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Article

Managing schizophrenia in primary care: the utility of remission criteria as outcome indicators

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ABSTRACT

The shared management of patients with schizophrenia in primary care can only succeed if underpinned by valid, easily administered and clinically relevant outcome measures. While conditions such as depression and anxiety lend themselves to this approach through the development, over a number of years, of patient- and observer-rated scales, schizophrenia still lacks the capacity for meaningful outcome measures. Recently, two international working groups have developed the concept of remission in schizophrenia and recommended a simple, brief and clinically valid measure based upon improvement in key symptoms over a specified time period. The authors consider this concept and its application to primary care both as a commissioning tool and to facilitate shared care of this chronic medical condition.

Keywords: outcome measures, remission criteria, schizophrenia, shared care

Introduction

From the *National Service Framework for Mental Health*,[1] to Lord Darzi's *Next Stage Review*,[2] through various evidence-based guidelines from the National Institute for Health and Clinical Excellence (NICE), UK mental health provision is moving inexorably towards a model of treatment in primary care, with specialist involvement as necessary. Primary care trusts are the commissioners of health care, with individual primary care physicians expected to take an increasing role so as to have 'a direct impact on the health and well-being of the population, driving unprecedented improvements in patient outcomes ...' (p. 3).[3]

While this may be seen as a parochial UK-based view of mental health, it is broadly supported by international experience as reviewed in the report on integrating mental health into primary care produced by the World Health Organization (WHO) and World Organization of Family Doctors (WONCA).[4] The conclusions are based upon a number of straightforward, but significant, evidence-based observations, including the substantial personal and economic burden of untreated mental disorders, and their prevalence in primary care, together with the inadequacy of primary care services for mental disorder, and consequent failures in recognition and treatment.[4]

As primary care physicians begin to shape the commissioning agenda, the ability to evaluate healthcare provision through setting measurable outcomes will become increasingly important. In most health settings, outcomes are largely reduced to 'payment by volume', and this is likely to apply equally to mental health, where the reliable measurement of clinical outcomes is generally considered to be an unattainable goal.[5] Nevertheless, if clinical services are to be shaped so as to improve the quality of clinical outcomes and reduce illness burden, the development of simple, valid instruments to measure change is essential. Such measures must be clinically led and universally adopted.[6]

> Schizophrenia is one of the most stigmatizing disorders, resulting in violations of human rights and discrimination in areas such as employment, housing, and education (p. 28).[7]

Worldwide, an estimated 25 million people suffer from schizophrenia, with the median gap between prevalence and numbers of people receiving care and treatment assessed at around 32% in high-income countries and much higher in poorer nations.[4] The cause is likely to be multifactorial, but poor funding of primary care provision, and stigma associated with exclusion from the community, from the workplace, and from society are likely to be important. Further, it is likely that a proportion of primary care clinicians are reluctant to take on the management of patients with schizophrenia, even those with stable symptoms,[4] in contrast to their willingness to manage patients with other chronic relapsing, remitting illnesses such as diabetes, rheumatoid arthritis and asthma.[4]

The WHO recently launched its *Mental Health Gap Action Programme* (mhGAP) in a bid to address the 14% global burden of disease caused by mental, neurological and substance use disorders (MNS).[7] Of this figure, measured in disability-adjusted life years (DALYs), 1.1% is the result of schizophrenia and other psychosis, and this extends to 2.8% when the early onset, long duration and severity of disability are taken into consideration. Recognising the adage 'what gets measured gets done', the programme recommends processes of monitoring and evaluation for its planning and implementation. Perhaps because the scope is too limited to consider individual conditions, however, outcomes in respect of morbidity are not addressed.

The purpose of this paper is to consider the use of remission criteria as an outcome measure for schizophrenia that could offer significant opportunities in addressing the fluctuations in the clinical course of this illness, supporting primary care and providing a common currency with specialist services to facilitate the delivery and success of management.

Outcome measures in schizophrenia

It would be a mistake to think that psychiatric disorders are not amenable to simple, quick and meaningful measures of clinical course and outcome. The mhGAP report provides a framework for the measurement of health information, as well as considering how these impact upon the health status of the individual.[7] It is unfortunate that the only example of an outcome measure is in the number of people treated each year for MNS disorders as a proportion of the total annual prevalence of those disorders. This is a measure of the volume of patients treated rather than the level of morbidity of the particular condition. In primary care, it is particularly important to assess the severity of symptoms on an ongoing basis, as these often fluctuate over time, particularly in chronic mental disorders. This is an issue that is related to, but distinct from, estimations of numbers in treatment, diagnosis or severity, but that has a crucial impact upon the relationship between patient,

primary and specialist services in respect of shared care management.

In the study of affective and anxiety disorders there are a number of validated, easily administered instruments that define the level of severity of the illness, based upon symptom severity and functional impairment, that are easy to use in clinical practice and can form the basis of outcome measures for the purposes of commissioning (e.g. Beck Depression Inventory, Hamilton Rating Scales for anxiety and depression). The relative complexity of schizophrenia makes the provision of a simple, quick and reliable measure of morbidity a more challenging proposition.

Schizophrenia is a chronic mental illness leading to a relapsing, remitting course in around 40% of patients.[8] Its myriad symptoms can be divided into a series of domains based upon positive, negative, cognitive and affective clusters. These have given rise to a number of valid research instruments such as the Positive and Negative Symptom Schedule (PANSS) or the Scale for Affective and Negative Symptoms in Schizophrenia (SANS). These instruments satisfy the first requirements of an outcome measure: they have a solid evidence base, are sensitive to change over time and are meaningful to clinicians. However, they are time consuming and complex to administer and are unlikely to be meaningful to service users and their families. Recent approaches to these instruments have allowed the development of a concept of remission in schizophrenia and its monitoring, over time, through a quick and simple scale that is likely to have currency within both primary and specialist care.

Remission

The term 'remission' is used in different ways in clinical medicine, but in mental health has generally been used in respect of anxiety and affective disorders to identify a state of minimal symptoms with no functional impairment.[9] Two expert panels, in the USA and Europe, have recently been occupied in developing a consensus definition of remission in schizophrenia. This has led to specific operational criteria for the assessment of remission over time in patients with schizophrenia.[10] The basis for this work was an analysis of the most diagnostically relevant domains from the PANSS and incorporation of a level of low scores and a time component that would indicate remission. The eight domains are: delusions, unusual thought content, hallucinatory behaviour, conceptual disorganisation, mannerisms/posturing, blunted affect, passive/apathetic social withdrawal, and lack of spontaneity and flow of conversation (see Table 1).

To be in remission, the patient has to satisfy a severity component – to be rated at 3 ('minimal symptoms'), or below, on all of these domains. In addition, there is a time component – that this level of symptoms must persist for a period of not less than six months (see Table 2).

The criteria are observer rated, and take in the region of 5–10 minutes to score as part of a standard clinical review. The concept has been tested and found to be viable from a qualitative and quantitative evaluation.[11–13]

Remission as an outcome measure

For a full review of literature investigating the use of the concept of remission in schizophrenia, see Yeomans *et al*.[14]

Lasser and colleagues studied the use of remission criteria in 578 schizophrenic patients as part of a trial of the use of long-acting injectable antipsychotics.[15] Although the patients were clinically stable at entry, only one-third met criteria for remission, with 21% of the unremitted subjects achieving remission during the trial period after further treatment. It is important to note, therefore, that two-thirds of patients referred to the study as clinically well still had residual symptoms, and that more than one-fifth of these were capable of further improvement over a short period of time with more effective treatment. The results have implications for consideration of appropriate outcome criteria given that even relatively low levels of residual symptoms can have a marked effect upon social integration, as demonstrated through the 18-month outcomes of patients in a study focusing on symptomatic and functional outcomes.[16]

In a study of 462 patients with first-episode psychosis over 2–4 years, 70% showed resolution of their symptoms on severity criteria alone, but only 24% achieved remission through maintaining their improvement for a period of six months. Remitters had a better quality of life, fewer relapses, a more positive attitude to medication, lower doses of medication and fewer extrapyramidal side-effects. This study demonstrates the utility of the remission concept in identifying practical stages in the illness associated with predictable clinical goals and prognoses.[17]

Investigations that have focused only on the severity criteria have led to a conclusion that meeting the remission criteria over six months predicts a

Table 1 The remission criteria symptoms derived from the PANSS

PANSS item	Symptom/sign	Definition
P1	Delusions	Beliefs which are unfounded, unrealistic and idiosyncratic
G9	Unusual thought content	Thinking characterised by strange, fantastic, or bizarre ideas ranging from those that are remote or atypical to those which are distorted, illogical and patently absurd
P3	Hallucinatory behaviour	Verbal report or behaviour indicating perceptions which are not generated by external stimuli. These may occur in the auditory, visual, olfactory or somatic realms
P2	Conceptual disorganisation	Disorganised process of thinking, characterised by disruption of goal-directed thinking, e.g. circumstantiality, tangentiality, loose associations, non-sequiturs, gross illogicality, or thought block
G5	Mannerisms and posturing	Unnatural movements or posture as characterised by an awkward, stilted, disorganised or bizarre appearance
N1	Blunted affect	Diminished emotional responsiveness as characterised by a reduction in facial expression, modulation of feelings, and communicative gestures
N4	Passive/apathetic social withdrawal	Diminished interest and initiative in social interactions due to passivity, apathy, anergy, or avolition. This leads to reduced interpersonal involvements and neglect of activities of daily living
N6	Lack of spontaneity and flow of conversation	Reduction in the normal flow of communication associated with apathy, avolition, defensiveness or cognitive deficit. This is manifested by diminished fluidity and productivity of the verbal-interactional process

Table 2 Rating guide for PANSS symptoms and signs

Rating level	For all symptoms and signs
1 (Absent)	Absent
2 (Minimal)	Questionable pathology, may be extreme of normal limits
3 (Mild)	Symptoms are clearly present but vague and relatively unobtrusive; they do not interfere with thinking, social relations or behaviour
All eight symptoms score above this line for 6+ months to be in remission	
4 (Moderate)	Symptoms are several and unquestionable but shifting and only occasionally interfere with thinking, social relations and behaviour
5 (Moderately severe)	Symptoms clearly manifest and preoccupy the patient, occasionally interfere with thinking, social relations and behaviour
6 (Severe)	Symptoms extensive and manifest, preoccupy the patient, and clearly interfere with thinking, social relations and behaviour
7 (Extreme)	Symptoms are severe and extensive and dominate major facets of life, leading to frequently inappropriate, irresponsible actions

better functional outcome than simply meeting the severity component at a single point in time.

Using remission in primary care

The remission concept has obvious advantages for service users, carers and primary care clinicians. It is quick and simple to use and provides a clear indication of the state of an individual's illness at a single point in time and its stability over time. It therefore removes the subjectivity from questions such as: 'How are you feeling?'.

The word 'remission' is used in everyday language when referring to a variety of chronic medical conditions, and conveys an impression of an illness that is still present but currently quiescent. This opens opportunities to discuss the benefits of long-term engagement and treatment, thus addressing insight and compliance.

Of equal importance, it offers an indicator for engagement with specialist services, with the possibility for clear pathways to be developed around the shared management of chronic schizophrenia in primary care. In 1997, Burns and Kendrick reviewed good practice guidance for the management of patients with chronic schizophrenia in primary care, and identified indicators for considering involvement of specialist services.[18] These included persistent symptoms, sudden or gradual changes in behaviour, and 'any problem the GP cannot deal with'. The inclusion of psychiatry as a core competency in GP vocational training will have led the last of these contingencies to become less frequent. Responding to this paper, Wilkes commented that 'the important assessment for the GP is that of a patient's vulnerability and functioning at an early stage of deterioration'.[19] In the decade that has elapsed since then, social inclusion for people with chronic mental health problems has become a firm part of the political agenda,[20] but there has been no instrument developed that can satisfy these requirements for primary care.[21]

The use of remission criteria would go some way towards providing a clinical framework for shared care of patients with schizophrenia, in a way that is common to many other chronic medical conditions.[22] Ease and speed of use make this an ideal instrument for primary care. Primary responsibility for the care of patients with schizophrenia would lie with secondary services until they meet the criteria for remission. At this point, in remission, a move to placing primary responsibility with the general practitioner (GP) would lead to management in primary care with periodic (up to three-monthly) reviews of care, including an assessment to ensure that they continue to meet the remission severity criteria and are thus still in remission. At any point where there is deterioration, a review by specialist mental health services could be sought, the goal being to continue in remission and facilitate psychosocial integration. Remission criteria thus perform the dual functions of ensuring symptomatic wellness at discharge from mental health services and allowing a prompt review in the event of relapse.

With insight, it would even be possible to train patients and their carers to be mindful of the remission criteria and use them to inform a crisis plan.

Conclusion

This paper has reviewed the concept of remission in schizophrenia and its utility in providing a simple, meaningful outcome on which to base shared care in increased patient/carer interaction.

There are a number of other ways in which a clear clinical concept of remission can add value to the management of patients with schizophrenia. Remission provides a structured routine measurement to facilitate open discussion with patients and their families, provides a focus for clinical ambitions to provide the optimal outcome for patients, provides an objective trigger to treatment review in patients who are not achieving remission within expected clinical timescales, and allows the possibility of 'treatment streams' based upon length of time to achieve remission, thus enhancing clinical judgement. Further, it provides a basis for the development of meaningful clinical pathways towards shared care and social inclusion of patients with schizophrenia.

REFERENCES

1 Department of Health. *National Service Framework for Mental Health: modern standards and service models*. London: HMSO, 1999.
2 Department of Health. *High Quality Care for All: NHS Next Stage Review final report*. London: HMSO, 2008.
3 Department of Health. *World Class Commissioning: vision document*. London: HMSO, 2008.
4 World Health Organization and World Organization of Family Doctors. *Integrating Mental Health into Primary Care: a global perspective*. Geneva: WHO Press, 2008.
5 Jacques J. Payment by results and mental health services. *Psychiatric Bulletin* 2008;32:361–3.
6 Gilbody SM, House AO and Sheldon TA. Psychiatrists in the UK do not use outcomes measures.

National survey. *British Journal of Psychiatry* 2002; 180:101–3.
7 World Health Organization. *mhGAP: Mental Health Gap Action Programme: scaling up care for mental, neurological and substance use disorders*. Geneva: WHO Press, 2008.
8 Bromet EJ and Fennig S. Epidemiology and natural history of schizophrenia. *Biological Psychiatry* 1999; 46:871–81.
9 Doyle AC and Pollack MH. Establishment of remission criteria for anxiety disorders. *Journal of Clinical Psychiatry* 2003;64(suppl 15):40–5.
10 Andraeason NC, Carpenter Jr WT, Kane JM *et al*. Remission in schizophrenia: proposed criteria and rationale for consensus. *American Journal of Psychiatry* 2005;162:441–9.
11 Van Os J, Burns T, Cavallaro R *et al*. Standardized remission criteria in schizophrenia. *Acta Psychiatric Scandinavica* 2006;113:91–5.
12 Leucht S, Beitinger R and Kissling W. On the concept of remission in schizophrenia. *Psychopharmacology* 2007;194:453–61.
13 Opler MG, Yang LH, Caleo S *et al*. Statistical validation of the criteria for symptom remission in schizophrenia: preliminary findings. *BMC Psychiatry* 2007;7:35.
14 Yeomans D, Taylor M, Forde K *et al*. How long have you been well? Remission as an outcome in schizophrenia. *Advances in Psychiatric Treatment* 2009;in press.
15 Lasser RA, Bossie CA, Gharabawi GM *et al*. Remission in schizophrenia: results from a 1-year study of long-acting risperidone injection. *Schizophrenia Research* 2005;77(2–3):215–27.
16 Wunderink L, Nienhuis FJ, Sytema S *et al*. Predictive validity of proposed remission criteria in first-episode schizophrenic patients responding to antipsychotics. *Schizophrenia Bulletin* 2007;33:792–6.
17 Emsley R, Rabinowitz J, Medori R *et al*. Remission in early psychosis: rates, predictors, and clinical and functional outcome correlates. *Schizophrenia Research* 2007;89:129–39.
18 Burns T and Kendrick T. The primary care of patients with schizophrenia: a search for good practice. *British Journal of General Practice* 1997;47:515–20.
19 Wilkes J. Primary care of patients with schizophrenia [letter]. *British Journal of General Practice* 1998;47:920.
20 Department of Health. *Capabilities for Inclusive Practice*. London: HMSO, 2007.
21 Oud MJT, Schuling J, Slooff CJ *et al*. How do general practitioners experience providing care for psychotic patients? *BMC Family Practice* 2007;8:37.
22 Rothman AA and Wagner EH. Chronic illness management: what is the role of primary care? *Annals of Internal Medicine* 2003;138:256–61.

CONFLICTS OF INTEREST

None.

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