Measuring the quality of urinary continence care in long-term care facilities: an analysis of outcome indicators

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Abstract

Background: the National Centre for Health Outcomes Development has produced outcome indicators for the assessment of quality of care in the management of urinary incontinence. Three measures relate to the management of older people in long-term care: the prevalence of incontinence, the use of indwelling catheters and clinical assessment rates.

Objective: to evaluate the recommended outcome measures in clinical practice.

Method: participating centres included residential homes, nursing homes and long-stay wards. We sent a structured questionnaire to each centre for qualitative assessment of the acceptability of the outcome indicators. We analysed data collected by nurses and other staff who used the urinary incontinence section of the Royal College of Physicians Continuous Assessment Review and Evaluation scheme audit tool for long-term care.

Results: there were 1125 residents in 17 residential homes, 14 nursing homes and five long-stay wards. The overall prevalence of urinary incontinence was 34% in residential homes (range 2–86%), 70% in nursing homes (38–100%) and 71% in long-stay wards (4–97%). Catheterization rates were 5% in residential homes (0–20%), 10% in nursing homes (0–44%) and 6% in long-stay wards (0–20%). Rates of full clinical assessment were 48, 24 and 36% respectively.

Conclusion: there is great variability in these outcome measures within and between settings. Interpretation of outcome results requires more precise details on case-mix and the definition of outcome measures. Individual units found the audit tool helpful, but we advise caution with interpretation of outcomes between units.

Keywords: long-term care, outcome and process assessment, quality of health care, urinary incontinence

Introduction


The National Centre for Health Outcomes Development set up a working group representing many disciplines. This group recommended health outcome indicators for the management of urinary incontinence. Three of these indicators are relevant to residents in long-term care: the prevalence of urinary incontinence, the use of indwelling catheters and rates of clinical assessment [2].

The aims of this study were to evaluate these health outcome indicators in clinical practice.

Methods

Thirty-six long-term care sites volunteered to take part in this study: 17 residential homes, 14 nursing homes and five long-stay hospital wards. Nurses collected data at each site using the Continuous Assessment Review and Evaluation scheme, which includes a clinical audit...
tool for the long-term care of elderly people [3–5]. The required information was obtained from nursing and medical notes. The data and results were kept anonymous. We did not obtain information on the ratio of staff to residents.

Staff from 22 of these sites completed a structured questionnaire at the end of the study. This gave qualitative data on the accuracy, interpretability, feasibility and acceptability of the outcome measures.

Results

There were 1125 residents in the 36 sites, and 608 were said to be incontinent. Results for the indicators in the three settings are shown in Table 1. A high prevalence of incontinence was reported, especially in nursing homes and long-stay wards. Rates for the use of indwelling catheters were low. There was much variation in the prevalence of incontinence and the use of indwelling catheters by site. The rates reported for fully assessing incontinent patients were low. Analysis of functional disability (Barthel index 0–9) and a crude assessment of cognitive function (from the audit tool [5]) showed considerable variation between sites in these case-mix factors (Table 2).

Staff expressed concerns about case-mix, selection criteria for admission to care settings and difficulties in variable definition of terms with regard to clinical assessment such as ‘appropriate assessment’ and ‘appropriate examination’.

Discussion

Clinical governance requires that quality of care is defined and measurable [1]. The work of the National Service Frameworks and of the National Institute for Clinical Excellence is directed to implementing systems that enable quality of care to be measured and compared between care settings. Any such systems will require outcome measures of care that are acceptable to clinicians.

Urinary incontinence affects many older people [6, 7] and is expensive to the National Health Service [7, 8]. It is therefore helpful to have outcome measures defined by an expert working group reporting to the Department of Health [2]. It is important to determine whether it is possible to collect the data required to quantify the outcome measures in everyday practice, and whether the outcome measurements are accepted by clinical and care staff as a valid reflection of the care provided [9].

The high prevalence rates in this study demonstrate the burden of urinary incontinence in varying long-term care settings. However, the usefulness of prevalence figures as indicators of failure in the prevention or successful treatment of incontinence cannot be assumed. Factors such as case-mix and admission policy will

### Table 1. Outcome indicators by type of accommodation: rates for all sites combined and for each site separately

<table>
<thead>
<tr>
<th>Accommodation type</th>
<th>Residential home</th>
<th>Nursing home</th>
<th>Long-stay ward</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of sites</td>
<td>17</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>No. of occupied beds per site</td>
<td>12</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Prevalence of incontinence of urine (%)</td>
<td>2.5</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Overall</td>
<td>7</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>By site</td>
<td>5</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Use of indwelling catheters in incontinent subjects (%)</td>
<td>20</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Overall</td>
<td>50</td>
<td>37</td>
<td>30</td>
</tr>
<tr>
<td>By site</td>
<td>37</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>Fall clinical assessment for incontinent subjects (%)</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Overall</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>By site</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

*χ² test for comparison of the three types of accommodation: *p* < 0.001, *p* = 0.007.

Of patients for whom data were returned.

0.0%
confounded the results. Data from both the case-mix analysis and questionnaire confirmed the marked variation in case-mix between settings. Such variations have important implications for the proper care and management of residents. Skill-mix, staffing levels and training must be appropriate for the dependency of residents admitted. The rate of indwelling urethral catheterization is an outcome measure that may be a better marker of quality of care, but again variations in case-mix must be taken into account in any comparative study. Over-use of catheters to manage incontinence, other than for short-term periods, is a potential sign of sub-optimal care and an indication that further assessment and alternative treatment could be offered.

The third outcome indicator, clinical assessment rates, may reflect quality of care if reliably collected. However, the definition of constituent elements such as ‘relevant history’, ‘relevant examination’ and ‘management plan’ will be subjective unless precisely defined. These terms require more clarification and standardization for the purposes of accurate and reliable data analysis.

Although nurses collected most of the data, other members of the inter-disciplinary team participated in discussion of the results and implementation of change to improve clinical care. The outcome indicators were found to be helpful within care settings for reviewing and improving quality of care. The amount of case-mix variability made interpretation of results between sites difficult.

Key points
- National outcome measures defining the quality of care for urinary incontinence have been published in the UK by the National Centre for Health Outcomes Development.
- These measures are useful in promoting continence care, although careful attention is needed when interpreting them.
- Interpretation of measures between sites requires more detailed information, including details of case-mix and more precise definition of measures.

Acknowledgement

This study of health outcome indicators in long-term care was undertaken with the funding and support of the National Centre for Health Outcomes Development. It relied heavily on the collaboration of a number of sites whose participation and contributions were critical to the study. Staff at the Clinical Effectiveness and Evaluation Unit of the Royal College of Physicians played a key role in processing the data and assisting in the presentation of the results.
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References


Received 21 October 1999; accepted in revised form 10 July 2000