Clinical pathways in psychiatry
Sara E. Evans-Lacko, Manuela Jarrett, Paul McCrone and Graham Thornicroft.

Summary
This editorial summarises the literature on the use of care pathways in psychiatry. Further, it considers the case-mix clusters used in care pathways in relation to health service financial tariff and currency systems, and also reviews the evidence for the effectiveness of clinical pathways.

Increasing emphasis is being placed on the implementation of care pathways for mental health, both nationally and internationally. Several clinical pathways have already been implemented in all types of healthcare settings, including psychiatry, both in the UK and abroad. Although many different definitions have been developed for care pathways, most include at least two specific components: (a) the types of services/interventions that are provided (e.g. assessment, admission, therapy); and (b) the time line over which this happens. For example, a definition used within the UK National Health Service (NHS) states that care pathways are:

Both a tool and a concept that embed guidelines, protocols and locally agreed, evidence-based, patient-centred, best practice, into everyday use for the individual patient.

Care pathway development began in the USA during the 1980s within managed care. Interest in care pathways then emerged in the UK during the early 1990s, along with the implementation of pilot sites. Despite growing enthusiasm for care pathways, evidence to support their effectiveness is, at present, weak. Their use is predicated on the hypothesis that the implementation of care pathways will help to improve care, for example by reducing the length of stay, improving multidisciplinary collaboration, increasing evidence-based practice, containing costs, or by enhancing patient empowerment. There is, however, limited evidence supporting any of these outcomes.

Several studies have examined the effectiveness of care pathways; however, a review of the quality of these studies demonstrates poor overall scientific quality. Specifically, several studies are flawed by use of historical controls without adequate adjustment for secular trends. Comprehensive reviews of care pathways in general medical and surgical settings also show weak evidence for reducing length of stay or improving care.

Evidence for care pathways in mental health
Clinical pathway development and use is more common in other areas of medical practice than in psychiatry, where their use has been rather limited to date. Some of the barriers to the implementation of clinical pathways include: defining the start and end of an episode of care, as this is clearly problematic with some long-term or intermittently relapsing and remitting mental health conditions; standardising packages of care for complex disorders; and having high levels of individual variation within designated clinical case-mix groups.

Eight studies have assessed the impact of care pathways in mental health (see online Table DSI). Three of these were for care pathways for use with people with schizophrenia, and the others referred to a general acute in-patient pathway, psychosis, major depression, major depression and psychosis, and anorexia nervosa. The results of the studies were mixed, and indeed several did not specify clear outcome criteria. Only one of these studies used a control group, but low completion rates added to the difficulty in determining the actual effectiveness of the pathway. Importantly, most of the studies cited the importance of contextual factors in the development of the care pathways. This is in agreement with other research highlighting the situational factors within which a pathway is implemented, and suggests that substantial clinical engagement in the development of a pathway may be an essential ingredient for its successful implementation.

Payment by results and care pathways
An important aspect of the introduction of care pathways is their potential use for financial systems in healthcare. The central idea is that the clinical case-mix groups identified for particular pathways may also be used as the basis for calculating costs for commissioning or reimbursement of service use. In England, at present, there is strong support for the implementation of care pathways at a national level for mental health as an integral part of the ‘payment by results’ system, which pays healthcare provider organisations on the basis of a standard fee for a particular type of intervention applied to a category of patients. Advocates for the use of payment by results in psychiatry cite the potential for improved efficiency and quality of mental healthcare. Moreover, care pathways are seen as an integral part of quality improvement by ensuring that the payment by results tariff relates not only to the average care inputs, but also reflects best practice in delivering care.

The evidence on the impact of care pathways and payment by results on the delivery of mental healthcare is still rudimentary. The Northern and Yorkshire Region of the NHS recently developed a case-mix system based on 13 care groups with a view to using this as the basis for payment by results. This system has been shown to have face validity among clinicians and the groups are distinct – two of the essential characteristics of a case-mix measure. A third required characteristic is that resource requirements for group members are similar. The Northern and Yorkshire team has been costing care provided to these groups based on: (a)
optimal care pathways, and (b) services actually used by patients in each group. So far, the costs reported for optimal care pathways have been found to be much higher than the actual observed costs. Therefore, it is unclear whether the use of care pathways in this instance is going to be a suitable basis for producing the tariff required for payment by results.

Conclusions

A clinical pathway is therefore a concept that both applies to a proposed sequence of steps for clinical care for a particular group of patients and can be used as the basis for calculating typical costs for an episode of treatment for patients in these categories. At present there is still a dearth of information on the effectiveness of implementing care pathways in mental health and on their use for financial purposes. Therefore, more evidence is needed on the effectiveness and the cost-effectiveness of clinical pathways before we can know whether they contribute towards better mental healthcare.

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References


### Data supplement

#### Table DS1: Comparison of mental health-related care pathway assessment studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Pathway indication</th>
<th>Sample and setting characteristics</th>
<th>Evaluation measures</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>Panella et al, 2006&lt;sup&gt;10&lt;/sup&gt; (Italy)</td>
<td>Schizophrenia</td>
<td>n=36; 19 individuals with schizophrenia, 17 controls</td>
<td>Process: prescription patterns, adherence to personal management plan, clinical record quality. Outcome: mental tests, rate of job reinsert, rate of revolving-door admissions, hospital admission.</td>
<td>† filling of personal management plan † use of mental tests † patients’ seclusion/restraint † antipsychotic and depot therapy use † evidence-based prescription pattern</td>
</tr>
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<td>Lock, 1999&lt;sup&gt;5&lt;/sup&gt; (USA)</td>
<td>Anorexia nervosa in adolescents</td>
<td>Hospital setting</td>
<td>Length of stay, cost of care, utilisation of high-cost medical interventions</td>
<td>† length of stay † cardiac monitoring † days on bed rest due to vital sign instability † number of days payment denied by insurers † in acceptable weight gain</td>
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<td>Jones, 2000&lt;sup&gt;9&lt;/sup&gt; (UK)</td>
<td>In-patients with schizophrenia</td>
<td>n=7</td>
<td>Participant observation, in-depth interviews, group meeting records</td>
<td>On average 31% completion of care pathway. Average of 21 days on care pathway (5–43). Noted poor documentation and high staff turnover.</td>
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<td>Emmerson, 2004&lt;sup&gt;8&lt;/sup&gt; (Australia)</td>
<td>Psychosis and depression</td>
<td>In-patient clinic</td>
<td>Not specified</td>
<td>† length of stay of care pathway patients † use of seclusion</td>
</tr>
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<td>Rayner, 2005&lt;sup&gt;11&lt;/sup&gt; (UK)</td>
<td>Residential placement</td>
<td>3 units, Nottinghamshire NHS Trust. Majority had a diagnosis of schizophrenia</td>
<td>Not specified</td>
<td>High staff turnover noted. Staff felt language was medically based and did not incorporate nursing concepts.</td>
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<tr>
<td>Emmerson, 2006&lt;sup&gt;4&lt;/sup&gt; (Australia)</td>
<td>Acute in-patient</td>
<td>9 in-patient teams</td>
<td>Length of stay, unplanned re-admissions, absconding, self-harm and suicide attempts</td>
<td>No improvement in clinical outcomes. Pathways completed for 81% of admissions.</td>
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<td>Wilson et al, 1999&lt;sup&gt;12&lt;/sup&gt; (Australia)</td>
<td>Major depression: in-patient context</td>
<td>n=17</td>
<td>Acceptance and completion rate, focus groups of staff</td>
<td>Completion ranged from 3.6% (occupational therapy) to 68% (nursing). Nurses felt the pathway was least useful.</td>
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<td>Reilly et al, 2007&lt;sup&gt;13&lt;/sup&gt; (Australia)</td>
<td>First presentation psychosis</td>
<td>Generic Victorian adult area mental health service</td>
<td>Noted failure to establish measurable objectives</td>
<td>Inability to evaluate service improvement at the level of patient outcomes. Noted duplicative documentation.</td>
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