



**Effect of early intervention service in Hong Kong  
on suicide rate of patients with psychosis –**  
*A 10-year outcome study of Early Intervention (EI) programme for psychosis in  
Hong Kong compared with Standard Care (SC) service*

**Press Conference**

**10 June 2013**



# Background on Psychosis

- Psychosis refers to a set of symptoms that include hallucinations, delusions and disorganized thoughts and speech
- A psychological and physiological condition related to an imbalance in certain chemicals in the brain called “neurotransmitters”
- Psychosis patient’s subjective experience, well-being, motivation, and functioning could be affected, patients will also getting out of touch with reality



# Background on Psychosis

- Psychosis has a prevalence of 3% worldwide
- It is the third highest on the global burden of mental, neurological and substance use disorders
- All of can be affected



# Psychosis and Suicide Rate

- Lifetime risk of suicide of patients with psychosis:  
5-10 per 100 people
- Suicide rate of patients exceeds general population by  
8 times
- A recent UK cohort study on mortality of first contact  
psychosis patients found that after a mean of 11.5  
years the patients' suicide rate is 1.9%, which is about  
12 times of general population

Sources for the above three figures respectively:

Palmer et al., The lifetime risk of suicide in schizophrenia. *Archive General Psychiatry*. 2005;65:247-253

Harris EC & Barraclough B, Suicide as an outcome for mental disorders. A meta-analysis. *British Journal of Psychiatry*. 1997;170:205-228

Dutta et al., Mortality in first-contact psychosis patients in the UK: a cohort study. *Psychological Medicine*. 2012, 42:1649-1661



# Hong Kong Early Intervention Service

- Early intervention service has been developed worldwide to provide intensive care to patients with first-episode psychosis
- Aim to improve long term outcomes, one of which is suicide rate and suicidal attempts
- In Hong Kong, Early Assessment Service for Young people with Psychosis (**EASY**) was launched in 2001, to provide early intervention service



Official website of EASY:

<http://www3.ha.org.hk/easy/eng/service.html>



# HK Early Intervention Service: EASY

- EASY is a territory wide service early intervention service operated by the Hospital Authority.
- Targets on patients from age 15 to 25 with first-episode psychosis
- Each patient will receive 2-year case management service
- The case manager can provide phase specific intervention for patients with first-episode psychosis
- After 2 years, patients will gradually transit to the standard mental health service



# HK Early Intervention Service: EASY

- In 2011, early intervention service (EASY) has been extended to patients age 15-65.
- Service duration has also been extended from 2 years to 3 years.
- Case load of case managers has been set as 1:50 (in 2001, case load was 1:70-100)



# HKU Study

- **Aim of the study:**
- By comparing the long term suicidal rate of patients with first-episode psychosis receiving early intervention service and those receiving standard care, to evaluate the effect of early intervention service





# HKU Study

- Patient sample selection:
- Patients who received Early Intervention (EI, i.e. EASY) service and Standard Care (SC, general adult mental health service) are selected for the study based on the diagnosis of schizophrenia-spectrum disorders

•Early Intervention (EI):  
(July 1, 2001 to June 30, 2002)

Total 289 patients first presented to  
the EI service in whole HK region  
(7 clusters)

•Standard Care(SC):  
(July 1, 2000 to June 30, 2001)

Total 160 patients first presented to  
the SC service in whole HK region  
(7 clusters)



# HKU Study

**Early Intervention  
(EI)  
(289 Patients)**

**Standard Care  
(SC)  
(160 Patients)**



**1 to 1 Matching Criteria**  
1. Diagnosis (schizophrenia-spectrum disorder)  
2. Gender  
3. Age



**145 Matched Pairs**



# HKU Study

- **Study period:** Conducted in 2010-2012
- **Study method:** Longitudinal diagnosis was ascertained based on the clinical information of medical records and face-to-face interview

## Face-to-face interview

### Information collected :

- Symptoms
- Functioning
- Side effects of medication

## Review 10-year medical records

### Information collected :

- hospitalization
- suicidal attempts
- employment status
- medications
- relapse
- other service utilization
- cause of death



# HKU Study

- **Study method: statistical analyses**

Kaplan-Meier survival analysis to compare the survival time between SC and EI groups



# HKU Study - Result

## Baseline demographics and diagnosis

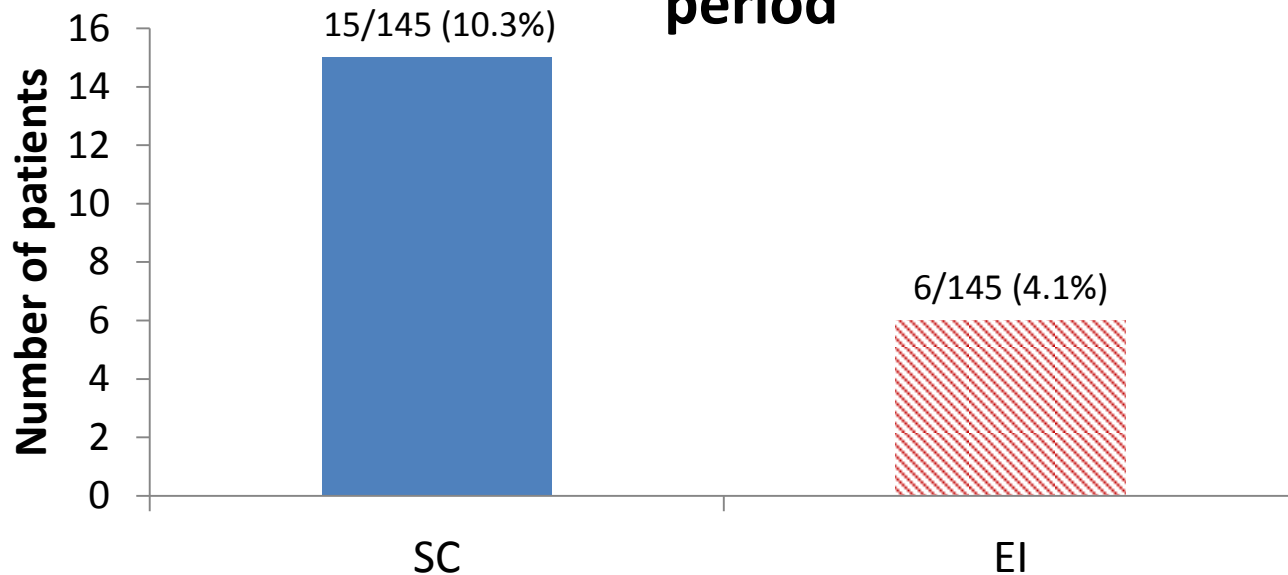
Characteristics	SC sample (n = 145)	EI sample (n = 145)
Age at 1st presentation, years, mean (SD)	21.90 (3.1)	21.69 (3.1)
Gender, male, n (%)	73 (50.3)	74 (51.0)
Education attained at 1st presentation, years, mean (SD)	10.84 (2.6)	10.84 (2.3)
Diagnosis, n (%)		
• Schizophrenia	100 (69.0)	112 (77.2)
• Others (Schizoaffective disorder, ATPD or Psychosis NOS)	45 (31.0)	33 (22.8)

- Both groups are compatible with age, gender, years of education and diagnosis



# HKU Study - Result

## Suicide rate of psychosis patients over 10 years study period



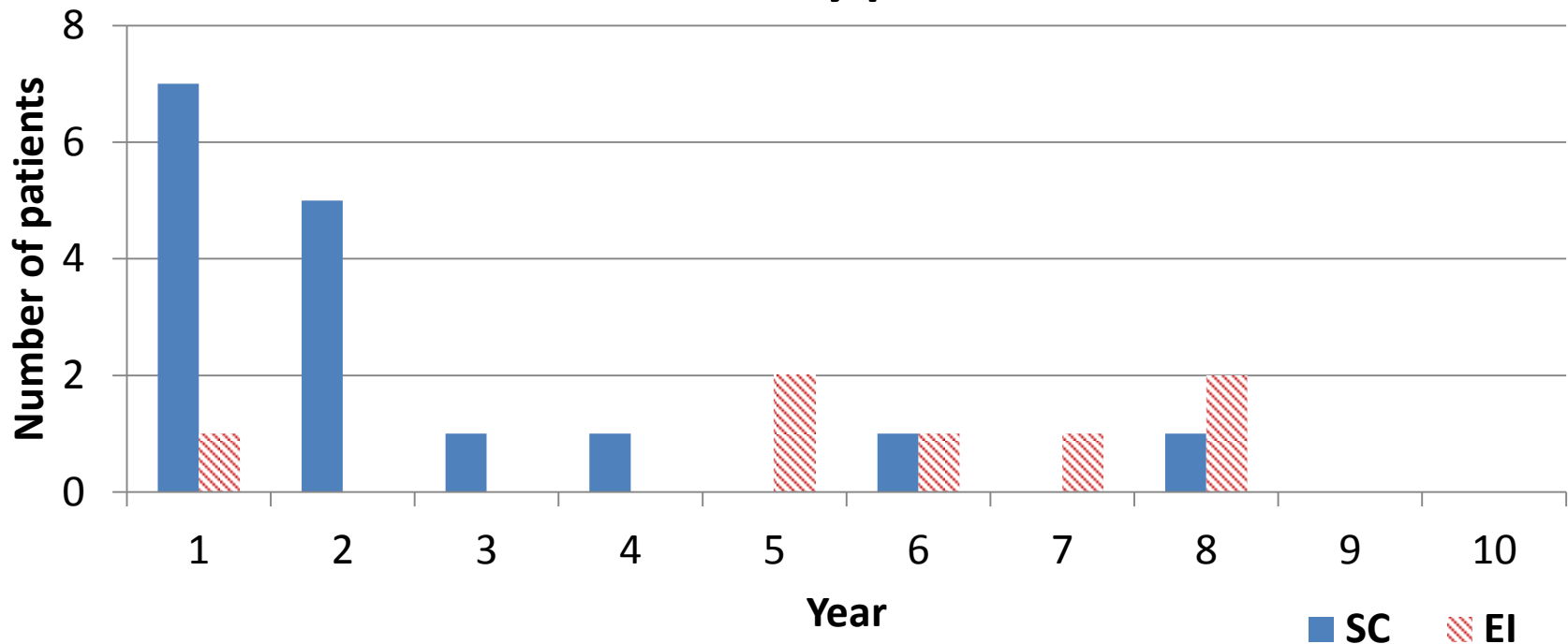
Characteristics	SC (n = 15/145, 10.3%)	EASY (n = 6/145, 4.1%)
Gender , male, n (%)	10 (66.7)	5 (83.3)
Age , mean (SD)	21.31 (2.4)	23.83 (3.3)

- Patients under the case of EI service has 60% less suicide rate than the patients under SC service



# HKU Study - Result

Number of deaths psychosis patients over 10 years study period

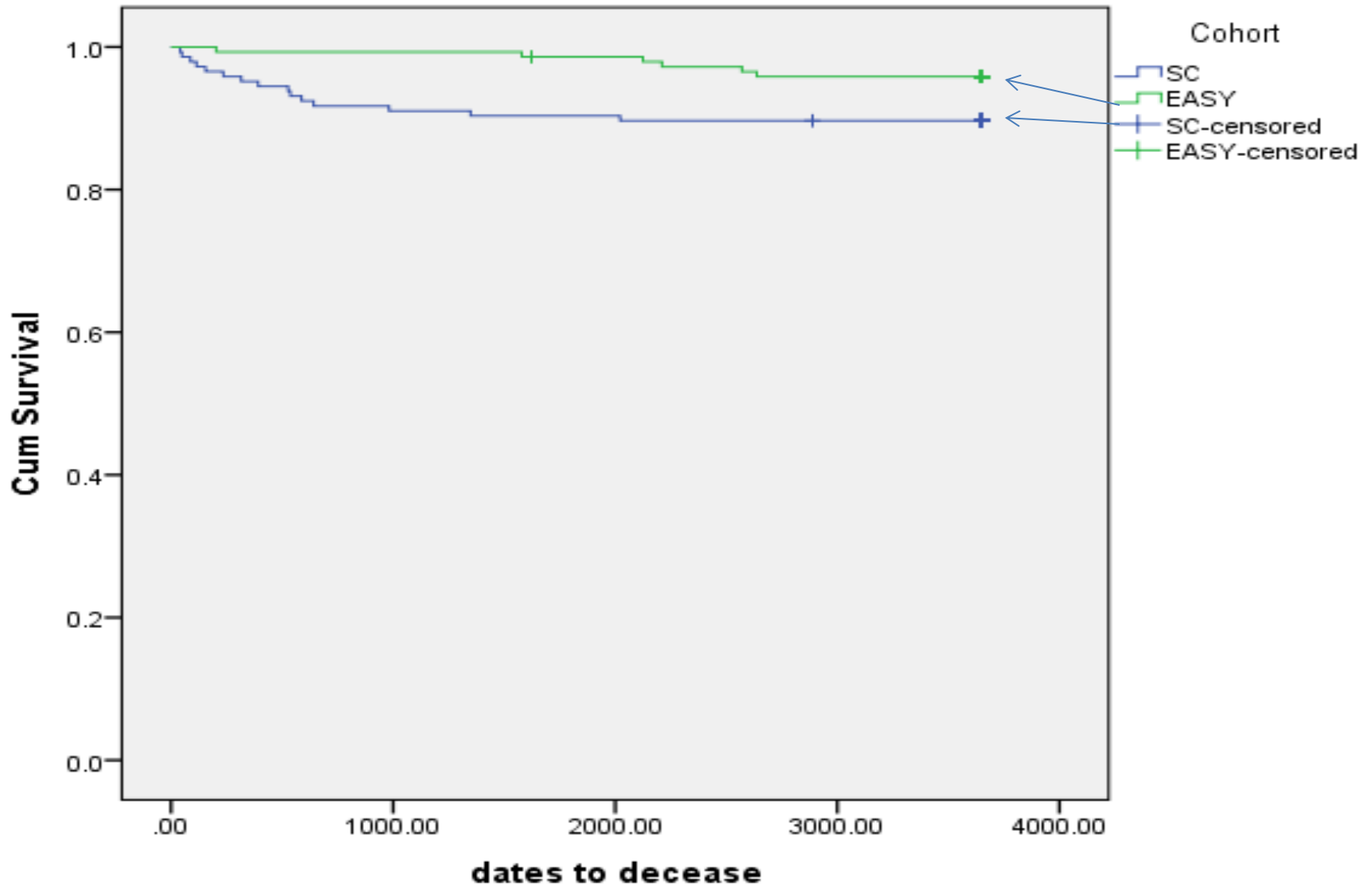


- EI service can significantly reduce the number of deaths by suicide among psychosis patients at early stage.



# HKU Study - Result

Survival Functions

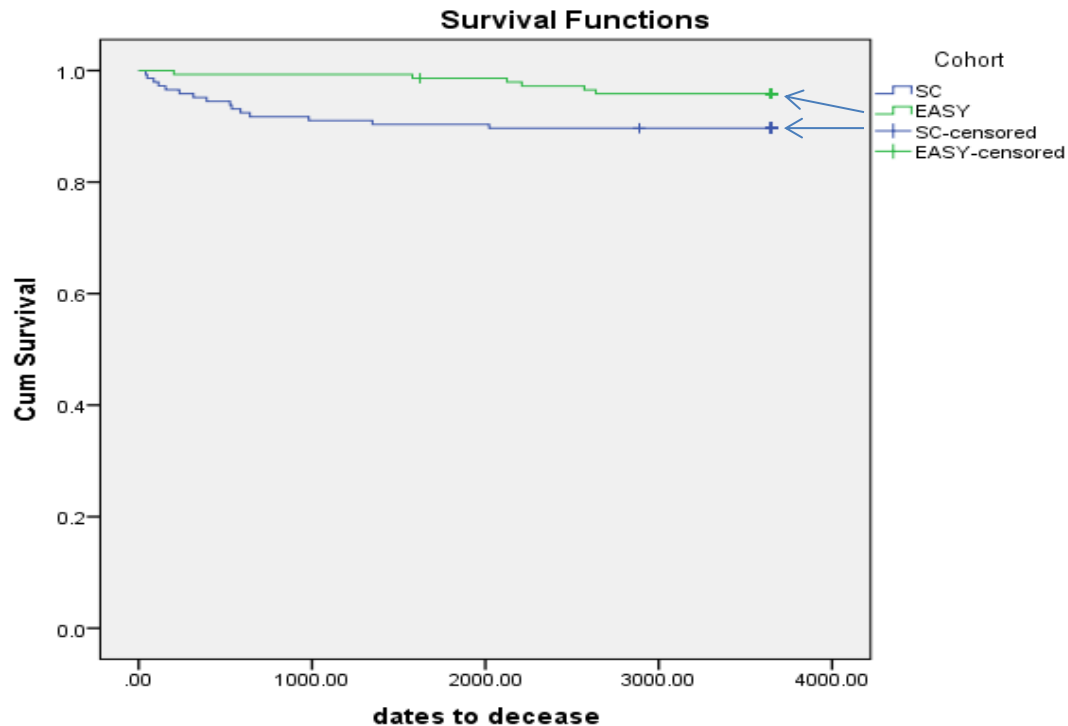






# HKU Study - Result

## Kaplan-Meier survival analysis



Log Rank test:  $X^2(1)=4.35$ ,  $p=.037$

*EI patients has longer survival than the SC patients over 10 years*

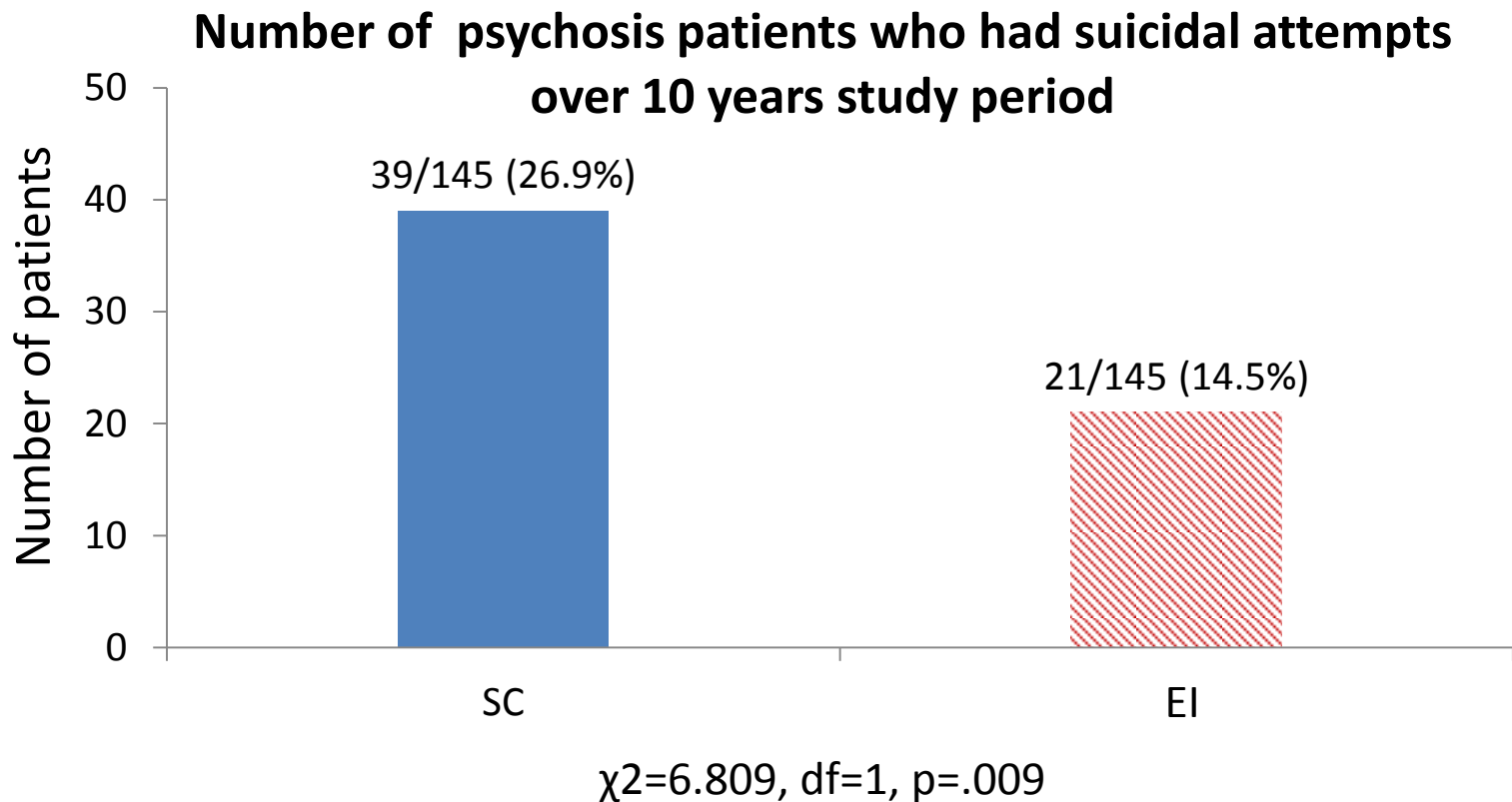
Cox regression analysis to control effects of gender:

hazard ratio of EI = 0.374 (95% CI= 0.145 to 0.642,  $p=.042$ )

*EI service had about 62% reduction of suicide risk*



# HKU Study - Result



- The number of patients under EI service had suicidal attempts over 10 years is significantly less than SC service by 46%
- Mean number of attempts of SC group is 2.59, EI group is 1.62



# Summary

- Over 10 years period, early intervention service for patients with first-episode psychosis can effectively reduce the suicide rate by about 62%.
- The reduction is particularly obvious during the early stage of the illness
- The number of patients who had suicidal attempts is 46% less in EI group compared with SC group
- 10-year suicide rate of EI patient is 4.1%. (A recent cohort study of UK first-contact psychosis patient found suicide rate is 1.9% over a similar period of time.)

Source:

Dutta et al., Mortality in first-contact psychosis patients in the UK: a cohort study. *Psychological Medicine*. 2012, 42:1649-1661



# Sharing from Case Manager



# Role of Case Manager

- Ensure active treatment of patients
- Crisis intervention
- Provide social and psychological support
- Help client identify their strengths
- Identify specific action plan to follow in case of intense negative emotion arisen



# Case Sharing 1

- Age: 35
- Gender: Female
- Background: housewife, living with daughter and husband, poor relationship with family members
- Diagnosis: depression with psychotic symptoms
- Medical record: poor drug compliance, no history of substance abuse, has past history of deliberate self harm, stressor is conflict with family



# Case Sharing 2

- Age: 40
- Gender: F
- Background: single, lives alone, unemployed, fair relationship with family members
- Diagnosis: delusional disorder
- Medical record: poor drug compliance, no history of substance abuse, has past history of suicidal attempt, her stressor the recent death of her mother



# Suggestions

- Early intervention is effective, so the expansion of service is recommended.
- It should focus not only on those who have been diagnosed with psychosis, but also those who are at the prodromal stage.
- Further funding is required to reduce the case load of case manager to be close to an international level.
- Provision of professional specialized training to the case managers is needed.





# Acknowledgement

**Funding:** The study is funded by Food and Health Bureau,  
Health and Health Services Research Fund Commissioned

**Collaborating institute:** Hospital Authority