EARLY DETECTION AND INTERVENTION OF PSYCHOSIS IN HONG KONG: EXPERIENCE OF A POPULATION-BASED INTERVENTION PROGRAMME

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Abstract

In 2001, an initiative was taken in Hong Kong to reduce delay in presentation and improve intervention for early psychosis. This has resulted in the launch of the Early Assessment Service for Young people with psychosis (EASY) programme. This article outlines the main issues in developing and implementing the programme, describes its characteristics, and presents early data on the service outcome. Patients managed by the programme appear to have improved occupational functioning, reducing hospitalization, and suicide rate, without increasing medical costs. In the Hong Kong context, key factors in service success include public education, destigmatization by renaming 'psychosis', increased service accessibility, hotline screening assessment, and protocol-based phase-specific case management.

Key Words: Psychosis – Mental Health Services – Early Detection – Early Intervention – Programme Development

Declaration of Interest: None

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Background Setting in Hong Kong

Hong Kong has a population of over 7 million. About 95% of the population is Han Chinese, and Cantonese is the primary language. The population density is high. Compared with locations such as the US, relatively few Hong Kong people live alone (25.7% vs 16.5%) (Population By-census Office 2006, Russell 2000).

Local psychiatric services are provided by government-subsidized public healthcare system as well as private services. To access public psychiatric outpatient service, the patient will first have to obtain a referral from a primary care practitioner. Waiting time for first psychiatric consultation was long, ranging from several weeks to several months. Patients with psychotic disorders often made their first contact to service in crisis situations, involving risks of self-harm or violence, often resulting in Accident and Emergency Department (AED) visits and hospitalizations. Stabilized patients were then managed in crowded general psychiatric outpatient clinics, where high service volume, brief consultation time (mean, 5 to 6 minutes), and relatively infrequent follow-ups constrained more thorough assessment and intervention (Hui et al. 2008). Supportive interventions such as counselling were limited.

The duration of untreated psychosis (DUP) was very long, averaged 546 days (Chen et al. 2005). Marked stigma and lack of public awareness in Hong Kong were two factors contributing to the long DUP. Stigmatization associated with mental illness is related to concealment of the condition by patients and their family (Chung and Wong 2004). A local survey revealed that the level of awareness of psychotic symptoms was low in the population: when presented with case vignettes with multiple first-rank symptoms, most respondents believed that rest and relaxation rather than professional help is needed (Lam et al. 1996). The fact that patients from families with previous experience in psychotic illnesses had significantly shorter DUP (mean, 225 days) also suggested that awareness is an important factor affecting DUP (Chen et al. 2005).

Submitted July 2008, Accepted September 2008

Under this context, the Early Assessment Service for Young people with psychosis (EASY) programme was conceived and implemented in 2001 within the public healthcare system, with an aim to reduce DUP and improve outcome by raising public awareness and reducing stigma, altering the pathway to care, and optimizing treatment in the first 2 years after the first-episode of psychosis.

The EASY Programme

Three main components of the programme are (1) raising public awareness; (2) creating an easily accessible channel for service; and (3) providing phase-specific intervention. The EASY programme is led by a steering committee. Working groups were formed during programme development on specific issues such as media events.

The service is territory-wide; 5 catchment areas were identified, each covered by an intervention team, who collaborate closely with local community networks, clinics and non-governmental organizations (NGOs). Each intervention team consists of 2 psychiatrists, 3 keyworkers (psychiatric nurses and social workers) and 0.25 clinical psychologist, serving a population of around 1.5 million.

Eligibility is defined by a set of intake criteria (**Table 1**), which serves to prioritize limited resources according to needs. In general, younger persons are more adversely affected by psychosis because of its disruption on developmental tasks, and they tend to have poorer outcomes (Jarbin et al. 2003, Werry 1992). A target age range of 15 to 25 years was therefore set based on incidence estimation.

Table 1. *Intake and exclusion criteria for EASY service**

Intake criteria:
• Presence of psychotic symptoms
• Age between 15 and 25 years
Exclusion criteria:
• Already receiving treatment for psychosis
• Significant medical illnesses affecting the central nervous system (e.g., epilepsy, serious head injury with loss of consciousness)
• Moderate to severe intelligence deficiency
• Psychotic episode is substance-induced

* Excluded clients are directed to other services where appropriate (e.g., substance abuse clinic). Subjects with at-risk mental state are monitored regularly.

Raising Public Awareness

A working group was set up for organizing public education programmes. The group consisted of media experts as well as key clinicians. The core message ultimately reaching the public was carefully considered and packaged, in order to be accurate, effective and balanced. At the launch of programme, intensive media exposure and educational campaign was coordinated to inform the public about psychotic symptoms. Channels included TV, advertisements, radio interviews, press releases, website, exhibitions, public talks, school visits, road shows, posters and leaflets.

Linked with the campaign was a movement to ameliorate stigma by renaming (Levin 2006). It was realized that there was no proper Chinese translation corresponding to the term 'psychosis', which was inappropriately rendered as 'serious mental illness' in its previous translation. A working group was thus formed to conceive a new Chinese term for 'psychosis'. The term eventually adopted, si-jue shi-diao (思覺失調), literally means dysregulation (失調 shi-diao) in thinking (思 si)and perception (覺 jue). The new term has an annotation of reversibility. While the term was not used as a replacement of diagnostic categories such as schizophrenia, it has been valuable in increasing public acceptance of the condition. It was emphasized that si-jue shi-diao refers to a symptom cluster or syndrome involved in an early abnormal mental state, and not a diagnosis.

Easily Accessible Channel

To encourage early help-seeking, an easily accessible channel for service contact was designed. The new system removes barriers such as having to be referred from primary care and the long waiting list for assessment. To achieve this without overstretching consultation time with excessive screening, a two-stage assessment system was used.

Stage 1 is a telephone-based initial screening assessment, carried out by keyworkers (usually a psychiatric nurse) equipped with trainings on screening strategies and skills. The goal is to determine if the individual is a potential client for the service according to intake criteria. Information is obtained directly from the client and/or from informants over the telephone. Where appropriate, cases not eligible for the programme (eg, those suffering from medical illnesses affecting central nervous system) are diverted to relevant agents. For the remaining potential clients, a diagnostic assessment by an early psychosis clinician (stage 2) is arranged within 1 week. In needed cases, flexible arrangement is made to expedite engagement and assessment. A non-stigmatizing setting in the community (such as in a general hospital or NGO) is used to encourage help-seeking. High-risk prodromal cases are monitored, and converted cases will proceed to receive phase-specific intervention services.

A broad range of referral mechanisms is accepted. These include referrals from the community through hotline, e-mail, walk-ins, NGOs and school social workers, and within the healthcare system through triage from outpatient departments, non-EASY psychiatrists, consultation liaison teams, inpatient departments, and AEDs.

Phase-specific Intervention

Assertive, phase-specific outpatient management is provided for confirmed cases of ICD-10 diagnosable psychotic disorders. Emphasis of management was not only on symptom remission, but also on functional

recovery and psychological adaptation. Each patient in the programme is assigned a case manager (a keyworker). The case management approach has the advantage of rapport building and service tailoring. Case managers provide in-depth engagement from the initial assessment, and keep regular contact with the patient, their family and relevant personnel. This allows thorough understanding of the patient's condition and progress, as well as their distinctive backgrounds, individualized needs, and readiness to receive various forms of interventions. Case managers also collaborate with carers, many of whom live with the patient and are well motivated to help at this stage of the disorders.

Keyworkers provide phase-specific psychosocial care according to individual patients' needs. A management protocol, the Psychological Intervention Programmes in Early Psychosis (PIPE) (Wong and Chong 2002), was specifically developed for EASY, with reference to the International Clinical Practice Guidelines for Early Psychosis (2005). It addresses particular psychological issues in different stages of illness to enhance psychosocial functioning. The PIPE has three main modules: (i) enhancing psychological adjustment to early psychosis; (ii) intervention for secondary morbidity; and (iii) cognitive behavioural therapy (CBT) for drug-resistant psychotic symptoms. Approaches to management include protocol-based individual psychological support, family intervention, and psychoeducation groups for patients and families.

According to the PIPE protocol, initial management of first-episode psychosis typically consists of eight to 10 sessions with keyworkers (30 minutes each). Core elements include (i) engagement; (ii) correction of myths about mental illness; (iii) psychoeducational information concerning the illness and treatment; (iv) treatment compliance; (v) appraisal of remaining strength, assets and controls; (vi) coping and stress management; and (vii) relapse prevention. For patients presenting with secondary morbidity or drug-resistant psychotic symptoms, management plans are individually designed by a clinical psychologist. Common interventions include CBT for mood and anxiety symptoms (Beck 1976, Salkovskis 1996), and CBT for residual psychotic symptoms and functional impairment (Bach and Hayes 2002, Kingdon and Turkington 1991, Tarrier 2002). The actual intervention content is tailored according to the individual's stage of illness (e.g., first recovery, relapsed) and specific needs (e.g., secondary depression, comorbid social anxiety).

Apart from interventions provided by keyworkers, specific programmes offered by collaborating NGOs and vocational training centres are also utilized to facilitate psychosocial rehabilitation. Multidisciplinary case reviews are held and needs are reassessed after an initial period of intervention. Phase-specific intervention is offered during the first 2 years within the programme; patients will go into a transitional step-down clinic in year 3, after which they will be followed up by the general psychiatric service.

Staff Development

All keyworkers are trained to carry out interventions in alignment with the PIPE protocol. In-service skills development includes monthly centralized training sessions, and an annual retreat involving all early intervention team members. Local and overseas trainings are arranged from time to time for skills update.

Programme Evaluation

Since launching in 2001, over 5000 cases have been assessed, monitored and managed by the programme. Based on an internal review in 2005 (personal communication, Lam 2008), during the period of July 2001 to June 2005, there were a total of 5069 referrals, of whom 4102 (80.9%) received psychiatric assessment. Among these 4102 subjects, 2450 (59.7%) had diagnosable psychotic disorders at presentation. Of the remaining 1652 assessed to be non-psychotic at presentation, 890 (53.9%) were high-risk cases who received regular monitoring. Median response time for the diagnostic assessment is around 5 days from the time of referral. Although changes in public perception towards psychosis are yet to be investigated, the new Chinese term for psychosis appears to have been positively received by the local population. It has since become part of daily vocabularies people inoffensively use and even find applications in popular song lyrics. Feedback from keyworkers suggests the term has successfully associated itself with hope and prospect of recovery.

Extensive outcome evaluation has been carried out. This includes a 1-year follow-up study (Chow et al. 2005), and a larger-scale 3-year case-control study (Chen et al. 2007). The first study is an initial evaluation involving 94 patients within the programme. It was found that even within the first year of treatment, highly significant improvements in negative symptoms and functional outcomes can already be observed (Chow et al. 2005). Mean DUP in this sample was 240 days, compared with the 546 days reported before the launch of this programme.

The second study compared 700 cases in the programme with 700 historical controls who received standard care. Historical controls were used as the territory-wide nature of the programme precluded control groups. Subjects were individually matched for age, sex and diagnoses, and had similar level of positive and negative symptoms at presentation. Outcomes over the 3 years were measured. The results are being analyzed and will be reported separately.

Preliminary comparison between EASY service and conventional care on direct medical costs (staff, medication, and hospitalization) suggests the programme to be cost-neutral. Extra staff input and medication costs (more atypical antipsychotics used) are offset by the reduction in hospitalization and relapse rate. In addition, improved clinical, psychosocial and functional outcomes are attained.

Summary

More than 6 years into the programme, early detection and intervention of psychosis in Hong Kong appear to be effective in improving patient outcome. The Hong Kong experience shows that important components for successful

early psychosis programmes include public education and destimatization, service accessibility, specialized team with a case management approach, and phase-specific individualized care. Cost-effectiveness can be achieved by shifting the pattern of care from crisis-oriented inpatient care to community-based outpatient service.

It remains to be determined the optimal duration of critical period intervention, against a background of limited resources allocated to mental health care. Future studies with randomized design are needed to provide a definitive answer.

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