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District-based Personalized Care Program for Patients with Severe Mental Illnesses - a Pilot Case Management Service Model in Hong Kong

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Abstract

Overseas literature showed that district-based community mental health teams and case management models have achieved positive outcome in healthcare service utilization, clinical, psychosocial and quality of life domains. The 2009-10 Policy Address of Hong Kong stated the pilot implementation of district-based Personalized Care Program (PCP) for patients with severe mental illnesses (SMI) in 3 districts, one of which being Kwai-Tsing (KT) district. KT District-based PCP was implemented at Kwai Chung Hospital in April 2010. There were 2 functional components in this program: personalized case management model and community partnership. The program objectives were: person-centered care, needs and risk management, active user and carer participation, gate-keeping to prevent avoidable hospitalization, better treatment adherence and reduction of disabilities, enhancement of strengths, recovery and social inclusion of patients with SMI, cultivation of mental health professional workforce, construction of district-based community partnership. In this paper, we described the program details and its outcome evaluation.

Keywords: District-based Personalized Care Program, case management, severe mental illnesses

Service need

About 22% of the global burden of disability-adjusted life years (DALYs) has been attributed to mental disorders, mostly due to the chronically disabling nature of depression, schizophrenia and bipolar disorders and other mental disorders (Prince et al, 2007). The World Health Report 2001 on Mental Health "New Understanding, New Hope" has recommended that community care has a better effect than institutional treatment on the outcome and quality of life of individuals with chronic mental diseases (The World Health Report on Mental Health, 2001). Shifting patients from mental hospitals to care in the community is also cost effective and respects human rights. Mental health services should therefore be provided in the community. Furthermore, discharged patients from the Team for the Assessment of Psychiatric Services (TAPS) project in London reportedly enjoyed more freedom, and the majority of the patients preferred to stay in the community (Lamb et al, 2005).

However, there was also concern that

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under-funding in the deinstitutionalization process without safe quality community care support had produced an influx of the homeless, unemployed, offenders with increased risk of violence to themselves and public, and suicide particularly in people suffering from severe mental illnesses (SMI) or co-morbidity (Knapp et al, 1990). There were also reports of increases in medical non-adherence and hospital readmission (Montgomery & Kirkpatrick, 2002). As a reaction to some of these less desirable ramifications of deinstitutionalization, various models of community care were developed.

SMI has different definitions in different contexts. It may include schizophrenia-spectrum disorders, affective disorders or other relevant category. All patients with SMI may produce sudden crises and risks to the public and catch us unattended. Services similar to that of overseas community mental health teams (CMHT) should be established in all districts of the community to look after low, medium and high risk patients with SMI through facilitation of crisis intervention and case management service model by case managers (CM) to meet their personal complex needs. Continuous structured, extensive links with various community partners and resources should be coordinated and delivered by these district-based teams to fill the unmet service needs.

International evidence

Well integrated district-based CMHT that jointly managed and co-located key elements of local acute mental health services, achieved the most positive outcomes for patients in terms of preventing avoidable admissions, fewer delayed discharges and shorter duration of stay, improved understanding and flexibility of staff skills, better informed and coordinated care planning and risk management and improved cost-effectiveness (Department of Health Estates and Facilities Division, 2008). It addressed district population-specific service needs, allowed greater capability to respond to sudden and irregular crises and provided deeper coverage of services for community patients with SMI by CM possessing generic core competencies and discipline-specific expertise. It improved efficiency and cost-effectiveness of service delivery.

Overseas systematic reviews and meta-analyses showed that case management models reduced number of hospital days, cost of hospital care and hospital admission, especially among patients who are high service users; improved clinical symptoms, quality of life, housing stability, independent living, social functioning, employment, engagement and compliance with services, family and patient satisfaction; reduced family burden (Mueser et al, 1998; Ziguras & Stuart, 2000; Marshall & Lockwood, 1998; Smith & Newton, 2007; Marshall et al., 2000).

Kwai-Tsing District-based Personalized Care Program

It was stated in the 2009-10 Policy Address of Hong Kong that there was pilot implementation of district-based Personalized Care Program (PCP) for patients with SMI in 3 districts, namely, Yuen Long, Kwun Tong and Kwai-Tsing (KT) districts. The program services of these 3 districts were provided by the mental health service (MHS) teams of 3 corresponding clusters of HA. Altogether, there were about 100 CM to look after about 5000 patients with SMI in 3 districts.

KT District-based PCP was manned by Kwai Chung Hospital (KCH), with a team of 33 CM comprising of psychiatric nurses, social workers, occupational therapists, to care for 1515 patients aged 15 to 64 with SMI, residing at KT district. It was implemented in April 2010. Essentially there were 2 functional components in this program: personalized case management model and community partnership. The program objectives were: person-centered care, needs

and risk management, active user and carer participation, gate-keeping to prevent avoidable hospitalization, better treatment adherence and reduction of disabilities, enhancement of strengths, recovery and social inclusion of patients with SMI, cultivation of mental health professional workforce, construction of district-based community partnership.

Risk stratification of patients with SMI was done and selected patients were assigned CM. The patient selection was based on professional judgment of patients by respective case medical officers (CMO) of patients with regard to the following risk factors: Priority Follow-Up (PFU), Conditional Discharge (CD), risk of violence, risk of suicide, lives alone or with poor social support, having young and dependent child (ren) or vulnerable family member(s) under care, poor medication compliance and poor SOPC follow up compliance. Holistic risks and needs assessments were performed by CM with validated instruments and they adopted care program approach to provide timely, proactive, multi-disciplinary comprehensive, continuous, coordinated, accessible, accountable, and individualized care plans to patients with SMI to reduce disabilities, risks and unmet needs, and increase their strengths with Hybrid Model of Clinical Case Management Model (Kanter, 1989) and Strengths Model (Rapp, 1993).

They involved internal and community partners for collaborated services at regular clinical meetings and service co-location in the district platform to strengthen pre-discharge risks-needs assessment and post-discharge community support to enhance recovery and social inclusion of patients in the community. CM followed up patients for at least 1 year to deliver phase-specific interventions through

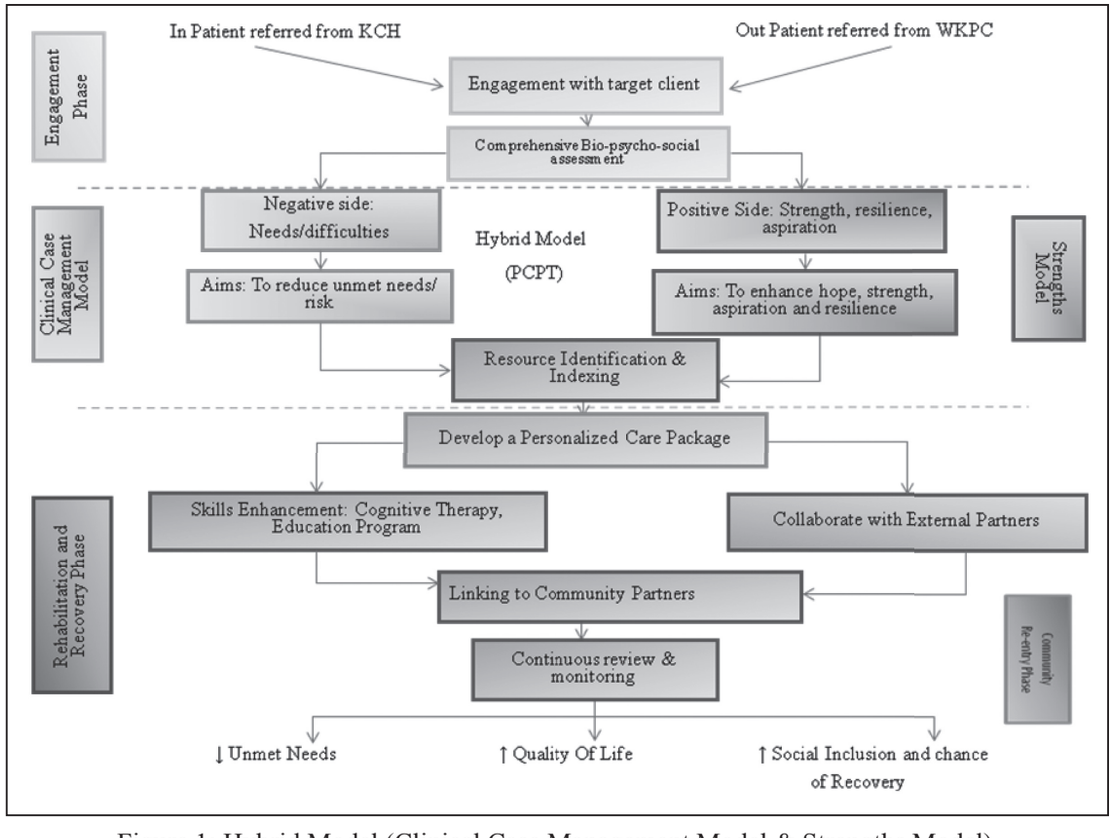

Figure 1: Hybrid Model (Clinical Case Management Model & Strengths Model)

Level of risk	Clinical Considerations	Level of Care
Low risk ▪ Few risk factors and significant protective factors ▪ Supportive family ▪ Stable mental state ▪ Engaged and cooperative ▪ Little significant history of violent/ suicide/neglect	▪ Increase protective factors ▪ Ongoing support and monitoring ▪ Implement recovery-focus intervention ▪ Involves family and significant others	Standard ▪ Monthly contact for risk and needs ax
Medium risk ▪ Some risk factors and few protective factors ▪ Inadequate social & family support ▪ Fair mental state ▪ Engaged and cooperative ▪ History of violent/suicide/neglect ▪ Participating events	▪ Increase protective factors ▪ Increase frequency of contact ▪ Closely monitoring ▪ encourage recovery and social inclusion ▪ Involves family and significant others ▪ Early follow-up if appropriate	Medium ▪ Increase frequency ▪ at least monthly contact for risk and needs ax ▪ closely monitoring ▪ Early FU/consider admission
High risk ▪ Significant risk factors and few protective factors ▪ Limited social & family support ▪ Impulsive, agitation, poor judgement ▪ Not improved even after intervention	▪ Intensive monitoring ▪ Warn others of the risk ▪ Consider admission voluntarily or involuntarily	High ▪ Intensive monitoring ▪ Frequency contact for risk management ▪ Early FU/consider admission

Figure 2: Risk Stratification and Level of Care for KT District-based PCP case managers

collaboration with patients and carers under shared care concept along their recovery journey. Extended CM service hours covering 365 days within the year, continuity of care, home visits and crisis intervention to individual patient along the care pathway by the same CM were provided to enhance seamless quality safe care. Overall medical supervision on the patient management and non office hour medical support were provided to CM. Central training program and clinical protocols were provided for CM to acquire generic core competency. Mental health promotion campaign was developed to increase public acceptance of recovered mental patients living in the community.

District-based community mental health service collaboration, co-location at the community centers and expertise sharing with community partners to deliver accessible, timely, non-stigmatizing, on-site cost-effective collaborative care were implemented for known mental patients and people with suspected mental problems in the community. Community partners were: primary care services - public and private general practitioners (GPs), private psychiatrists; Social Welfare Department (SWD) – Integrated Family Service Center (IFSC) and medical social worker (MSW); SWD/ Non-government Organization (NGO) – Integrated Community

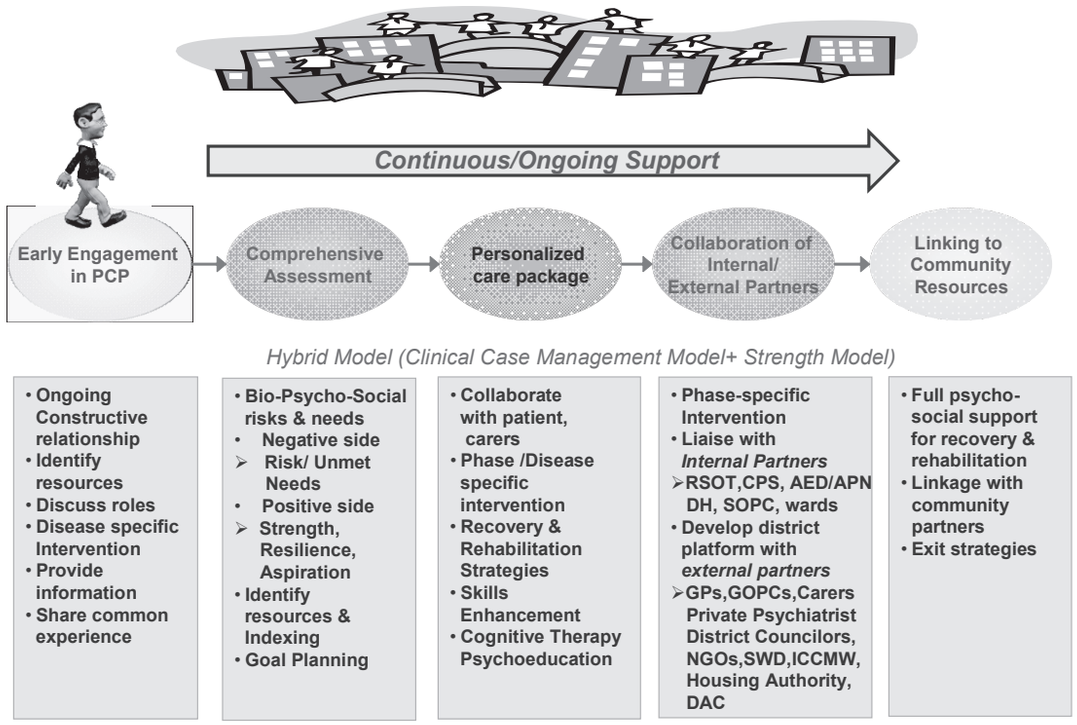

Figure 3: Care Pathway of patients with SMI by internal and community care partners

Center for Mental Wellness (ICCMW); family carers; Housing Authority; District councilors; District Liaison Committee; District Board; Police and/or Correctional Services Department (CSD); estate-based general community nurse; neighbors and public. Task groups between medical and social sectors were formed at headquarter level and district level to formulate the collaboration logistics. It provided an exit strategy for HA services to community partner services, empowered their gate-keeper/detector role and facilitated the mobilization of community resources to enhance the sustainable community living of our clients along the recovery journey. It provided one-stop solution to service users and carers. Estate-based case management system was developed to provide one-entry point for collaboration with community partners with clear accountability and better cost-effectiveness.

Outcome evaluation for the Kwai Tsing District-based Personalized Care Program

Since the rise of managed care in recent years, there were more and more demand on evidence-based outcomes of care and verified information about the relationship between what's done and the results. Outcome evaluation was thus needed. Outcome evaluation studied the direct effects of the program on our patients. It was important to measure the outcome routinely in service provision and inform the staff and patients regularly in a reflective practice for continuous service improvement (Burns, 2001). Short-term and long-term effectiveness studies and cost-effectiveness studies were important. Pragmatic real-life outcome indicators of multiple domains and perspectives (Slade, 2002; National Institute for Mental Health in England, 2008) were used. The measurement instruments should be reliable, internationally

and culturally valid, sensitive to change at different time points of measurement, cost-effective and feasible at the studied service setting (Slade, 1999b).

In this KT District-based PCP, we incorporated the following domains into our outcome evaluation framework:

1). Healthcare service utilization : number of psychiatric in-patient episodes and its corresponding length of stay, unplanned re-admission rate (operationally defined as readmission to mental hospital again within 28 days after discharge via the Accident and Emergency Department(AED)), AED attendances (related to psychiatric problems) and the percentage required subsequent in-patient care. This data was collected using the clinical information system of the Hospital Authority;

2). Clinical characteristics : symptoms, impairment and behaviors using the Brief Psychiatric Rating Scale (BPRS) (Thompson et al., 1994) and the Health of Nation Outcome Scales (HoNOS) (Wing et al., 1998).

3). Psychosocial functioning: Social and Occupational Functioning using the Assessment Scale (SOFAS) (Goldman et al., 1992)

4). Patient's health and social needs: Camberwell Assessment of Need (CAN) (Phelan et al., 1995)

5). Patient satisfaction and carer distress: patient's satisfaction questionnaire and the carer's Involvement Evaluation Questionnaire (Tang et al., 2008)

To evaluate the treatment effectiveness of the KT District-based PCP, we selected a cohort of the first 102 cases recruited into the program. Of 102 referrals, 55 (54%) were male and mean age was 44.7 (ranged 18 to 64). All patients were diagnosed as suffering from schizophrenic-spectrum disorders. We intended to conduct a baseline and 6-month comparison on the aforementioned clinical parameters. At the time this paper was written, we have collected the baseline characteristics (Table 1).

From the baseline characteristics of the cohort, this group of patients appeared to have stable mental condition as reflected in the baseline BPRS, mild impairment in overall health and social functioning as reflected in overall HoNOS, moderate difficulty in making friends and engaging themselves in day time activities as reflected in SOFAS, several unmet needs which were considered to be significant by patients, carers and staff as reflected by CAN, and experiencing some degree of carer burden in taking care of the patients. In line with the international trend of moving towards community care for patients with SMI, the district-based KT-PCP, targeting this group of moderately impaired patients with SMI, aimed to provide enhanced community support and care for the patients and their carers using a personalized case management approach with a view to facilitate community re-integration and enhance recovery. We hoped that, after the 6-month comparison, this program can provide initial evidence on the effectiveness of a personalized case management program as a means to better meet the recovery needs of our patients in the community.

Way forward

The new district-based Personalized Care Program in Hong Kong modeled on the overseas successful community mental health team and case management models to deliver service to patients with severe mental illness. It was both evidence-based and value-based. The pilot service was started in April 2010 in 3 districts of Hong Kong. It was stated in the 2010-11 Policy Address of Hong Kong that it would be rolled out to 5 more districts in 2011. It revolutionized the mental health service model of Hong Kong from traditional episodic and institutional care to modern recovery-

Table 1

Clinical Parameter	Baseline
1. Service utilization (6 months prior to KT-PCP)	
- Total no. of psychiatric in-patient episodes	34
- Total length of in-patient stay	1,281 days
- Total unplanned readmission via AED	1
- AED attendances	30
- Total psychiatric admission via AED	22
2. Clinical characteristics	
- BPRS (n=102)(mean)	25.2
- HoNOS (n=102)(mean)	7.8
- Behavioral	0.44
- Impairment	0.73
- Symptomatic	3.56
- Social	2.94
3. Psychosocial functioning	
- SOFAS (n=100)	59.4
4. Health and social needs (CAN)	
- Total no. of unmet needs rated by patient (n=102)	168
- Total no. of unmet needs rated by staff (n=101)	210
- Total no. of unmet needs rated by Carer (n=54)	91
- Patient satisfaction and carer distress Involvement Evaluation Questionnaire (n=59)	
- Urging	7.34
- Supervision	7.01
- Tension	5.88
- Worrying	9.61

orientated and community care for patients with severe mental illness. Community partnership collaboration and community acceptance of our patients are vital to the success of this service model. Although we are yet to see the result of this innovative service model in Hong Kong and the way forward is arduous, we are confident that it served as a ground-breaking milestone for paving a track leading to "new horizon" of mental healthcare in Hong Kong. Together with the passion and dedication of all care partners and carers, we can paint a beautiful future for our clients and mental health status of the whole territory.

摘要

醫院管理局葵青區社區爲本個案復康支援先導計劃

香港2009/10年度的特首施政報告落實推行地區爲本的社區精神健康團隊和個案經理服務模式的先導計劃，醫院管理局葵涌醫院的葵青區個案復康支援計劃目的是透過個案經理，於葵青區爲重性精神病患者，提供持續及個人化的深入支援服務，並加強與社區夥伴合作，協助患者復元和融入社會，本文章會描述計劃詳情和評估它的初步成效。

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