement from psychiatry care after first emergency visit for more than four months at any subsequent visits

### 3.5. Data Collection

The registry found in the emergency OPD data base of ASMH was used to identify cases to be included in the study. Over this study period over 1,793 new cases with any psychiatry disorder or seizure disorder diagnosis were seen and among this (414, 471,477 and 431 cases) respectively seen in the season Autumn/'mehir'/, summer/'bega'/, winter /'kiremt'/ and spring/ 'tsedey'/. From each season we selected equal number 96 cases except winter for which 97 cases were selected. Data for each case was extracted from the patient chart and from emergency data base. Information regarding the profile of the study participant, such as date at first emergency visit, socio demographic characteristics, reason for visit, substance abuse histories, clinical diagnosis, intervention provided and side effect was taken from patient chart. In addition to this information which was not documented on the chart and information like reason for disengagement was collected from the study participants or from the relatives of the study participants through cell phone number documented on each participants chart. Information regarding the clinician who attended the participants at each visit was collected after sample of the signature and hand writing of staff clinicians who worked at emergency was taken and compared with each participant chart by PI and two clinicians (data collectors) who worked at emergency OPD during the study period. Given the absence of a standardized tool for extraction of the necessary details from the case files, data extraction tool was developed on the basis of review of relevant literature and suggestions obtained from the advisors. This Data extraction tool was used to extract the necessary information from the recorded files and the Register.

### 3.6. Ethical consideration

- Ethical permission was sought from the Department of Psychiatry, College of Health Sciences, Addis Ababa University, and ethics committee at Amanuel Specialized Mental Hospital.
- Names of the study participants were not mentioned in the study to keep the confidentiality of the participants.

### 3.7. Data analysis

The data sheets were coded and data entry, cleaning and analysis was done using the Statistical Package for the Social Sciences (SPSS) version 20. Data was organized with variables including age, gender, educational status, employment, marital status, religion, diagnosis, side effect, disengagement and e t c.

# Chapter four

## 4.1. RESULTS

### 4.1.1. Socio-demographic characteristics of the study participants

Three hundred and eighty five cases were included in the study. Of these, ---were males. The mean age of cases at first emergency visit evaluation was 31 years (SD 12.1; range 14–85 years) and most of the participants (54.3%) were single and around 32.2% were married. Around 59.5% of the participants were Christian in religion and 40.5% were Muslim. In terms of region, near to half of the patients [181 (47 %)] were from Oromia, 91(23.6%) from Addis Ababa, 65 (16.9%) from SNNP, 40(10.4%) from Amhara and the rest from different part of Ethiopia. The socio-demographic characteristics of the study participants are shown in Table 1

| Characteristics | | Frequency | Percent |
|---|---|---|---|
| **Age** | <20 | 46 | 11.9 |
| | 21-29 | 155 | 40.3 |
| | 30-39 | 108 | 28.1 |
| | 40-59 | 58 | 15.1 |

Table 1: socio-demographic characteristics of the study participants

| | | | |
|---|---|---|---|
| | 60 and above | 18 | 4.7 |
| G**ender** | Male | 221 | 57.4 |
| | Female | 164 | 42.6 |
| Marital status | Married | 124 | 32.2 |
| | Single | 209 | 54.3 |
| | Divorced | 19 | 4.9 |
| | Widowed | 6 | 1.6 |
| Religion | Christian | 229 | 59.5 |
| | Muslim | 156 | 40.5 |
| Level of education | high school | 202 | 52.5 |
| | elementary school | 120 | 31.2 |
| | college student and above | 22 | 5.7 |
| | no formal education | 5 | 1.3 |
| Address by region | Oromia | 181 | 47.0 |
| | Addis Ababa | 91 | 23.6 |
| | SNNP | 65 | 16.9 |
| | Amhara | 40 | 10.4 |
| | Others* | 6 | 1.6 |
| Employment Status at first visit | Unemployed | 164 | 42.6 |
| | Employed | 157 | 40.8 |
| Employment Status current | Unemployed | 221 | 57.4 |
| | Employed | 77 | 20.0 |

Note: others*(Tigray, Ethiopian Somali, Harar regions and Diredawa)

### 4.1.2. Reason for emergency visit

With regard to the main reason for emergency visit either verbal or physical aggression was reported for 157(40.8%) patients; refusal to eat or drink for 31(8.1%) of patients; suicidal ideation, attempt or homicidal behavior for 17 (4.4%) of patients; other disturbances like:- other behavioral disturbances, sleep disturbance, suspiciousness, abnormal body movement and other psychopathologies were reported by 163(42.3%) patients and abnormal body movement with or without other presentation was reported by 17(4.4%) of the patients. The distribution of reason for first emergency visit is shown in (table 2).

Table 2: the main reason for first emergency visit

| Characteristics | | Frequency | Percent |
|---|---|---|---|
| Reason for first emergency visit | aggression: verbal or physical | 157 | 40.8 |
| | refusal to eat or drink | 31 | 8.1 |
| | suicidal ideation, attempt, self harm or homicidal behavior | 17 | 4.4 |
| | Seizure | 17 | 4.4 |
| | *other disturbances | 163 | 42.3 |

Note:* *other disturbances( include behavioral disturbances like urge to be on the move, restlessness, walking naked; sleep disturbances; suspiciousness or other psychopathology and referral from other health institutions)

### 4.1.3. Diagnosis and intervention at first visit

The diagnosis of the participants and the interventions they received at first emergency visit is shown in (Table 3). Majority (65.3%) of the participants were give diagnosis of non affective psychosis which includes Schizophrenia [143(31.1%)], brief psychotic disorder [86(22.3%)], psychosis secondary to GMC or substance induced psychosis [34(8.8%)] and Schizophreniform disorder [12(3.1%)]. Other diagnosis were bipolar disorder [38(9.9%)], depression [8(2.1%)]; seizure disorder and other psychiatric disorder were diagnosed among 64(16.6%)] of participants. Among the participants 62 had reported to have co-morbid substance diagnosis. From the substance 'khat' 41(10.6%) was the commonest to be reported and alcohol 27(7%) and tobacco 23(6%) was also reported at first emergency visit by the participants.

Regarding intervention given at first visit only 71(18.4%) patients were admitted at first visit and only 2(0.5%) of the participants in the study, who were followed after first visit, were admitted on subsequent visit. Not for small number of the participants [29(7.5% of the total study population) patients] admission was requested but they were not admitted. Majority [201(52.2%)] of the patients received either injection of haloperidol and diazepam together with po antipsychotic or any other po medication. From the participants 6(1.6%) patients received long acting injection (modicate) at initial visit and 158 (41%) patients were given only po medications.

Regarding interventions other than admission and medication; only 14(3.6%) of the patients were given psycho-education which was documented on the charts and 10(2.6%) of the participants were referred to other health institutions after first emergency visit either for co-morbid medical management or to have follow-up at nearby health institutions.

Table 3: Season, Diagnosis and intervention at first visit

| Season, Diagnosis and intervention at first visit |
|---|

| Characteristics | | Frequency | Percent |
|---|---|---|---|
| **first clinical diagnosis** | Brief psychotic disorder | 86 | 22.3 |
| | Schizophreniform disorder | 12 | 3.1 |
| | Schizophrenia | 143 | 31.1 |
| | Bipolar disorder | 38 | 9.9 |
| | Depression | 8 | 2.1 |
| | Psychosis secondary to GMC or substance induced | 34 | 8.8 |
| | Others** | 64 | 16.6 |
| *Medications | Po | 158 | 41.0 |
| | im/iv | 24 | 6.2 |
| | both po and im/iv | 201 | 52.2 |
| Admission | Yes | 71 | 18.4 |
| | no | 312 | 81.0 |
| | admitted on subsequent visit | 2 | .5 |
| **psycho education** | Yes | 14 | 3.6 |
| | No | 371 | 96.4 |
| Referral given | Yes | 64 | 2.6 |
| | No | | 97.4 |
| Seasons | Autumn('mehir') | 96 | 24.9 |
| | Summer ('bega') | 96 | 24.9 |
| | Winter('kiremt') | 97 | 25.2 |
| | spring ('tsedey') | 96 | 24.9 |

Note: others**(Anxiety disorder, seizure disorder, post partum psychosis )

*The sum of values does not add up to 385 because of missing values

4.1.4. Clinicians attended the participants at first emergency visit

Regarding the clinicians who attended the participants at first visit majority [204(53.2%)] were attended by masters psychiatry prescribers followed by BSC psychiatry prescribers [87(22.6%)]. Among the participants only 32 (8.3%) patients and 6(1.6%) patients were seen by psychiatry residents or psychiatrists respectively at first emergency visit. Other different clinicians like Health Officers, General Practitioners, non-psychiatry nurses and BSC or master psychiatry trainees have attended 56(14.5%) patients at first emergency visit (see table 3)

Table 4: Clinicians who attended the participants at first emergency visit

| Characteristics | | Frequency | Percent |
|---|---|---|---|
| Clinicians | Psychiatrist | 6 | 1.6 |
| | psychiatry resident | 32 | 8.3 |
| | masters psychiatry prescriber | 204 | 53.0 |
| | BSC psychiatry prescriber | 87 | 22.6 |
| | Others | 56 | 14.5 |

4.1.5. Patterns of engagement to care after first emergency

A. Patterns of engagement to care after first emergency visit by operational definition one

Participants who show up for re-visit less than 1 month after first emergency visit or after discharge from hospital and engaged to care without missing at least more than four months on subsequent visit were only 41(10.6%). The rate of disengagement was very high [344(89.4%)]. Among disengaged participants 138(35.8%) had no re-visit to hospital; 81(21%) participants disengaged after three or more visit to the hospital; 60(15.6%) participants disengaged after second visit and near to 17%(65) disengaged initially but they were re-engaged again to care. We have also looked patterns of engagement by considering no re-visit more than four months at any visit and according to this only 76(19.7%) participants were engaged to care.

B. Patterns of engagement to care after first emergency visit operational definition two

Among the participants 39.7 %( 153 patients) had no revisit to the hospital after they were seen at the emergency OPD [80.4 %( 80 patients)] or discharged from the hospital [19.6 %( 30 patients)].

Majority of the participants [55.6 %( 214 patients)] had only two visits to the hospital over the study period and near to two third [64.9 %( 250 patients) had only three visit to the hospital over the study period.

Participants who show up for re-visit less than four months at first visit and still who are on follow-up without dropping out from care more than four months were 75(19.5%) participants. The disengagement rate in this case was 80.5%. Among disengaged participants 9.4% (36) disengaged initially and re-engaged at different time on subsequent visits. The rest participants disengaged either after second visit (59%) or third visit (77%).

C. Patterns of engagement to care after first emergency visit operational definition three

When we see the patterns of engagement by operational definition three (not showing up for re-visit after first visit for six months and not currently on follow-up) 103 (26.8%) of the participants were engaged to care. But still the disengagement rate was high (73.2%). By this definition 8 (2.1%) participants were disengaged (drop out) from care more than six months after initial visit but then re-engaged to care at different time period on subsequent follow-up.

Table 5: Engagement and disengagement after first visit at different time line

| | | Disengagement one month* | | Disengagement four months** | | Disengagement six months*** | |
|---|---|---|---|---|---|---|---|
| Characteristics | | Frequency | Percent | Frequency | Percent | Frequency | Percent |
| Disengagement | No | 41 | 10.6 | 75 | 19.5 | 103 | 26.8 |
| | Yes | 344 | 89.4 | 310 | 80.5 | 282 | 73.2 |
| Patterns of engagement | disengaged after first visit | 138 | 35.8 | 138 | 35.8 | 138 | 35.8 |
| | disengaged after second visit | 59 | 13.3 | 59 | 13.3 | 59 | 13.3 |
| | disengaged after three or more visit | 77 | 20.0 | 77 | 20 | 77 | 20.0 |
| | disengaged initially and re-engaged | 70 | 18.2 | 36 | 9.4 | 8 | 2.1 |
| | engaged to care | 41 | 10.6 | 75 | 19.5 | 103 | 26.8 |

Note: * By operational definition for disengagement 1

** By operational definition for disengagement 2

*** By operational definition for disengagement 3

### 4.2.1The socio-demographic determinants of disengagement

The only socio-demographic characteristics that was associated with disengagement after first emergency visit by operational definition two was gender. At those who are female had odds of 2.79 of disengagement (OR=2.79, 95% CI= (1.065-7.325), P=.037). (See table 6)

Table 6: Socio-demographic factors associated with disengagement after first emergency

Note:* participants come from SNNP, Ethiopain Somalia region,Tigray, Dire Dewa and Harare

| | Disengagement by four months | | | Disengagement by six months | |
|---|---|---|---|---|---|
| Characteristics | Crude odds ratio (95%Confidence Interval) | Adjusted odds ratio (95%Confidence Interval) | P value | Adjusted odds ratio(95%Confidence Interval) | P value |
| Gender | | | | | |
| Male | | | | | |
| Female | 1.626(.957-2.761) | 2.793(1.065-7.325) | .037** | 1.276 (.396-4.114) | .061 |
| Age | | | | | |
| <20 | | | .697 | | .366 |
| 21-29 | .804(.355-1.823) | .597(.157-2.89) | .449 | 816 (.228-2.9142) | .754 |
| 30-39 | 1.302(.533-3.183) | 1.205(.278-5.223) | .803 | 1.770 (.417-7.513) | .439 |
| 40-59 | .932(.355-2.451) | 1.143(.210-6.220) | .877 | .476 (.088-2.568) | .388 |
| 60 and above | 4.135(.484-35.298) | -- | .999 | 4.313(.44-42.55) | .999 |
| Marital status | | | | | |
| Married | | | .382 | | .405 |
| Singe | .927(.530-1.618) | 2.995(.213-42.015) | .416 | 2.899 (.209-40.206) | .428 |
| Widowed/Divorced | 1.260(.396-4.013) | .742(.041-13.487) | .840 | 746 (.045-12.351) | .838 |
| Educational level | | | | | |
| Elementary school | | | | | |
| High school and above | .849(.487-1.479) | .349(.027-4.582) | .423 | .204(.0162-.696) | .228 |
| Previous employment status | | | | | |
| Employed | | | | | |
| Unemployed | 1.647(.942-2.880) | 1.448(.488-4.294) | .504 | 1.188 (.421-3.355) | .744 |
| Current employment status | | | | | |
| Employed | | | | | |
| Unemployed | 2.267(1.058-4.858) | 1.199(.333-4.312) | .781 | .923 (.267-3.192) | .900 |
| Address in region | | | | | |
| Addis Ababa | | | .370 | | .010 |
| Oromia | 1.193(.63-2.27) | 2.363(.713-7.828) | .159 | 1.276 (.396-4.114) | .684 |
| Others* | .767(.39-1.51) | 1.793(.519-6.191) | .356 | .314 (.092-1.069) | .064 |

**p=<.o5 statically significant

### 4.2.2. Other determinants of disengagement

Other than the socio-demographic factors, clinicians who attended the patients at first visit were significantly associated with disengagement after first emergency visit. Participants who were seen by Master or BSC psychiatry prescriber's had odds of 6.22of disengagement (odds ratio [OR] = 6.22, 95%CI= (1.126-34.39), P=.034). Where as participants who were seen by other non-psychiatry professionals including general practitioners, health officers or psychiatry nurse trainees had odds of 52.45 of disengagement (odds ratio [OR] = 52.45, 95%CI= ( (5.36-513.40)), P=.001). Apart from this, participants who visited emergency OPD

at the month of winter (‘Kiremt’) had lesser chance of disengagement with odds ratio of .17 of disengagement (odds ratio [OR] = .17, 95%CI= ( .040-.730), P=.017).

Regarding the duration of the illness participants who had intermediate duration of the illness at the time of first visit were less likely to disengage with odds ratio of .30 of disengagement (odds ratio [OR] = .30, 95%CI= ( (.11-.85), P=.024). (See table 6)

Table 7: other determinants of disengagement

| | Disengagement by four months | | Disengagement by six months | |
|---|---|---|---|---|
| Characteristics | odds ratio (95%Confidence Interval) | P value | odds ratio (95%Confidence Interval) | P value |
| Season at first emergency visit | | | | |
| Autumn(‘mehir’) | | .013* | . | .007 |
| Summer (‘bega’) | .856(.223-3.288) | .821 | .481 (.130-1.777) | .273 |
| Winter(‘kiremt’) | .170(.040-.730) | .017 | .108 (.026-.446) | .002 |
| spring (‘tsedey’) | .892(.213-3.731) | .875 | .376 (.095-1.490) | .164 |
| Duration of illness before first visit | | | | |
| <6 month | | .076 | | .039 |
| 6 months -2 years | .298(.105-.851) | .024 | .280 (.105-.747) | .011 |
| >2 years | .736(.222-2.441) | .616 | .655 (.203-2.108) | .478 |
| Admission at first visit | | | | |
| Yes | | | | |
| No | 2.370(.782-7.187) | .127 | 1.409(.467-4.248) | .543 |
| Diagnosis at first visit | | | | |
| non-affective psychotic spectrum disorder | | .173 | | .138 |
| affective disorder | 1.341(.492-3.659) | .566 | 1.389 (.535-3.610) | .500 |
| Other** | .203(.031-1.335) | .097 | .186 (.027-1.272) | .086 |
| substance use | | | | |
| Yes | | | | |
| No | 1.261(.403-3.948) | .691 | 1.958 (582-6.583) | .278 |
| Side effect reported after first visit | | | | |
| No | . | | | |
| Yes | 396(.013-12.069) | .595 | 1.431 (.031-65.697) | .854 |
| Medication given at first visit | | | | |
| Took only po medications | | .601 | | .974 |
| Took only im/iv medications | .547(.070-4.249) | .564 | 1.173 (.153- 8.985) | .878 |
| Took both po medications and injectables- haloperidol or diazepam | 1.348(.548-3.314) | .515 | 1.093 (.459- 2.603) | .841 |
| Psycho education given and documented | | | | |
| Yes | | | | |
| No | 1.943(.262-14.377) | .516 | .424 (.052-3.440) | .422 |
| Clinicians attended at first visit | | | | |
| Psychiatrist or psychiatry residents | | .003 | | .034 |
| Masters or BSC psychiatry prescribers | 6.224(1.126-34.387) | .036 | 4.190(.768-22.843) | .098 |
| Other*** | 52.445(5.357-513.396) | .001 | 13.524(1.789-02.252) | .012 |

Note: *p=<.05 statically significant

** Anxiety disorder, seizure disorder, post partum psychosis

*** Health Officers, General Practitioners, non-psychiatry nurses and BSC or master psychiatry trainees

### 4.3. The reason for disengagement

In this retrospective study we have also accessed the family member of the participants or the participant themselves who were disengaged from care through cell phone. We were able to access 205 participants and among those accessed 167 were participants disengaged from care. We also contacted 38 participants through cell phone to gate information which was not available on the chart even if they were engaged to care.

Regarding the reason for disengagement, most of the participants [51(30%)] said they were disengaged from care because they went to holly water or other spiritual places. the reason either economic problem or far distance was given by thirty eight participants. For an equal number of participants (thirty eight) their family member said they were not able to bring their beloved one because they refused to come to the hospital or to take any medication. In addition to this18 participants said they were disengaged because they have improved. From those who said they were improved 5 individual said they were not ill in the first place and they only came because their family brought them without their will. Apart from this eleven participant said treatment was either ineffective or they developed side effect of the medication and disengaged. Among those accessed only 4 participants said they changed the hospital either to have follow up to their nearby health institutions or they couldn't gate bed for admission during the follow up so they went to private hospital and continued follow up there. For five participants their family said their beloved one disappeared from home and they were not able to know where they are. Sadly two of the study participants passed away according to their family. According to their family, one of the participants passed away secondary to alcohol related liver disease and the other passed away due to medical problem related to RVI.

# Chapter 5

## Discussions

The frequency of disengagement from care, more than four months at any visit, in this retrospective study of pattern of engagement to care after first emergency visit was 80.5%.This result is significantly different from several other studies in which the reported prevalence of disengagement varied from 30 to 50 %( 2, 5, and 19). This variability has been dependent on the criteria used to define disengagement to care. There are no universally accepted definitions for mental health service disengagement and engagement and several studies used varies proxy measures of engagement and disengagement like attendance, treatment drop out, therapeutic alliance or treatment adherence. In this retrospective study we

used treatment drop out as proxy measure for disengagement. Due to lack of clear cut off point to define treatment drop out, we looked disengagement at three different time line. Those includes: not showing up at one month after first visit or discharge from hospital and dropout from care more than four months at any visit; not showing up for more than four months at any visit; not showing up for visit more than six months.

The majority of patients in our study were male 221 (57.4%) and their mean age±SD were 31.2±12.1. Regarding socio-demographic characteristics we found significant association of disengagement with gender. Unlike several other studies the disengagement rate for female in this study was high. Among female participants who visited emergency OPD near to 85% were disengaged from care.

Majority of the patients present to emergency OPD either due to aggressive behaviour or other behavioural disturbances like urge to be on the move, walking naked, restlessness or any other behavioural disturbances. This is consistent with that found in other literatures for emergency presentation. This might explain why most patients who come to emergency OPD were males and those who disengaged were more females because it is less easy to contain females than men. In addition to this majority of the participants were given a diagnosis of non affective psychotic spectrum disorder which is again consistent with other studies (6, 12, and 18). Regarding the diagnosis given at the initial visit majority got diagnosis of no-affective psychosis and near to this they were given a diagnosis of mood disorder either bipolar I d/o or MDD. This finding is again consistent with other literatures (2, 7, and 15).

Participants who visited emergency OPD in the months of winter (‘kiremt’) relatively better engaged to care. Patients with intermediate duration of the illness (6months to two years) had better engagement to care than patients with shorter(less than 6months) or longer (more than two years) duration of the illness.

Amanuel specialized mental hospital is the only largest mental health referral hospital in the country and most patients come to hospital for better care and to be seen by better higher mental health professionals. But contrary to this only 9.9% (38 patients) of the study participants were seen by either psychiatrists or psychiatry residents at initial first visit in emergency OPD. Participants who were seen by Master or BSC psychiatry prescriber’s took the majority but surprisingly patients who were seen by other non-psychiatry professionals including general practitioners, health officers or psychiatry nurse trainees constitute 14.5%(56 patients). The majority of patients (92.9%) who were seen by non-mental health professionals disengaged from care.

5.1. Strength: This is the first comprehensive study on emergency psychiatry patient's engagement in an Ethiopian setting. We were able to access 205(53.2% of study population) patients through a cell phone to know their reason for disengagement although the number was not as we wished to get.

5.2. Limitation: The drawback of the study was that it is a retrospective patient chart report review and there was poor documentation identified which limited as to include important variables like living condition of the patient in to our analysis that might be an important determinants of disengagement.

5.3. Conclusion: - Disengagement from care has deleterious effect on over all prognoses of patients and mental health care system in general. Proper emphasis should be given for psychosocial interventions specially giving due emphasis on psycho-education about illness, lifestyle management, family intervention and support, relapse prevention strategies. The disengagement rate in this retrospective study was extremely high (80.5%) and there was strong association with clinicians attended the patients at initial visit in the emergency OPD. During data collection basic elements of patient assessment were missing and the number of patients who were reported that they were given psycho-education was extremely low [14(3.6%)]. Participants who were assessed and judged to be admitted by health care professionals at first visit [29(7.5% of the total study population) patients] were not able to be admitted. So we need to look in to the reasons for this and other areas that hinder patient engagement and care.

5.4. Recommendation:

- Proper assessment, diagnosis and documentation are an important initial step in patient care and it needs to improve.
- Giving standardized evidence based treatment is essential to improve the care.
- Proper psycho-education should be given and treatment should be patient centered.
- At this higher level of specialized mental hospital patients need to be seen by higher mental health professionals.
- Improving the referral system, working in co-ordination and collaboration with other health institutions might improve disengagement.
- As most patients went to holly water or other spiritual places after disengagement from care, working in collaboration with religious leaders and creating awareness about mental illness is very important.
- Decentralizing the service with the training of mental health professionals might solve some problems associated with the service engagement.

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# Appendix

## Data Extraction Sheet

**Data extraction sheet**

1/what was the season for the first emergency visit

1 AUTOMON' MEHIR' 2 SUMMER' BEGA'

3 WINTER 'KIREMT' 4 SPRING ' TSEDEY'

2 /age of the participants

1 < 20 2 20-29
3 30-39 4 40-59
5 60 AND ABOVE

3 /gender of the participants

1 male 2 female

4 /what is the address of the participant in region

1 Addis Ababa 2 Oromia
3 Debub 4 Amhara
5 Others

5/what is the religion of the participant

1 Christian 2 Muslim

6 /What is the marital status of the participants

1 MARIED 2 SINGLE
3 DIVORCED 4 WIDOWED
5 NO INFORMATION

7 /what is the maximum educational level achieved by the participants

1 NO FORMAL EDUCATION 2 ELEMANTARY SCHOOL
3 HIGH SCHOOL 4 COLLEGE AND ABOVE
5 NO INFORMATION

8/ what was the employment status before the illness

1 UNEMPLOYED 2 EMPLOYED
2 NO INFORMATION
1 /what is the current employment status of the participants
1 UNEMPLOYED 2 EMPLOYED 3 NO INFORMATION

10 /what is the living condition of the participants

1 HOMELESS 2 LIVES WITH THE FAMILY
2 LIVES IN THE RENTAL HOUSE 4 LIVES IN THEIR OWN HOUSE
3 NO INFORMATION

11/what was the main reason for emergency visit

1 suicidal ideation, attempt, self harm or homicidal behavior 3 refusals to eat or drink
2 aggressions: verbal or physical 4 other disturbances
3 seizures

11 /what was the duration of the illness before first emergency visit

3 < 6 MONTHS 2 6 MONTHS -2 YEARS
3 > 2 YEARS 4 NO INFORMATION

12 /what was the first clinical diagnosis given for the participants at first presentation

1 BRIEF PSYCHOTIC DISORDER 2 SCHIZOPHRINIFORM DISORDER
3 SCHIZOPHRENIA 4 BIPOLAR DISORDER
5 DEPRESSION 6 PSYCHOSIS SECONDERY TO SUBSTANCE OR GMC
7 OTHERS

13 /if a participant was given a diagnosis of psychotic spectrum disorder what was the specific diagnosis

1 BRIEF PSYCHOTIC DISORDER 2 SCHIZOPHRINIFORM DISORDER
3 SCHIZOPHRENIA 4 POST PARTUME PSYCHOSIS
5 SUBSTANCE INDUCED PSYCHOSIS 6 PSYCHOSIS SECONDARY TO GMC
6 OTHER PSYCHOTIC SPECTRUM DIS ORDER

14 /was there any substance use history reported at first visit

1 yes 2 no

15 /if yes what was the specific substance used

16 /any laboratory investigation done at first visit for the participants
1 Yes 2 no

17/ If yes what was the specific lab investigation

18 / what was the medication given at emergency at initial visit

19 / antidepressant given on first psychiatry emergency visit

1 yes 2 no

20 /mood stabilizer or antiepileptic given on first psychiatry emergency visit

1 yes 2 no

21 /diazepam injection given for the participants on first psychiatry emergency visit

1 yes 2 no

22 /po benzodiazepine given on first psychiatry emergency visit

1 yes 2 no

23/ po anti psychotic given on first psychiatry emergency visit

1 yes 2 no

24 haloperidol injection given for the participants at first visit on first psychiatry emergency visit

1 yes 2 no

25 /what was the route of drug administration at first visit on first psychiatry emergency visit

1 PO 2 IM/IV
3 BOTH PO AND IM/IV

26 /long acting anti psychotic injection given for the participant on first psychiatry emergency visit

1 yes 2 no

27 /Artane given for participant on first psychiatry emergency visit

1 yes 2 no

28 /was the participant given psycho education which was documented

1 yes 2 no

29 /was the participant given psychotherapy which was documented

1 yes 2 no

30 /any side effect after first medication administration for the participants

1 yes
2 no

31 /what was the clinical response of the participants after treatment

1 WORSE 2 NO CHANGE
3 IMPROVED 4 NO INFORMATION

32 /was the participants admitted at first visit

1 yes 2 no

33/ admission was requested for the participant but not admitted

1 yes 2 no

34 what was the duration of hospital stay after admission

1 < 1MONTHH 2 1-2 MONTHS
3 >2 MONTHS

35 /what was the duration of the first hospital revisit

0 NO RE-VISIT 1 < 2 WEEKS
2 2-4 WEEKS 3 > 1MONTH

36 /did the participants disengage from care with operational definition for disengagement

1 yes2 no

37 /did the participants disengage from care more than four months

1 yes 2 no

38 /what was the reason for disengagement

1 REFUSAL TO COME 2 CHANGED HOSPITAL
2 WENT TO HOLLY WATER OR OTHER SPIRTUAL PLACE 4 TREATEMENT INEFFECTIVE
3 ECONOMICAL REASONS OR DISTANCE 5 IMPROVED
4 OTHER REASON 8 NO INFORMATION

39 /was the participant referred to other hospital after emergency visit

1 yes 2 no

40 /what was the pattern of engagement to care

1 DISENGAGED AFTER FIRST VISIT 2 DISENGEGED AFTER SECOND VISIT
3 DISENGAGED AFTER THIRD OR MORE VISIT 4 DISENGAGED INITIALLY AND RE-ENGAGED
5 ENGAGED TO CARE

41 /who saw the participants at first emergency visit1 psychiatrist

1 psychiatrist 2 masters prescriber
3 BSC prescriber 4 others ( includes:-GP, HO, BSC or master students ,non psychiatry nurse)

42 /who saw the participants at second emergency visit

1 psychiatrist 2 masters prescriber
3 BSC prescriber 4 others ( includes:-GP, HO, BSC or master students ,non psychiatry nurse)

43 /who saw the participants at third emergency visit

1 psychiatrist 2 masters prescriber

3 BSC prescriber 4 others ( includes:-GP, HO, BSC or master students ,non psychiatry nurse)

44 /who saw the participants at fourth emergency visit

1 psychiatrist 2 masters prescriber
3 BSC prescriber 4 others ( includes:-GP, HO, BSC or master students ,non psychiatry nurse)