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**Deinstitutionalised patients, homelessness and imprisonment: systematic review**

Petr Winkler *et al*

**An exploratory randomised trial of a simple, brief psychological intervention to reduce subsequent suicidal ideation and behaviour in patients admitted to hospital for self-harm**

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## Editorial

## Deinstitutionalisation does not increase imprisonment or homelessness†

Tatiana Taylor Salisbury and Graham Thornicroft

**Summary**

Closing long-stay psychiatric beds remains contentious. The review by Winkler *et al* in this issue examines 23 studies of deinstitutionalisation for the outcomes of people discharged from psychiatric hospitals after an admission of 1 year or longer. The majority of these studies identified no cases of homelessness, incarceration or suicide after discharge from hospital.

**Declaration of interest**

None.

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**Defining deinstitutionalisation**

Deinstitutionalisation is generally defined as a shift in the locus of mental healthcare from hospitals to the community, and has been in operation for up to 60 years across many countries worldwide.<sup>1</sup> Although advocated by both the World Health Organization (WHO)<sup>2</sup> and the World Psychiatric Association<sup>3</sup> as an integral step in the development of a modern system for the provision of mental healthcare, this process is not without its detractors.

**Concerns about deinstitutionalisation**

Since its introduction in the mid-20th century, critics have claimed a series of adverse effects, most notably increased homelessness and incarceration. Indeed, there has even been a recent call to 'bring back the asylum'.<sup>4</sup> Such reports tend to correlate, in various countries, with the numbers of people who are in psychiatric hospitals and prison, and then suggest that they are causally related. Another argument against deinstitutionalisation is that it is linked to an increase in homelessness for people with mental illness. Indeed, from the early stages of closing psychiatric hospital beds in the USA, commentators expressed concern that where there was insufficient provision of accommodation in the community, homelessness would be the consequence,<sup>5</sup> although few studies have supported this proposition.<sup>6</sup>

In this issue, Winkler and colleagues systematically review the evidence for any damaging implications of closing long-term psychiatric beds.<sup>7</sup> They note that much of the evidence used to criticise deinstitutionalisation has 'been based on either ecological studies or, more often, on personal observations or judgements'. To address these limitations, they focused on cohort studies of individuals with severe mental disorders who were discharged from psychiatric hospitals, as a result of deinstitutionalisation, following an admission of 1 year or longer, and where data were analysed at the individual level. Most of the 23 studies included

in the review found that at follow-up no cases of homelessness, incarceration or suicide were identified. The authors conclude that, contrary to the results of ecological studies, instances of homelessness, incarceration or suicide among those discharged are rare.

**Why investment and implementation matter**

Those people with long-term psychiatric conditions who were included in the studies reviewed were largely discharged to residential facilities in the community with varying levels of support (e.g. to nursing homes, high support facilities, group homes or to semi-independent accommodation). A characteristic shared by all the studies included is that the projects aimed to discharge patients to community settings appropriate to their individual level of need. Ecological studies in this field do not necessarily share this characteristic, and this may be one of the reasons for the discrepancies with the findings of the review by Winkler *et al*.

In some countries, efforts to deinstitutionalise mental healthcare have been half-hearted, with an emphasis on closing down psychiatric beds rather than on providing comprehensive community-based services. Where bed reduction is done responsibly, either in the context of closing hospitals or 'down-sizing' bed numbers, it has been shown that the overall costs of community care are about the same as for the previous hospital services for such patients.<sup>8</sup> A systematic review of care for individuals with longer-term mental health problems found evidence of higher quality of life and satisfaction among individuals receiving residential care in the community compared with those in hospital.<sup>9</sup> On the other hand, where hospital bed closures are seen as a cynical method of making cost savings, without replacement investment in community services, then it is clear that the quantity and quality of care will suffer and may well lead to adverse outcomes for the people concerned.

At the global level there are continuing changes in the provision and use of psychiatric beds across the world. According to the WHO *Mental Health Atlas 2014*,<sup>10</sup> there was a slight decrease of 5% in the number of mental hospitals between 2011 and 2014. A more significant decrease is observed for the number of mental hospital beds, which has dropped by nearly 30% compared with 2011. The number of beds available in psychiatric wards in general hospitals has shown a marked increase of 60% between 2011 and 2014. At the same time, despite the global decrease in number of beds, there was an increase of over 20%

†See pp. 421–428, this issue.

in rate of admissions to mental hospitals, indicating an increasing bed turnover rate and reducing average length of stay.<sup>10</sup> In this context, this important review by Winkler *et al* shows that it is no longer necessary to engage in a stale debate about whether to focus on hospital or community services – rather the debate now needs to address what balance of hospital and community services is needed in low-, middle- and high-income countries.

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## Review article

Deinstitutionalised patients, homelessness and imprisonment: systematic review<sup>†</sup>

Petr Winkler, Barbara Barrett, Paul McCrone, Ladislav Csémy, Miroslava Janoušková and Cyril Höschl

**Background**

Reports linking the deinstitutionalisation of psychiatric care with homelessness and imprisonment have been published widely.

**Aims**

To identify cohort studies that followed up or traced back long-term psychiatric hospital residents who had been discharged as a consequence of deinstitutionalisation.

**Method**

A broad search strategy was used and 9435 titles and abstracts were screened, 416 full articles reviewed and 171 articles from cohort studies of deinstitutionalised patients were examined in detail.

**Results**

Twenty-three studies of unique populations assessed

homelessness and imprisonment among patients discharged from long-term care. Homelessness and imprisonment occurred sporadically; in the majority of studies no single case of homelessness or imprisonment was reported.

**Conclusions**

Our results contradict the findings of ecological studies which indicated a strong correlation between the decreasing number of psychiatric beds and an increasing number of people with mental health problems who were homeless or in prison.

**Declaration of interest**

None.

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In 1939 Penrose examined European statistics on prison and psychiatric hospital populations and introduced what is now known as the 'hydraulic hypothesis'. This hypothesis presents the idea that the number of prisons increases as the number of psychiatric beds decreases.<sup>1–4</sup> The idea gained prominence in the era of deinstitutionalisation,<sup>3,5,6</sup> and has been revisited following deinstitutionalisation in South America.<sup>7,8</sup> Deinstitutionalisation emerged in the 1950s and 1960s in the USA and UK and was triggered by humanitarian, economical and societal factors.<sup>9–12</sup> Subsequently this policy was pursued in Canada,<sup>13,14</sup> western Europe,<sup>15,16</sup> northern Europe,<sup>17–19</sup> southern Europe,<sup>20,21</sup> non-communist central European countries,<sup>22</sup> Australia,<sup>23,24</sup> New Zealand,<sup>25</sup> Jamaica,<sup>26,27</sup> and in other parts of the world. In many countries it is still an ongoing process.<sup>22</sup> However, in central and eastern Europe and in east and southeast Asia, mental healthcare still relies heavily on large psychiatric hospitals and therefore deinstitutionalisation is central to mental health reforms in these areas.<sup>28,29</sup>

Since deinstitutionalisation began, arguments that psychiatric reforms have led to former patients entering prisons and becoming homeless have been prolifically published in the professional literature,<sup>5,30–33</sup> as well as in newspapers.<sup>34</sup> As a rule, these arguments have been based on either ecological studies or – more often – personal observations or judgements. Ecological studies are observational studies that work with aggregated rather than individual data. Such studies resulted in contradictory findings. Priebe *et al*, Hodgins *et al*, Raphael & Stoll and Kramp & Gabrielsen, for example, came to the conclusion that where there were fewer psychiatric beds there were more criminal convictions of those with mental disorders.<sup>20,35–37</sup> On the other hand, Wallace *et al* and Hartvig & Kjelsberg, for instance, came to the opposite conclusion and did not attribute increased criminal convictions to deinstitutionalisation.<sup>33,38</sup> No matter what

the findings, ecological studies face the risk of ecological fallacy, i.e. invalid inference on causal relationship from group data to individual level.

The limitations of ecological studies might be overcome by cohort studies. Some studies approached people who were homeless or in prison and then detected a history of psychiatric treatment at the individual level: see, for instance, Bassuk & Lamb and Whitmer.<sup>39,40</sup> The problem with such studies is an implicit assumption that these people, usually with new and acute disorders, would not end up homeless or in prison under the old system dominated by psychiatric hospitals. It is an assumption that the old system would somehow deal better with the new societal situation.

Maj, on behalf of the World Psychiatric Association and in concordance with the World Health Organization (WHO) and the European Commission, stated that deinstitutionalisation should be regarded as a priority worldwide.<sup>41–43</sup> However, the question of homelessness and criminality among patients discharged from the institutions has not been resolved,<sup>44</sup> and may become an obstacle to reform efforts. For instance, in the Czech Republic some psychiatrists and media outlets published messages predicting that mental health reform would drive people with psychosis into homelessness and imprisonment.<sup>45–49</sup> This backlash phenomenon has been described during the early years of deinstitutionalisation in the USA and is referred to as anti-deinstitutionalisationism.<sup>10</sup> Cohort studies of discharged patients might help to shed light on whether or not deinstitutionalisation has led to homelessness and criminality. These studies could either use a follow-up design, assessing participants at baseline and then repeatedly for a long period, or they could follow a trace-back design in which cases of patients discharged some time ago are re-examined. We aimed to identify such cohort studies and assess homelessness and imprisonment among those with severe mental disorders who were discharged from psychiatric hospitals as a consequence of deinstitutionalisation. A further aim was to assess suicidality among these former patients as it was suggested that a

<sup>†</sup>See editorial, pp. 412–413, this issue.

reduction in psychiatric beds might increase suicide rates.<sup>48,49</sup> This review was conducted to bring new insights into the controversy; in other words, we hoped to replace rhetoric with evidence. This should inform decision makers, especially in countries where institutional mental healthcare predominates, and help them to pursue a good strategy for mental healthcare development. Deinstitutionalisation is the official WHO policy for Europe; however, if it leads to homelessness and criminality, the price to be paid may be perceived as too high by both policy makers and the public.

## Method

A systematic literature review in compliance with the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines was conducted between July 2013 and February 2014. The study population was defined as people with severe mental disorders who had been resident in a psychiatric hospital for more than 1 year, whose main disability was not related to old age (dementia) or intellectual disabilities, and were 18–65 years old. If patients were older, the study could still be included if it was made clear that those with dementia were not eligible. People with dementia and those with intellectual disabilities were excluded because they do not represent typical populations of mental hospitals; rather, there are specialist institutions for both of these groups. The definition of length of stay was chosen in line with other studies that defined a long-term patient as someone treated in hospital for more than a year.<sup>50–53</sup> However, some studies defined long-term patients as those with a duration of stay longer than 6 months,<sup>54,55</sup> and yet other studies used minimum periods of up to 2 years.<sup>56</sup>

Intervention was defined as a discharge of patients from psychiatric hospitals that was driven by deinstitutionalisation, defined broadly as a policy of significant reduction in the number of psychiatric beds or total closure of hospitals. The simultaneous development and functioning of community care was not necessary for a study to be included in the final analysis, although this would have had probably influenced the outcomes of interest. Only patients discharged from general as opposed to secure psychiatric hospitals were included in our review. Comparison of different groups of patients was not considered to be relevant.

Outcomes were primarily defined as criminality and homelessness among discharged patients. Criminality was expressed as the number of people who ended up in prison at some point during the follow-up period and thus was concerned mainly with serious offences. Homelessness was identified through the number of people who were known to have become homeless or had used services for homelessness at some point during the follow-up period. The rate or number of suicides was also examined.

To meet inclusion criteria studies had to have a cohort design and either follow up or trace back the discharged patients. Studies based on data gathered from registers (unless they contained individual patients' data) were excluded. Individual case reports were excluded from the final analysis, as they would introduce systematic bias. Best efforts were made to obtain grey literature with possibly relevant data; no time restraints were applied, and studies published in English, German, French or Dutch were included in the analysis.

## Search strategy

Scientific databases were searched in two phases. The pilot phase took place in July 2013, and PubMed/Medline was chosen for the initial search. Nineteen potentially eligible articles were identified: eight examined homelessness and criminality among

deinstitutionalised patients, two of which were concerned with the TAPS study population. These 19 articles were analysed and relevant information extracted. Reference lists were searched for additional articles, as was the review published later that year by Kunitoh.<sup>54</sup> The pilot demonstrated that a broad search strategy was necessary to identify all potentially eligible studies. For example, some studies did not refer to 'deinstitutionalisation' but rather to psychiatric or mental hospital closure, others used the term 'transinstitutionalisation' or 'reinstitutionalisation' in order to describe the process of how people ended up in other institutions, including prisons and institutions for homeless people. Some studies did not use any of these terms and spoke simply about patients discharged from psychiatric hospitals.

The second search phase took place in October, November and December 2013. The search strategy was developed, tested, adjusted and finally applied at PubMed/Medline (up to November 2013 week 2) and Web of Knowledge (including Web of Science from 1900 and Medline from 1950, both up to November 2013 week 2), and subsequently also adjusted for databases working on Ovid platform including PsycINFO, Health Management Information Consortium and Social Policy and Practice (all searched up to December 2013 week 2). A combination of truncated and asterisked words deinstitutionalisation, crime, homelessness, psychiatry, reinstitutionalisation, transinstitutionalisation, psychiatric hospital, mental hospital, discharge and closing was used to identify possibly relevant studies in peer-reviewed journals as well as grey literature (see online supplement DS1 for more details). The Cochrane Library was searched simply using 'deinstitution-alization' for title, abstracts and keywords; the last search was conducted in January 2014 week 5.

## Results

The search strategy resulted in over 9416 unique and possibly relevant pieces of literature. Most relevant articles were identified by this strategy, although a few ( $n=19$ ) other potentially eligible articles were identified through references, authors and experts (Fig. 1).

## Included studies

Twenty-three studies representing unique populations of deinstitutionalised patients from Albania, Australia, Austria, Canada, England, Wales, Finland, Ireland, Italy, Japan, Northern Ireland, Scotland and USA were identified and analysed (Table 1). The years of patient discharge ranged from 1970 (Australia) up to 2011 (Albania),<sup>57,58</sup> which effectively means that the earliest period of deinstitutionalisation was not covered. The first studies conducted in the USA and the UK were of patients discharged between 1980 and 1986 (USA) and between 1982 and 1984 (UK). No eligible study from Latin America was found. The included studies are described in detail in online supplement DS2, and excluded studies in supplement DS3. The included studies differed in quality and ranged from local cohort studies with as few as 14 respondents,<sup>59</sup> to studies conducted on a national scale with as many as 3307 respondents.<sup>60</sup> The studies of highest quality were conducted by the TAPS team in England and by Honkonen *et al* in Finland.<sup>50,60</sup> These were methodologically rigorous and included large cohorts of patients. However, there was a considerable loss to follow-up in the Finnish study.<sup>60</sup> Both studies reported few adverse consequences and that patients were more satisfied in the community than in the hospital.

The percentage of women respondents ranged from 15% to 100%,<sup>52,58</sup> and the proportion of those with schizophrenia ranged from 48% to 100%.<sup>59–62</sup> The mean age of discharged patients

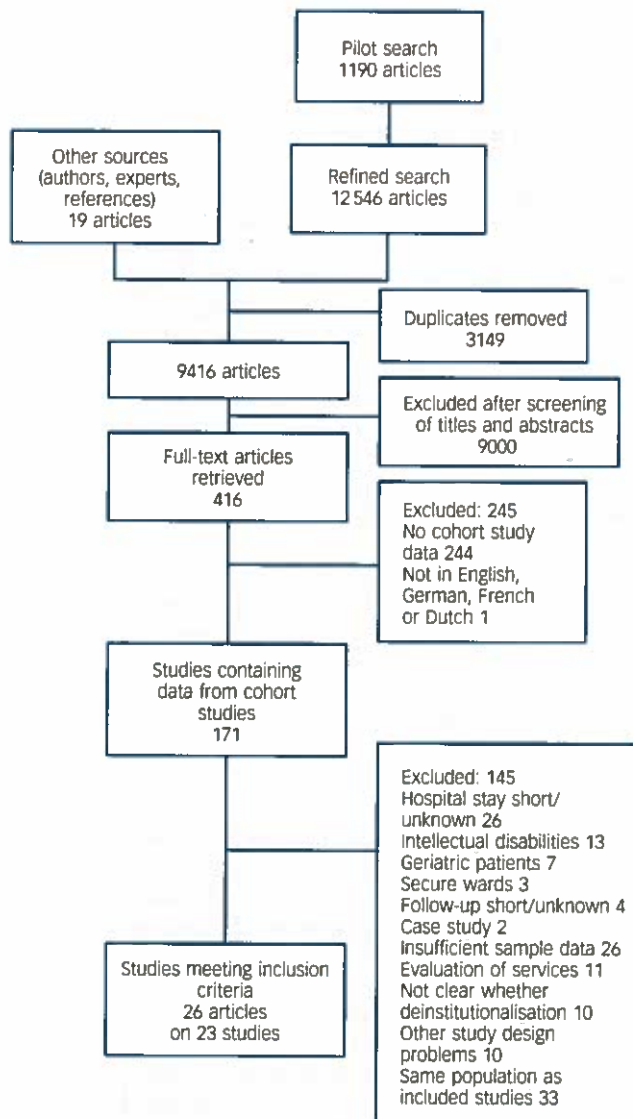


Fig. 1 PRISMA flowchart.

varied between 37.6 years and 67.3 years.<sup>63,64</sup> All discharged patients had a lengthy stay in psychiatric hospital, ranging from 8 years to 37 years,<sup>65–67</sup> and were followed up from 1 year to 14.1 years after discharge.<sup>68,69</sup> The studies by Farragher *et al*, McNerney *et al* and Furlan *et al* had high rates of loss to follow-up (47%, 33% and 19% respectively) due to high death rates.<sup>52,67,69</sup> One study had a 22% loss to follow-up due to readmission of previously discharged patients.<sup>65</sup> Rates of refusal to participate in the follow-up were highest in the studies by Honkonen *et al* and Leff (9% and 3% respectively).<sup>50,60</sup> Otherwise, refusals to follow-up were rare. The rate of untraced patients was under 1% in the majority of studies, but reached 5% in the study by Honkonen *et al* and 4% in the studies by Lesage *et al* and Haberfellner *et al*.<sup>9,60,61</sup>

Out of 23 studies, 15 reported no case of homelessness among discharged patients. Barbato *et al* reported 1 case out of 163 patients (0.6%),<sup>71</sup> Leff reported 7 cases out of 737 patients (0.9%),<sup>50</sup> Mastroeni *et al* reported 1 case out of 97 patients (1%),<sup>72</sup> Rothbard *et al* reported 6 cases out of 321 patients (1.9%),<sup>73</sup> and Jones *et al* reported 1 case out of 50 patients (2%).<sup>53</sup> Honkonen *et al*, McGrew *et al* and Lesage *et al* reported 0–22 (0–0.7%), 0–4 (0–4.2%) and 0–7 (0–2.3%) possible

cases of homelessness out of 3307, 96 and 303 patients respectively.<sup>9,60,65</sup> Problems with housing other than homelessness were identified in some studies (online supplement DS2).

The number of discharged patients who ended up in prison was recorded in 18 studies; of these, 11 reported that no patient was imprisoned. Donnelly *et al* found 1 out of 321 patients in prison (0.3%),<sup>74</sup> Leff found 2 out of 737 patients in prison (0.3%),<sup>50</sup> McNerney *et al* found 1 out of 87 patients in prison (1.1%),<sup>52</sup> McGrew *et al* found 4 out of 303 patients in prison (1.3%),<sup>65</sup> Barr & Parker found 2 out of 140 patients in prison (1.4%),<sup>57</sup> Okin *et al* reported that 1 out of 64 patients was imprisoned (1.6%),<sup>63</sup> and Thornicroft *et al* found 3 out of 73 discharged patients (4.1%).<sup>64</sup> Misdemeanours that had not led to imprisonment occurred occasionally.

Suicide rates were reported in 18 studies, and of these 11 indicated that no suicide occurred. The highest rates of suicide were reported by McNerney *et al*, who found that 3 out of 87 patients died by suicide (3.4%) (S. J. McNerney, personal communication, 2014), Farragher *et al* who found that 4 out of 226 patients died by suicide (1.8%) and Andrews *et al* who found that 3 out of 208 patients died by suicide (1.4%).<sup>52,75,76</sup>

## Discussion

Deinstitutionalisation has been criticised, mainly in the USA, where it was considered to have been poorly organised, resulting in lower levels of funding or budget cuts, and also to have been inconsistent with stated political declarations.<sup>39,77–88</sup> This has been concisely described by Dumont & Dumont, who stated that the original US plan, developed under the presidencies of John F. Kennedy and Lyndon Johnson, included an investment of \$7 billion and establishment of 2000 community mental health centres across the USA,<sup>89</sup> however, this plan was not realised as Johnson's successor, Richard Nixon, substantially restricted its funding. The appropriateness of the delivery of community care has also been criticised elsewhere, for example in Denmark and Canada.<sup>17,90</sup>

Ecological studies have been widely used to research the consequences of deinstitutionalisation, and often conclude that decreasing the number of beds in mental hospitals leads to more people with mental illness in prison or on the streets. Our review does not support this, and we think that these ecological studies might have been confounded. Rather than deinstitutionalisation, other societal factors such as rapid globalisation, increases in migration, growing individualism, less emphasis on traditional families, pressures on housing and the labour market, increased illegal drug use, growing unemployment, legal changes (e.g. those associated with the war on drugs), changes in mental healthcare funding and associated budget cuts could have all contributed to the rising number of people with mental health problems who end up in prison or homeless in the USA and in western Europe. Durham emphasised that the context of deinstitutionalisation in the USA was characterised by restrictive changes in Medicaid, social security and disability payment systems, and by the reduction in low-cost housing and other sociopolitical changes.<sup>88</sup>

Countries in Latin America have also undergone deep societal changes in the past 30 years. Although the overall burden of psychiatric and neurological disease has grown tremendously, investment in mental healthcare has remained low, and other societal challenges have emerged.<sup>91</sup> Again, in this context, it might be not surprising that the study by Mundt *et al*, which analysed data related to deinstitutionalisation in Latin America, found an association between a decreasing number of mental health beds

Table 1 Summary of included studies

Study	Country of discharge	Place of discharge	Year of discharge	n	Female %	Mean age Years	Schizophrenia %	Mean length of stay Years	Mean length of follow-up Years	Death during follow-up, n	Refused follow-up, n	Untraced, n	Other loss to follow-up, n	Homeless, n	In prison, n	Suicide, n	More satisfied in community
Barr & Parker (1975) <sup>59</sup>	Australia	Callan Park Hospital	1970-3	140	NR	53.3	70	13.2	1.7	11	0	2	15	0	2	NR	Yes
Jones et al (1986) <sup>53</sup>	England	York mental hospitals	1982-4	50	50	NR	>50	22	2	NR	NR	0	NR	1	0	0	NR
Andrews et al (1990) <sup>76</sup>	Australia	New South Wales hospitals	1984-7	208	29	NR	80	NR	1.9	13	3	1	19	0	0	3	Yes
MacGill (1991) <sup>70</sup>	Scotland	Argyll & Bute Hospital	1981-9	48	42	57	54	14	4.6	8	1	0	14	0	0	NR	Yes
Okin et al (1995) <sup>63</sup>	USA	Rhode Island State Hospital	1980-6	64	42	37.6	70	15.4	7.5	9	0	0	2	0	1	0	Yes
Farragher et al (1996) <sup>69</sup>	Ireland	Rehabilitation ward, rural Ireland	1974-89	226	50	51	62	11	14.1	106	0	0	0	0	0	4	NR
Donnelly et al (1996) <sup>68</sup>	N. Ireland	Six long-stay psychiatric hospitals	1990-2	188	42	63	67	22	1	6	0	0	0	0	0	0	Yes
Donnelly et al (1997) <sup>74</sup>	N. Ireland	Six long-stay psychiatric hospitals	1987-90	321	42	63	64	22	4.5	41	1	2	35 <sup>a</sup>	0	1	3	Yes
Leff (1997) <sup>50</sup>	England	Claybury and Friern Hospitals, London	1985-93	737	NR	53.4	NR	23	1	24	23	7	12	7	2	0-2	Yes
Honkonen et al (1999) <sup>60</sup>	Finland	Hospitals all over the country	1986-90	3307	46	38.2	100	NR	3	121	293	159	0	0-22	NR	31	Yes
McGrew et al (1999) <sup>65</sup>	USA	Central State Hospital, Indiana	1994	303	33	43.9	63	8	2	27	0	7	66 <sup>b</sup>	0-7	4	NR	Yes
Rothbard et al (1999) <sup>73</sup>	USA	Philadelphia State Hospital	1988-93	321	35	46	83	9.8	3	24	NR	NR	14	6	NR	0	NR
Lesage et al (2000) <sup>9</sup>	Canada	Louis-H Lafontaine hospital, Quebec	1989-98	96	53	NR	65	14.4	4.5	0	0	4	11 <sup>b</sup>	0-4	0	NR	NR
Hobbs et al (2002) <sup>66</sup>	Australia	Psychiatric hospital in Sydney	1994-5	47	47	41	98	8	6	3	0	0	0	0	0	0	Yes
Barbato et al (2004) <sup>71</sup>	Italy	Antonini Mental Hospital, Milan area	1998-9	163	41	43.9	52	28.3	3.5	22	0	0	3	1	NR	0	NR
Haberfellner et al (2004) <sup>61</sup>	Austria	Landesnervenklinik Wagner Jauregg, Untz	1995-2000	163	44	57.8	48	19.3	3.6	28	5	6	8	0	0	NR	NR
Mastroeni et al (2005) <sup>72</sup>	Italy	Como Mental Hospital, Northern Italy	1999	97	44	57.4	74	17.4	5	14	0	0	2	1	0	0	NR
Thornicroft et al (2005) <sup>64</sup>	England	Cane Hill Hospital, London	1990s	73	51	67.3	92	36.5	1	13	0	0	0	0	3	0	Yes
Mizuno et al (2005) <sup>62</sup>	Japan	Sasagawa Hospital	2002	78	35	54.6	100	26	1	2	0	0	0	0	0	1	NR
Chan et al (2007) <sup>59</sup>	Japan	Tosa Hospital	After 2000	14	29	63	100	24.2	2	NR	NR	0	NR	0	NR	0	Yes
Furlan et al (2009) <sup>67</sup>	Italy	Collegno and Grugliasco hospitals, Turin area	1998-2002	176	38	63	73	37	4	34	0	0	24 <sup>c</sup>	0	NR	0	NR
Canta et al (2013) <sup>58</sup>	Albania	Vlore Psychiatric Hospital	2010-1	16	100	42.6	56	12.3	1	0	0	0	0	0	0	0	NR
McInerney et al (2014) <sup>62</sup>	Ireland	Our Lady's Hospital, Ennis	2000-1	87	15	57.5	75	12	10	29 <sup>d</sup>	NR	2	0	0	1 <sup>e</sup>	3	Yes

NR, not reported.

a. Of these, 33 were in hospital and thus ineligible for follow-up.

b. In hospital at the time of follow-up.

c. Patients were transferred to facilities for the elderly.

d. At the 5-year follow-up.

e. At the 5-year follow-up; this man died by suicide later on.

and an increasing number of prison places.<sup>8</sup> The study's authors were, however, aware of its limitations, and indicated that an increase in the number of prison places cannot be solely explained by decreases in the number of hospital beds. They suggest that more evidence is required to determine the pathways leading people with mental health problems into prison.<sup>8</sup>

The evidence presented here comes from cohort studies of long-term psychiatric patients discharged into the community. These studies might be more helpful than ecological studies in determining direct causality between deinstitutionalisation and homelessness and criminality.<sup>92</sup> Our review shows that such studies were conducted on different cohorts of patients and in a number of different countries. Analysis of these studies demonstrates that homelessness and criminality among discharged patients occurred sporadically, and suggests that even patients who were discharged after many years in hospital did well in the community. This is in line with the evidence presented by Kunitoh,<sup>54</sup> who conducted a systematic review and concluded that deinstitutionalisation was generally beneficial for the majority of discharged patients in terms of both social functioning and quality of life. It also supports findings made by Rothbard & Kuno, who analysed four cases of deinstitutionalisation in Europe and suggested that discharging long-stay patients to the community might be easier than is usually assumed.<sup>93</sup> Our study reveals little evidence of negative consequences of deinstitutionalisation globally.

### Limitations

Patients from the studies analysed here are not representative of all deinstitutionalised patients. Untraced and unreported patients could have biased the results, although it would be far from appropriate to conclude that untraced patients were either in prison or homeless. Analyses of withdrawal, which were conducted in some studies (for example those by Honkonen *et al* and Gardos *et al*),<sup>60,94</sup> showed that these patients did better at baseline, and therefore might have had improved health during the follow-up and as a consequence deliberately lost contact with mental health services. In addition, there might have been some unreported negative outcomes in primary studies, for instance those that occurred among patients who were already dead by the time of the follow-up. Differences in length of stay, age, gender distribution, place and means of discharge, availability of community services and year of discharge were detected in included studies and make direct comparisons more difficult. Furthermore, mean values might be unrepresentative because outliers could skew the distribution. This was probably the case for many studies analysed here, but this influenced only the sociodemographic profile of patients and not the outcomes of interest – homelessness, imprisonment, suicidality – as these have a binary form (yes or no). There were considerable differences in the follow-up periods, which ranged from 1 year to 25 years. Studies with longer follow-up are expected to have higher drop-out rates and also a greater chance that some of the respondents would become homeless, commit a serious offence or die by suicide. Differences in the health status and history of psychiatric treatment of the population in the studies may be attributed to differences in diagnostic profiles. In some cases, for example in the study by Furlan *et al*,<sup>67</sup> the mean age of patients was close to 65 years; thus, some might have had age-related disorders such as dementia, which could slightly bias the results. In many studies there were some patients with personality disorders and drug misuse, and it is not entirely clear whether these were the patients who eventually became homeless or were imprisoned.

A further limitation relates to the place of stay after discharge from hospital. Some of the patients were discharged to nursing

homes, and it is questionable whether these can be considered to be proper community facilities. The same applies to the Sasagawa project.<sup>62</sup> The Sasagawa hospital was converted into a facility with traditional living accommodation and it is arguable whether this represents 'regular' deinstitutionalisation. Additionally, the definition of homelessness was not addressed in the majority of studies. For instance, in the study by Rothbard *et al*, everyone who had ever been admitted to a homeless shelter was considered to be homeless, no matter how long this period had lasted.<sup>73</sup> On the other hand, Double & Wong found two former patients in a Sheffield hostel for homeless men, but did not record them as homeless.<sup>95</sup> The problem of definition also applies to criminality. There are a number of ways to measure criminality, such as self-reports, police reports, number of trials and records from country-specific registers. Our review focused on serious offences only and reported the number of those who ended up in prison after being discharged from psychiatric hospitals. Less serious offences, as well as other relevant details from primary studies, are reported in online supplement DS2.

### New cohorts and short-term patients

Despite its limitations, our review suggests that deinstitutionalisation has not resulted in substantial homelessness and imprisonment among discharged long-term patients. It may be, however, postulated that deinstitutionalisation has had a negative effect on new cohorts of patients without access to a psychiatric hospital. This hypothesis is difficult to test. A randomised controlled trial and 5-year follow-up of newly admitted patients with schizophrenia spectrum disorder in Denmark did not find evidence to justify hospital-based treatment,<sup>96</sup> and a study by Wahlbeck suggested that deinstitutionalisation in Nordic countries, where appropriate community services were available, might have contributed to a reduction in the life expectancy gap between those with mental health problems and general population,<sup>97</sup> but still it is difficult to entirely rule out the aforementioned hypothesis.

It may be also argued that recipients of long-term hospital care have stabilised disorders and are thus at a lower risk of unwanted outcomes than those in their first year of severe mental illness. This argument, however, is not against deinstitutionalisation. It stresses the need for availability of mental health services and mental health beds, but does not imply that these have to be located in large psychiatric institutions. On the contrary, Housing First and assertive community treatment are both community-based services that have been shown to be effective in working with homeless people with mental health problems.<sup>98–100</sup> Although it might be more expensive to provide such comprehensive care in the community, this does not make it less cost-effective, and it is a human right to live independently and to be included in the community.<sup>101</sup>

### Implications

The perfect methodological approach that would allow a clear conclusion on the association between deinstitutionalisation, homelessness and imprisonment is unclear. This systematic review, however, demonstrates that the number of former long-stay patients who became homeless or imprisoned after discharge was not excessive, contrary to popular argument. The findings suggest that some of the ecological studies may have been confounded. Cohort studies that followed up or traced back people discharged from long-term psychiatric care show that these patients benefited from the transfer to the community and that serious behavioural problems such as homelessness,



imprisonment or suicide did not occur frequently. However, this might have been different with patients with intellectual disabilities or those who were discharged from secure wards. The review has implications for forthcoming psychiatric reforms in eastern Europe and elsewhere. It will help decision makers to tackle the argument that deinstitutionalisation will lead to homelessness and criminality among those with mental health problems, and it will also help stakeholders to justify reforms and advocate increased investment in mental health budgets.

### Future research

The findings presented here suggest that Penrose's hydraulic hypothesis might need to be reconsidered. In Penrose's time *de facto* all public mental healthcare investment went into psychiatric hospitals. Decreasing the number of psychiatric beds signified decreasing investment in mental healthcare. This has, however, changed with the discovery of effective psychopharmaceuticals and with the introduction of new forms of care, both of which emerged roughly in the mid-20th century. Now, a decrease in the number of psychiatric beds no longer necessarily means a decreasing investment in mental healthcare. Instead, as a consequence of the increasing burden of mental disorders and more pressure on the availability of good-quality care in the community, investments into mental health might be rising, whereas the number of beds in mental hospitals might be simultaneously decreasing. Deinstitutionalisation has been criticised and its association with homelessness and criminality among those with mental disorders has been suggested mainly in locations where there have also been deep societal changes, mental health budget cuts and insufficient investment into the development of appropriate multilayered care in the community. Together, these factors suggest that Penrose's hydraulic hypothesis could be stated more precisely as the idea that criminality and homelessness increase as efficacious public investment into mental health decreases. Further research is needed to examine this refined hypothesis.

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## reflection

### *The Anatomy of Melancholy* by Robert Burton

German E. Berrios

*The Anatomy of Melancholy* (1621) continues featuring in all histories of 'depression' and/or 'melancholy' (as per the current meaning given to these terms). This erroneous inclusion may be due to anachronistic reading, lazy repetition of earlier claims or mere ignorance. Be that as it may, over the years the false friends ('anatomy' and 'melancholy') have set a deserved trap to those who believe that this book offers an 'early insight into the neural networks (*anatomy*) that underlie depressive illness (*melancholy*)'.

The fact that by the end of the 16th century the old Greek word 'anatomy' was already being used figuratively (e.g. anatomy of mischief, anatomy of grief) explains Robert Burton's (1577–1640) choice. In turn, the polysemic term 'melancholy' carried, in addition to its classical Hippocratic reference to malaria and black bile, an allusion to 'love-melancholy' – as Lawrence Babb identified in Elizabethan poetry. If to these linguistic usages the fact is added that by the early 1600s centosising had become fashionable as a show of erudition, then it makes sense to see *The Anatomy of Melancholy* for what it is, an anthology of classical quotations referring to human emotions, passions, feelings, dissatisfactions and complaints about life. The fact that the quotation-hunter can find in this book support for any claim they may wish to make explains the persistent presence of Burton's cento in histories of depression, hypochondria, anxiety, obsessive-compulsive behaviour, and so on.

If *The Anatomy of Melancholy* is not really about psychiatry, then, what is it about? The greatest among Burton's scholars, John Bamforth (1921–2009), described it as an *omnium gatherum*, a literary genre according to which only successful centos, i.e. those truly encompassing the knowledge of a historical period, could contain hidden 'truths'. In this epistemological sense, during the early 17th century Burton's book played a social, political and scientific role comparable to that of meta-analysis in our own day.

To write his book Burton ransacked about 1500 classical texts. It ended up being half a million words' long (including 8000 footnotes). The five 'revisions' that followed caused it to have a multi-layered structure and Burton's original intention of writing a consolatory (partially self-therapeutic) religious discourse was well-nigh lost under a frondous canopy of 'medical' quotations. Influences shaping the book ranged from *Archipathologia* (1614), the great cento written by P. E. Montalto (1557–1616), to ongoing innovations in map-making and in the concept of geography. The thread stitching the patchwork of Burton's work together was no doubt his balanced scholarship, literary sensitivity and his readiness to take personal responsibility for all he had stated in his book. In contrast to the great centos of the past, meta-analysis explores a 'knowledge' base that presents itself as impersonal, universal and immanently 'truth-making'.

Reams have been written on *The Anatomy of Melancholy*. Those who really want to know it should approach it with different eyes and expectations and stop searching in it for descriptions redolent of 'bipolar disorder' or 'agoraphobia' or whatever. Given that all its content is borrowed from classical texts, seeing it as a 'psychiatric textbook' leads to the strange conclusion that all classical literature must also be regarded as psychiatric in nature! *The Anatomy of Melancholy* must be seen as a cultural object whose meaning, as time goes by, is becoming increasingly harder to apprehend. It teaches us something far more important than psychiatry: it provides us with the epistemological coordinates with which we can understand the remote world of the 17th century.