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Help-seeking pathways in early psychosis

■ **Abstract** *Introduction* Understanding the help-seeking pathways of patients with a putative risk of developing psychosis helps improving development of specialised care services. This study aimed at obtaining information about: type of health professionals contacted by patients at putative risk for psychosis on their help-seeking pathways; number of contacts; type of symptoms leading to contacts with health professionals; interval between initial contact and referral to a specialised outpatient service. *Method* The help-seeking pathways were assessed as part of a prospective study in 104 patients with suspected at-risk states for psychosis. *Results* The mean number of contacts prior to referral was 2.38. Patients with psychotic symptoms more often contacted mental health professionals, whereas patients with insidious and more unspecific features more frequently contacted general practitioners (GPs). *Conclusions* GPs have been found to underidentify the insidious features of emerging psychosis (Simon et al. (2005) Br J Psychiatry 187:274–281). The fact that they were most often contacted by patients with exactly these features calls for focussed and specialised help for primary care physicians. Thus, delays along the help-seeking pathways may be shortened. This may be of particular relevance for patients with the deficit syndrome of schizophrenia.

■ **Key words** early psychosis – prodrome – first episode – schizophrenia – help-seeking pathways

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Introduction

In recent years, the aim of intervening in the early phases of psychosis has drawn great interest. Early intervention may shorten duration of untreated psychosis or even prevent onset of psychosis. Exact knowledge about the help-seeking pathways of patients is pivotal in order to provide early intervention and, thus, supply specialised and focussed health care. One study has investigated the patterns of referral in patients known to be at risk for developing a psychotic illness [1]. Further studies investigating these trajectories in first-episode patients [2–5] were able to show the important role of GPs. GPs were reported to be commonly contacted by patients who later develop psychosis. In particular, GPs were often reported to be contacted early along the help-seeking pathways and were shown to commonly be the first contacted professional group [3]. It can thus be hypothesised that a considerable part of GPs are contacted by patients who may still be presenting more insidious features such as functional disability or social withdrawal, given that these insidious features have been found to be highly prevalent in the early course of psychosis [6]. It must therefore be expected that studies of help-seeking pathways which, in addition to first-episode patients, further include patients in presumed at-risk states for psychosis would be able to corroborate the importance

of GPs as early contacted professional groups. Up to date, only one other such study has been reported on patients who are considered to be at-risk for psychosis, but who have not yet developed psychosis [1]. This study is the first to compare the help-seeking behaviour of at-risk patients, patients with first psychotic episodes and of patients neither meeting clinical at-risk nor first episode criteria, but who are concerned about their mental health and thus were assessed in a prodromal service. To the best of our knowledge, it is also the first study to assess symptoms in patients at risk for psychosis at their first presentation to a prodromal service. We expected GPs to be highly represented among the early help-seeking contacts of at-risk patients.

Method

■ Recruitment strategy

In August 2002, a specialised, low-threshold outpatient service for the assessment of patients considered at-risk for psychosis was established in a semi-urban catchment area of North Western Switzerland (population = 300.000). This "prodromal clinic" is part of the only general psychiatric outpatient clinic of the catchment area and is associated with a public psychiatric hospital. As is the case all over Switzerland, patients can refer themselves directly to any public or private psychiatric facility and do not require referral to mental health systems via gate-keeping GPs. Patients can also be referred by any other source such as GPs, school counsellors, paediatricians or social workers.

Between August and December 2002, the majority of GPs (*n* = 240), private psychiatrists and psychologists (*n* = 130) of the catchment area were educated either individually or in small groups about the early warning signs of emerging psychosis and manifest psychotic features. Education strategies were based on the findings from a large, nation-wide survey among 1089 GPs [7] that showed that GPs often underidentified the insidious features of beginning psychosis, such as functional decline. In keeping with these findings, education strategies primarily focussed on the importance of the insidious features of beginning psychosis such as sustained functional decline and social withdrawal as important early warning signs. With the inclusion of the adolescent psychiatric service into our prodromal clinic in January 2004, all private youth psychiatrists as well as paediatricians were equally enrolled in this campaign so as to ensure additional referrals of patients aged 14–17 years, as symptom onset in this young age group has been associated with less favourable outcomes [8].

In our study, sensitised primary and secondary health care providers were encouraged to contact the outpatient clinic whenever one of their patients showed sustained decline in social functioning in a still relatively asymptomatic state; if they showed attenuated or brief intermittent positive psychotic symptoms; or if they suspected that "something odd had been going on" for some time in their patients.

The research protocol was approved by the "Ethikkommission beider Basel". It was designed to obtain data on help-seeking pathways and to collect longitudinal information about progression of symptoms and social as well as neuropsychological functioning, and was not a treatment trial.

■ Patient sample

As of January 1st 2003, patients could be referred to our prodromal clinic. Consenting patients were included in the study. Each individual was fully informed about the research protocol. Written informed consent was obtained from all patients, and additionally from the parents if under 18. Patients were considered ineligible for further assessment within the study if they presented a history of a past psychotic episode, traumatic brain injury, epilepsy or other known neurological disorder; other significant medical conditions considered to affect cognitive performance and self-perception; an IQ of below 70; or patients below the age of 18 in the first year and below the age of 14 years in the second year of the present study.

■ Symptom ratings

We assessed the entire range of potential symptoms from early prodrome to first psychotic episode using the following instruments: potential early prodromes were assessed using the Schizophrenia Prediction Instrument—Adult Version (SPI-A) [9], potential late prodromes using the Scale of Prodromal Symptoms (SOPS) with its companion interview manual (Structured Interview for Prodromal Symptoms, SIPS) [10, 11]. For the assessment of potentially manifest psychosis, we used the Positive and Negative Syndrome Scale (PANSS; 12). Ratings were performed by an experienced consultant research psychiatrist (A.S.) or by a trained masters-level psychologist (D.D.). Interrater reliability was established by extensive training by one of the authors of the SPI-A and by repeated training sessions involving all raters. However, formal assessment of interrater reliability was not conducted.

The SPI-A has been developed from a hierarchical cluster analysis of the BSABS [13] and includes those 10 basic symptoms for which a good positive predictive value for later schizophrenia has previously been reported [14, 15]. These basic symptoms include: thought interferences; thought perseveration; thought pressure; thought blockages; disturbances of receptive language; decreased ability to discriminate between ideas and perception, phantasy and true memory; unstable ideas of reference; derealisation; visual and acoustic perception disturbances.

The structure of the SIPS manual and the SOPS rating scale as well as its high validity and reliability have been reported elsewhere [10, 11]. In summary, these authors classified patients with either attenuated positive psychotic symptoms, brief limited intermittent positive psychotic symptoms or with a combined functional decline and genetic high-risk as ultra high-risk (UHR).

■ Group assignment

Depending on symptom severity, patients were assigned to one of the three following groups: (1) the First Episode (FE) group was constituted by patients scoring 6 on any of the five SOPS positive symptom items for more than 1 week, which is identical with a minimum score of 4 on any of the PANSS positive items for the same time period. (2) The at-risk (AR) group included: patients meeting severity, but not duration criteria of the FE group; patients meeting scores of 3–5 on any SOPS positive psychotic symptom item at least once a week over the past month; patients with a first degree relative with any psychotic disorder and/or patient meeting DSM-IV Schizotypal Personality Disorder criteria and a 30% or greater drop in the GAF [16] score during the last month compared to 12 months ago; patients scoring a minimum of 3 on any of the 10 predictive basic symptoms according to the SPI-A. (3) Help-seeking patients who were referred to the prodromal clinic for risk assessment, but who did neither meet FE nor AR criteria, were assigned to the Patient Control (PCo) group.

■ Assessment of help-seeking pathways and of symptoms at prior contacts

After symptom assessment, patients were asked which other professional groups they had previously contacted for similar problems. Further, timing and number of contacts as well as type of symptom leading to each single prior contact were recorded and, whenever possible, corroborated with information from family members. These data were assessed using a semi-structured interview that was designed for this study. However, no information was collected whether referrals to mental health services were voluntary or involuntary.

Table 1 Socio-demographic characteristics

	First episode	At-risk	Controls	Total	Significance values
Number of patients	28	50	26	104	
Mean age	23.4	21	22.1	22	$\chi^2 = 3.744$, df = 2, $P = 0.153$
Gender					
m (%)	22 (79)	31 (62)	23 (88)	76 (73)	$\chi^2 = 6.676$, df = 2, $P = 0.036$
f (%)	6 (21)	19 (38)	3 (12)	28 (27)	
Marriage status					
Unmarried (%)	26 (93)	45 (90)	25 (96)	96 (92)	$\chi^2 = 0.929$, df = 2, $P = 0.629$
Children					
No children (%)	28 (100)	48 (96)	25 (96)	101 (97)	$\chi^2 = 1.140$, df = 2, $P = 0.566$
Living situation					
Alone (%)	5 (18)	7 (14)	6 (23)	18 (17)	$\chi^2 = 8.412$, df = 4, $P = 0.078$
With partner or friends (%)	5 (18)	5 (10)	8 (31)	18 (17)	
With parents or relatives (%)	18 (64)	36 (72)	10 (39)	64 (62)	
City size					
>200,000 (%)	5 (18)	5 (10)	4 (15)	14 (14)	$\chi^2 = 3.337$, df = 6, $P = 0.766$
10,000–200,000 (%)	7 (25)	12 (24)	6 (23)	25 (24)	
<10,000 (%)	16 (57)	33 (66)	16 (62)	59 (62)	
School education					
None completed (%)	1 (4)	1 (2)	2 (8)	4 (4)	$\chi^2 = 4.688$, df = 6, $P = 0.584$
Obligatory school (%)	19 (68)	36 (72)	18 (69)	73 (70)	
Maturity (%)	5 (18)	4 (8)	4 (15)	13 (13)	
Still in education (%)	3 (11)	9 (18)	2 (8)	14 (13)	
Professional training					
None (%)	9 (32)	22 (44)	8 (31)	39 (38)	$\chi^2 = 10.429$, df = 6, $P = 0.108$
Apprenticeship (%)	12 (42)	18 (36)	12 (46)	42 (40)	
Academic education (%)	5 (18)	1 (2)	1 (4)	7 (7)	
Still in training (%)	2 (7)	9 (18)	5 (19)	16 (15)	
Work situation					
No occupation (%)	12 (43)	19 (38)	10 (39)	41 (39)	$\chi^2 = 4.097$, df = 6, $P = 0.664$
At work (%)	10 (36)	11 (22)	6 (22)	27 (26)	
In training (%)	6 (21)	20 (40)	10 (39)	36 (35)	

■ Analysis

Data on patients who were enrolled between January 2003 and December 2004 were analysed using the computer package SPSS Version 11.04. We compared number of contacts and professionals contacted along the help-seeking pathways between groups. Similarly, symptoms that patients had presented during their previous help-seeking contacts and the interval between initial contact and referral to our prodromal service were compared between groups. Continuous variables were compared with t-tests or ANOVA, categorical variables with χ^2 tests or, if ranked, with Kruskal–Wallis and Mann–Whitney-U tests. An alpha level of 0.05 was considered significant.

Results

■ Sample characteristics

Of the 104 patients included into this study, 28 were female and 76 male. The mean age was 23.2 years (SD: ±5.43; range: 16–38) in the first year of the study, and 20.0 years (SD: ±6.08; range: 14–40) in the second year. 28 patients met criteria for the FE group, 50 for the AR group, and 26 patients were assigned to the PCo group. A summary of the socio-demographic characteristics across these study groups is shown in Table 1.

■ Number of contacts and professionals contacted

The mean number of contacts over all three patient groups was 2.38 (SD: ±1.42; median: 3.0; range: 1–8)

with no significant between-group differences ($\chi^2 = 208.375$, df = 2, $P = 0.605$). The overall patient sample reported a total of 247 contacts prior to their referral to our prodromal clinic. Table 2 shows the type of professional groups contacted by the patients across the three study groups along their help-seeking trajectories. FE patients more often presented themselves to mental health professionals (psychiatrists, psychologists as well as psychiatric out- and in-patient services) than AR and PCo patients (71.2% vs. 57.6% vs. 53.5% of contacts); however, this comparison did not reach significance ($\chi^2 = 4.724$, df = 2, $P = 0.094$). When comparing FE patients with the combined non-psychotic AR and PCo patients, FE patients significantly more often presented themselves to mental health professionals ($\chi^2 = 4.461$, df = 1, $P = 0.024$). Furthermore, when comparing the numbers of contacts with mental health professionals (149/247 = 60.3%) with those to non-mental health professionals (98/247 = 39.7%), FE patients more often contacted in-patient services, whereas PCo and AR patients more often attended GPs and "other" professionals such as alternative medical practitioners, non-medical counselling services and non-specified professionals ($\chi^2 = 20.189$, df = 8, $P = 0.010$). Of the overall sample, 51.0% (53/104) contacted a GP at some point in time, whereas 83.7% had at least once visited a mental health professional.

Table 2 Distribution of professionals contacted

	FE	AR	PCo	Total
(n) % of total	(66) 26.7	(125) 50.6	(56) 22.7	(247) 100
General practitioners	21.2% (14)	21.6% (27)	37.5% (21)	25.1% (62)
Private Psychiatrists/Psychologists	21.2% (14)	24.8% (31)	21.4% (12)	23.1% (57)
Psychiatric out-patient services	30.3% (20)	25.6% (32)	16.1% (9)	24.7% (61)
Psychiatric in-patient services	19.7% (13)	7.2% (9)	16.1% (9)	12.6% (31)
Other professionals	7.6% (5)	20.8% (26)	8.9% (5)	14.6% (36)

Percentages (and absolute numbers) of contacts made with professional groups at any stage of the help-seeking pathway
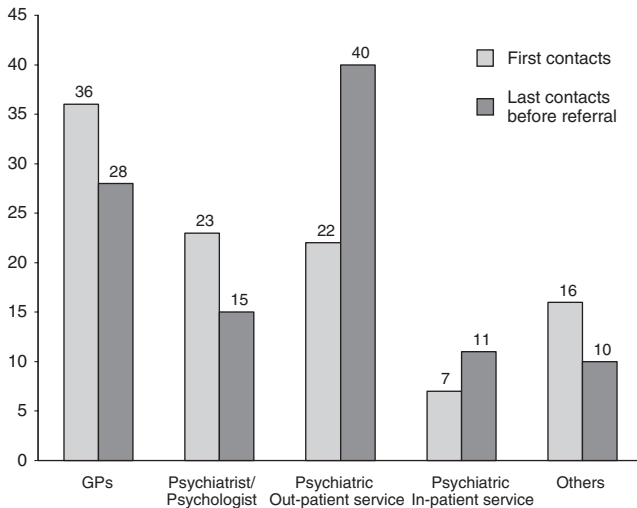

Fig. 1 Progression to specialized services. Distribution of first ($n = 104$) and last contacts ($n = 104$) in percent made to different helper groups. Contacts representing the only help-seeking attempt by a subject appear in both first and last contacts

However, as shown in Fig. 1, there was a trend for progression from non-psychiatric towards psychiatric services. Contacts with GPs were often at an earlier stage on the help-seeking pathways. Moreover, GPs were the most often first-contacted professional groups, whereas psychiatric in-patient services were most commonly the last contacted professional group ($\chi^2 = 15.816$, df = 4, $P = 0.003$). However, differences among study groups did not reach significance (first contacts: $\chi^2 = 13.102$, df = 8, $P = 0.108$; last contacts: $\chi^2 = 9.699$, df = 8, $P = 0.287$).

■ **Symptoms at prior presentations**

The complete set of signs and symptoms which led patients or their relatives to seek help at each of the recorded contacts was obtained from 100 of the total patient sample (96.2%). The frequencies of the most commonly presented symptoms are shown in Table 3. In the AR and PCo groups, the trias depression, social decline and social withdrawal were presented most frequently. In the FE group, unusual thought content was the most frequent symptom, followed by the above-mentioned triad.

FE patients had presented at least one positive symptom in 80.3% of their prior contacts, AR patients in 56.6% and PCo patients in 5.9% of their prior contacts ($\chi^2 = 65.680$, df = 2, $P < 0.001$). Similarly,

Table 3 Frequency of presented symptoms

	FE	AR	PCo	Total
Number of contacts	66	125	56	247
Positive symptoms				
Ideas of reference (%)	15 (23.1)	2 (<5.0)	1 (<5.0)	18 (7.7)
Unusual contents of thought (%)	36 (55.4)	18 (14.8)	1 (<5.0)	55 (23.5)
Hallucinations (%)	13 (20.0)	11 (9.0)	2 (<5.0)	26 (11.1)
Perceptual disturbances (%)	5 (7.7)	21 (17.2)	0	26 (11.1)
Alienation or derealisation (%)	16 (24.6)	29 (23.8)	0	45 (19.2)
Negative symptoms				
Deterioration of social functioning (%)	32 (49.2)	54 (44.3)	16 (34.0)	102 (43.6)
Social withdrawal (%)	32 (49.2)	42 (34.4)	14 (29.8)	88 (37.6)
Avolition (%)	9 (13.8)	26 (21.3)	12 (25.5)	47 (20.1)
Cognitive symptoms				
Impaired concentration (%)	13 (20.0)	29 (23.8)	1 (<5.0)	43 (18.4)
Impaired attention (%)	7 (10.8)	12 (9.8)	1 (<5.0)	20 (8.5)
Impaired memory (%)	10 (15.4)	5 (<5)	2 (<5.0)	17 (7.3)
Formal thought disorders (%)	17 (26.2)	25 (20.5)	0	42 (17.9)
Other symptoms				
Depression (%)	24 (36.9)	74 (60.7)	38 (80.9)	136 (58.1)
Anxiety (%)	14 (21.5)	27 (22.1)	9 (19.1)	50 (21.4)
Lack of impulse-control (%)	2 (<5.0)	14 (<5.0)	11 (23.4)	27 (11.5)

Absolute numbers (percentages) of presented symptoms. Percentage values do not add to 100% due to multiple symptoms recorded for most contacts

Table 4 Positive vs. non-positive symptoms presented to professional groups

	General practitioners	Psychiatrists psychologists	Out-patient services	In-patient services	Other xprofessionals	Total
Number of contacts	59	55	61	30	34	239
Contacts made with positive symptoms	37.3% (22)	40% (22)	67.2% (41)	70% (21)	55.9% (19)	(125)
Contacts made with non-positive symptoms	62.7% (37)	60% (33)	32.8% (20)	30.0% (9)	44.1% (15)	(114)

Percentages (absolute numbers) of symptoms presented to professional groups. Percentage values do not add to 100% due to multiple symptoms recorded for most contacts

Positive symptoms included items according to Table 3, non-positive symptoms included items according to "negative", "cognitive" or "other" symptoms in Table 3

when comparing numbers of patients rather than numbers of contacts, 89% FE, 65% AR and 8% PCo patients had reported positive symptoms at any stage along their help-seeking pathway ($\chi^2 = 35.483$, df = 2, $P < 0.001$). Of patients presenting positive symptoms along their help-seeking pathways, 81.2% already did so during their first contact. Positive symptoms were significantly more often reported in first help-seeking contacts with psychiatric out-patient (63.6%) and in-patient (100%) services as compared to GPs (37.1%) and private psychiatrists/psychologists (31.8%) ($\chi^2 = 13.425$, df = 4, $P = 0.009$).

Table 4 shows the relationship between positive and non-positive symptoms and the professional groups to whom they were presented. Positive symptoms were significantly more often reported in contacts with both psychiatric out- and in-patient services (67.2%, 70.0%) as compared to GPs, who were contacted for positive symptoms only in 37.3% recorded contacts. Consequently, GPs were contacted with more unspecific symptoms (62.7%) such as depression and negative symptoms ($\chi^2 = 18.046$, df = 4, $P = 0.01$).

◼ Duration from initial contact to referral

The median interval from initial contact to time of referral to our prodromal clinic was 36 weeks (range: 1 day to 7.6 years; mean: 124.0 weeks; ±SD 217.1). About a third (33.3%) of the patients whose initial contact was over 18 months before referral to the prodromal clinic accounted for the relatively long mean help-seeking duration. Two-thirds (66.6%), however, were referred within 18 months, with one-third (35.4%) being referred within 2 months. The median help-seeking duration of the FE group (12.5 weeks) was shorter than for the AR (42.5 weeks) and PCo groups (46.5 weeks), however, between-group comparisons dropped just below level of significance ($z = -1.879$, $P = 0.06$). More significantly, patients presenting with positive symptoms at some stage along their help-seeking trajectories ($n = 56$) showed shorter pathway durations (median = 24.5 weeks) than patients presenting only with negative, affective or "unspecific" symptoms, i.e. patients never presenting positive symptoms ($n = 44$; median = 46.0 weeks) ($z = -2.072$, $P = 0.038$).

We further calculated the median intervals from any of the prior contacts to the time of referral and compared these "delays to referral" for the different professional groups that were contacted. Median "referral delay" across all three-study groups was 28 weeks with no between-group differences ($z = -1.260$, $P = 0.208$). Median "delays" were 15 weeks for contacts with GPs, 68.5 weeks for private psychiatrists and psychologists, each 13.0 weeks for psychiatric in- and out-patient services, and 52.2 weeks for contacts made to "others" ($z = -3.554$, $P < 0.001$). For 165 of the 247 recorded contacts, we were able to obtain information on whether a continuous treatment of three or more consecutive sessions was provided. The significantly longer "delays to referral" following contacts with private psychiatrists and psychologists was associated with the finding that in 58% of all contacts made with these groups, three or more sessions were administered. In comparison, in the vast majority of the cases (83.7%) contacts with GPs were single consultations.

Discussion

To the best of our knowledge, this is the first study to investigate the help-seeking pathways of a patient cohort, which was referred to a prodromal clinic for a suspected at-risk state for psychosis. We were able to confirm the important role of GPs along the help-seeking pathways of patients with emerging psychosis. Furthermore, GPs were contacted in particular by those patients who presented insidious features. It was these patients that showed the longest delays in referral to our specialised outpatient service.

◼ The importance of GPs along the early pathways

This study was able to confirm recent reports from Australia [1] and from Germany [17, 18] that a substantial number of contacts made along the help-seeking pathways were with mental health care professionals. As the gatekeeping model applies for Australia, but not for Germany or Switzerland, mental health care professionals seem to play an important role independent of a particular health system. At the same time, our study also confirms earlier reports

[2–5] about the pivotal role of GPs in the early pathways to care of help-seeking individuals that were referred to our prodromal clinic for an assessment of a potential psychotic at-risk state. While they were solicited in half of all contacts, GPs even constituted the most frequently first-contacted professional group (34.6%). It is noteworthy that in Switzerland patients can refer themselves to GPs without a "gate-keeping" GP. It can be thus assumed that in health systems with "gate-keeping" GPs [19], the present results may be even more representative.

The challenge of detecting the insidious symptoms

In addition, our results revealed that patients in less symptomatic states more commonly seek help with their GPs. Patients with manifest psychotic symptoms, however, more often contacted specialists. These results are paralleled by the finding that a shift from contacts made with primary carers to contacts with more specialised professional groups is taking place along the pathways (as shown in Fig. 1). Similar findings were reported by Lincoln et al. [3]. We assume that this process may also be an expression of the symptom progression along the course of early psychosis [20, 21].

As we thus had expected, GPs are faced with the difficult task to detect potential at-risk states in patients that do not yet present psychotic, but the unspecific insidious features. This finding is of particular relevance as a recent comprehensive survey among 1089 Swiss GPs was able to show that GPs commonly under-identified the insidious features of emerging psychosis [7]. Preliminary results of an international replication study (IGPS) of the Swiss survey across 10 countries were able to confirm these findings [22]. Although features such as functional disability or social isolation may not necessarily lead to overt psychosis and may either be expression of another psychiatrically relevant process or remit after time, it is the detection of the earliest signs and symptoms of emerging psychosis that has become the aim of preventive efforts. Similarly, depression has been shown to be highly prevalent in emerging psychosis [6]. While this triad—functional disability, social isolation and depression—was found to be highly prevalent across all groups in the present study, it is also a characteristic of the deficit syndrome of schizophrenia [23]. If such symptoms are true-positive precursors of later psychosis, the non-detection of such patients contributes to a substantial delay on their way to specialised services and adequate treatment, which in turn has been shown to negatively affect the outcome of patients with first-episode psychosis [24]. Accordingly, our study confirmed earlier reports that patients with more insidious features showed longer pathway durations than patients with predominant positive symptoms [25]. Deficit syndrome patients, however, may show lower adherence to treatment and are per se characterised by worse outcomes [23].

Delays in referral

Interestingly, when compared to specialists and other professional groups, GPs referred patients more rapidly to other professional groups once they were contacted. In contrast, more contacts per patient were found with private psychiatrists and psychologists before final referral to the prodromal clinic was established. Partially, this finding may be explained by our large and repetitious sensitisation of GPs about the insidious features of early psychosis. However, some of the sampled patients had contacted a GP before the sensitisation had taken place, suggesting that GPs tend to refer such patients more rapidly. This would be in line with the findings from both the Swiss survey [7] and its international replication study [22], in which GPs indicated that they wished to rapidly refer patients in whom they suspected a beginning psychosis to specialised outpatient services. Given their degree of specialty, private psychiatrists and psychologists, in contrast, seem not to engage into rapid referral of these patients.

Given the considerable potential for recall bias, our study did not assess type of treatment that was provided to patients at each of their contacts. Thus, no conclusions can be drawn about the adequacy of applied treatment strategies. It may be the psychiatrists and psychologists that are seeing the more symptomatic and "difficult-to-treat" patients who require a stable and continuous treatment setting. However, all patients included into this study were finally referred to our prodromal clinic, which may have either taken place for diagnostic assessment or for optimising treatment. It may thus be suggested that referrals of patients could have ideally been initiated already at an earlier stage along their help-seeking pathways. Interestingly, in two German studies on the pathways to care of patients with first-episode psychosis, contacts with private psychiatrists and psychologist were associated with longer duration of untreated psychosis as compared to GPs and general casualty services [17, 18]. Taken together, these findings suggest that education may not only need to include primary carers such as GPs, but also other professional groups as well as secondary carers such as private psychiatrists and psychologists.

Number of contacts and duration of help-seeking pathways

Finally, the comparatively low mean number of contacts (2.38) on the pathways to care over all patient groups may express the effect of the large sensitisation of professional groups that was conducted when our prodromal clinic was established. This finding is

identical with the Phillips et al. study [1] who reported a mean number of contacts of 2.36 in their at-risk sample. Additionally, the median duration from initial contact to referral to our prodromal service was very similar to the one reported by Phillips et al. [1] (42.5 vs. 41.4 weeks). In those studies assessing help-seeking pathways of first-episode cohorts, only one other study reported lower mean contacts (1.7; range 1–4) and also was conducted as part of an early psychosis service [5]. In comparison, number of contacts of patient samples not treated in specialised services were reported to be higher. A mean number of contact of 4.9 was reported by Johnstone et al. [2], a finding which was identically reported in a study that included patients treated before and after the establishment of an early psychosis service [3]. These findings point to the importance of specialised early psychosis services.

■ Weaknesses of this paper

Finally, a few weaknesses of this survey should be acknowledged. First, this study, like any retrospective research, is limited by an inherent potential for recall bias. Given the considerable length of pathway duration in the case of some patients, information on the exact number and on timing of contacts may be subject to errors. Ideally, all contacted professional groups would need to be contacted and interviewed in order to validate the information obtained by patients and their relatives. Second, pathways were studied on a patient sample, which was mainly constituted by subjects without manifest psychosis. Contacted professional groups may therefore not have been alarmed to refer their patients, and referral to our prodromal clinic may have only occurred in order to exclude an at-risk state for psychosis once the prodromal clinic was established. It can, however, be suggested that referrals would only take place if there is particular need for further assessment. Moreover, referrals may also have been initiated by patients themselves, although we did not control for that aspect in our study. Third, we cannot exclude that pathways may differ in patients that are never referred to our prodromal clinic. It may well be possible that an unknown number of patients in presumed at-risk states are treated by private specialists and undergo complete remission. It may therefore be a per se selection of more impaired patients that will be referred to a prodromal clinic. Although the at-risk criteria applied in the current study are now well-established in the early psychosis research community [26], it may well be possible that not all true at-risk patients meet these criteria. Thus, our study may have only captured a fraction of the individuals developing psychosis [27]. Fourth, we did not control for patient-related factors that may in a large part contribute to referral delays. These factors may include lack of insight, poor social adjustment, paranoid thoughts or avolition. Finally,

the training and role of GPs in the health care system may vary across countries; thus, not all of the findings of our study may be generalisable to other settings. However, our findings emerge from a health system where specialists may be contacted without the referral of the "gate-keeping" GPs. Thus, in health systems with gate-keeping models our findings that GPs are more commonly contacted by individuals with insidious features may warrant appropriate education efforts even stronger.

Conclusions

Our study confirms earlier reports of the GPs' important role on the help-seeking pathways of psychotic patients. Furthermore, our study revealed that GPs are often contacted by patients with suspected at-risk states for psychosis early on their pathways to care. The insidious nature of the symptoms presented by these patients in the early stages of their pathways imposes an important challenge for GPs, as insidious features of early psychotic stages are difficult to detect. Our results thus support the need for appropriate education of GPs on these insidious features and for rapidly accessible specialised outpatient services. In a few countries, such specialized outpatient services have been established in recent years [28]. For example, in England, under the National Health Service Plan, 50 early intervention teams have been established at a cost of £70 million [29]. It can thus be expected that help-seeking pathways of patients in early phases of psychosis may be reduced, thus maybe improving the overall outcome of patients.

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