Regionalised Tertiary Psychiatric Residential Facilities

ALAIN LESAGE,[1] DAVID GRODEN,[2] ELLIOT M. GOLDNER,[3]
DANIEL GELINAS,[4] LESLIE M. ARNOLD[5]

[1]*Centre de recherche Fernand-Seguin, Hôpital Louis-H. Lafontaine, Montréal, Québec (Canada)*
[2]*Riverview Psychiatric Hospital, Port Coquitlam, British Columbia (Canada)*
[3]*Centre for Applied Research in Mental Health and Addiction (CARMHA), Faculty of Health Sciences, Simon Fraser University, Vancouver, British Columbia (Canada)*
[4]*Centre de recherche Fernand-Seguin and Hôpital Louis-H. Lafontaine, affiliated to Université de Montréal, Montréal (Canada)*
[5]*British Columbia Mental Health and Addiction Services. Agency of the Provincial Health Services Authority*

SUMMARY. **Aims** – Psychiatric hospitals remain the main venue for long-term mental health care and, despite widespread closures and downsizing, no country that built asylums in the last century has done away with them entirely – with the recent exception of Italy. Differentiated community-based residential alternatives have been developed over the past decades, with staffing levels that range from full-time professional, to daytime only, to part-time/on-call. **Methods** – This paper reviews the characteristics of community-based psychiatric residential care facilities as an alternative to long-term care in psychiatric hospitals. It describes five factors decision makers should consider: 1. number of residential places needed; 2. staffing levels; 3. physical setting; 4. programming; and 5. governance and financing. **Results** – In Italy, facilities with full-time professional staff have been developed since the mid-1990s to accommodate the last cohorts of patients discharged from psychiatric hospitals. In the United Kingdom, experiments with *hostel wards* since the 1980s have shown that home-like, small-scale facilities with intensive treatment and rehabilitation programming can be effective for the most difficult-to-place patients. More recently in Australia, *Community Care Units* (CCUs) have been applying this concept. In the Canadian province of British Columbia (BC), T*ertiary Psychiatric Residential Facilities (TPRFs)* have been developed as part of an effort to regionalise health and social services and downsize and ultimately close its only psychiatric hospital. **Conclusions** – This type of service must be further developed in addition to the need for forensic, acute-care and intermediate-level beds, as well as for community-based care such as assertive community treatment and intensive case management. All these types of services, together with long-term community-based residential care, constitute the elements of a balanced mental health care system. As part of a region's balanced mental health care plan, these Tertiary Psychiatric Care Facilities have the potential to act as hubs of expertise not only for treatment, rehabilitation, community integration and service co-ordination for the severely mentally ill, but also for research and training.

Declaration of Interest: None.

KEY WORDS: health services research, psychiatric hospitals, community psychiatry, health care economics and organizations.

Received 06.10.2007 – Final version received 19.10.2007 – Accepted on 20.10.2007.

INTRODUCTION

The psychiatric care of individuals with severe mental illness has moved from the asylum era to a period of community-based treatment and a balanced mental health care system (Thornicroft & Tansella, 2003). This system includes: i) primary mental health care with specialist backup; ii) day treatment and occupational services; iii) acute care hospital services; iv) long-term residential care facilities; and v) outpatient care. The authors consider it possible to provide all long-term residential care outside psychiatric hospitals, and at least one industrialised country--Italy--has achieved this goal. Indeed, there has been a series of reports on the successful closure of psychiatric hospitals in many industrialised countries. These documents indicate that the vast majority of discharged patients: i) require some form of residential care; ii) prefer this arrangement to being in hospital, and; iii) show minimal changes in symptoms or functioning (Rothbard & Kuno, 2000). In the United Kingdom, whereas the first cohorts to be discharged were less disabled, the last were "difficult to place" as they exhibited challenging aggressive or socially embarrassing behaviours, The latter were placed in 24-hour nursing staffed facilities of hospital wards, nursing homes or hostel wards at a ratio of 10-12

Address for correspondence: Dr. A.D. Lesage, Centre de recherche Fernand-Seguin, Hôpital Louis-H. Lafontaine, Unité 218, 7401 Hochelaga, Montréal, Québec HIN 3M5 (Canada).
Fax: +1-514-251 5404
E-mail: alesage@ssss.gouv.qc.ca

patients per 100 000 members of the general adult population (Trieman *et al.*, 1998; Trieman & Leff, 2002). A region of Quebec (Canada) that has become self-sufficient without ever operating a regional psychiatric hospital was found to present the same ratio of patients to the general population (10-12 per 100 000). These resided for the most part in two facilities with 24-hour staffing (one nursing home and one highly-supervised by professionals). Only one patient from this region was found to be hospitalised in a psychiatric hospital outside the region and, in rare cases, patients were admitted for more than a year in acute-care bed facilities within the region. Some patients ended up in the homeless services network and in correctional facilities, but these were considered to be in need of assertive community treatment with housing support, rather than facilities with 24-hour nursing staff (Trudel & Lesage, 2006).

Table I shows the array of hospital and residential care facilities and resource levels recommended by European researchers at the end of the 1990s (Wing *et al.*, 2001) for the whole population. This table compares these recommendations with epidemiologically-based estimates calculated previously for an adult population in a region of Quebec (Lesage *et al.*, 2003).

Table I. – *Estimated need for residential services by type in the UK in the late 1990s (Wing et al. 2001) and in Quebec (Canada) in the early 2000s (Lesage et al., 2003) as well as for related outpatient and community services (MSSSQ, 2005), for adults less than 65 years of age.*

	UK, late 1990s	**Quebec, Canada, early2000s**
Type	**Expected range No. of places per 100 000**	**Expected range No. of places per 100 000**
Medium-secure unit	0.4-4	Not mentioned
Intensive care unit/local care unit	2-6	Not mentioned
Acute care ward	20-60	25
24-hour nurse-staffed units/hostel wards/staff awake at night	10-60	40[1]
24-hour non-nurse staffed hostels/night staff sleep in	16-60	80
Day-staffed hostels	10-48	
Lower-support accomodations	19-40	51
Assertive community treatment	Not mentioned	70-100
Intensive case management	Not mentioned	250
Community specialist mental health	1200	780

[1] 50% nursing homes

In recent decades, governments have faced challenging policy questions regarding the appropriate role of psychiatric hospitals. In the UK, the decision to rapidly downsize and close all but 20 psychiatric hospitals was suspended upon evidence of an acute shortage of hospital beds and insufficient alternatives to hospital care in the community, such as hostel wards with 24-hour nursing staff (Johnson *et al.*, 1997; Goldberg, 2000). In Italy, the ratio of remaining long-stay psychiatric hospital inpatients was approximately 35 per 100 000 in 1996 despite a drastic reform policy, implemented in 1981, that closed psychiatric hospitals to new admissions (Lesage, 1997). By 2005, however, all of the country's psychiatric hospitals were finally closed thanks to the development of an array of residential facilities over the intervening decade, most of which with 24-hour nursing staff (de Girolamo *et al.*, 2007).

Based on their observations in Massachusetts in 1984, Gudeman & Shore (1984) estimated the ratio of patients with unremitting symptoms and prominent behavioural disabilities at 10-15 per 100 000 in the general adult population. These patients were further divided into five subgroups: i) patients with schizophrenia, disorganized and little to no daily living skills; ii) patients with schizophrenia and severe aggressive/socially embarrassing behaviours; iii) brain-damaged patients with severe aggressive/socially embarrassing behaviours; iv) mentally or developmentally disabled patients with severe aggressive/socially embarrassing behaviours; and v) elderly patients with dementia and severe aggressive/socially embarrassing behaviours. These authors proposed a policy that entailed developing a new genre of specialized-care units, headed administratively at the state or regional level and located on campuses with no more than 150

to 200 beds, with each unit accommodating 25 to 30 patients. Each unit was to have stringent pre-admission screening, specific programs for the five patient subgroups, and multidisciplinary staff. Further, the units were to be located on the grounds or in renovated pavilions of state hospitals or general hospitals. The new facilities were to be linked to acute care facilities and controlled by a board representative of patients, their families, and community groups. Finally, the authors emphasized that these pilot programs were to be evaluated and linked to relevant university programs (Gudeman & Shore, 1984).

Yet, since the publication of this seminal paper, there has been little in the US research literature concerning the development or evaluation of such new facilities (Starkey & Leadholm, 1997). In Canada, Wasylenki *et al.* (2000) recommended that psychiatric hospitals review their programs to provide intensive rehabilitation for patients requiring so-called *tertiary psychiatric care*. These programs would be best provided within relatively small units and should be academically affiliated, community-based, consumer-oriented and subject to evaluation (Starkey & Leadholm, 1997). Such regional facilities have emerged in the Canadian province of British Columbia (HC/SC, 1997; Newton & Schieldrop, 2005), where they are referred to as *tertiary psychiatric residential facilities* (TPRF).

As indicated in Table I, the need for such facilities cannot be estimated and their optimal role and the approach to their implementation cannot be examined without considering the need and development of other related services for severely mentally ill patients in the region. As Rothbard and Kuno pointed out: "*the desire to create a cost-effective service system that provides care in the least restrictive setting while promoting quality of life [requires information about]...what mix and level of service(s) should replace the former state hospital system, not whether long-stay psychiatric institutions should be eliminated*" (Rothbard & Kuno, 2000, p. 341). The assessment of these facilities should also take into account the needs of those severely mentally ill patients in: i) nursing homes; ii) correctional facilities; iii) the homeless population; and iv) forensic hospitals (Trudel & Lesage, 2006), as well as those with brain damage, developmental disabilities and dementia (Gudeman & Shore, 1984).

EXPERIENCES WITH TERTIARY PSYCHIATRIC RESIDENTIAL FACILITIES (TPRF)

The first publications on hostel wards in the UK described them as renovated Victorian-style houses located on hospital premises, providing individualised intensive treatment and rehabilitation in normal living conditions (Garety & Morris, 1984; Wykes, 1982; Wykes & Wing, 1982). Shepherd provided detailed descriptions of the context and key elements of these facilities also referred to as "wards-in-a-house" (Shepherd, 1995). To date, these facilities have been the object of only one randomised trial. The study in question found clinical benefits and improved cost-effectiveness compared with acute care wards, where many long-stay patients had been treated subsequent to the downsizing or closure of psychiatric hospitals (Goldberg *et al.*, 1985; Hyde *et al.*, 1987). The British experience suggested that patients admitted to hostel wards could be divided into three groups. One third of the patients ended up requiring a lighter set of resources less intense than was provided by hostel wards within five years, following a process of rehabilitation. Another third of the patients required treatment resource at the hostel ward level for at least five years. The third group required hospital re-admission owing to the presence of extremely challenging behaviours that nullified rehabilitation efforts deployed within this framework (Hirsch, 1992; Reid & Garety, 1996). Bridges *et al.* (1994) demonstrated the necessity to have specialised psychiatric care units in hospitals in order to provide long-term treatment for this last group of patients for whom both short-stay hospitalisation and hostel ward residence failed to meet all specific needs. Following complete closure of certain psychiatric hospitals, some of the most-difficult-to-place patients who should have been placed in hostel wards were directed to revamped inpatient units of nursing home facilities or general hospitals (Trieman *et al.*, 1998; Trieman & Leff, 2002).

In Italy, in view of closing the last psychiatric hospitals between 2000 and 2005, a variety of residential facilities were deployed, including cluster apartments, supervised group homes, purpose-built "residential facilities", institutions for the developmentally disabled, and nursing homes (Barbato *et al.*, 2004). The most severely mentally ill patients, requiring intense supervision, were therefore placed in highly staffed "residential facilities", for which the needs requirement was estimated at about 30 places per 100 000 inhabitants in this country with a population of about 55 million (de Girolamo *et al.*, 2005). Only the Barbato study of all patients discharged from a psychiatric hospital reported, in general, no clinical deterioration, improved social behaviours and better physical settings; about 1% were found to be homeless or untraceable (Barbato *et al.*, 2004).

In the state of Victoria, Australia, where complete psychiatric hospital closure is being envisaged, community

care units (CCUs) have been set up as alternative long-stay rehabilitation settings since 1995. The first CCUs were purpose-built cluster housing developments located in suburban settings, accommodating 20 residents. They were the most intensively supported residential service located outside of a hospital, fitting in the continuum of residential care between secure extended care units located in a general hospital setting and 24-hour staffed disability support agencies in the community (Farhall *et al.*, 2000; Trauer *et al.*, 2001; Hobbs *et al.*, 2000).

In Canada, only one such tertiary psychiatric residential facility (TPRF) has been described in the literature of the past decade (HC/SC, 1997; Newton & Schieldrop, 2005). The Seven Oaks facility in Victoria, BC, was cited as a "best practice" in mental health reform in a seminal document published by Health Canada's Federal/Provincial/Territorial Advisory Network on Mental Health (Wasylenki *et al.*, 2000; HC/SC, 1997). Opened in 1994, it consisted of two six-resident houses. An initial evaluation of Seven Oaks showed it was feasible to provide individualised, intensive treatment and rehabilitation to a majority of the most difficult to treat patients in a homelike and normalising atmosphere. The exceptions were mainly patients with unremitting aggressive behaviours who could not be managed without isolation rooms and secure perimeters. In 2001, Seven Oaks was expanded to include a new facility treating 38 residents in six home-like buildings. In British Columbia (a province with a population of 4.3 million and operating only one provincial psychiatric hospital, i.e., Riverview in Coquitlam), the development of Seven Oaks was the first step in a plan by the provincial government to close its one and only psychiatric hospital and replace it with a series of regional TPRFs modelled after Seven Oaks. An evaluation of the redevelopment of the 800-bed Riverview psychiatric hospital begun in 2000 demonstrated the feasibility of discharging all patients to the new facilities and identified gains in residents' daily living skills and increased satisfaction with housing. The evaluation also found that the TPRFs served as a springboard for the annual transfer of about 25% of residents to less supervised community accommodations (Lesage *et al.*, 2006).

TPRF CHARACTERISTICS

How many places?

Gudeman and Shore estimated the need at 15 beds per 100000 inhabitants for the five populations they described. This included 7.5 beds per 100000 for adults with schizophrenia (Gudeman & Shore, 1984). Earlier, we quoted the Trieman and Leff estimate of 10-12 places per 100 000 (Trieman *et al.*, 1998; Trieman & Leff, 2002), which is very close to our own needs estimates for the Eastern Townships of Quebec of 12 places per 100 000 adults less than 65 years of age (Trudel & Lesage, 2006). Needs for such facilities in any given region or state essentially depend on two factors: the mix of other services available (including those indicated in Table I) and the degree of diversion to or from other sectors, as described earlier. It is also important to recognize relative needs across regions according to the level of social deprivation (Drukker *et al.*, 2007). In this regard, Table 1 shows the difference between minimums and maximums for the UK estimates ranging from two- to ten-fold for all services for the severely mentally disordered in recognition of greater needs in socio-economically disadvantaged areas, in particularly those found in large urban areas (Smith *et al.*, 1996; Croudace *et al.*, 2000). As psychosis is more prevalent in urban areas, it exerts greater pressure upon services (Marcelis *et al.*, 1998); moreover, the relative lack of social supports available to residents of socially disadvantaged urban area may increase needs exponentially (Lesage et al., 1996). Hence, the need for such facilities in large urban areas of Canada has been pegged at as much as 40 places per 100 000 inhabitants (Lesage *et al.*, 2003; Trudel & Lesage, 2006). Such estimates are consistent with the higher ratios identified in the UK for socially disadvantaged urban areas (see Table I).

Needs cannot be defined in absolute terms within a given country because they vary substantially across geographic regions because of differences in demographic, epidemiological and societal factors and of the variable availability and distribution of services and supports. Societal and cultural issues emerge much more clearly in international comparisons among industrialised countries. The EPSILON project compared care for people with schizophrenia in 5 urban catchment areas in the UK, Denmark, the Netherlands, Italy and Spain, examining the existing service supply relative to outcomes (Becker *et al.*, 2002). Substantial differences were noted across the regions; the ratio per 100 000 population for hospital indefinite-stay beds ranged from 14 in London to 75 in Santander, with Copenhagen at 67; for residential facilities with 24-hour support it went from a remarkable high of 147 in Copenhagen to a low of 4 in Santander, with London at 33. The ratio of daily-support residential facilities per 100 000 population ran from 91 in Copenhagen, to 0 in Santander. When these ratios were examined to determine overall bed-places per 100 000 in the hospital and community, figures varied markedly: 92 in Santander,

106 in London and Verona, 195 in Amsterdam, and 529 in Copenhagen. Where outcomes and level of satisfaction among service recipients were concerned, these were relatively high in Copenhagen where costs per patient were much higher than elsewhere. Outcomes and costs were considered to have been influenced by the clinical and psychosocial characteristics of patients. However, cultural expectations and values were also evoked to explain the different outcomes and costs across regions.

Thornicroft & Tansella (2003) emphasised the major influence exerted by values on decision planning and needs and priorities determination. They singled out nine values known as the three ACEs: autonomy, accountability, access, comprehensiveness, continuity, coordination, equity, effectiveness, efficiency. Rothbard & Kuno (2000) listed a number of similar values favourable to deinstitutionalisation and the establishment of alternative residential facilities, including non-restrictive environments (autonomy) and a comprehensive and cost-effective system (comprehensiveness and efficiency). The notion of autonomy differs across countries and is related to the social role relatives are ready and expected to play in supporting severely mentally ill patients. For example, it has been shown that severely mentally ill Italian patients are much more likely to live with their family than are their US or Canadian counterparts (Carpentier *et al.*, 1992; Warner *et al.*, 1998; van Wijngaarden *et al.*, 2003).

Physical setting

In the UK, hostel wards have been located on the premises of psychiatric hospitals, general hospitals or elsewhere in the community. Originally, they were described as having a front door to the street, with a garden on hospital grounds. In Italy, "residential facilities" have been described as independent buildings, located in urban or suburban areas, with 10 residents per facility on average. Half of these facilities have been set up in central urban areas, and offer indoor space comparable to the average for Italian citizens, and over 80% have a garden space. Most patients share a room and less than 40% of the rooms have ensuite bathrooms. Further, most facilities have two or more common areas (Picardi *et al.*, 2006). In Australia, CCUs are purpose-built cluster housing developments located in suburban settings accommodating up to 40 residents in four units; the design requirements for CCUs provide for each resident to have a separate bedroom but to share a kitchen, bathroom and sitting room with up to three fellow residents (Farhall *et al.*, 2000; Hobbs *et al.*, 2000).

In BC, TPRFs have been established in four locations throughout the province. The Seven Oaks facility near Victoria is located in a beautiful semi-urban setting with six buildings on the site; an administration and recreation building, two non-secured residential buildings, two secured residential buildings and an original farmhouse renovated to provide eight individual apartments. The South Hills facility is another TPRF located in a residential area of Kamloops, one of the larger cities in BC's interior. Two non-secured buildings each house 20 residents. Iris House is a single 20-bed building located in a residential area next to the regional general hospital in Prince George, a city in northern BC. Finally, Connolly Lodge is a 20-resident purpose-built facility located on the wooded grounds of the Riverview Hospital campus. Residents at the four TPRFs each have a bedroom but share bathroom, kitchen and common room amenities.

Staffing

In Italy, according to the PROGRES survey, residential facilities had a mean staff-resident ratio of 0.92; staff were mostly nurses and auxiliary staff (Picardi *et al.*, 2006). In Australia, CCUs are staffed on a 24-hour basis; staff typically include a manager, a part-time consultant psychiatrist, a medical officer/trainee psychiatrist, several psychiatric nurses, a full-time social worker and occupational therapist, and a part-time psychologist (Farhall *et al.*, 2000; Hobbs *et al.*, 2000). In BC, the TPRFs have budgets comparable to those of hospital wards: the staff-patient ratio is generally close to 1, and staffing composition is similar to that of CCUs. In the original UK hostel wards, the staff-patient ratio was at one point slightly greater than 1, but later dropped to 0.8. In emerging hostel wards, staffing allocations appear to be in line with this, but with the presence of one full-time-equivalent psychologist (Allen *et al.*, 1993).

Programming

The original developers of the Seven Oaks program in BC stressed the need to balance intensive treatment, psychosocial rehabilitation, and security with autonomy and a recovery orientation. Careful attention is paid to on-site staff development with continuing education in psychosocial rehabilitation (Newton & Schieldrop, 2005). In Australia, the CCUs aim to provide integrated psychiatric care and disability support in a normal domestic environ-

ment, particularly for people who otherwise would have been treated in long-term hospital wards. Statements of philosophy and principle emphasise the development of independent living skills and improved quality of life through integration in the local community, while benefiting from non-acute clinical psychiatric care. Wherever possible, residents participate in normal domestic tasks, such as cooking, cleaning, shopping and budgeting, and utilise local community services and public transport (Hobbs *et al.*, 2000). A similar process is encouraged in the four BC TPRFs, as has been described in the literature for the original "hostel wards" or "wards-in-a-house" (Wykes, 1982; Wykes & Wing, 1982; Garety & Morris, 1984; Shepherd, 1995). In this regard, Shepherd (1995) summarized four key programmatic elements: i) individualised treatment and rehabilitation plans; ii) focus on functional disabilities; iii) quality of staff-resident interactions; and iv) team coherence and training.

In Italy, 97% of the facilities keep clinical records; some rehabilitation activities are provided, which consist of skills training for 27% of patients, internal job training for 8%, less structured socialisation for 53% (including external activities like joining local clubs), and neighbourhood awareness for 70% (de Girolamo *et al.*, 2005).

Financing and governance

The average cost per patient of TPRF-like facilities has never been found to be lower than that of psychiatric hospitals. Rather, the cost tends to be closer to that of the intensive care psychiatric ward of a general hospital (Knapp *et al.*, 1990; Beecham & Lesage, 1997; Hyde *et al.*, 1987; McCrone *et al.*, 2001). This may explain why hostel wards have not propagated in the UK despite evidence of their benefits (Wing, 1994; Wing *et al.*, 2001) and positive recommendations from regional evaluations (Johnson *et al.*, 1997; Goldberg, 2000). In fact, within the UK, some hostel wards have been closed owing to financial constraints and lack of support from regional health authorities (Staufenberg & Bridges, 1991).

In BC, TPRFs became reality as the result of a provincial strategic plan for regionalisation of tertiary psychiatric care, overseen by a provincial health services authority (Mac Farlane *et al.*, 1997; PHSA, 2005) In 2001, the average cost per resident at Seven Oaks was CAN$350/day, which was similar to the per-diem cost at Riverview Hospital, the provincial psychiatric hospital in BC.

In Italy, the annual per-patient cost for "residential facilities" can reach as much as US$39,352. Development of such facilities has been intensified as a result of the 1980 Italian law prohibiting any new admissions to psychiatric hospitals, and the 2005 financial law prohibiting any public financing of psychiatric hospitals (Amaddeo *et al.*, 2007). Some creative accounting and renaming took place where long-stay wards on psychiatric hospital premises were turned into 'residential facilities' following renovations. Other wards, also, were renovated and transformed into nursing home facilities for older adults with dementia requiring 24-hour nursing care.

In Australia, no economic analysis has ever been conducted on the specific CCU setup in Melbourne. However, an outcome and costs analysis was carried out on a cohort of 47 patients discharged at the closure of a psychiatric hospital in Sydney. The facilities initially used were described as 24-hour staffed residential group homes: about 7 patients had to return to hospital-type settings, whereas the vast majority of the others moved to less supervised settings after two years. In the first two years, the cost of the 24-hour staffed residential group homes was approximately half that of the psychiatric hospital beds that were closed, namely, AUS$121,000 in 2004-2005 (Lapsley *et al.*, 2000; Hobbs *et al.*, 2002).

In the United States, Rothbard *et al.* (1998) are the only ones to date to have reported the residential care costs that accompanied extensive hospital downsizing. These ranged from US$22,000 to $84,000. These higher costs were comparable to UK and Canadian estimates for the most-difficult-to-place patients. However, it need be borne in mind that staffing and operations costs in Italy were substantially lower than in northern Europe (Grigoletti *et al.*, 2004).

In a balanced mental health care system, hospital and residential facilities account for over 80% of the mental health care budget (Amaddeo *et al.*, 1997). Using benchmarks listed in Table I, it was estimated that long-term residential treatment in hospitals or homes with 24-hour nursing staff would utilise 23% of the overall mental health budget, whereas all hospital and residential facilities combined would take up 76% of the budget (Lesage, 2001), a figure similar to the one estimated by Amaddeo *et al.* (1997).

Opportunities

A balanced system should include a flexible array of "alternative types of long-stay community residential care" to replace the function of psychiatric hospitals for those patients with unremitting symptoms and prominent behavioural disabilities (Thornicroft & Tansella, 2003). In the UK, the lack of systematic dissemination of hostel

wards has been attributed to organizational issues and conflicts at local and regional levels related to implementation of these costly, staff- and skill-intensive facilities (Staufenberg & Bridges, 1991). For one, demand for long-term, intensively staffed facilities in the UK placed a hefty extra burden on local health services. For another, indications are that compromising led to insufficient and understaffed specialist facilities (Trieman *et al.*, 1998).

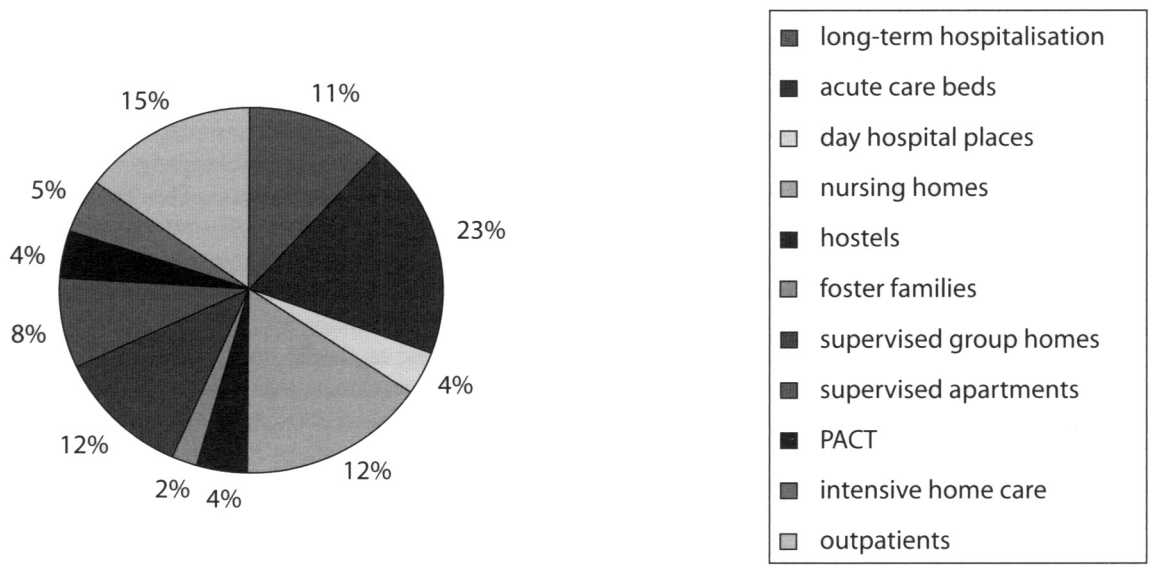

Figure 1. – *Estimated cost distribution for a system of care for severely mentally ill adults.*

Clarifying the explicit and implicit social functions of psychiatric hospitalisation would contribute to the beneficial reform of mental health services (Thornicroft & Bebbington, 1989). Such a reform was envisaged in British Columbia well before the current cycle of redevelopment (MacFarlane *et al.*, 1997). As described by Goering and colleagues in *Review of Best Practices in Mental Health Reform*, published by Health Canada in 1998 (HC/SC, 1998), major health service changes, such as regionalisation of tertiary psychiatric services, require,: 1) a clearly articulated policy; 2) governance and leadership cooperating at provincial, regional and facility levels; 3) financial incentives and disincentives; and 4) training. Although a reform aimed at deinstitutionalisation can be driven by service providers rather than government officials (i.e., a bottom-up rather than top-down process) (Pijl *et al.*, 2002), *both* managers *and* clinician-decision-makers need to be involved to ensure successful implementation of the plan (Reinharz *et al.*, 2000).

CONCLUSION

Evidence and experience points increasingly to alternative models of community residential care for people with severe mental illness in order to create more humane, clinically and economically sound approaches than those previously available in the large psychiatric hospital services of the past (Rothbard & Kuno, 2000). Systematic reports of experience with these alternative facilities are rare. Existing reports have concentrated on descriptions of settings and programs, clinical and psychosocial outcomes, and examinations of costs. Little has been written about the organisational aspects required to facilitate the successful implementation, maintenance and evolution of these facilities at regional levels. In utilising what may represent 15% to 30% of the mental health budget, managers of public and private care systems should consider that, in general, the effective implementation and dissemination of evidence-based practices

have been led at the level of the state/province, where standards have been defined, training established, and program and outcome evaluations implemented along with accountability components (Rapp *et al.*, 2005). More comprehensive evaluations of these new facilities, such as the economic study underway in 28 European countries (Mansell *et al.*, 2007) would be useful both nationally and internationally to steer mental health policy makers, Organisational studies exploring leadership, governance and power plays in multidisciplinary teams at such facilities would also be valuable (Reinharz *et al.*, 2000). Evaluations should also investigate the linkage to other local and regional programs as well as to the justice, social services and university sectors. From what we have observed in four regions of British Columbia, TPRFs serve as a hub of expertise and have empowered regional players and boosted autonomy in the care of the most severely mentally ill in the community.

REFERENCES

Allen H., Baigent B., Kent A. & Bolton J. (1993). Rehabilitation and staffing levels in a 'new look' hospital-hostel. *Psychological Medicine* 23, 203-211.

Amaddeo F., Beecham J., Bonizzato P., Fenyo A., Knapp M. & Tansella M. (1997). The use of a case register to evaluate the costs of psychiatric care. *Acta Psychiatrica Scandinavica* 95, 189-198.

Amaddeo F., Grigoletti L., de Girolamo G., Picardi A. & Santone G. (2007). Which factors affect the costs of psychiatric residential care? Findings from the Italian PROGRES study. *Acta Psychiatrica Scandinavica* 115, 132-141.

Barbato A., D'Avanzo B., Rocca G., Amatulli A. & Lampugnani D. (2004). A study of long-stay patients resettled in the community after closure of a psychiatric hospital in Italy. *Psychiatric Services* 55, 67-70.

Beecham J. & Lesage A. (1997). [Lessons in transferring resources: the system of fees per patient] in French. *Santé Mentale au Québec* 22, 170-194.

Becker T., Gaite L., Knapp M., Knudsen C., Leese M., Ruggeri M., Schene A., Tansella M., Thornicroft G., Vazquez-Barquero J.L., Welcher B. & Van Wijngaarden B. (2002). The iceberg tip and the rest. Mental health care for people with schizophrenia in five European centres. *Epidemiologia e Psichiatria Sociale* 11(1), 6-11.

Bridges K., Davenport S. & Goldberg D. (1994). The need for hospital-based rehabilitation services. *Journal of Mental Health* 3, 205-212.

Carpentier N., Lesage A., Goulet J., Lalonde P. & Renaud M. (1992). Burden of care of families not living with young schizophrenic relatives. *Hospital and Community Psychiatry* 43, 38-43.

Croudace T.J., Kayne R., Jones P.B. & Harrison G.L. (2000). Non-linear relationship between an index of social deprivation, psychiatric admission prevalence and the incidence of psychosis. *Psychological Medicine* 30, 177-185.

de Girolamo G., Picardi A., Santone G., Falloon I., Morosini P., Fioritti A. & Micciolo R. (2005). The severely mentally ill in residential facilities: a national survey in Italy. *Psychological Medicine* 35, 421-431.

de Girolamo G., Bassi M., Neri G., Ruggeri M., Santone G. & Picardi A. (2007). The current state of mental health care in Italy: problems, perspectives, and lessons to learn. *European Archives of Psychiatry and Clinical Neuroscience* 257, 83-91.

Drukker M., Gunther N., van Os J. (2007). Disentangling associations between poverty at various levels of aggregation and mental health. *Epidemiologia e Psichiatria Sociale* 16, 3-9.

Farhall J., Trauer T., Newton R. & Cheung P. (2000). *Community Care Units Evaluation Project: One-year Report*. Mental Health Branch, Department of Human Services: Victoria (Australia).

Garety P.A. & Morris I. (1984). A new unit for long-stay psychiatric patients: organization, attitudes and quality of care. *Psychological Medicine* 14, 183-192.

Goldberg D. (2000). Findings from London's Mental Health: a service in crisis. *Acta Psychiatrica Scandinavica*, Supplement No. 399, 57-60.

Goldberg D.P., Bridges K., Cooper W., Hyde C., Sterling C. & Wyatt R. (1985). Douglas House: a new type of hostel ward for chronic psychotic patients. *British Journal of Psychiatry* 147, 383-388.

Grigoletti L., Amaddeo F., de Girolamo G., Picardi A. & Gruppo Nazionale Progres (2004). [Costs of psychiatric residential care in Italy], in Italian. *Epidemiologia e Psichiatria Sociale* 13(4), 262-269.

Gudeman J.E. & Shore M.F. (1984). Beyond deinstitutionalization. A new class of facilities for the mentally ill. *New England Journal of Medicine* 311, 832-836.

HC/SC (1997). *Best Practices in Mental Health Reform: Situational Analysis. Ottawa (Canada)*. Prepared for the Federal/Provincial/Territorial Advisory Network on Mental Health and published by Health Canada.

HC/SC (1998). *Review of Best Practices in Mental Health Reform. Ottawa (Canada)*. Prepared for the Federal/Provincial/Territorial Advisory Network on Mental Health and published by Health Canada.

Hirsch S. R. (1992). Services for the severe mentally ill- a planning blight? *Psychiatric Bulletin* 16, 673-675.

Hobbs C., Tennant C., Rosen A., Newton L., Lapsley H.M., Tribe K. & Brown J.E. (2000). Deinstitutionalisation for long-term mental illness: a 2-year clinical evaluation. *Australian and New Zealand Journal of Psychiatry* 34, 476-483.

Hobbs C., Newton L., Tennant C., Rosen A. & Tribe K. (2002). Deinstitutionalization for long-term mental illness: a 6-year evaluation. *Australian and New Zealand Journal of Psychiatry* 36, 60-66.

Hyde C., Bridges K., Goldberg D., Lowson K., Sterling C. & Faragher B. (1987). The evaluation of a hostel ward. A controlled study using modified cost- benefit analysis. *British Journal of Psychiatry* 151, 805-812.

Johnson S., Ramsay R., Thornicroft G., Brooks L., Lelliott P., Peck E., Smith H., Chisholm D., Audini B., Knapp M. & Goldberg D. (Eds.) (1997). *London's Mental Health: The Report to the King's Fund London Commission*. King's Fund Publishing: London.

Knapp M., Beecham J., Anderson J., Dayson D., Leff J., Margolius O., O'Driscoll C. & Wills W. (1990). The TAPS project. 3: Predicting the community costs of closing psychiatric hospitals. *British Journal of Psychiatry* 157, 661-670.

Lapsley H.M., Tribe K., Tennant C., Rosen A., Hobbs C. & Newton L. (2000). Deinstitutionalisation for long-term mental illness: cost differences in hospital and community care. *Australian and New Zealand Journal of Psychiatry* 34, 491-495.

Lesage A. (1997). [The role of psychiatric hospitals] in French. *Santé Mentale au Québec* 22, 25-32.

Lesage A. (2001) Towards benchmarks for sheltered housing places and at what costs? Annual meeting of the Canadian Psychiatric Association, Montreal.

Lesage A.D., Clerc D., Uribe I., Cournoyer J., Fabian J., Tourjman V., Van Haaster I. & Chang C.H. (1996). Estimating local-area needs for psychiatric care: a case study. *British Journal of Psychiatry* 169, 49-57.

Lesage A.D., Gelinas D., Robitaille D., Dion E., Frezza D. & Morissette R. (2003). Toward benchmarks for tertiary care for adults with severe and persistent mental disorders. *Canadian Journal of Psychiatry* 48, 485-492.

Lesage A., Groden D., Ohana P. & Goldner E. (2006). Seven Oaks and South Hills Projects – Year 2 Assessment Report (Draft). Riverview Hospital (Vancouver BC) & Louis-H. Lafontaine Hospital: Montreal, QC.

MacFarlane D., Fortin P., Fox J., Gundry S., Oshry J. & Warren E. (1997). Clinical and human resource planning for the downsizing of psychiatric hospitals: the British Columbia experience. *Psychiatric Quarterly* 68, 25-42.

Mansell J., Beadle-Brown J., Knapp M. & Fernandez J.L. (2007). Comparative cost analysis: Community-based services as an alternative to institutions. Research commissioned by the European Commission: Employment, Social Affairs and Equal Opportunities DG.

Marcelis M., Navarro-Mateu F., Murray R., Selten J.P. & Van Os J. (1998). Urbanization and psychosis: a study of 1942-1978 birth cohorts in The Netherlands. *Psychological Medicine* 28, 871-879.

McCrone P., Johnson S. & Thornicroft G. (2001). Predicting the costs of community care for individuals with severe mental illness in South London. *Schizophrenia Bulletin* 27, 653-660.

MSSSQ (2005). La force des liens : Plan d'action en santé mentale 2005-2010. Ministère de la Santé et des Services Sociaux du Gouvernement du Québec.

Newton T.E. & Schieldrop P. (2005). [Seven Oaks: a new look at tertiary care] in French. *Santé Mentale au Québec* 30, 31-45.

PHSA (2005). *Regional Tertiary Care: an Early Assessment of Patient Transfers from Riverview to South Hills and Seven Oaks*. Provincial Health Services Authority: Victoria (BC).

Picardi A., de Girolamo G., Santone G., Falloon I., Fioritti A., Micciolo R., Morosini P. & Zanalda E. (2006). The environment and staff of residential facilities: findings from the Italian 'Progres' national survey. *Community Mental Health Journal* 42, 263-279.

Pijl Y.J., Sytema S., Barels R. & Wiersma D. (2002). Costs of deinstitutionalization in a rural catchment area in The Netherlands. *Psychological Medicine* 32, 1435-1443.

Rapp C.A., Bond G.R., Becker D.R., Carpinello S.E., Nikkel R.E. & Gintoli G. (2005). The role of state mental health authorities in promoting improved client outcomes through evidence-based practice. *Community Mental Health Journal* 41, 347-363.

Reid Y. & Garety P.A. (1996). A hostel-ward for new long stay patients: Sixteen years' progress. *Journal of Mental Health* 5, 77-89.

Reinharz D., Contandriopoulos A.P. & Lesage A.D. (2000). Organizational analysis of deinstitutionalization in a psychiatric hospital. *Canadian Journal of Psychiatry* 45, 539-543.

Rothbard A. B. & Kuno E. (2000). The success of deinstitutionalization. Empirical findings from case studies on state hospital closures. *International Journal of Law and Psychiatry* 23, 329-344.

Rothbard A.B., Schinnar A.P., Hadley T.P., Foley K.A. & Kuno E. (1998). Cost comparison of state hospital and community-based care for seriously mentally ill adults. *American Journal of Psychiatry* 155, 523-529.

Shepherd G. (1995). The 'ward-in-a-house': residential care for the severely disabled. *Community Mental Health Journal* 31, 53-69.

Smith P., Sheldon T.A. & Martin S. (1996). An index of need for psychiatric services based on in-patient utilisation. *British Journal of Psychiatry* 169, 308-316 (Discussion 317-321).

Starkey D. & Leadholm B.A. (1997). PRISM: the Psychiatric Rehabilitation Integrated Service Model a public psychiatric hospital model for the 1990s. *Administration and Policy in Mental Health* 24, 497-508.

Staufenberg E. & Bridges K. (1991). High Elms: a hostel-ward which closed after four years. *Psychiatric Bulletin*, 15, 670-672.

Thornicroft G. & Bebbington P. (1989). Deinstitutionalisation: from hospital closure to service development. *British Journal of Psychiatry* 155, 739-753.

Thornicroft G. & Tansella, M. (2003). *What Are the Arguments for Community-based Mental Health Care?* World Health Organization: Copenhagen.

Trauer T., Farhall J., Newton R. & Cheung P. (2001). From long-stay psychiatric hospital to Community Care Unit: evaluation at 1 year. *Social Psychiatry and Psychiatric Epidemiology* 36, 416-419.

Trieman N. & Leff J. (2002). Long-term outcome of long-stay psychiatric in-patients considered unsuitable to live in the community. TAPS Project 44. *British Journal of Psychiatry* 181, 428-432.

Trieman N., Hughes J. & Leff J. (1998). The TAPS Project 42: the last to leave hospital--a profile of residual long-stay populations and plans for their resettlement. Team for the Assessment of Psychiatric Services. *Acta Psychiatrica Scandinavica* 98, 354-359.

Trudel J.F. & Lesage A.D. (2006). Care of patients with the most severe and persistent mental illness in an area without a psychiatric hospital. *Psychiatric Services* 57, 1765-1770.

van Wijngaarden B., Schene A., Koeter M., Becker T., Knapp M., Knudsen H.C., Tansella M., Thornicroft G., Vázquez-Barquero J.L., Lasalvia A. & Leese M. (2003). People with schizophrenia in five countries: conceptual similarities and intercultural differences in family caregiving. *Schizophrenia Bulletin* 29, 573-586.

Warner R., de Girolamo G., Belelli G., Bologna C., Fioritti A. & Rosini G. (1998). The quality of life of people with schizophrenia in Boulder, Colorado, and Bologna, Italy. *Schizophrenia Bulletin* 24, 559-568.

Wasylenki D., Goering P., Cochrane J., Durbin J., Rogers J. & Prendergast P. (2000). Tertiary mental health services: I. Key concepts. *Canadian Journal of Psychiatry* 45, 179-184.

Wing J.K. (1994). Mental illness. In *Health Care Needs Assessment: The Epidemiologically Based Needs Assessment Reviews* (ed. A. Stevens and J. Raftery). Radcliffe Press: Oxford.

Wing J.K., Brewin C.R. & Thornicroft G. (2001). Defining mental health needs. In *Measuring Mental Health Needs*, 2nd ed. (ed. G. Thornicroft). The Royal College of Psychiatrists: London.

Wykes T. (1982). A hostel-ward for 'new' long-stay patients: an evaluative study of 'a ward in a house'. *Psychological Medicine* 2, 57-97.

Wykes T. & Wing J.K. (1982). A ward in a house: accommodation for 'new' long-stay patients. *Acta Psychiatrica Scandinavia* 65, 315-330.