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Essential elements of an early intervention service for psychosis: the opinions of expert clinicians

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Abstract

Background: Early intervention teams attempt to improve outcome in schizophrenia through earlier detection and the provision of phase-specific treatments. Whilst the number of early intervention teams is growing, there is a lack of clarity over their essential structural and functional elements.

Methods: A 'Delphi' exercise was carried out to identify how far there was consensus on the essential elements of early intervention teams in a group of 21 UK expert clinicians. Using published guidelines, an initial list was constructed containing 151 elements from ten categories of team structure and function.

Results: Overall there was expert consensus on the importance of 136 (90%) of these elements. Of the items on which there was consensus, 106 (70.2%) were rated essential, meaning that in their absence the functioning of the team would be severely impaired.

Conclusion: This degree of consensus over essential elements suggests that it is reasonable to define a model for UK early intervention teams, from which a measure of fidelity could be derived.

Background

Early intervention attempts to improve outcome in schizophrenia through earlier detection of untreated psychosis and provision of effective, phase-specific treatments [1]. Early intervention is usually delivered by a team of clinicians who work exclusively with people who have recently experienced a first episode of psychosis or have presented with prodromal symptoms of psychosis [2]. Over the past decade early intervention teams have been established in the USA, Canada, Australia and several European countries [3]. The UK Department of Health has announced its intention to set up 50 Early Intervention Teams to provide care to all young people with a first episode of psychosis in England [4].

Early intervention teams are specialised multi-disciplinary entities that seek to provide a range of sophisticated interventions to several distinct target populations. Experience with other specialised psychiatric teams shows that teams with similar labels and philosophies often exhibit profound differences in structure and function [5,6]. To avoid confusion in research and clinical practice, it is essential to be clear about what are the essential elements of an early intervention team, and to develop a standardised way of

assessing the degree to which these elements are present in any particular team.

Two sets of UK guidelines have been produced that describe how to set up early intervention teams. These guidelines were produced by the UK Department of Health [7] and Initiative to Reduce the Impact of Schizophrenia (IRIS) [8]. However it is not clear how far these guidelines reflect the consensus of clinicians working in early intervention teams, if such a consensus exists. The present study used a technique known as the Delphi process to elicit and quantify the opinions of a group of expert clinicians working in UK early intervention teams [9]. Similar Delphi exercises have been used to: clarify the concept of relapse in schizophrenia [10]; identify the key components of schizophrenia care [11] and delineate the practice model of a community mental health team [12]. The aim of the study was to determine the extent of expert consensus on the essential structural and functional elements of early intervention teams.

Methods

Participants in the Delphi Exercise were senior clinicians (consultant psychiatrists, community psychiatric nurses, psychologists, etc.) who were working in a clinical capacity in early intervention teams in England. The participants were initially identified from a list of clinicians who had registered an interest in early intervention with the Severe Mental Illness Project Team at the Department of Health. Each eligible person on the list was contacted and asked to participate. They were also invited to nominate other eligible clinicians, who were then approached by the research team.

The Delphi process took place in three stages. In stage one a list of structural and functional elements an early intervention teams was extracted from the two sets of UK guidelines by MM and AL. This list was sent to all participants who were asked to add any additional important elements that they felt had been omitted. An 'element' was defined as 'a person, intervention, method of working or style of service organisation that makes an important contribution to improved outcome for patients when incorporated into an early intervention team'. This initial questionnaire was mailed to participants, with reply-paid envelopes enclosed. All the participants' responses to the first questionnaire were reviewed by (MM and AL) in order to identify elements that needed to be added to the initial list. All new elements suggested by the participants were included except for obvious duplicates or elements that referred to general aspects of good practice which any clinician would be expected to demonstrate, whether or not they worked in an early intervention team (for example, "being polite to service users").

For stage two of the Delphi exercise a questionnaire was constructed containing all the elements identified in stage one. Participants were asked to rate the importance of each element on a 1 to 5 scale. The scale anchor points were: 1 – essential (without this element the effective functioning of the team would be severely impaired); 2 – very important (without this element the team would be less effective, but not severely impaired); 3 – important (this element desirable, but its absence would not make the team noticeably less effective for most service users); 4 – unimportant (absence of this element would have little impact on effectiveness); 5 undesirable (presence of this element would have a detrimental effect on effectiveness). The questionnaire was mailed to each participating expert. The responses were entered on a database which was used to produce a customised questionnaire for each expert in stage three of the study.

Stage three of the exercise used the same questionnaire as stage two, with the addition of two extra pieces of information for each element. The first piece of information was that the expert's previous rating was indicated by underlining the relevant anchor point. The second piece of information was the level of agreement within the group of experts as a whole was indicated by shading each score within one point of the median rating for each item (for example, if the median rating for a particular element was 2, then the ratings 1, 2 and 3 would be shaded). Each expert was asked to reconsider their original ratings from stage 2 in the light of this new information. If their new rating was outside the shaded area (indicating that they disagreed with the rest of the panel), they were asked to comment on their reasons for making the rating. The degree of consensus was assessed by calculating the interquartile range of the participants' ratings of importance [13,14]. A semi-interquartile range of 0.5 or less was interpreted as indicating consensus.

Results and Discussion

Forty-eight potential participants were identified (32 from the initial list and a further 16 suggested by people on the list). It was possible to contact 41 of the 48 potential participants, of whom 16 did not meet inclusion criteria (they were not currently working in an early intervention team) and 4 declined to participate. Of the 21 clinicians who participated, 7 were psychiatrists, 9 were community psychiatric nurses, and 5 were clinical psychologists. The mean age of participants was 42.2 yrs (95% CI 38.2–46.2) and they had been working in early intervention services for a mean of 4.3 yrs (95% CI 3.0–5.5). Thirteen participants were based in urban areas and eight in rural areas. The participants came from a total of eleven English early intervention teams with catchment areas ranging from 50,000 to 500,000 (median 160,000). The team sizes ranged from 2 to 35 members with a median of 6.5.

Table 1: Elements rated essential with strong consensus

Element	Grouping
EIS should deal with people in their first episode of psychosis	The client group
EIS should be composed of staff whose sole or main responsibility is to the EIS	Team structure
EIS should have at least one member trained in CBT	Team structure
The EIS approach should incorporate medical, social and psychological models	Team structure
The EIS should emphasise clients' views on their problems and level of functioning	Team structure
The EIS should include a consultant psychiatrist with dedicated sessions	Membership
The EIS should include at least one psychiatric nurse	Membership
The EIS should include a clinical psychologist	Membership
EIS should have support from CAMHS when prescribing for under 16 year olds	Membership
The EIS should have close links with CAMHS	Membership
The EIS should assess clients referred on suspicion rather than certainty of psychosis	Initial assessment
The EIS should encourage direct referrals from primary care	Initial assessment
The EIS should regularly audit effectiveness of referral pathways & training programmes	Initial assessment
The EIS should offer a rapid initial assessment	Initial assessment
An EIS assessment should include a psychiatric history and mental state examination	Initial assessment
An EIS assessment should include an assessment of risk (including suicide)	Initial assessment
An EIS assessment should include a social functioning and resource assessment	Initial assessment
An EIS assessment should include an assessment of the client's family	Initial assessment
An EIS assessment should include the client's aspirations and understanding of their illness	Initial assessment
An EIS assessment should be multi-disciplinary	Initial assessment
Each EIS client should have a relapse risk assessment	Initial assessment
The EIS should have access to translation services	Initial assessment
EIS should not be concerned about precise diagnosis so long as in psychotic spectrum	Initial assessment
The EIS should accept referrals from child and adolescent mental health services	Initial assessment
The goal of early contact should be engagement rather than treatment	Initial assessment
The EIS assessment should identify areas of distress	Initial assessment
EIS should have a assertive approach to engagning the client & their family/social network	engagement
The EIS should not close the case if the client fails to engage	engagement
The EIS should allocate a key worker to all clients accepted into the service	engagement
The EIS should provide services away from traditional psychiatric settings to avoid stigma	engagement
EIS should emphasise the identification and treatment of depression amongst its clients	Non-pharmaceutical
EIS should emphasise the identification & treatment of suicidal thinking	Non-pharmaceutical
The EIS should provide CBT to clients with treatment-resistant positive symptoms	Non-pharmaceutical
Each EIS client should have a relapse prevention plan	Non-pharmaceutical
The EIS should provide clients with educational materials about psychosis	Non-pharmaceutical
The EIS should use low-dose atypical neuroleptics as the first line drug treatment	Pharmaceutical
Clients with disabling negative symptoms should have review of drug treatment	Pharmaceutical
The EIS should actively involve clients in decisions about medication	Pharmaceutical
EIS clients should get detailed information about medication	Pharmaceutical
The EIS should engage the client's family/significant others at an early stage	Relatives and sig others
The EIS should involve family and significant others in the client's ongoing review process	Relatives and sig others
The EIS should provide families with psychoeducation and support	Relatives and sig others
The EIS should provide families with Psychoeducational Family Intervention	Relatives and sig others
A relapse prevention plan should be shared with the client's family/significant others	Relatives and sig others
EIS should have access to separate age-appropriate in-patient facilities for young people	Admission to Hospital
The EIS should be able to provide intensive community support when a client is in crisis	Admission to Hospital
Each EIS service user/family/carer should know how to access support in a crisis	Admission to Hospital
EIS clients should be able to access out-of-hours support from a 24 hour crisis team	Admission to Hospital
When a client is an in-patient, EIS team should be actively involved in in-patient reviews	Admission to Hospital
When a client is an in-patient, EIS team should be actively involved in discharge planning	Admission to Hospital
The EIS should be prepared to use its powers under mental health legislation	Admission to Hospital
There should be a single point of contact so primary care and other agencies can check out potential concerns/resources and to ease the confusion of roles/responsibilities	Community connections

Table 2: Elements rated essential with good consensus

Element	Grouping
The EIS should deal with people who are in their first three years of a psychotic illness	The client group
The EIS should integrate child/adolescent and adult mental health services	The client group
The EIS should have access to separate age-appropriate facilities for young people	The client group
The EIS should focus on people under the age of 35 years	The client group
The EIS should adhere to the principles of Assertive Community Treatment	Team structure
The EIS should promote peer support and self help initiatives	Team structure
The EIS should include a social worker	Membership
The EIS should include an occupational therapist	Membership
The EIS should include a support worker	Membership
The EIS should include at least one representative from CAMHS	Membership
The EIS should include a specialist in vocational rehabilitation	Membership
In the early phases of a psychotic illness the EIS should adopt a "watch and wait" brief	Initial assessment
Each EIS client should receive an early assessment of educational/vocational functioning	Initial assessment
EIS care plans should be reviewed every 6 months	Initial assessment
The EIS should routinely assess clients for substance misuse	Initial assessment
EIS should assign key workers on suspicion of psychosis but discharge if not psychotic	Initial assessment
The EIS should work with clients in the prodromal phase of psychosis	Initial assessment
The EIS should encourage direct referrals from services for young people	Initial assessment
Where possible the EIS should assess clients at home or in primary care	engagement
Where possible the EIS should treat clients at home or in primary care	engagement
The EIS should maintain contact with the client and family for 3 years after acceptance	engagement
The EIS should have a range of venues for assessment and treatment	engagement
The EIS should have an emphasis on finding employment or resuming work	Non-pharmaceutical
EIS should assess and treat symptoms of post-traumatic stress disorder	Non-pharmaceutical
The EIS should provide CBT to clients with disabling negative symptoms	Non-pharmaceutical
The EIS should include therapists trained and accredited in providing CBT for psychosis	Non-pharmaceutical
The EIS should have formal links with local colleges, careers advisory services & VR agencies	Non-pharmaceutical
Each client should have access to a vocational/educational training programme	Non-pharmaceutical
The EIS should be able to provide psychological interventions for substance misuse	Non-pharmaceutical
EIS should provide psychological interventions for anxiety/social phobias/avoidance	Non-pharmaceutical
The EIS should help clients develop daily living skills, where appropriate	Non-pharmaceutical
The EIS should include health promotion as part of its psycho-education package	Non-pharmaceutical
EIS should treat prodromal symptoms symptoms with CBT even when diagnosis uncertain	Non-pharmaceutical
EIS should regularly monitor medication side-effects using standardised monitoring tools	Pharmaceutical
EIS should involve the service user in monitoring the side-effects of drug treatment	Pharmaceutical
EIS should treat psychotic prodromal symptoms with drugs, even when diagnosis uncertain	Pharmaceutical
EIS should be persistent in treating residual positive symptoms with drug treatments	Pharmaceutical
Clients with positive symptoms not responding to other treatments should have clozapine trial	Pharmaceutical
Clients with positive symptoms 6 weeks after acute episode should have review drug treatment	Pharmaceutical
The EIS should offer clients the choice of pharmacological treatment	Pharmaceutical
EIS should attempt to maintain/establish contact between young clients & other young people	Relatives and sig others
The EIS should make initial contact with the client's family within one week of referral	Relatives and sig others
Initial contact with family should include "debriefing session", with opportunity to air feelings	Relatives and sig others
EIS should include therapists trained & accredited in Psychoeducational Family Interventions	Relatives and sig others
EIS should have access to age-appropriate crisis resolution facilities (non-inpatient crisis beds)	Admission to Hospital
When client requires acute care joint assessment should take place between EIS & acute team	Admission to Hospital
When client is in-patient, the EIS consultant should be responsible for his/her care	Admission to Hospital
EIS should be involved in community based programmes to reduce stigma of mental illness	Community links
EIS should provide symptom awareness programmes for relevant agencies	Community links
The EIS should provide clients with information about local service user groups	Community links
The EIS should ensure that the primary care team remain closely involved in client's treatment	Community links
The EIS should actively promote the use of community facilities	Community links
The EIS should foster close collaboration with youth organisations	Community links
EIS should have strategy for engaging the local community, based on needs and demography	Community links

Table 3: Elements rated very important with good consensus

Element	Grouping
EIS team should have a catchment area of 250-300,000	The client group
The EIS should work with adolescents as young as 14 years	The client group
EIS should involve users as support workers in community & respite services	Membership
The EIS should have designated sessions from a child and adolescent psychiatrist	Membership
The EIS should employ youth workers	Membership
The EIS should encourage direct referrals from social services	Initial assessment
Assessment should people important to service user other than family	Initial assessment
The initial EIS care plan should be reviewed at 3 months	Initial assessment
The EIS should assess client's eligibility for benefits	Initial assessment
The EIS should allow self referral	Initial assessment
The EIS should not attempt to make a diagnosis at first assessment	Initial assessment
Assessment includes measures symptoms/distress/social functioning/work	Initial assessment
Clients should have education/training plan to employment within 3 months	Non-pharmaceutical
Clients should have access to user led vocational/educational programme	Non-pharmaceutical
The EIS should help clients find suitable accommodation	Non-pharmaceutical
EIS avoids reliance on disability allowance as hampers chances of work	Non-pharmaceutical
The EIS should provide CBT to prevent transition to psychosis	Non-pharmaceutical
The EIS should provide Cognitive Behavioural Therapy for depression	Non-pharmaceutical
The EIS uses structured techniques to encourage compliance with drugs	Pharmaceutical
The EIS should make initial contact with the clients family at home	Relatives and sig others
EIS contacts family/carers and significant others at least monthly	Relatives and sig others
EIS maintains regular contact with family even when client has left home	Relatives and sig others
EIS attempts to form positive relationships with journalists from local media	Community links
The EIS should have access to sports and leisure facilities	Community links
EIS integrates with local community to foster ownership and reduce stigma	Community links

There were 100 key elements on the initial list generated from the two sets of guidelines. Responses were received from all 21 participants, 15 of whom suggested a total of 71 additional elements. Of these new elements, 11 were excluded because they were considered to be duplications of elements already included in the initial list and a further 9 were excluded because they were considered to be general statements of good psychiatric practice, rather than elements specific to an early intervention team. Therefore at the end of stage one the final list consisted of 151 elements. These elements fell into 10 broad categories: the client group (11 elements), team structure and ethos (10), membership of the team (15), referral and assessment procedures (34), engaging and maintaining contact (10), non-pharmaceutical interventions (23), pharmaceutical interventions (15), relatives and significant others (12), admission to hospital or crisis care (10) and community connections (11).

All 21 experts returned the completed stage two and stage three questionnaires. The experts made few alterations to their opinions in stage three. Tables 1, 2, 3, 4, 5 group the elements according to the median rating and degree of consensus as measured by the semi-interquartile range (0–0.25 strong consensus, 0.25–0.5 good consensus, greater than 0.5 weak consensus). Fifty-two items were rated essential with strong consensus (table 1); 54 items were rated essential with good consensus (table 2); 25 items were very important with good consensus (table 3.); 12 items were rated very important with weak consensus; 4 items were rated important with good consensus; 2 items were rated important with weak consensus; 1 item was rated not important with weak consensus. Only one item was rated as undesirable, this item had good consensus. Thus overall strong or good consensus was present for 136 (90%) elements, of which 106 (70.2%) were rated essential. Items proposed by a participating clinician were significantly less likely to be rated essential or very important (odds ratio 0.15, 95% CI 0.015–0.90, p = 0.018), however they were not significantly more likely to fail to achieve consensus (odds ratio 2.47 95% CIs 0.73–8.52 p = 0.15), although confidence intervals for this odds ratio were wide.

Conclusions

This study has highlighted the complexity of early intervention teams by showing that it was possible to identify 151 distinct structural and functional elements of such teams using two sets of guidelines and the opinions of twenty-one expert clinicians. There was high degree of consensus amongst expert clinicians that about two thirds of these elements (106) were essential. By way of compar-

Table 4: Elements rated very important with weak consensus

Element	Grouping
EIS should adopt a needs led model of support	Team structure
EIS produces a care plan within week of initial assessment	Initial assessment
When treating acutely ill client, long acting benzos rather than neuroleptics used for sedation	Pharmaceutical
EIS maintains watching brief for at least 3 months on all clients screened but judged unsuitable for treatment	engagement
An EIS should have a catchment area of about 150,000 in inner city areas	The client group
The EIS should focus on people under the age of 25 years	The client group
EIS should be embedded in a youth services structure owned by statutory & voluntary agencies	Team structure
EIS has designated sessions from a child and adolescent psychologist	Membership
The EIS should encourage direct referrals from educational institutions	Initial assessment
The EIS should encourage direct referrals from non-statutory agencies	Initial assessment
EIS uses social activities by the key worker as a means of engaging clients	engagement
When client appears psychotic, treatment with drugs delayed for 2 days until diagnosis confirmed	Pharmaceutical

Table 5: Other elements

Element	Grouping
Important/good consensus	
EIS adopts a strengths model of support (as opposed to a needs model)	Team structure
EIS includes an engagement worker	Membership
EIS works with clients with high risk of psychosis (high actuarial risk)	Initial assessment
The EIS should have access to outdoor pursuit courses	Non-pharmaceutical
Important/weak consensus	
EIS deals with people in their first six years of a psychotic illness	The client group
EIS treats non-psychotic prodromal symptoms with drugs	Pharmaceutical
Not important/weak consensus	
The EIS should include clients over the age of 35 years	The client group
Undesireable/good consensus	
EIS not stand-alone, but integrated into mainstream psychiatric services	Team structure

ison, a similar exercise conducted with clinical experts in assertive outreach identified 73 elements, of which 54 (74%) were rated very important [15]. Thus, in the judgement of clinical experts, an early intervention team appeared to be considerably more complex that an assertive outreach team, which in itself is an entity of some intricacy.

The present consensus over the essential elements of early intervention teams suggests that it is reasonable to define a model for UK teams, from which a measure of fidelity could be derived. Such a measure will be essential if research on early intervention is not to be clouded by controversy over how far the model was properly implemented in particular studies. It will also be essential in clinical practice to evaluate the degree to which a team with the early intervention "label" is actually adhering to the specifics of the model.

The consensus between clinical experts suggests that the existing UK guidelines, from which about two thirds of the elements were derived, are generally accepted. It could be argued that this was because the initial list of clinicians was provided by the Department of Health, who also endorsed the guidelines. However, one third of the experts approached were not on the original list, and the final sample included clinicians from eleven different teams and four different professions, which suggests that a reasonable range of opinion was canvassed. A more likely explanation for the consensus is that there was insufficient evidence available on the effectiveness of different approaches to early intervention for the clinicians to be confident in ruling out any particular element. However, clinicians were united on the undesirability of one element: they agreed that early intervention teams should be free standing teams, and not an additional function of existing community mental health teams.

It would be interesting to repeat this exercise with an international panel of experts to make the results more applicable to a global audience.

Competing interests
None declared.

Authors' contributions
MM: Analysed the results and prepared the manuscript

AL: Contacted participants, collected data and assisted in the preparation of the manuscript

MF: Designed the study and acted as consultant on the Delphi methodology

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