

Management of early psychosis in a generic adult mental health service

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Objective: To evaluate current practice at a generic adult mental health service, St Vincent's Mental Health Service (SVMHS) in relation to management of patients with early psychosis. A further aim was to compare treatment of early psychosis patients within this generic service with management of a similar group in a specialized early psychosis service.

Method: A case file audit of all patients identified as having early psychosis (within the first 2 years of treatment) was undertaken using a standardized audit tool. Variables including proportion of early psychosis admitted as inpatients to the psychiatric unit, average length of stay (LOS), use of seclusion, involvement of police in admission process, mean neuroleptic dose and estimated duration of untreated psychosis (DUP) were studied. Results of this audit were then compared with published evaluative data from the Early Psychosis Prevention and Intervention Centre (EPPIC), a service specifically catering for young people with early psychosis (within the first 18 months of treatment).

Results: Data were collected on 62 of 68 patients identified as having early psychosis. Within the generic service, mean DUP was found to be about 15 months, a high proportion (81%) of patients were admitted and secluded (22% of those admitted), average length of stay was 46.5 days and use of police in the admission process was also high (40% of those admitted). This compares unfavourably with the EPPIC data of mean DUP of just over 6 months, 64.1% of patients admitted, 10.3% secluded, average LOS 12.9 days, and police involved in 3.8% of admissions.

Conclusions: We believe that practice at SVMHS in relation to early psychosis patients is fairly typical of management of these patients within generic services as a whole. These services tend to focus on the needs of the majority of their patients, those with chronic schizophrenia, rather than the small group of patients with early psychosis (who make up about 8% of current case-load at SVMHS). Failure to assertively assess and follow-up young people with early psychosis may contribute to long DUPs, which may in turn result in patients being more disturbed at time of initial treatment, thus requiring inpatient treatment and longer length of stay. Additionally, staff at generic services may not feel confident in managing early psychosis patients and may be unaware of the special needs of this patient group. These preliminary data suggest that generic services are not optimal for treatment of early psychosis patients and that treatment of early psychosis within them is not cost-effective.

Key words: early intervention, early psychosis, schizophrenia, services.

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The importance of intervening early in psychotic disorders is well described [1–3] and is gaining momentum, particularly in places such as the UK, where a large amount of funding has recently been allocated to establish specialized early intervention teams throughout the country [4]. However, debate continues as to whether there is sufficient evidence to justify extensive investment in such specialized services [5] and about what is

the most cost-effective strategy of treating first-episode and recent onset psychosis.

There are a number of different service models and approaches to the management of patients with early psychosis. One is the establishment of a specialized service exclusively focusing on the early stages of psychotic disorder, as exemplified by centres such as the Early Psychosis Prevention and Intervention Centre (EPPIC) in Melbourne, Australia. This service consists of multiple programmes designed for and available only to people with a first-episode of psychosis and for 18 months following the first treated episode. Description of the service and evaluative data can be obtained elsewhere [6–8]. At the other extreme in terms of service model is the generic adult mental health service, in which first-episode and early psychosis patients are managed within existing resources, although there may be individuals or a committee of staff members with a particular interest in this patient group. In between these two extreme service models are various approaches. For example, provision of a specialized early psychosis outpatient service only (such as in Christchurch, New Zealand and Los Angeles, US [9]), programmes that focus on reducing the duration of untreated psychosis (such as in Norway [9]), a focus on home treatment of early psychosis patients within a generic community treatment team [10] and funding of positions within generic services to provide second opinions, secondary consultation and training of staff members about early psychosis issues. This latter model of ‘Early Intervention workers’ has recently been introduced throughout the state of Victoria, Australia and is currently being implemented.

This study is set in a generic adult mental health service in metropolitan Melbourne, the St Vincent's Mental Health Service (SVMHS). At the time of the study the ‘Early Intervention’ position had not yet been filled. This paper presents data from our clinical file audit of early psychosis management and makes some comparison of the generic and specialized approach to early psychosis.

Background

The SVMHS provides mental health services to adults (16–64 years) who live in a defined catchment area of metropolitan Melbourne, Australia and experience serious mental illness and associated disability. The total sector population is approximately 215 000. The service has 39 inpatient beds and just over 94 effective full-time (EFT) clinicians working in the community with a standing case load of about 770. The average caseload per community case manager is about 26–30 patients. In comparison, EPPIC has 16 beds and 33.5 EFT clinicians

in the community for a sector population of 850,000, with approximately 205 000 in the EPPIC age range (15–29). Early Psychosis Prevention and Intervention Centre has a standing case load of about 365, and an average case load per community case manager of 32.2 patients (Table 1).

At the time that this audit was done there were no specialized programmes within the service for first-episode or recent onset psychosis patients. The Early Psychosis Committee was established in June 1998 and consists of 23 individuals from all components of SVMHS who have an interest in improving the quality of care for early psychosis patients and their families.

Objective

The aim of the study was to establish a baseline audit of current practice to determine the number of early psychosis patients within the service; the demographics, diagnoses and illness features of the group and to document current practice and outcome.

The rationale for the study was to establish how well services were being delivered to our early psychosis patients, that is a process evaluation [9]. This would then determine if additional resources were needed for the early psychosis consumers and their families and whether any changes in practice, service structure and culture were required to optimize their care.

A further aim was to compare management patterns and practice standards in a generic service (SVMHS) with those in a specialized service (EPPIC). The following variables were chosen for comparison: police involvement in involuntary admissions, number requiring admission, average length of stay, duration of untreated psychosis, use of seclusion and mean neuroleptic dose as they reflect important areas of practice.

Method

A case file audit of all current early psychosis patients was carried out in June 2001. An operationalized definition of early psychosis was developed, based on the definition in the Australian Clinical Guidelines for Early Psychosis (ACGEP) [11]. Patients were included in the audit if they were experiencing a first treated episode of psychosis or were in the first 2 years after an initial psychotic episode. No age range was specified. Detailed operationalized criteria can be provided by the authors on request.

The definition of early psychosis was circulated to all clinical staff at St Vincent's Mental Health Service in June 2001 who were asked to record Unit Record numbers of patients thought to meet the criteria. Members of the Early Psychosis Committee attended clinical meetings and also identified patients meeting this definition at these forums. Case files were checked and audited by a member of the Committee using a specially developed audit form (available from the authors by request).

Table 1. Comparison of Early Psychosis Prevention and Intervention Centre (EPPIC) (1996, 1998, 2000) data and St Vincent's Mental Health Service (SVMHS) (2001) audit data

	EPPIC	SVMHS
Mean age	21.4 (SD 3.8) (n = 167, 2000 data)	27.0 (n = 62)
Number requiring admission	107 of 167 (64.1%) (2000 data)	50 of 62 (81%)
Police involvement	8 of 208 admissions (including re-admissions) (3.8%) (2000 data)	20 of 50 admissions (40%)
Average LOS (mean)	12.9 days (2000 data)	46.5 days
DUP mean	191.4 days (n = 51) (1996 data)	469 days (n = 53)
DUP median	52 days (1996 data)	92 days
Number secluded	11 of 107 patients (10.3%) (2000 data)	11 of 50 (22%)
Mean neuroleptic dose (CPZ equivalents)	Maximum 205 mg (1998 data)	Average 253 mg
Number on CTO during Period of care under study	21 Of 167 (12.6%) (2000 data)	11 of 62 (18%)

LOS, length of stay; DUP, duration of untreated psychosis; CPZ, chlorpromazine; CTO, Community treatment order.

Therefore, the sample consists of individuals identified as early psychosis patients who were being managed by the SVMHS at one particular point in time (June 2001). This is not likely to be a representative sample of all people in the first 2 years after a first treated episode of psychosis in the SVMHS region. Some people may have been treated in the private psychiatric system for their first psychotic episode. This factor is particularly relevant in this study as there are many private psychiatrists working in and around the SVMHS area and a large private inpatient psychiatric facility within the region with capacity to admit and manage less disturbed patients (patients cannot be admitted involuntarily to this hospital). The audit also excludes people who were treated by the SVMHS but who were discharged from the service, for example to other public mental health facilities, private psychiatrists or general practitioners, as cases for the audit were recruited from clinicians' current caseload. Other patients with early psychosis managed within the service may also have been missed.

For data analysis, responses recorded on the Audit Form were entered onto a Microsoft Access 95 database using an Access Form that allowed the data to be validated. Analysis was done using Access select and crosstab Queries.

Results

At the end of June 2001, 68 patients with early psychosis were being managed within SVMHS. Data is available on 62 of these (the other six files were not able to be located within our audit time frame).

Thirty-four subjects were male (55%) and 28 were female (45%). Age range was from 17 to 62 years with a mean age of 27.

Referral sources

Both referral pathway and final referral source to SVMHS were recorded. Thirty-five consumers (or their carers) sought help from more than one place prior to reaching SVMHS. There was a mean of 1.7 contacts per person (range 1–4). Referral sources included self or carer (n = 22), other psychiatric services (n = 19), GPs (n = 5), private

psychiatrists (n = 3) and others (n = 13), for example youth accommodation services, drug and alcohol services, forensic services. A general practitioner was involved in any step of the pathway (either final or non-final referral source) in only 10 (16%) of the cases.

Diagnoses

Clinicians' diagnoses were recorded. These usually reflected a consensus diagnosis from the treating team, including a consultant psychiatrist. As in most Australian psychiatric services, clinicians' diagnoses are loosely based on the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) [12] classificatory system, of which most psychiatrists and psychiatry trainees in the public system have some knowledge. Due to time constraints, our auditing team did not re-diagnose cases using a standardized instrument. Hence diagnoses may be unreliable, and can be considered to best represent clinical impression. Diagnoses were: schizophrenia (n = 22), schizophreniform psychosis (n = 7), schizoaffective psychosis (n = 3), bipolar disorder (n = 5), major depressive disorder with psychotic features (n = 7), 'first-episode psychosis' (n = 13), 'drug-induced psychosis' (n = 2), 'paranoid psychosis' (n = 1) and 'borderline personality disorder with psychotic features' (n = 2). As can be seen, the last four of these diagnoses are not standard DSM-IV categories. This frequent use of non-standardized diagnoses may reflect diagnostic uncertainty of the first psychotic episode [13,14], and the clinicians' reluctance to prematurely label and stigmatize the patient, with a schizophrenic diagnosis in particular, or alternatively may reflect clinician unfamiliarity with the DSM-IV system.

Duration of untreated psychosis

This variable was estimated from the case notes. There was insufficient information in nine cases to make an accurate determination of DUP, hence data are only available on 53 subjects. The mean estimated DUP was 469 days (over 15 months) (SD = 953), with a median of 92 days. Twenty-two subjects, over 35% of the total sample, had a duration of untreated psychosis longer than 6 months.

Management patterns

Admission to hospital

Fifty patients (81% of the sample) had been admitted to hospital at least once. The mean number of admissions per patient was 1.85 (range = 1–9). Most (84%) admissions were involuntary. Police were involved in 20 (39%) of the admissions (or 48% of the involuntary admissions).

The mean length of stay was 46.5 days (median = 30, SD = 57, range = 5–302 days) in those who required admission.

The extra care unit or ECU is the locked area of the inpatient unit, designed for management of severely behaviourally disturbed patients. Twenty-seven patients (54% of those admitted) spent at least one day in ECU, and the average time spent in ECU was 11.2 days. Eleven patients (22% of those admitted to hospital) were secluded.

Antipsychotic (neuroleptic) medication

Sixty-one (98%) of the early psychosis patients in our sample were on antipsychotic medication. Excluding the person who was not on antipsychotic medication, the mean number of medications used was 1.92 (range = 1–6). Newer antipsychotics were the most frequently prescribed, for example olanzapine was used or had been used in 46 patients (75%) and risperidone in 23 patients (38%). Older antipsychotics were usually used in the short-term only on the inpatient unit, including chlorpromazine in 5 (8%) cases, haloperidol in 3 (5%) and intramuscular droperidol in 7 (11%). The average dose of neuroleptic was 253 mg of chlorpromazine equivalents (range = 38–600). Eleven patients (18%) were on depot neuroleptic medication (8 on flupenthixol, 4 on zuclopenthixol (one patient had been on both)). Data were not collected about other psychotropic medications such as mood stabilisers, antidepressants and benzodiazepines.

Other service issues

Service use

In June 2001 the current management was: inpatients 1, Crisis Assessment and Treatment Service 8, case management 45, mobile support team 8. No patients were being managed within the Continuing Care (Rehabilitation) Unit.

Community treatment orders (CTOs)

Eleven (18% of the sample) were on CTOs.

Family/carer involvement

Families or carers were contacted and involved in the management of 43 (69%) of the early psychosis patients. The Early Psychosis Committee recommends that families and carers receive psychoeducation by the case manager and/or treating doctor, as well as the provision of educational reading materials and videos about early psychosis. We were however, unable to gauge the extent to which this actually occurred as this is generally not documented in case files.

Outcome measures

Some of the patients in our sample had Health of the Nation Outcome Scales (HoNOS) [15] and Life Skills Profile (LSP) [16] data recorded around the time of intake into the service and at various time points in follow up. However, data were not consistently available for all patients at or shortly after intake, and follow-up data collection points were so wide-ranging in time that meaningful interpretation could not be made. There was also a lot of missing data. Thus, unfortunately, outcome measures of functioning and symptomatology at baseline and follow-up are not able to be reported for this sample.

Comparison of a generic and a specialized service

Comparison was made between measures of service delivery in our generic service and EPPIC. Three sources of EPPIC data were used: service utilization data for a cohort of EPPIC patients who commenced treatment over a 6 month period (1 September 1999 to 29 February 2000), followed over an 18-month period of care [17], 1998 data from a 3-month longitudinal follow-up of a cohort of first-episode patients (n = 231) [7] and 1996 data from a sample of 200 first admission cases followed-up for 12 months [6]. It must be acknowledged that the EPPIC data and our data were collected using different methodologies. As noted previously, the SVMHS sample is not likely to be representative of all the first treated episode cases in the area. In fact those with less disturbed behaviour and better recoveries are likely to have been excluded from our sample as they could have been managed entirely in the private system, or could have been discharged to private psychiatrists or general practitioners early in the course of illness. In contrast, the EPPIC data is likely to reflect a more representative sample of first-episode cases within the area due to the low number of private psychiatrists practising within the region [6]. Additionally, the EPPIC patients were in the early stages of their treated illnesses and are likely to have had fewer admissions. Since first admissions tend to be for longer than subsequent admissions [18], this could artificially inflate the LOS data for the EPPIC group. Despite this, average LOS of SVMHS patients was much longer than the EPPIC sample. Seclusion rate at SVMHS was almost double that at EPPIC. Some comparison can be made on variables such as DUP, recognizing that this may have been estimated differently in the two studies (direct enquiry by structured interview in the EPPIC study, estimated from case-note histories in the SVMHS audit). Duration of untreated psychosis was longer in the SVMHS group. Police involvement was much higher in the SVMHS group compared with the EPPIC group. Average dose of neuroleptics was also similar between the two services.

Discussion

This study presents data from a case file audit of 62 (91%) of the 68 early psychosis patients being managed by the SVMHS in June 2001. Early psychosis patients represent a small fraction (about 8%) of the total clinical caseload for the service. At the time of this audit there were no specialized programmes for these patients, including no formal family education or support groups and no patient group programme. There was also no

standardized treatment regime for management of first-episode psychosis or any system for highlighting these patients and their needs within the system. This was despite an Early Psychosis Committee consisting of clinicians from all components of the Service advocating for improved management of early psychosis patients since 1998.

The current study did not use a formal longitudinal follow-up design but rather was a case file audit reflecting a cross-sectional (point prevalence) picture of current practice (June 2001) in the SVMHS. Therefore, there may be inaccuracies and reliability problems related to data collection (files audits were carried out by several clinicians). However, we feel that it was still a useful exercise to examine important aspects of early psychosis management within our service.

Due to the cross-sectional methodology employed, the patients audited had varying lengths of treated illness (time since first presentation), ranging from 5 days to over 2 years. Hence, some comparisons between our data and other studies are not possible or must be evaluated in the light of the different study designs, with the caveats detailed above.

Some noteworthy findings from the study are considered below.

Exposure to trauma

There was a high number of patients requiring admission (81%), and these were largely involuntary admissions. Length of stay in hospital was long by Australian standards (mean of 46.5 days), use of a locked area was high and for lengthy periods, and seclusion rate was also high. There was frequent police involvement in involuntary admissions. These data indicate that our patients were exposed to high levels of potentially traumatizing events: involuntary hospitalization; use of police, admission to a ward, frequently a closed environment, with large numbers of older (and often chronically) psychotic or otherwise disturbed patients; and seclusion, in addition to the first experience of psychosis itself. All of these experiences have been found to be associated with posttraumatic stress disorder [19–21].

The reasons for this high level of exposure to trauma need to be examined. As noted previously, the SVMHS sample is biased towards including more severely ill and disturbed patients. It may also be that the traumatic introduction to psychiatric services that our patients receive is a reflection of their relatively late presentation, illustrated by an estimated mean DUP of over 15 months. It may be that these patients are not coming into treatment until their symptoms are florid or they draw attention to themselves with highly disturbed or aggressive

behaviour. By this time, community treatment may be difficult or impossible and involuntary hospitalization may be necessary. Psychotic symptoms are likely to be entrenched and insight into the need for treatment reduced.

Alternatively, staff unfamiliarity with young people with recent onset psychosis may be a factor. Young people with first-episode psychosis do not understand the mental health system and its procedures. They are experiencing bewildering symptoms in addition to meeting new people (treating staff) who may be perceived as threatening. Reactions to psychotic symptoms including intense fear, anxiety and loss of control, can be exacerbated by hospitalization [22]. Staff may be used to dealing with patients who know the system and may not appreciate the difficulties that young first-episode patients are experiencing. Indeed a recent staff survey conducted at SVMHS found that 69.5% of clinicians felt they had expertise in treating patients with chronic schizophrenia, versus only 7.6% for first-episode psychosis [Yung, unpublished data]. It must be recognized that best-practice treatment for later stages of the disorder and for more persistently ill and disabled subgroups may not constitute best-practice for early psychosis [6]. Standardized treatment guidelines, such as the ACGEP [11] highlight the special issues that young people with a first psychotic episode present. The absence of such guidelines may contribute to diagnostic and management uncertainty.

Duration of untreated psychosis

Prolonged DUP has been associated with longer time to treatment response [6,23–25] and less degree of remission [24,26]. Furthermore, the longer the DUP the longer the suffering for both the individual and his or her family as a potentially treatable illness goes unmanaged [27]. The economic impact of long DUP should also be considered. Moscarelli and colleagues reported that patients with a DUP of longer than 6 months cost over twice as much to treat in the first 3 years following psychiatric contact as patients with DUP of less than 6 months [28]. As 35% of our sample had a DUP greater than 6 months, this represents a potentially significant economic burden.

The duration of untreated psychosis in our group of first-episode patients was in line with reported data from international studies, which tend to indicate DUPs of between 1 and 2 years [29] (e.g. mean DUP of 60.8 weeks in [30]). However, services that have a particular focus on early intervention have reported much shorter DUPs [31–33] This indicates that SVMHS is no worse than other generic services in promoting individuals with

first-episode psychosis into treatment. However, the reasons for the long DUP found in generic services compared to specialized services should be examined given its importance.

Help-seeking by the individual or his or her family or friends, recognition of psychosis and appropriate referral to psychiatric services are all aspects of engaging in treatment for a first-episode of psychosis [34,35]. Strategies for removing the barriers to each of these components are discussed in detail in the literature [32,35]. Essentially, what is required is increased community awareness of psychosis, stigma reduction and education of primary care workers. Young people experiencing a first psychotic episode frequently have contact with a number of agencies and potential referrers before finally receiving effective help. For example, Lincoln and McGorry [34] reported in a sample of 62 first-episode patients a mean of 4.9 contacts before definitive treatment. We found a mean of 1.7 contacts per person, but this would be an underestimate as the clinical case file was the only source of information. Clinical notes may not include detailed narratives of patients or families' attempts to seek help or previous contacts with other agencies. Our finding of previous GP contact in only 10% of cases is also probably an underestimate. However, these data and findings from the extant literature suggest that GPs and other primary carers need to be made aware of the different manifestations of early psychosis and the process and logistics of referral. Psychiatric services need to harness the assistance of services and individuals who see and are trusted by young people, including school counsellors, youth workers and drug and alcohol services [35].

Another important component is creating flexible and accessible psychiatric services that are sensitive to the needs of the young, the homeless and those who abuse substances [35]. This is important not just so families and patients feel able to engage with them, but so that general practitioners and other primary care agencies feel able to easily refer potential patients [35]. It is in these areas that generic mental health services risk performing poorly. Generic services tend to cater for 'known customers' and may be less responsive to new referrals, particularly when there is doubt about the clinical picture or the referred person is reluctant to accept help, which is frequently the case in first-episode psychosis [34]. Anecdotally, many services, particularly busy and under-resourced assessment teams, adopt a 'watch and wait' strategy to early psychosis, avoiding active intervention until dangerous behaviours or florid symptoms are manifest. Similarly, people may be sent home from emergency departments without follow-up arranged, even when known to be psychotic, as their

symptoms at an early stage of illness seem not to warrant urgent intervention [36]. Such a strategy results in the person being more unwell by the time treatment is available and increasing the duration of untreated psychosis. Furthermore, generic mental health outpatient clinics are often stigmatizing and unattractive to young people experiencing a first-psychotic episode and to their families, who may therefore be reluctant to attend these services. Homeless itinerant, insightful psychotic young people need assertive, mobile and persistent assessment teams. Unfortunately, many generic services fail to adequately resource and develop these areas. As first-episode patients make up a small proportion of the total caseload of a generic mental health service, and it is understandable that more chronic patients tend to be more easily catered for.

Prolonged hospitalization

The long average stay in hospital of our early psychosis patients suggests that they may be difficult to treat and/or remain behaviourally disturbed for some time. Long DUP is likely to be a significant contributing factor for this as described above. There is the possibility that family and other relationships have broken down during the prodromal period [37] and the period of untreated psychosis [27]. Patients may risk homelessness due to disconnection with family and friends, and this situation may contribute to prolonged length of hospital stay as suitable accommodation then needs to be found. Again, another reason for the long hospital admissions could be that staff are not used to dealing with this subpopulation of early psychosis patients, a situation that may be improved with the introduction of standardized treatment guidelines. Additionally, there may be some trial and error in finding the optimal medication and dose for each individual [36], which is usually well-known for more chronic patients of the service.

The trend of lengthy hospital stays is concerning not just from the point of view of its psychosocial impact on the young people and their families, but also has economic implications. Inpatient treatment is expensive; published economic analyses of treatment of mental illnesses indicate that inpatient costs make up about 50–90% of direct treatment costs [28,38,39].

Some positives

Some encouraging results from the audit were found. First, relatively low doses of antipsychotic medication were prescribed. This is consistent with the low doses recommended in the literature [11,36] and compares well with the published EPPIC data. Second, there was

high use of atypical antipsychotics that have been found to be associated with fewer extrapyramidal side-effects than conventional antipsychotics [36] and decreased prolactin elevation (olanzapine and quetiapine), but with similar efficacy [36]. The ACGEP [11] strongly recommend these novel antipsychotics as first-line treatment for psychosis.

Finally, a further positive is the fact that this audit was undertaken in the first place and that staff in both inpatient and community settings willingly cooperated with the data collection and have been interested in the results. We are now using this study as a springboard to improve our services to early psychosis patients. Since the audit was completed a group programme for early psychosis patients has commenced and has been taken up with enthusiasm by both patients and staff. Early evaluation has been extremely positive. The Early Psychosis Committee is also working on the drafting and implementation of standardized guidelines for management of early psychosis based on the ACGEP [11] and on a programme of family psychoeducation and support. A follow-up audit is planned to assess the impact of these changes to our management of people with early psychosis.

Conclusion

The SVMHS is a generic service catering mainly to patients with chronic psychotic illnesses. We believe that the SVMHS is fairly typical of generic services within metropolitan Melbourne. This audit aimed to examine the management of people with early psychosis within this service structure. Some limited comparison with a specialized early psychosis service was also made. The results indicate that current practice is not optimal for early psychosis patients. Long delays in reaching treatment, exposure to trauma at the time of receiving treatment and prolonged hospitalizations were all areas that need improvement. These potentially harmful practices were occurring despite a large and growing body of knowledge of optimal early psychosis management. The challenge for all practitioners and policy makers is how to implement early intervention strategies in the current 'real world' of mental health service delivery.

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