

Mortality of mentally handicapped patients after mass inter-hospital relocation

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Summary

In September 1987 847 mentally handicapped patients were moved from A. J. Stals Care and Rehabilitation Centre to Lentegeur Hospital. A study of the death rates of patients for 4 years before the move and 18 months afterwards showed a rise in the death rate in the 6-month interval after the move.

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Reports regarding the consequences of relocating institutionalised patients provide conflicting results. Watson and Buerkle¹ concluded that certain types of mass involuntary transfer of geriatric neuropsychiatric patients can be carried out without an increase in deaths. On the other hand, Schultz and Brenner² concluded that mortality rates of elderly institutionalised patients were significantly higher for those moved to another hospital or nursing home than for a comparable group that were not moved. Pablo³ found that the effects of relocation were detectable for 12 months after transfer.

There is evidence that the outcome of relocation is influenced by a number of factors, including psychological preparation of the patients for the move; the degree of environmental change; and also the characteristics of those moved, especially the severity of their disabilities. Zweig and Csank⁴ reported a decrease in mortality in the year after relocation compared with mortality in the same population in each of the 3 previous years. Their study involved chronically ill geriatric patients who were intensively prepared for a move to more modern facilities on the same site. Haddad⁵ reported no significant increase in mortality for psychogeriatric patients who were not specifically prepared for relocation, but were looked after by an increased number of staff in more suitable facilities. Morriss *et al.*⁶ recently reported no significant increase in mortality for long-stay psychiatric patients who were not intensively prepared for relocation, and did not visit their own homes before transfer, but were mostly moved in small groups with the same staff and patients to similar or improved facilities. They also suggested that where a group of patients had undergone inter-hospital and intra-hospital relocation before, those patients who were particularly susceptible to the effects of relocation might already have died.

A search through recent medical publications did not highlight any reports on mortality after relocation of mentally handicapped patients.

In this study observations on the effect of relocation on the mortality among long-stay mentally handicapped patients are reported.

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Patients and methods

A. J. Stals Care and Rehabilitation Centre was a hospital for mentally handicapped patients in Tokai, Cape Town. The facilities were old and considered inadequate for the requirements of the patients. In September 1987 the patients and staff were relocated to Lentegeur Care and Rehabilitation Centre in Mitchell's Plain, Cape Town. This is a newly-built hospital with modern facilities more suited to the patients' needs. The nursing staff/patient ratio and the ratio of medical practitioners to patients stayed more or less the same.

The patients were prepared for the move by the nursing staff and the nursing and other professional and administrative staff were kept abreast of developments by management. Groups of staff, and even patients who could cope physically, visited the new hospital to acquaint themselves with the facilities before the move.

Patients were relocated in groups over a period of weeks, and as far as possible were moved with the same staff. Immobile patients were moved in a humane, organised manner by the Provincial ambulance service, but this group could not be prepared by a visit to the hospital beforehand. The relocation involved 847 patients, 57% of whom were men.

The death rate of patients for the 18-month period after relocation was compared with the death rate among the same patient population during the preceding 4 years. Although using a 12-month period would negate any seasonal influence, we found it appropriate to use 6-month intervals of study in the comparison, taking the anniversary date of the move as the start of each 12-month interval. The denominator for the rate did not vary significantly over the study period (median 841; maximum 1,9% > median; minimum 3,4% < median). Unfortunately, information on the proportion of profoundly mentally handicapped patients was not available for all the periods; however, we believe that the proportion remained constant.

We also compared the degree of mental handicap of the patients who died after relocation with the patients who had died in the previous 4 years.

Results

There was a trend for the death rate to decrease over the 4 years before relocation, with a mean of 1,8% per 6-month interval. This decrease was probably a result of more vigorous medical treatment.

During the 6-month interval after relocation there was an increased death rate of 2,8% followed by a decrease of 2,0% and 1,3% in the following two 6-month intervals thereafter (Fig. 1). The mean age of patients who died after relocation was 29,9 years and 54% were men. In the previous 4 years the figures were 29,7 years and 51% men. The mean duration of hospital stay of patients who died was 10,6 years (range 24 - < 1 yr). Only 1 patient had undergone previous inter-hospital relocation, and then only for a short stay in a general hospital for physical treatment.

When the patients who died were divided according to their degree of mental handicap, there was a noticeably higher percentage of profoundly mentally handicapped patients who

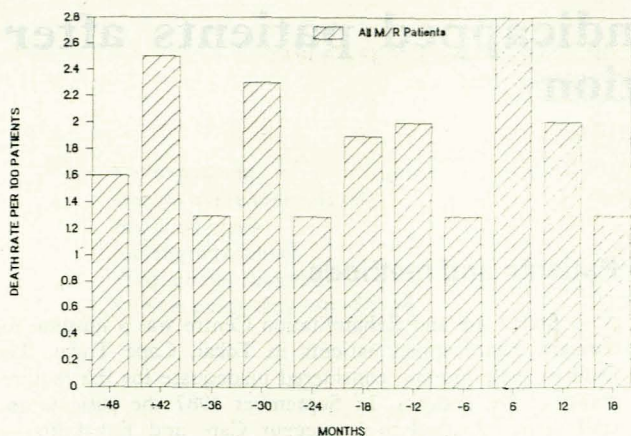


Fig. 1. Death rates for consecutive 6-monthly intervals, 1 September 1983 - 2 February 1989.

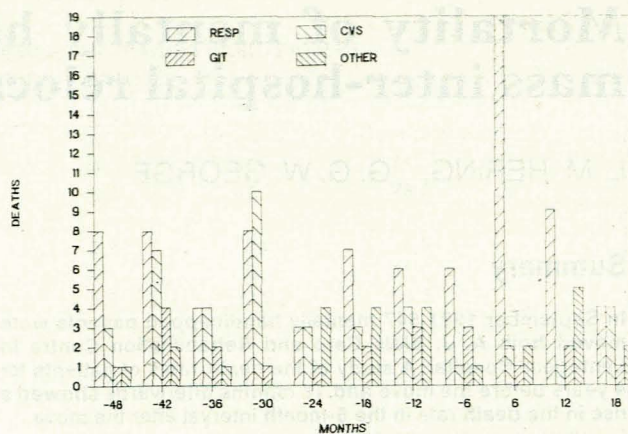


Fig. 3. Causes of death for consecutive 6-monthly intervals, 1 September 1983 - 2 February 1989.

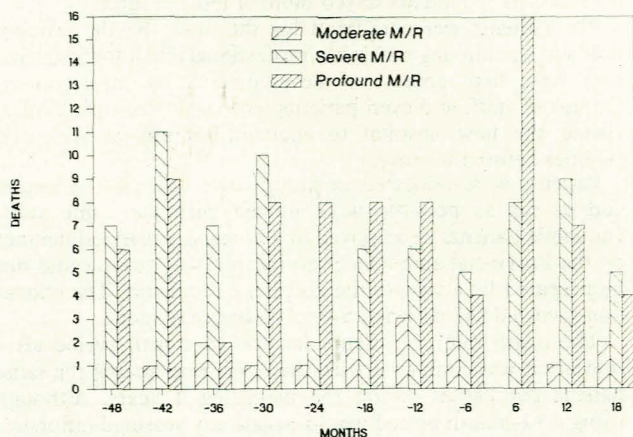


Fig. 2. Total deaths according to severity of mental handicap for consecutive 6-monthly intervals, 1 September 1983 - 2 February 1989.

died in the 6-month interval after relocation (66,7%; 16/24) compared with all other intervals (43,5%; 64/147), this difference being statistically significant (χ^2 4,4; 1 df; $P < 0,03$) (Fig. 2).

Causes of death were noted from death certificates. The most common cause of death in the 6-month interval after relocation was respiratory disorder, which accounted for 79% of deaths (19/24). This was followed by cardiovascular diseases (8,5%), other diseases (8,5%) and gastro-intestinal diseases (4%). During the 4 years before relocation, respiratory disorders accounted for statistically significantly fewer deaths, i.e. 42% (50/119) (χ^2 11,0; 1 df; $P < 0,002$ (Fig. 3).

Discussion

In a recent study of mortality in a hospital for mentally handicapped patients, McLoughlin⁷ found an overall death rate of 23,1/1000 living patients. Figures for total hospital populations are, however, influenced by age of the population and its composition in terms of mental handicap. For example, McLoughlin⁷ also found that the severely handicapped group of patients with an IQ of < 36 had a significantly greater

chance of dying under the age of 50 years compared with patients with an IQ of ≥ 36 . Conversely, in the mildly handicapped group the death rate was as high as 58,5/1000 because it was an older population.

In our patients we observed that in spite of the preparation before transfer, and the improved facilities and nursing care afterwards, there was an increase in the death rate of mentally handicapped patients after relocation. The effects did not last for more than 6 months. Neither age nor gender appeared to be a factor in this increase. The fact that the increased number of deaths were observed in the profoundly mentally handicapped group of patients suggests that these patients were more susceptible. This may have been because they were unable to benefit from the prior preparation owing to their mental handicap or because of the physical handicaps commonly associated with profound mental handicap and their known higher mortality rate. Also, very few of our patients had undergone inter-hospital relocation before, which might have been a further reason for increased susceptibility.

Respiratory disorders appeared to account for the increase in deaths. Severely mentally handicapped patients might be more susceptible to respiratory disorders because they are less efficient at throat clearing, coughing and nose blowing and so there might be a greater incidence of chest infections.

It is anticipated that the death rate will return to the mean rate before the move, and that the long-term downward trend will be resumed.

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