

UC Davis

UC Davis Previously Published Works

Title

Which components of specialized early intervention for psychosis do senior providers see as most important?

Permalink

<https://escholarship.org/uc/item/7dz5191s>

Journal

Early Intervention in Psychiatry, 13(3)

ISSN

1751-7885

Authors

Savill, Mark
Sardo, Angela
Patel, Pooja
[et al.](#)

Publication Date

2019-06-01

DOI

10.1111/eip.12690

Peer reviewed



Published in final edited form as:

Early Interv Psychiatry. 2019 June ; 13(3): 677–681. doi:10.1111/eip.12690.

Which components of specialized early intervention for psychosis do senior providers see as most important?

Mark Savill^a, Angela Sardo^b, Pooja Patel^b, Rachel Loewy^a, Joy Melnikow^c, and Tara Niendam^b

^aDepartment of Psychiatry, Weill Institute for Neurosciences, University of California San Francisco, USA

^bDepartment of Psychiatry, University of California, Davis School of Medicine, CA, USA

^cCenter for Healthcare Policy and Research, University of California, Davis, CA, USA

Abstract

Aim—Specialized early interventions improve outcomes in early psychosis. Experts have proposed a number of essential treatment components. However, it is unclear whether these reflect the views of senior clinic staff charged with implementing this model in practice.

Method—Twenty-Five senior Early Psychosis clinic staff across California completed a survey indicating which features of early psychosis treatment they considered most important.

Results—Components related to the service structure and the need for a prompt, comprehensive assessment and care planning were considered most important, despite the limited evidence base evaluating these aspects of care. Administration of clozapine to treatment-refractory patients and weight gain interventions were considered the least important, despite the relatively strong evidence base supporting these treatment components.

Conclusion—The findings suggest a bi-directional dissemination gap, where components considered most important by senior providers receive limited research attention, while some areas with supporting evidence may be underappreciated in clinical practice.

Keywords

Community health services; early intervention; healthcare providers; psychotic disorders; surveys and questionnaires

INTRODUCTION

Specialized interventions for early psychosis typically include low-dose antipsychotic medication, cognitive behaviorally-based psychotherapy, educational and vocational support, and family education and support, delivered by a multi-disciplinary team (1). This treatment model is effective (2, 3), and feasible to implement in clinical practice (4), but the delivery

Corresponding author contact information: Dr. M Savill, Department of Psychiatry, 401 Parnassus Avenue, San Francisco, CA, 94143.

Conflict of interest statement: The authors report no conflicts of interest or financial relationships with commercial interests.

of an intervention with so many different components presents a significant challenge to providers.

With the expansion of early psychosis (EP) services across America, Europe and Australasia there has been an emphasis on determining what features of the early psychosis care model are critical to care delivery and developing fidelity scales to standardize implementation (5–7). In a UK study, expert clinicians identified 106 key service components related to the team, structure, and function of an EP program (8). However, some recommendations were not relevant outside the UK's National Health Service, such as the need to develop links with Child and Adolescent Mental Health services for prescribing to patients under 16, while others were not specific to early psychosis services. In a study by Addington and colleagues, 32 key service components were identified through a Delphi process (9). In this study, the participants were recruited based on their published research contributions, rather than their experience in delivering frontline EP care in a general outpatient setting. While informative, it is unclear to what extent the perceptions of such a cohort are consistent with clinical staff working in a broad range of programs, from rural to urban clinics, university to community-based services, new and established services, and to less research-intensive programs.

Identifying what particular components of care senior staff charged with managing and delivering EP services across a broad range of services consider most important may be significant for two reasons. First, it could help identify areas where evidence has not been translated into the priorities of everyday practice, which is important in determining where efforts to bridge the dissemination gap are most needed. Second, it may identify areas considered important in practice but under-evaluated in the literature, signposting important future directions for research.

METHOD

The data originates from a study evaluating the structure of EP programs across California (10). Programs were identified through a review of Mental Health Block Grant applications, and stakeholder feedback. A senior staff member from each program was invited to complete an online survey regarding details of their service, and opinions on what components of care they considered most important. If the survey was not completed within two weeks, up to three courtesy calls and email reminders were used to encourage completion. Where necessary, program representatives were contacted to clarify unclear responses, discrepancies, or resubmit missing data. Prior to conducting the study, all procedures were approved by the U.C. Davis IRB.

The survey (see Appendix I) was based on the First Episode Psychosis Services Fidelity Scale (FEPS-FS) (11). The FEPS-FS identifies 31 essential components of EP programs, including 30 items based on a review completed by Addington and colleagues (9). Participants rated how important they considered each component of care on a 5-item Likert scale, ranging from “5= Extremely important (Essential, must be given to everyone in FEP care)” to “1= Unimportant (not important for FEP care)”. The ratings were then compared to the strength of the evidence base identified for each component of care reported by

Addington and colleagues (9). In the Addington study, this process followed two steps. First, essential care components were identified via a Delphi process with leading academics in the field of EP care. Second, a systematic review was conducted to identify the evidence supporting for each component of care identified from the Delphi process, resulting in a rating from “A” (strong evidence) to “D” (no evidence of benefit or harm) for each component.

RESULTS

Across 58 California counties, 28 programs were identified. Staff from twenty-six programs (93%) completed the survey. One was excluded, due to the participant completing a survey twice (one for each clinic they managed). Participant and program details are presented in Table 1. The majority (75%) reported their role as being the clinical, program or divisional manager, director or coordinator; while other titles included Medical Director; Chief of Care and Strategy; Clinical Psychologist; and Senior Program Supervisor. A summary of how each component of care was rated by participants, compared to the level of evidence grade from the Addington study is presented in Table 2.

The components of care that were most consistently identified as “extremely important” related to the need for a prompt, comprehensive assessment and care plan, and service structure. Twenty-three participants (92%) believed a comprehensive assessment at intake was extremely important. Other components of care deemed extremely important by over 80% of participants included the presence of a team leader with training at a Masters level or higher (88%); the provision of crisis intervention, or links to crisis services (88%); an individual treatment plan following assessment (88%); regular multidisciplinary team meetings (88%); and the ability to offer a face-to-face appointment within two weeks of referral (84%). In the assessment of evidence-based components of care completed by Addington and colleagues (9), the majority of these components were either not evaluated, or given an evidence quality assessment of ‘C’ (weak or reasonable evidence, or expert opinion alone) or ‘D’ (no evidence of benefit or harm). The mandate to conduct regular team meetings was given an evidence rating of ‘B’ (moderate evidence).

The components deemed least important by EP staff related to pharmacotherapy, including strategies to address medication side-effects. Only one participant (4%) considered strategies addressing weight gain due to side effects as extremely important, and 48% gave an importance rating of 3 (“equivocal”) or lower. Few participants considered guided antipsychotic dose reduction after 1 year of remission or a trial of clozapine following two unsuccessful trials of other antipsychotics extremely important (20% and 24% respectively). This contrasts with the Addington et al., 2013 review findings that gave clozapine for treatment-resistance an evidence rating of ‘A’ (strong evidence) and interventions to address weight-gain a rating of ‘B’ (moderate evidence).

DISCUSSION

Senior EP staff rated practical service elements (program structure, assessment procedures and the need for individual treatment plans) as the most important, despite the lack of strong

evidence supporting these particular components of care. They rated issues related to pharmacotherapy and interventions for side-effects related weight gain as least important, despite substantial evidentiary support in the research literature. These findings highlight the challenge of both of translating research findings into practice, and the lack of research in areas considered most critical to senior staff delivering EP services.

Strengths and limitations

A strength of the study is the high response rate (93%) from staff based in university and community-based EP programs, rural and urban locations, and established and new programs, supporting the representativeness and generalizability of the findings. One limitation of the study is that the Delphi study identifying the essential components of care and the literature review determining the evidence base for each component is based on a study published in 2013 (9). Consequently, more recent developments, such as use of long-acting antipsychotic injections for FEP clients (12), were not considered. Additionally, new studies may have changed the evidence ratings given to the different components of care. However, a brief review of the literature did not identify new findings related to areas identified as most important (i.e. service structure & intake procedures), suggesting the results remain valid.

While the survey focused on psychosis, the majority of clinics (76%) serve both psychotic and clinical high-risk (CHR) clients. This may have impacted participants' assessment of the importance of antipsychotic medication, given the controversy of providing such treatments to individuals with CHR (13). However, few staff from FEP-only programs rated clozapine for treatment resistant clients (33.3%), antipsychotic reduction plans (16.7%) or weight-gain treatment (16.7%) as extremely important. Finally, it is notable that the majority of participants were either licensed family therapists or social workers (68%), leaving it unclear whether these findings generalize to other professionals who work in EP services such as psychiatric nurses, occupational therapists, psychiatrists, or peers with lived experience of psychosis.

Implications

This study highlights the lack of research into components of EP care that senior providers consider most important. In addition, these findings suggest that some components supported by a strong evidence base may be underappreciated in clinical practice. These results may reflect the challenges of implementing EP care. The current emphasis on measurable metrics for reporting purposes (i.e. intake timeliness, paperwork requirements) may have led to an increased focus on these particular elements in community care. If so, simultaneously emphasizing both measurable metrics and the quality and fidelity of other essential components may be important in future program implementation.

Another reason for the increased focus on service structure and lack of importance ratings for pharmacological options may be a consequence of canvassing the opinions of senior staff members whose primary responsibilities concern providing non-pharmacological interventions and/or managing the service as a whole (only two MD's participated). The results may reflect a bias where individual team members can become siloed, focusing on

elements critical to their own role. This is a significant issue given the importance attached to the multidisciplinary approach and the need for team leaders to champion all treatment elements (1).

This study suggests that interventions to manage weight gain and clozapine for treatment-resistant psychosis are not typically considered important by providers, relative to other aspects of care. However, interventions to reduce antipsychotic-induced weight gain are effective (11), while weight-gain side-effects of medication can lead to significant patient distress, reduced treatment compliance, and increased risk of cardiovascular disease and diabetes (14). In treatment-refractory early psychosis, clozapine is more effective at treating symptoms relative to other atypical antipsychotics (15), and significantly reduces suicide attempts (16). Part of the low priority given to clozapine may be related to the risk of side effects such as agranulocytosis that requires regular lab monitoring (17), and the fact that clozapine use in the US is low relative to many other countries (18). Given the relatively short duration of EP care only a small proportion of clients would likely be eligible for clozapine. However, there can be a significant delay in initiating clozapine even after demonstrating treatment resistance (19), highlighting the need for more detailed investigation of this issue in community-based EP care. Clozapine is associated with significantly lower mortality rates relative to other antipsychotics (20), and so this should be considered a gap between research and practice that requires addressing.

This study highlights the lack of research in areas that senior staff considered most critical, suggesting the presence of a bi-directional dissemination gap and potentially important new avenues for research. For example, most participants reported that they considered providing crisis intervention services, or linkage to such services, and offering a face-to-face appointment with potentially eligible clients within two weeks as “extremely important”. However, the evidence base validating these components is weak (rated as ‘C’ and ‘D’ respectively). With an increasing push towards synchronizing the collection of EP service data via learning healthcare networks (21), such a move may allow us to examine the impact of service-level differences, including specific treatment elements and different team structures, on outcomes such as improved engagement with services and therapeutic relationship, as well symptoms and functioning. Such research could have significant implications on how EP services should be structured and help bridge the gap between service and science.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

This work was supported by the National Institute of Mental Health (grant number MH018261-31) and the Mental Health Services Oversight and Accountability Committee (grant number 14MHSOAC010). The authors would like to thank all the participants for their involvement in the study.

References

1. Heinssen, R; Goldstein, A; Azrin, S. Evidence-Based Treatment for First Episode Psychosis: Components of Coordinated Specialty Care. 2014. Retrieved from https://www.nimh.nih.gov/health/topics/schizophrenia/raise/nimh-white-paper-csc-for-fep_147096.pdf
2. Kane JM, Robinson DG, Schooler NR, Mueser KT, Penn DL, Rosenheck RA, ... Marcy P. 2015; Comprehensive versus usual community care for first-episode psychosis: 2-year outcomes from the NIMH RAISE early treatment program. *American Journal of Psychiatry*. 173:362–372. DOI: 10.1176/appi.ajp.2015.15050632.3 [PubMed: 26481174]
3. Nordentoft M, Rasmussen JØ, Melau M, Hjorthøj CR, Thorup AE. 2014; How successful are first episode programs? A review of the evidence for specialized assertive early intervention. *Current Opinion in Psychiatry*. 27:167–172. [PubMed: 24662959]
4. Dixon LB, Goldman HH, Bennett ME, Wang J, McNamara KA, Mendon SJ, ... Essock SM. 2015; Implementing coordinated specialty care for early psychosis: the RAISE Connection Program. *Psychiatric Services*. 66:691–698. DOI: 10.1176/appi.ps.201400281 [PubMed: 25772764]
5. Essock SM, Nossel IR, McNamara K, Bennett ME, Buchanan RW, Kreyenbuhl JA, ... Dixon LB. 2015; Practical monitoring of treatment fidelity: examples from a team-based intervention for people with early psychosis. *Psychiatric Services*. 66:674–676. [PubMed: 25555176]
6. Hetrick, SE; O'connor, DA; Stavely, H; Hughes, F; Pennell, K; Killackey, E; McGorry, P. Development of an implementation guide to facilitate the roll-out of early intervention services for psychosis. *Early Intervention in Psychiatry*. 2017. . Advance online publication
7. Melau, M; Albert, N; Nordentoft, M. Development of a fidelity scale for Danish specialized early interventions service. *Early Intervention in Psychiatry*. 2017. . Advance online publication
8. Marshall M, Lockwood A, Lewis S, Fiander M. 2004; Essential elements of an early intervention service for psychosis: the opinions of expert clinicians. *BMC psychiatry*. 4:17.doi: 10.1186/1471-244X-4-17 [PubMed: 15230978]
9. Addington DE, McKenzie E, Norman R, Wang J, Bond GR. 2013; Essential evidence-based components of first-episode psychosis services. *Psychiatric Services*. 64:452–457. DOI: 10.1176/appi.ps.201200156 [PubMed: 23370444]
10. Niendam TA, Sardo A, Savill M, Patel P, Xing G, Loewy RL, Dewa CS, Melnikow J. 2018 The rise of early psychosis care in California: An overview of county-based services.
11. Addington DE, Norman R, Bond GR, Sale T, Melton R, McKenzie E, Wang J. 2016; Development and Testing of the First-Episode Psychosis Services Fidelity Scale. *Psychiatric Services*. 67:1023–1025. DOI: 10.1176/appi.ps.201500398 [PubMed: 27032665]
12. Emsley R, Chiliza B, Asmal L, Mashile M, Fusar-Poli P. 2013; Long-acting injectable antipsychotics in early psychosis: a literature review. *Early intervention in Psychiatry*. 7:247–254. DOI: 10.1111/eip.12027 [PubMed: 23342964]
13. McGlashan TH. 2001; Psychosis treatment prior to psychosis onset: ethical issues. *Schizophrenia Research*. 51:47–54. DOI: 10.1016/S0920-9964(01)00238-9 [PubMed: 11479065]
14. McIntyre RS, McCann SM, Kennedy SH. 2001; Antipsychotic metabolic effects: weight gain, diabetes mellitus, and lipid abnormalities. *The Canadian Journal of Psychiatry*. 46:273–281. DOI: 10.1177/070674370104600308 [PubMed: 11320682]
15. Kumra S, Kranzler H, Gerbino-Rosen G, Kester HM, DeThomas C, Kafantaris V, ... Kane JM. 2008; Clozapine and “high-dose” olanzapine in refractory early-onset schizophrenia: a 12-week randomized and double-blind comparison. *Biological Psychiatry*. 63:524–529. DOI: 10.1016/j.biopsych.2007.04.043 [PubMed: 17651705]
16. Meltzer HY, Alphas L, Green AI, Altamura AC, Anand R, Bertoldi A, ... Krishnan R. 2003; Clozapine treatment for suicidality in schizophrenia: international suicide prevention trial (InterSePT). *Archives of General Psychiatry*. 60:82–91. DOI: 10.1001/archpsyc.60.1.82 [PubMed: 12511175]
17. Joober R, Boksa P. 2010; Clozapine: a distinct, poorly understood and under-used molecule. *Journal of Psychiatry & Neuroscience*. 35:147–149. DOI: 10.1503/jpn.100055 [PubMed: 20420765]

18. Bachmann CJ, Aagaard L, Bernardo M, Bernardo M, Brandt L, Cartabia M, Clavenna A, ... Taylor D. 2017; International trends in clozapine use: a study in 17 countries. *Acta Psychiatrica Scandinavica*. 136:37–51. [PubMed: 28502099]
19. Yoshimura B, Yada Y, So R, Takaki M, Yamada N. 2017; The critical treatment window of clozapine in treatment-resistant schizophrenia: secondary analysis of an observational study. *Psychiatry Research*. 250:65–70. [PubMed: 28142068]
20. Tiihonen J, Lönnqvist J, Wahlbeck K, Klaukka T, Niskanen L, Tanskanen A, Haukka J. 2009; 11-year follow-up of mortality in patients with schizophrenia: a population-based cohort study (FIN11 study). *The Lancet*. 374:620–627. DOI: 10.1016/S0140-6736(09)60742-X
21. Heinsen, R. Early Psychosis Intervention Network (EPINET): A Learning Healthcare System for Early Serious Mental Illness. 2015. Retrieved from <https://www.nimh.nih.gov/funding/grant-writing-and-application-process/concept-clearances/2015/early-psychosis-intervention-network-epinet-a-learning-healthcare-system-for-early-serious-mental-illness.shtml>

Table 1

Participant and program details.

Variable	participants/programs n=25	
Licensed clinician (n, %)	23	92%
Marriage and Family Therapist (MFT)	12	48%
Clinical Social Worker (CSW)	5	20%
Clinical Psychologist (PhD, PsyD)	4	16%
Psychiatrist (MD)	2	8%
No clinical qualification	2	8%
Components of care offered by program [†]		
Regular psychiatric services	22	95.7%
Nursing Services	12	52.2%
Individual Psychotherapy	23	100.0%
Case Management	23	100.0%
Client-focused Psychoeducation	23	100.0%
Treatment of co-morbid substance abuse	15	65.2%
Family therapy (individual or group)	20	87.0%
Supported employment & education	16	69.6%
Skills training	18	81.8%
Other	3	13.0%
Total components of care delivered by service [†] (median, IQR)	8	7–8
Maximum duration of treatment (median, range)	24	6–60
No maximum duration (n, %)	2	8%
Program inclusion criteria related to age (median, range)		
Minimum age	14	8–18
Maximum age	25	24–45
No minimum-maximum age criteria (n, %)	2	8%
Disorders treated according to program inclusion criteria (n, %)		
Psychosis & Clinical High Risk	19	76%
Psychosis only	6	24%
Length of time clinic open (months; median, IQR)	32.5	13.5 – 44.8

Key: IQR: Inter quartile range.

[†]Data provided by 23 clinics

Table 2

Importance attached by senior early psychosis staff members to each component of the coordinated specialty care model

Item	Level of evidence-base †	Level of importance (n=25)				
		Extremely Important	Important	Equivoval	Less important	Un-important
Population-level interventions and access						
* First appointment within 2 weeks	D	84%	16%	-	-	-
Targeted education to “first contact” services in the community communication between FEP & inpatient services	B	64%	36%	-	-	-
	D	64%	32%	-	4%	-
Comprehensive assessments and care plan						
* comprehensive clinical assessment at intake	C	92%	8%	-	-	-
* Create individual treatment plan following assessment	C	88%	12%	-	-	-
Psychosocial needs are incorporated into care plan	C	72%	24%	4%	-	-
Seek collateral information from family	C	76%	24%	-	-	-
Pharmacotherapy						
Antipsychotic medication provided	A	52%	32%	16%	-	-
Medication decision based on standardized algorithm	-	40%	32%	16%	4%	8%
Clozapine offered after two unsuccessful trials of APs	A	24%	32%	16%	16%	12%
Guided AP dose reduction after 1 year of remission	-	20%	48%	16%	8%	8%
Structured intervention to prevent weight gain	B	4%	48%	24%	16%	8%
Psychoeducation & Psychotherapy						
Client-focused psyched or illness management training	B	60%	24%	16%	-	-
CBT for symptoms of psychosis, anxiety or depression	B	60%	36%	-	-	4%
Caregiver education and support	A/B	60%	28%	8%	4%	-
Social & community skills training	B	48%	40%	8%	4%	-
Addictions treatment						
MET or CBT for co-morbid substance use	C	48%	40%	8%	4%	-
Vocational and Educational support						
Supported employment services	A	56%	32%	8%	-	4%
Service system and models of intervention						
* At least Masters level Team Leader	-	88%	11%	-	-	-

Item	Level of evidence-base †	Level of importance (n=25)				
		Extremely Important	Important	Equivocal	Less important	Un-important
* Providing crisis intervention or linkage to crisis services	C	88%	8%	4%	-	-
* Regular multidisciplinary team meetings	B	88%	8%	-	4%	-
Multidisciplinary team of qualified professionals	-	80%	16%	-	4%	-
Case manager assigned for ongoing care	C	80%	16%	-	4%	-
Psychiatrists assigned to specific clients	C	76%	24%	-	-	-
Psychiatrist integrated into the team	C	68%	24%	-	4%	4%
Proactive outreach and engagement for clients	C	60%	24%	12%	-	4%
Explicit admission criteria	B	56%	24%	20%	-	-
ratio of active FEP clients to clinicians 20:1	C‡	48%	44%	4%	4%	-
Clearly identified population served	-	48%	40%	8%	-	4%
Mandate to provide services for specified time	B	36%	36%	20%	-	8%
Evaluation and quality improvement						
Formal annual assessment conducted	C	64%	24%	12%	-	-

Key: AP: Antipsychotic; CBT: Cognitive Behavioral Therapy; FEP: First Episode Psychosis; MET: Motivational Enhancement Therapy.

† Level of evidence base as determined in the Addington et al., 2013 review of essential EP program components. A= strong evidence, B= Supportive evidence, C=opinion, D= No evidence of benefit or harm.

‡ Defined as ratio of 1:25 in Addington et al., 2013 study.

* Denotes components that were deemed as “extremely important” by at over 80% of participants.