Meadows Mental Health Policy Institute

Best Practices and Challenges in First Episode Psychosis Care: Implications for the UTSW Psychosis Center

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THE MEADOWS MENTAL HEALTH POLICY INSTITUTE FOR TEXAS

TABLE OF CONTENTS

Introduction and Overview

First Episode Psychosis (FEP) Care is a rare health resource for individuals and families experiencing the very early stages of a serious psychotic illness, such as schizophrenia. Emerging psychosis, which is a bewildering and terrifying experience for individuals and their families, affects approximately 4,000 families in Texas each year. When people do not receive immediate, comprehensive, and effective care, the experience of psychosis is more likely to negatively change the trajectory of a person's life and leave families distraught. Unfortunately, most people do not receive prompt and effective care for emerging psychosis, and approaches to helping people maintain satisfaction in their work and social life are desperately needed.

First Episode Psychosis (FEP) Care is delivered by a multi-disciplinary team of mental health professionals, including psychiatrists, therapists and substance use disorder counselors, employment specialists, and peer specialists. Early detection is important. So, through community education activities and the development of strategic partnerships with key entities in the community, the team also plays a role in detecting emerging psychosis and creating channels through which young people can be referred for treatment. FEP Care is individually tailored to the person and it actively engages the family in supporting recovery from early psychosis. Effective treatments, such as medication management, individual therapy, and illnesses management are provided, as well as other less common evidence-based approaches, such as Supported Education and Supported Employment, that are known to help people with serious mental illnesses retain or recover a meaningful life in the community. The ultimate goal of FEP Care is to provide effective treatment and support as early in the illness process as possible so that people can remain on a healthy developmental path.

Recent research on FEP Care in the United States, as well as previous research in other countries, indicates it is effective in engaging and retaining young people with psychosis in care, helping them maintain low hospitalization rates, and improving their quality of life. Because it tends to reduce overreliance on expensive inpatient services, it has great potential not only to preserve a person's health, social functioning, and quality of life, but also to save communities and employers money in the long-term.

Experts in the field have defined FEP Care models that early research suggests can lead to positive, cost-effective outcomes. In this paper, we will summarize prevailing models, including the staffing structures, evidence-based treatments and supports, and program processes they employ, and offer a composite perspective on the core components of FEP Care across these models. In Appendix 2 and Appendix 3, we describe specific FEP Care models in more detail and we compare five of them side-by-side.

While much progress has been made in recent years, we are still in the early stages of understanding how best to deliver early treatment and support to people with emerging

psychoses. Following our summary of what is known about prevailing models, we will outline what is yet *unknown* and where further experimentation with various implementation strategies and adaptations is needed. This latter activity represents a considerable opportunity for Texas programs such as the University of Texas Southwestern (UTSW) Psychosis Center, which can implement exemplary, cutting-edge care and extend the boundaries of what we know to be optimal care for people with first episode psychosis.

This paper was written to help inform the planning of a Psychosis Center at UTSW. In the first major section of the paper ("Core Components and Features of Best Practice FEP Care Models"), we summarize best practices as found in prominent program model descriptions and as articulated by national experts with whom we conducted key informant interviews in the spring of 2016. We describe best known practices in the following implementation domains:

- Multidisciplinary team structure
- FEP Care service processes and embedded evidence-based interventions, including:
  - Recruitment of consumers and inclusion criteria
  - Person-centered planning and shared decision making
  - Medication management
  - Supported Employment and Supported Education
  - Family psychoeducation
  - Individual therapy and individual resilience training
  - Substance abuse treatment[1]
  - Peer support
  - Supported housing and case management
  - Typical lengths of stay in FEP Care and approaches to helping people transition to lower levels of care

In the second major section of the paper ("What is Next for Texas? What More Does Texas Need?"), we identify illustrative areas of FEP Care implementation that are in need of innovative experimentation and research. We offer an array of implementation challenges that, if creatively and effectively addressed, could help Texas become one of the nation's leading states in expanding knowledge about how FEP Care can address the needs of individuals, families, and communities. In fact, even the diagnostic boundaries associated with schizophrenia, the most prominent psychotic disorder, are not fully understood, and more research is needed on how to meaningfully distinguish between the various sub-types of

[1] Ensuring integrated treatment for consumers with substance use sometimes involves the inclusion of substance abuse treatment or skill modules within individual therapy or (in RAISE-NAVIGATE) within Individual Resiliency Training. However, because of the high prevalence co-occurring substance used disorders, the capacity to integrate substance abuse treatment must be present on the team.

schizophrenia and other psychoses in such a way as to inform treatment and lead to better clinical outcomes.

1. Core Components and Features of Best Practice FEP Care Models

In identifying the core components and features of FEP Care programs, we have drawn most heavily from five models that represent various manifestations of current best practice. In identifying core staffing and program components, we have leaned most heavily on the two FEP Care programs that have been researched through funding from the National Institute of Mental Health—the Recovery After an Initial Schizophrenia Episode (RAISE) Navigate and Connection programs. In addition, we have drawn heavily from two programs currently being implemented on the west coast—the Early Assessment and Support Alliance (EASA) in Oregon and the Prevention and Recovery in Early Psychosis (PREP) program in California. These latter FEP Care programs provide additional input into the understanding of various implementation processes. More detail on each of these models, along with references for obtaining more information, can be found in the body of this paper and in Appendices 2 and 3.

FEP Care teams created through adherence to any of the four models noted above are team-based and oriented toward providing services in the natural settings where consumers and their family members live their lives; they also provide an array of embedded evidence-based practices. The number of consumers served intensively by the team typically is small—the larger FEP Care teams would be more similar to a small Assertive Community Treatment team, for example, and would each serve approximately 50 to 60 people.[2] The focus of all treatments and services is tailored to the realities of first episode or very early psychosis. Below, we summarize typical team structures as well as common FEP Care service processes and core embedded evidence-based interventions.

Multi-Disciplinary Team Structure (Who is on the Team?)

FEP Care program models vary in terms of program size, breadth of conditions and diagnoses served, team staffing, and emphases on certain types of psychosocial and peer-led interventions. However, because early psychosis affects many areas of a person's life and threatens to disrupt the progress of their development, *all* teams are multi-disciplinary in nature, drawing on medical, psychological, psychosocial, and experiential expertise.

[2] However, this is a rough estimate and research does not currently support a specific team size. The volume of patients served must be matched to the community's needs and a program's available staffing. Nevertheless, people experiencing first episode psychosis have substantial needs; therefore, teams must maintain an intensive level of staffing and team size that is manageable.

According to the Coordinated Specialty Care for First Episode Psychosis model on which the two RAISE programs are based,[3] teams should, at a minimum, consist of the following:[4]

- A **team leader** or coordinator (PhD or master's degree), who is responsible for the client's overall treatment plan and programming as well as the team's coordination and functioning;
- A **psychiatrist**[5] trained in treatment of early psychosis, who provides medication management, actively monitors and helps ameliorate medication side effects, and coordinates treatment with primary care and other specialty medical providers;
- A **primary clinician** (PhD or master's degree), who provides in-depth individual and family support, suicide prevention planning, and crisis management, and, along with the team leader and other clinicians, assistance with access to community resources and supports as well as other clinical, rehabilitation, and case management-related services; and
- A **Supported Employment specialist** (occupational therapist or master's level clinician) to help consumers re-enter school or work.

Recent developments in FEP Care have increasingly led to the expectation that a **peer specialist** should also be included on the team.[6] This position is filled by a person who has experienced serious mental illness and has been able to recover from it or to develop a productive and satisfying life while continuing to receive treatment.

However, the precise staffing of the team is not as important as the team's ability to provide the full array of services that is necessary to help people obtain the treatment they need, develop illness self-management skills, and continue to pursue functional goals, such as employment, independent living, and strengthening social support networks. In addition, one or more clinicians on each team must be dedicated to establishing and maintaining a referral network

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[3] McNamara, K. et al. (n.d.) *Coordinated specialty care for first episode psychosis, manual I: Outreach and treatment*. Rockville, MD: National Institute of Mental Health. Retrieved on July 30, 2016 from http://www.nimh.nih.gov/health/topics/schizophrenia/raise/csc-for-fep-manual-i-outreach-and-referral_147094.pdf.

[4] Please note that these models only describe an outpatient or community-based team. All teams will need to develop collaborative working relationships with inpatient providers that will enable them to ensure continuity of care as well as timely and comprehensive discharge planning.

[5] Some programs might choose to utilize advanced psychiatric nurse practitioners, but the UTSW Psychosis Center plans to employ psychiatrists in this important role.

[6] Dr. Nev Jones (personal communication, July 6, 2016). For a comprehensive explication of the role of peers in FEP Care programs, see: Jones, N. (2015, September). *Peer involvement and leadership in early intervention in psychosis services: From planning to peer support and evaluation*. Rockville, MD: SAMHSA/CMHS. DOI: 10.13140/RG.2.1.4898.3762.

and evaluating potential clients for acceptance into the program as well as for graduation to lower levels of care.[7]

Nevertheless, as long as program planners understand that a particular staffing structure should be seen as a guide and not as a rigid requirement, it is useful to be able to draw on typical FEP Care staffing structures when designing an FEP Care team. Inspired by the two models that were developed through the National Institute for Mental Health's national multi-site demonstration program (RAISE), we have depicted in the table below a foundational staffing structure for two team sizes: one serving 25 consumers and the other serving 50 consumers. FEP Care teams can vary considerably in size, but the staffing structures below illustrate both how small and how intensively staffed FEP Care teams tend to be. This is especially true in less densely populated areas that do not have a high incidence of first episode psychosis.[8]

First Episode of Psychosis (RAISE) Team Staffing[9]—FTEs for Team Sizes of 25/50		
Position	**RAISE Connections/ OnTrackNY**	**RAISE NAVIGATE ETP**
Team Leader/Director (licensed clinician)[10] (can also be Family Worker in OnTrackNY)	1.0/1.0 FTE	1.0/1.0 FTE
Supported Education and Employment Specialist[11]	0.5/1.5 FTEs	0.5/1.5 FTEs

[7] McNamara, K. et al. (ibid).

[8] Programs in rural areas may also need to consider the use of telemedicine.

[9] The evidence-based RAISE models are more concerned about ensuring that the necessary services are provided than that a certain mix of providers is on the team. Clinicians need to work together as a team, and if some clinicians split their time between the FEP Care team and another type of team within the agency, they need to be regularly and reliably available to respond to the needs of FEP clients and their families.

[10] In RAISE NAVIGATE/Early Treatment Program Model, this person can also serve as the family psychoeducation and family support lead. If not, there needs to be another clinician on the team who takes the lead in that area.

[11] On a small team, the supported education and employment (SEE) function is shared by the SEE specialist and the peer specialist.

First Episode of Psychosis (RAISE) Team Staffing[9]—FTEs for Team Sizes of 25/50		
Other Licensed Clinician(s): • Recovery Coach/Skills Trainer(s)/Family Worker(s) (OnTrackNY) • Individual Resiliency Training Specialist(s) and Family Psychoeducation Provider(s) (NAVIGATE)	0.5/1.5 FTEs	0.5/1.5 FTEs
Psychiatrist/Prescriber	0.2/0.4 FTE	0.2/0.4 FTE
Peer Specialist[12]	0.5/1.0 FTE	0.5/1.0 FTE
Services that collectively need to be provided by staff (and individually tailored to the needs and preferences of each client)	• Medication management • Supported Employment and Education (IPS model) • Individual and family support • Social skills training and substance abuse treatment • Case management and care coordination • Peer support	• Medication management (shared decision-making model) • Supported Employment and Education (IPS model) • Family psychoeducation • Individual resiliency training (IRT) • Peer support

FEP Care Service Processes and Embedded Evidence-Based Interventions

In this section, we illustrate common approaches to recruiting consumers into FEP Care programs and describe the inclusion criteria often used to determine who will benefit from these programs. However, as we note in a later section of the report, the field has not yet achieved consensus on these matters, particularly with respect to how broad or narrow the inclusion criteria should be.

Recruitment of Consumers/Inclusion Criteria

People experiencing psychosis do not always actively seek treatment, or even know what help is available and where. For this reason, an important element of FEP Care implementation is

[12] Peers were not originally formal staff in either model, but OnTrackNY has been working on adding peers; national experts such as Nev Jones indicate all teams should have peers.

developing processes for identifying people in need of FEP Care and recruiting them into treatment. Each team must determine how narrow or broad its inclusion criteria will be.

Inclusion Criteria in FEP Care Can Be Narrow or Broad

Information shared by our key informants about their processes for recruiting consumers, as well as our examination of the available research literature, revealed to us that some programs preferred a narrow focus on people experiencing psychoses that were not part of a primary mood disorder or induced by substance use.[13] The RAISE multi-site demonstration programs, for example, were somewhat narrow in focus, and this may be largely due to the fact that in pioneering real-world, multi-site studies in the United States, researchers wanted to have as much research control as possible in order to increase the internal validity of the studies. Another consideration, especially from a research perspective, is that a narrower focus allows the team to target its treatment on a more circumscribed set of symptoms and associated problems and, perhaps, to be more potent in its interventions.

However, in systems attempting to meet the early intervention needs of people experiencing painful and debilitating symptoms of psychosis and other disorders, a broader focus often evolves. For example, in some of the counties where it provides early intervention services, the Felton Institute in northern California has begun to serve people with bipolar disorder and major depressive disorder with psychotic features. Earlier in their implementation of FEP Care, they had found that referral sources did not appreciate their rejection of people with psychosis who did not meet their specific inclusion criteria.[14] The Felton Institute now has a specific intervention for bipolar disorder called "Bipolar Early Assessment and Management" (BEAM) that they are offering in partnership with San Mateo County and the University of California-San Francisco. Finally, in some systems, FEP Care teams might represent one of the only program capacities to diagnostically distinguish people who are experiencing psychosis solely because of a reaction to substance use from people who may or may not use substances but have an emerging psychosis-related illness, such as schizophrenia or bipolar disorder with psychotic features, for example.

Encouraging People to Participate in FEP Care

FEP Care programs vary in the extent to which they rely on assertive outreach to the community versus passively receiving referrals from their own agency or other providers and

[13] See, for example, Marino, L., et al. (2015, May). The RAISE Connection program for early psychosis: Secondary outcomes and mediators and moderators of improvement. *Journal of Nervous and Mental Disease, 203*(5), 365-371. And also see: Kane et al. (2015), p. 2. Diagnoses that were accepted into the research trial included schizophrenia, schizoaffective disorder, schizophreniform disorder, brief psychotic disorder, and psychotic disorders not otherwise specified. Bipolar disorder with psychotic features and major depressive disorder with psychotic features would not have been accepted, for example.

[14] Nev Jones (personal communication, July 20, 2016).

closely-aligned hospitals. Some FEP Care teams, such as those with the Felton Institute's PREP program, engage in a substantial amount of community outreach. They provide educational sessions in various community settings such as schools, non-profit organizations, and religious congregations to help people learn how to recognize and detect signs of psychosis. They also provide direction on how to refer to the PREP program. In counties where PREP has been active for several years, various community partners that have learned how to detect emerging psychosis and to successfully refer people to treatment are in regular contact with the program.[15]

The latest understanding of fidelity to Assertive Community Treatment (ACT) implementation includes a focus on ACT teams actively recruiting people who are most in need of their services—people who experience high utilization of emergency rooms, hospitals, and jails.[16] If ACT teams only passively received referrals from their own agency, referred consumers may or may not actually have problems with high utilization (but might simply have had difficult in being served in routine outpatient settings), resulting in the ACT teams being less effective in treating those most in need of intensive community-based care.

Analogously, some FEP Care teams may be tempted to receive referrals primarily from their own agency, targeting people who are still young (and perhaps difficult to serve), even though they may not still be experiencing a first episode. This referral process would be easier, because the team would not have to spend the time and energy in providing community education or engage in the sometimes difficult processes of receiving referrals from a variety of other providers and organizations, some of whom may not always be savvy in understanding the proper inclusion criteria, for example. But if FEP Care teams are to play a vital role in the system, they need to provide leadership in helping communities identify people as early in their first episode of psychosis as possible (ideally in the prodromal or very early in the active symptom stages).

Engagement: The Importance of Providing FEP Care in Accessible and Acceptable Settings

FEP Care teams provide all services within a paradigm based on collaboration and oriented toward engagement and shared decision making. Psychosis can be a bewildering experience for both affected individuals and their family members, and the emerging illness often compromises a person's perceptual abilities and motivation, making it difficult for them to assertively engage in treatment. As one key informant put it, "The biggest question is

[15] Nev Jones (personal communication, July 20, 2016). In some counties, PREP even provides information on very early warning signs and prodromal symptoms of psychosis.

[16] Monroe-DeVita, M. et al., (2011). The TMACT: A new tool for measuring fidelity to assertive community treatment. *Journal of the American Psychiatric Nurses Association, 17*, 17-29.

engagement—how to engage people into care?" In fact, nearly every other key informant we interviewed stated that engagement was the most challenging and most important task of FEP Care clinicians.

Engagement can be made easier when FEP Care programs are located in places where youth may already be receiving services, or at least in places that are not going to be off-putting for youth who are only beginning to experience psychotic symptoms and have not identified themselves as "mental patients" who should be attending clinics that only provide treatment for mental illnesses. FEP Care programs in Texas need to be offered in settings other than local mental health authorities (LMHAs), for example—that is, in settings that are more "normalizing" of receiving care, such as universities, primary care clinics, and general hospital settings. This is not to say that LMHAs should not be involved in providing FEP Care or that they should not attempt to help the publicly-funded mental health system respond much earlier in the course of illness than it has up to now. However, Texas needs to develop and experiment with the provision of FEP Care in multiple settings if it is going to develop optimal engagement strategies.

Engagement: The Importance of Person-Centered Planning and Shared Decision Making

To enhance consumers' engagement in services, FEP Care teams emphasize the use of a shared decision-making approach to helping individuals and their families identify goals and select treatments.[17] Shared decision making has been described as "a foundation for the work" of FEP Care.[18] This means that treatment planning is person-centered, rooted in the person's stated life goals, and focused on developing mutually agreed-upon treatments and services that build on the person's strengths. Shirley Glynn and colleagues eloquently articulated the rationale behind the shared decision-making orientation:

> *The technique of shared decision-making acknowledges that, while clinicians have a wide array of knowledge about the odds that an intervention is likely to improve a particular situation, the client also has a wide array of knowledge regarding his/her preferences, attitudes, beliefs, and history. Both the clinician and the client are "experts" on what they know, and both sets of knowledge are important to resolving problems.*[19]

[17] See for example Bennett, M. et al. (n.d.). *Coordinated specialty care for first episode psychosis, Manual II: Implementation*. National Institute of Mental Health (NIMH) Recovery After an Initial Schizophrenic Episode program. Rockville MD: NIMH.

[18] Glynn, S.M. et al. (2014, April). *NAVIGATE family education program (FEP)*. Retrieved on August 1, 2016 from https://raiseetp.org/StudyManuals/Family%20Manual.pdf.

[19] Glynn, S.M. et al. (2014 April). *NAVIGATE family education program (FEP)*.

However, as noted by Dr. Delbert Robinson, trainer of prescribers in the RAISE-NAVIGATE multi-site demonstration project, shared decision-making does not imply that the consumer chooses whatever treatments he or she wants. Rather, it means that clinicians present the person with the array of known treatments and services that can help them achieve wellness, recover what has been lost in the illness process, and effectively pursue life goals. Clinicians present what is known about the likelihood that the treatments and services will achieve outcomes of interest to the person, as well as what the individual and family will need to do to participate. The consumer, in turn, shares information on what he or she is willing to try and the extent to which he or she can commit to a particular treatment or service.

FEP Care clinicians demonstrate respect for consumers' perspectives and attempt to link the best available treatments and services to their goals. There may be times when clinicians believe that consumers will benefit significantly from services they are not willing to receive. In these cases, it is advisable to use motivational interviewing[20] interventions to encourage consumers to reconsider, while avoiding any semblance of coercion.

Medication Management

Treatment for psychosis almost inevitably involves the prescription and management of antipsychotic medication. However, first episode psychosis requires a different approach than treatment for people with already established histories of schizophrenia and other psychotic disorders.[21] For example, in comparison to treatment for multi-episode schizophrenia, smaller dosages of medication are effective in treating first episode psychosis.[22] In fact, Dixon and Stroup recommend that all first-episode consumers be treated with the lowest effective dosage in order to minimize side effects.

Indeed, because people experiencing first episode psychosis tend to be very sensitive to medication side effects, detailed side effect monitoring is needed. However, at the same time, the length of a medication trial for first episode psychosis often is longer, either because some consumers do not respond as quickly to the medication or because a longer trial is needed in order to fully test the medication (this is because consumers would have no history of medication response upon which to draw). Also, lower doses sometime take longer to have a demonstrably positive clinical effect. But it is also important to note that some consumers choose not to receive medication, at least initially. An important aspect of FEP Care is that it

[20] Miller, W.R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change* (2nd Ed.). New York: Guilford Press.

[21] See also Dixon, L.B., & Stroup, T.S. (2015, March). Medications for first-episode psychosis: Making a good start. *American Journal of Psychiatry, 172*(3), 209-211.

[22] The specific ways in which treating first episode psychosis is different, as mentioned here, are derived from our interview with Dr. Delbert Robinson, primary trainer of prescribers in the RAISE-NAVIGATE multi-site demonstration project. Delbert Robinson (personal communication, April 19, 2016).

allows people to engage in whatever way they can while skillfully encouraging them to accept treatments from which they are likely to benefit.

Even from the basic, cursory review above, one can see that medication management in first episode psychosis requires specific knowledge about how to treat early psychosis as well as skill in engaging people who may, in addition to being bewildered by psychosis, experience significant sensitivity to medication side effects before experiencing the full benefit of medication treatment. This further reinforces why FEP Care teams must be intensively staffed and why all clinicians must be skillful in engaging consumers in treatment, with the ability to be empathetic, encouraging, and hopeful with consumers and their families. And, because FEP Care is a team approach, it is important that the team's prescriber educate other members of the team, who may only have had experience with consumers with multi-episode psychosis, about the various ways in which medication management of first episode psychosis is different.

Supported Employment/Supported Education (SEE)

Using the evidence-based Individual Placement and Support (IPS)[23] model, the SEE specialist on the team provides support for people attempting to succeed in school or work. The IPS model emphasizes certain core principles, including: focus on integrated, competitive employment; consumer interest (versus level of symptomatology) determines eligibility; job or school searches are conducted rapidly (versus prioritizing prevocational training); ongoing functional assessments are provided; community-based supports are individually tailored; and benefits counseling is provided.

IPS was originally developed primarily with employment in mind, and it is important to blend the model with specific principles and interventions from Supported Education (SEd), especially because so many of the younger consumers served by FEP Care teams either are still in school or wish to return to school.[24] Whereas in SE, the specialist needs to work with employers to develop job opportunities that match the interests of consumers served, SEd requires development of pathways and supports at school and, in many cases, the development of relationships with institutions of higher learning. Fortunately, Killackey, Nuechterlein, and colleagues recently adapted IPS and Supported Education approaches to the population of people who have experienced a first episode of psychosis[25] and their work has been

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[23] Becker, D.R., & Drake, R.E. (2003). *A working life for people with severe mental illness*. New York: Oxford University Press.

[24] For a review of SEd models, see Zahniser, J.H. (2005). Psychosocial rehabilitation. In C. Stout, & R Hayes (Eds.), *The evidence-based practice: Methods, models and tools for mental health professionals*. Hoboken, NJ: John Wiley & Sons. (pp. 109-152).

[25] Killackey, E., et al. (2008). Vocational intervention in first episode psychosis: A randomized controlled trial of individual placement and support versus treatment as usual. *British Journal of Psychiatry, 193*, 114-120.

instrumental in RAISE-NAVIGATE's development of a well-articulated and well-integrated approach to SEE.[26]

Family Psychoeducation

For decades, research has shown that family members who remain connected to their loved one and involved in their care can help reduce unnecessary hospitalizations and facilitate the recovery process.[27] Research on psychoeducation interventions for family members shows that they are effective in increasing family members' knowledge of mental illness, capacities for providing support to loved ones, and skills in coping with the family burden associated with mental illness. While most FEP Care teams do not have a dedicated specialist in this area, the team leader, the prescriber, and primary clinicians work together to provide family psychoeducation, both in informal interactions with family members and in family psychoeducation groups.[28]

The RAISE-NAVIGATE Family Education Program provides one example of a comprehensive approach. It incorporates family education sessions, family skill training, individual family consultation sessions, and referral to family groups offered through the National Alliance on Mental Illness (NAMI) or other mutual support organizations. Other programs offer multi-family psychoeducation groups,[29] which can provide an efficient means of educating families as well as opportunities for families to discover they are not unique in experiencing the burden of mental illness and to engage in mutual support.

In addition to delivering specific family-based interventions, adhering to the guiding principles of family psychoeducation also is crucial to clinicians' success. For example, the "strengths perspective" encourages clinicians to look for the assets that both individuals and their families bring to the challenge of a first episode of psychosis. These are specifically listed in treatment plans, highlighted and mobilized in education sessions, and built upon in the recovery process. The strengths perspective improves the chances that family members and their affected loved ones will remain engaged in the recovery process.

Nuechterlein, K.H. et al. (2008). Individual placement and support for individuals with recent-onset schizophrenia: Integrating Supported Education and Supported Employment. *Psychiatric Rehabilitation Journal, 31*, 340-349.

[26] RAISE-NAVIGATE Supported Employment and Education Manual. Retrieved on July 31, 2016 from http://www.nasmhpd.org/sites/default/files/SEE%20Complete%20Manual.pdf.

[27] See studies summarized in Glynn, S.M. et al., (2014, April). *NAVIGATE family education program*, p. 4.

[28] The PREP program uses multi-family psychoeducation groups and finds them to be effective. Dr. Nev Jones (personal communication, July 20, 2016).

[29] For example, multi-family groups represent an important component of the Prevention and Recovery in Early Psychosis (PREP) program at the Felton Institute in San Francisco, which is affiliated with the University of California-San Francisco. Dr. Nev Jones (personal communication, July 20, 2016).

While good FEP Care teams employ evidenced-based psychoeducational interventions with families, they also do not rely primarily on formal intervention techniques in helping them help their loved ones. Rather, taking a strengths perspective from start to finish (with both consumers and families), they consider each interaction to be important in building confidence and hope as well as motivation to play an integral role in their loved one's recovery process.

Individual Therapy and Illness Management Training

In the fall of 2015, John Kane and colleagues published an outcome study of FEP Care in the American Journal of Psychiatry[30] that received a significant amount of attention from the media. Several media reports emphasized that FEP Care used less medication (perhaps because of lower dosages—see above) and relied more on individual therapy.

In the context of FEP Care, individual therapy represents a variety of approaches to helping the person develop a capacity to manage his or her illness in the service of achieving life goals. Therapists help people cope with the trauma that they often feel in experiencing psychotic symptoms, as well as the stigma that often accompanies that experience. They also help them successfully navigate life transitions and achieve developmental goals despite those experiences. The Individual Resiliency Training (IRT) approach developed by Piper Meyer and colleagues is a good example of an FEP Care approach to individual therapy, which brings together techniques from Cognitive Behavioral Therapy for Psychosis (CBT-P), psychiatric rehabilitation skills training, and illness self-management training to help people remain on their life trajectories while coping with the challenge of psychosis.[31]

Integrated Interventions for Substance Abuse

Use of substances is not uncommon in young people experiencing psychosis. Some use for self-medicating purposes, while in other cases substance use can trigger an episode in people who are vulnerable to psychosis.[32] In the ideal FEP Care program, all clinicians are trained in assessing a person's stage of readiness for addressing substance abuse issues and in providing stage-matched interventions, including evidence-based substance abuse counseling and motivational interviewing techniques for people who are not yet ready to change. Substance abuse specialists help people make better choices about using substances and implement plans to carry out those choices.

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[30] Kane, J.M., et al. (2015). Comprehensive versus usual community care for first episode psychosis: 2-year outcomes from the NIMH RAISE early treatment program. *American Journal of Psychiatry, AJP in Advance*, 1-11.

[31] Meyer, P.S. (2015). Individual resiliency training: An early intervention approach to enhance well-being in people with first-episode psychosis. *Psychiatric Annals, 45*(11), 554-560.

[32] Mathias, S. et al. (2008). Substance-induced psychosis: A diagnostic conundrum. *Journal of Clinical Psychiatry, 69*(3), 358-367.

Peer Support

Psychosis is often a shattering experience for adolescents and young adults. Common beliefs about people suffering from hallucinations and delusions, and even input from clinicians, often create a sense that a person's life is unalterably compromised. For this reason, the empathetic and hopeful encouragement from a peer who has "been there," and who can model the reality that recovery is possible, can be a life-changing experience. Recent research provides evidence that peer involvement in person-centered planning and in the provision of illness self-management training can increase engagement and perceived self-control in treatment, as well as greater hope and quality of life.[33]

In her comprehensive guide, *Peer Involvement and Leadership in Early Intervention in Psychosis Services*, Dr. Nev Jones provides a detailed description of the unique roles that peer specialists can play on FEP Care teams.[34] On FEP Care teams, peers can take on roles that peer specialists often play in other programs, such as ACT teams—running illness self-management groups, meeting with consumers one-on-one to talk about the recovery process and share their own experience, and participating in and contributing to team meetings and treatment planning sessions. But Jones points out that they might also participate or provide leadership in implementing specific program elements of FEP Care such as helping facilitate multi-family groups, organizing FEP Care service orientations and graduations, and participating in community engagement/outreach efforts.[35]

Supported Housing and Case Management

The above overview of embedded interventions is meant to highlight the most prominent features of the FEP Care service array, but consumers often need other services, as well, including, for example, case management and housing supports. As noted by FEP Care experts, clinicians with experience working in publicly-funded systems often are not used to consumers who are still in school or working in integrated settings and living independently, as is the case with some FEP Care consumers. However, in some communities served by FEP Care teams, poverty and trauma require the active and ongoing provision of case management and housing supports. In a key informant interview, Dr. Nev Jones noted that the Felton Institute's Prevention and Recovery in Early Psychosis (PREP) program in the Bay Area of northern

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[33] Davidson, L., et al. (2012). Peer support among persons with severe mental illnesses: A review of evidence and experience. *World Psychiatry, 11*(2), 123-128. Cook, J.A., et al. (2011). Results of a randomized controlled trial of mental illness self-management using Wellness Recovery Action Planning. *Schizophrenia Bulletin*, *38*(4), 881-891.

[34] Jones, N. (2015, September). Peer involvement and leadership in early intervention in psychosis services: From planning to peer support and evaluation. Rockville, MD: SAMHSA/CMHS. DOI: 10.13140/RG.2.1.4898.3762

[35] See, for example, Jones (2015), p. 40.

California must operate differently in low-income urban areas than in high-income communities.

Typical Length of Stay in the Program and Approaches to Helping People Transition to Lower Levels of Care

Information in this area was somewhat limited because FEP Care is still relatively new in most parts of the country and the focus recently has been on implementing effective care. Comparatively little attention has been devoted to the lower levels of care that need to be in place in order for people who graduate from FEP Care programs to remain on the path to recovery. However, some FEP Care teams and programs have attempted to identify a typical length of stay in the program and address the accompanying challenge of ensuring a smooth transition to lower levels of care.

A typical expected length of stay (LOS) is two to three years, but all key informants who provided feedback about expected lengths of stay noted that greater individual variation in the length of time that people need to receive FEP Care argues against the rigid use of any particular requirement for length of stay.

Some experts recognized that the expected LOS in FEP Care does depend somewhat on the availability of less intensive services that are well-prepared to receive people who no longer need the intensity of FEP Care but who still need somewhat intensive services to remain on the road to recovery. In Texas, this is analogous to the need for robust "Level 3" services—medication treatment and case management—for people who are transitioning from a sufficient course of Assertive Community Treatment.

It is important to note that transitions to lower levels of care need to attend to the needs of family members of individuals experiencing psychosis. Since most, if not all, FEP Care programs have well-designed services that help meet family members' needs for education and easing their burdens, a transition for their loved one typically will mean a sudden unavailability of services for them. Referring families to mutual help through the National Alliance on Mental Illness (NAMI) or other community organizations can be helpful, but the PREP program in northern California also has found that family "reunion groups" can help ease the transition, as well.[36]

2. What is Next for Texas? What More Does Texas Need?

As we have shown above, models of FEP Care have begun to crystallize and they provide guidance for implementation. In addition, research in the United States on prevailing models

[36] Nev Jones (personal communication, July 20, 2016).

has begun to emerge and shows much promise (see Appendix 5). However, there is much that is yet unknown concerning the effective implementation of FEP Care at various stages of the service delivery process, and the implementation of known best practice needs to be accompanied by thoughtful and rigorous experimentation with FEP Care. In its current mental health block grant set-aside program for states, the Substance Abuse and Mental Health Services Administration has recognized this by encouraging states both to implement models of best practice as they are currently understood and to experiment with elements of FEP Care in such a way as to extend knowledge of what works. This section of the report contains two sub-sections: (1) an explication of FEP Care elements in need of innovation and rigorous research and (2) thoughts on what is needed to support the dissemination of FEP Care implementation and learning opportunities in Texas.

The Cutting Edge of FEP Care: Areas in Need of Research and Innovation

We offer the following illustrative examples (by no means a comprehensive listing) of areas in which knowledge, innovation, and research of FEP Care needs to be expanded. The list follows a logical progression through stages of the care delivery process, from detection and patient inclusion to transition of patients to lower levels of care.

Engagement, Detection and Inclusion of Patients

Early Detection. We know from the recent RAISE-NAVIGATE study by Kane and colleagues that people who were served within 17 months of their first onset of symptoms had better outcomes. However, many programs, especially in Texas, are serving many people in FEP Care long after their first episode has begun. Innovative approaches are needed to engage people as early as possible in care (including at the point when prodromal signs and symptoms first emerge), along with studies of the various benefits that accrue (or do not accrue) to health and social functioning with early detection and when people are encouraged to enter treatment early in the illness process.

Engagement. Not everyone with an emerging psychosis elects to participate in FEP Care. Research is needed on the most effective engagement approaches, including the effectiveness of different types of staff and the skills they employ. In addition, research is needed on the most effective forms of community engagement that lead to early detection and engagement of people in need of FEP Care as well as the most fruitful collaboration with—and referrals from—such potential partners as schools, primary care providers, hospitals, and emergency rooms. For example, does the widespread provision of Mental Health First Aid training to non-professionals promote engagement? Or would it be more helpful to target partnerships with health and mental health agencies and professionals in the community that are most likely to detect emerging psychoses and refer to FEP Care? Is there an important role for anti-stigma

programs in the community engagement process and, if so, how best can the stigma of mental illness (which has been identified as the major impediment to help-seeking)[37] be overcome?

Inclusion of Patients in FEP Care. As indicated above, programs vary in the range of criteria they use for including people in FEP Care. Some programs include people with psychosis who appear to have an emerging form of schizophrenia as well as people whose psychosis is associated with a major depressive or manic episode. Other programs exclude people whose psychosis is part of an emerging affective disorder. Are outcomes better for programs that are more or less inclusive? Is it better to have separate FEP Care programs for non-affective psychosis and serious affective disorders? Does the answer to that question vary by geography (rural versus urban)? The issue of substance abuse is particularly difficult, because programs sometimes struggle in determining whether a person with an apparently substance-induced psychosis has an emerging form of schizophrenia or other major mental illness. Research is also needed on the most effective ways to provide early intervention (including referral to appropriate substance use treatment or other co-occurring treatment programs) to people with co-occurring substance use.

FEP Care Team Staffing and Structure

There are lingering questions about whether FEP Care programs should be fully dedicated to serving people with first episode psychosis, or whether team members can (or should) also serve on other teams within the same agency or mental health system. Some FEP Care experts note that in rural areas, it is not only advantageous but also financially necessary to allow FEP Care team members to serve on other teams at the same time since they would be able to form mini-teams around the care of a person with first episode psychosis.

The role of peers on the team is not always formally recognized by prevailing models, but some experts believe they can play a crucial role in modeling recovery and instilling hope in young people for whom hope may be difficult to summon in the face of the often devastating experience of psychosis. Research could further address issues of what peers uniquely add to the team's effectiveness in terms of client retention and recovery-related outcomes as well as how best to integrate peers into the team.

Implementation of Evidence-Based Practices

Linking Medications and Other Types of Treatments to Subtypes of Psychosis. Research by Tamminga and colleagues on the biomarkers associated with different subtypes of psychotic disorders is encouraging and has the potential to revolutionize FEP Care. Studies that examine the development of more individually tailored care based on biomarker findings are needed.

[37] Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist, 59*(7), 614-625.

For example, we already know that medication management needs to be conducted differently in First Episode Care, but more research is needed on how to titrate medications (and which specific medications to use) for biologically-validated subtypes of psychosis. Such research could expand the boundaries of what is known about prognosis, have implications for educating families and patients, and examine the effectiveness of various dosing strategies (such as intermittent dosing) with specific sub-groups of patients. In addition, research on brain-based biomarkers (e.g., neuroimaging, EEG, cognition; perhaps even genetic markers) that predict individual disease trajectories and outcomes—and subsequent distinct modifications of available treatments based on these predictive brain measures—can add a highly innovative component that could bridge the gap between scientific models and clinical care.

Examination of the Relative Contributions of Various Evidence-Based Practices (EBPs) to Outcomes. FEP Care models prescribe various embedded EBPs, such as family psychoeducation, Supported Employment/Supported Education, Illness Management/Individual Resiliency Training, and integrated stage-matched interventions for co-occurring substance use disorders. However, in the context of FEP Care, research is still needed on which EBPs (or which combinations of EBPs) are vital to helping people recover from psychosis and maintain the trajectory of their lives.

Examination of Core Service Delivery Processes. Person-centered planning and shared decision making are considered important service delivery process principles in FEP Care. However, there is much more to learn about how best to engender these approaches with patients and their families. In addition, more could be learned from patients and families about which service delivery processes are most helpful and in what ways.

Transitions to Lower Levels of Care

While in some systems it is expected that people on FEP Care teams will be served for at least two years, other recent work suggests high fidelity implementation involves serving people for an average of five years.[38] An expectation for recovery would suggest that people should eventually move on to managing their illness in health care settings that are as normalizing as possible. But little is known about the optimal amount of time spent by patients on an FEP Care team, or on how best to ensure an effective transition to lower levels of care. Research findings related to those issues could provide very useful guidance to system planners and program managers.

In addition, research on the transition to lower levels of care could explore the variety of programs and care levels that limit patients' risk of returning to FEP Care. Guidance for these

[38] Addington, D.E., et al. (2016). Development and validation of the first-episode psychosis service fidelity scale. *Psychiatric Services, 67*(9), 1023-1025.

types of transitions has been developed for Assertive Community Treatment and could provide a framework for research on transitions from FEP Care to lower levels of care.

Areas of FEP Care Delivery in Need of Further Research and Innovation	
Domain	**Illustrative Questions to Be Addressed**
Engagement, Detection, and Inclusion of Patients	*Detection*—What approaches to early detection are most effective? How can people be engaged as early in the illness process as possible? What are the outcome implications for early detection?
	Engagement—Which engagement approaches and which staff skills are associated with more effective engagement that leads to higher levels of retention in care? Which types of partnerships with what types of entities in the community are most effective? Which community education programs (Mental Health First Aid, anti-stigma interventions, etc.) are most effective at developing appropriate referrals?
	Inclusion Criteria—Are outcomes better for programs that are more or less inclusive / programs that are broader versus narrower in scope (e.g., is it better to combine affective and non-affective early psychosis care or have separate teams/programs, and should the approach vary by urban-rural settings?) What are the best ways for systems to serve people with and without co-occurring substance abuse and psychosis?
FEP Care Team Staffing and Structure	Should FEP Care teams only serve people with first episode psychosis or should they consist of people who also serve in other programs within the same agency? Does the answer to that question need to be different in rural versus urban settings?
	What is the optimal use of peer specialists within an FEP Care program?
Implementation of Evidence-Based Practices	Can biomarkers of psychosis sub-types inform medication and other targeted treatments? Are outcomes better when treatments are informed by and tailored to sub-types as revealed by biomarker and related research?

Areas of FEP Care Delivery in Need of Further Research and Innovation	
Domain	**Illustrative Questions to Be Addressed**
	How can research into sub-types of psychosis be used to help inform patients and families about prognosis and the shared decision-making process for selecting interventions and treatments?
	Which embedded EBPs are most crucial to helping patients and families retain the trajectory of their lives, and how are they best implemented within the context of FEP Care? Which embedded evidence-based practices are most helpful for which types of patients?
	How are core service processes, including shared decision making and person-centered planning, best implemented within the context of FEP Care? What is their contribution to outcomes above and beyond the implementation of EBPs?
	What do surveys and interviews of patients and their families reveal about the interventions and service delivery processes that are experienced as most helpful to recovery?
Transitions to Lower Levels of Care	What are the expected average (median) and range of optimal lengths of stay on an FEP Care team? How can these data be used by system planners to estimate more precisely the number of FEP Care teams needed in a system?
	What are the most effective processes for transitioning people to lower levels of care? Which lower levels of care need to be available in a mental health system in order for such transitions to be effective in helping people continue the recovery process?

FEP Care Program Dissemination and Enhancement

All phases of care delivery need innovation and research. However, there is also a need to use implementation science to examine the optimal strategies for developing FEP Care programs in various types of settings, including, but not limited to, LMHAs. For example, what types of partnerships are needed to develop and sustain FEP Care teams? How does one avoid excessive turnover and develop a highly functioning team that has long tenure?

In addition, the use of evaluation and continuous quality improvement techniques can help any program improve and remain focused on appropriate service delivery and outcome goals. Little is known about how to measure the implementation fidelity of an FEP Care team and how to use fidelity assessment as a tool for program enhancement. Study in these areas can be included in research programs that are aimed at addressing the care delivery processes outlined above.

Need for Innovation and Collaborative Learning in the Implementation of FEP Care in Texas

While FEP Care currently is being tested by pioneering providers in Dallas and Houston, and soon will be implemented in about eight additional communities around the state (see **Appendix 6** for more details), the statewide effort would benefit from certain key system enhancements, including statewide collaboration among both providers and researchers as well as policy discussions between the Texas Department of State Health Services (DSHS), LMHA providers, universities, and health districts. In addition, several implementation challenges that have been identified nationally and in Texas could also be addressed through the joint efforts of system planners, providers, and researchers.

Develop a Learning Community

A more formal process that links Texas leaders in FEP Care could lead to greater capacity in the state for using practice-based learning and research findings to enhance FEP Care programming. The creation of a formal FEP Care learning community could serve as a vehicle for disseminating critical information, including outcomes and cost-effectiveness findings associated with FEP Care, the identification of policy needs, and examples of success in sustaining FEP Care despite current financing limitations. The learning collaborative could be organized under the joint auspices of DSHS, the Texas Council, and mental health institutes and foundations that have relative expertise and convening capacities. Regardless of how the collaborative is organized, it should be oriented toward developing innovative, excellent care tied to rigorous research and evaluation.

Hold an Annual Summit on First Episode Psychosis Care

With the proper collaboration in place, an annual statewide summit[39] and regional quarterly meetings could be planned, at which research findings on outcomes, costs, and factors associated with FEP Care could be shared, along with advances in such widely ranging factors as the following:

- Estimations of the incidence of FEP in Texas geographic regions and related implications for planning FEP Care capacity;

[39] Under the auspices of DSHS, Texas does have a FEP Care conference planned for next year.

- Geographic and socioeconomic-related challenges associated with implementing FEP Care, such as scaling teams in rural areas that have lower incidences of first episode psychosis, or meeting the challenges of social determinants of health in urban areas;
- Approaches to collaborating with community partners in the service of detecting first episodes as quickly as possible and ensuring that people obtain access to FEP Care at least within the first 17 months of a first episode (as was found by Kane et al. to be crucial to maximizing outcomes);
- Strategies for preparing small sub-sets of the current LMHA workforce in select areas of the state as well as incorporating FEP Care and other preventive/early intervention models into university-based mental health training programs;[40]
- Development of effective approaches to transitioning people to lower levels of care, as well as establishing the necessary features of those lower levels of care;
- Advantages and disadvantages (and how they might be weighed differently in rural and urban settings) associated with narrowing or broadening the diagnostic inclusion criteria;[41]
- Identification of the most significant program "ingredients" that must be implemented for optimal outcomes to be realized, as well as clinical measures such as biomarkers[42] of schizophrenia that are needed to inform more precise selection of medications and other treatments; and
- Understanding the changes in policy and financing that will need to be made in order to ensure maximum support for FEP Care implementation.

Address Policy and Financing Issues That Currently Limit the Dissemination of FEP Care

As the demonstration projects yield important findings, Texas will need to take FEP Care "to scale" by implementing polices that ensure health plans can work with providers to pay for the early detection and treatment of psychosis. Especially because we need a system that can respond immediately (ideally through primary care and schools) to people who have private insurance, non-LMHA providers should also be brought into the mix; it would make sense to

[40] At least two of our expert key informants noted that the skill levels of clinicians—their abilities to effectively engage consumers in care; to smoothly deliver evidence-based interventions while meeting with people in natural, community settings; and to understand and incorporate the perspectives of family members, for example—are more important than delivering the various interventions prescribed by the particular FEP Care model chosen.

[41] By allowing for affective-related psychosis, Texas appears to be taking a broader approach (Reese Carroll and Warren Stewart [personal communication, April 15, 2016]), and rightly so, in our judgment. However, the question of whether to establish separate first episode teams for other conditions, like the BEAM program for first-episode bipolar disorder in northern California, versus having unified teams capable of serving all first-episode conditions that often evolve into serious mental illness, could be addressed.

[42] In the person of Dr. Carol Tamminga at the University of Texas Southwestern, Texas has an internationally renowned researcher of biomarkers and other biological/neurological causes and correlates associated with schizophrenia and other forms of psychosis. We interviewed Dr. Tamminga on June 30, 2016.

begin planning soon for that eventuality.[43] One particularly promising approach that was originally developed in South America is in some ways the opposite of the "coordinated specialty care" approach inherent in the predominant models that have been implemented to date in the United States. Dr. Gabriel de Erausquin, now located at the University of Texas-Rio Grande Valley medical school, helped develop an FEP Care model in Argentina that was rooted in primary care. Working with the support of embedded behavioral health specialists, such as psychologists, and drawing on externally located psychiatrists when needed, primary care providers are at the center of FEP Care in this model.[44] Texas could learn much from Dr. de Erausquin and the developments currently underway in the Rio Grande Valley.

Develop Better Epidemiology of First Episode Psychosis That Can Inform Program Planning

Finally, as mentioned briefly above, the current lack of specificity in estimating the annual incidence of first episode psychosis (and, to a lesser extent, mania and major depressive episodes) in Texas needs to be addressed if Texas is to take FEP Care to scale. Currently, estimates in Texas, as well as nearly all (if not all) other states, rely on European studies by Kirkbride and others. Texas also needs to track the number of people receiving early care, along with the outcomes and costs of care statewide. Again, these and other problems might be more systematically and effectively addressed through the establishment of a statewide FEP Care/early intervention learning community that would include university and foundation/institute expertise.

[43] Of course, it would also be ideal if all LMHAs had first-episode care capacity, as well.

[44] Dr. Gabriel de Erausquin (personal communication, June 30, 2016).

Appendix 1: Expert Key Informants Who Were Interviewed

Interviewee	Organizational Association	FEP Care Model
Reese Carroll and Warren Stewart	Texas Department of State Health Services (DSHS)	State-level facilitation of evidence-based models
Lisa Dixon, MD	OnTrackNY	RAISE Connection/OnTrack
Gabriel de Erausquin, MD	University of Texas-Rio Grande Valley	Primary care-based FEP Care
Jane Hamilton, PhD	University of Texas Health Sciences Center-Houston	RAISE Connection (Harris County)
Nev Jones, PhD	Felton Institute and University of California-San Francisco	Prevention and Recovery in Early Psychosis (PREP), and Early Assessment and Support Alliance (EASA)
Piper Meyer-Kalos, PhD	Minnesota Center for Chemical and Mental Health	RAISE-NAVIGATE/ETP
Ken Minkoff, MD	Director of Systems Integration	MMHPI
Carol North, MD and Katy McDonald	Metrocare Services and University of Texas Southwestern (UTSW)	RAISE Connection/OnTrack
Delbert Robinson, MD	Center for Psychiatric Neuroscience, Feinstein Institute for Medical Research (NY)	RAISE-NAVIGATE/ETP
Kemi Sells and Brent Lawless	The Harris Center for Mental Health and IDD	RAISE Connection (Harris County)
Pat Shea	National Association of State Mental Health Program Directors	National-level facilitation of evidence-based models
Carol Tamminga, MD	University of Texas Southwestern	No specific model (first episode biomarkers research)

Appendix 2: National Exemplars of FEP Care

RAISE Connection/OnTrackNY

The RAISE Connection program was one of two multi-site research projects funded by the National Institute of Mental Health (NIMH) to study the Coordinated Specialty Care (CSC) treatment model, which was designed to serve people during the first two years of onset of psychosis. This model was inspired by earlier studies that found that a team-based approach to treatment of first episode psychosis helped engage people in treatment longer and led to better outcomes.

Clinics chosen to participate in the RAISE Connection program were affiliated with the University of Maryland School of Medicine in Baltimore and Columbia University's Department of Psychiatry in New York City. Each clinic had a treatment team that was made up of four staff members and 25 consumers. The staff members consisted of a full-time team leader, a full-time Supported Employment/Education specialist, half-time recovery coach, and a 0.2 FTE psychiatrist, who would ideally also work elsewhere in the clinic's agency to ensure availability for crisis situations. Additional outreach and employment specialists also worked as adjunct staff with the team.

Out of these trials, the RAISE Connection Program developed training materials for mental health providers in communities across the country. The training materials, which included manuals, instructional videos, educational handouts, and worksheets, presented information on the importance of early intervention in first episode psychosis, the principles of coordinated specialty care, key roles and services provided, and the core competencies for different treatment modalities.

Additionally, the program developed brochures and flyers to engage prospective consumers and family members. They also developed a crisis intervention program of 24-hour telephone coverage that consumers and family members could use for crises and to help them avoid going to the emergency department or hospital. For fidelity, they developed operation manuals to standardize core aspects of the CSC model. Finally, they developed a support tool that estimates the incidence of first episode psychosis in a community and the likely number of people who could be enrolled in the program. This tool also informs the number of teams needed and helps estimate the cost of services.[45]

The New York State Office of Mental Health developed the OnTrackNY program, which began with the same goals as the original sites but modified the team structure and some of the

[45] Humensky, J.L., et al. (2013). An interactive tool to estimate costs and resources for a first-episode psychosis initiative in New York State. *Psychiatric Services, 64*(9), 832-834.

specific roles on the team to serve 30 to 35 consumers instead of only 25. Full-time providers on an OnTrackNY team typically include a team leader, recovery coach, primary care manager, and outreach and recruitment coordinator. Part-time team members typically include an employment/education specialist, a psychiatrist, and a nurse.

RAISE NAVIGATE/ETP

The RAISE NAVIGATE program is the experimental treatment arm of the NIMH RAISE Early Treatment Program (ETP). It is an evidence-based, comprehensive intervention staffed by a coordinated team of mental health professionals who help individuals with first episode psychosis (FEP) work toward individualized goals and recovery.[46] The NAVIGATE team consists of a program director, two Individual Resiliency Training (IRT) clinicians, a Supported Employment and Education (SEE) specialist, a family education clinician, and a prescriber.[47] The program implements four distinct manualized treatment components: Family Education, IRT, SEE, and Individualized Medication Management.[48] Each of these core treatment components is applied utilizing a shared decision-making model within a framework acknowledging patient preference.

The family education program engages family members or significant others in providing social support and serving as allies for clients in treatment, with the client's permission.[49] Family sessions may include the client and involved family members or significant others, depending on the preference of the client.

The IRT program was modeled after the Illness Management and Recovery (IMR) program—an evidence-based practice—and the Graduated Recovery from Initial Psychosis (GRIP) program. The IRT program focuses on helping clients develop resiliency to achieve their personal goals through education about illness management and improving functioning.

The SEE program is an adaptation of the principles of the Individual Placement and Support (IPS) model of supported employment, broadened to address education in addition to work, and specialized for individuals with FEP. All clients meet with a SEE specialist, and they are given the opportunity to engage in SEE services to help them achieve work or educational goals.

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[46] Kane, et al. (2016). Comprehensive versus usual community care for first-episode psychosis: 2-year outcomes from the NIMH RAISE Early Treatment Program. *American Journal of Psychiatry, 173*(4), 363-372.

[47] NAVIGATE. (n.d.). *How it works*. Retrieved from: http://navigateconsultants.org/how-it-works/.

[48] Mueser, K.T., & Gingerich, S., et al. (2014, April 1). *The NAVIGATE team members' guide*. Retrieved from: https://raiseetp.org/studymanuals/Team%20Guide%20Manual.pdf.

[49] National Association of State Mental Health Program Directors and NASMHPD Research Institute. (2015). *An inventory and environmental scan of evidence-based practices for treating persons in early stages of serious mental disorders* (Contract No. HHSS283201200002I/Task Order No. HHSS28342002T).

Individualized medication management is informed by research findings about the specialized medication approaches needed with FEP—including prescribing the lowest medication dose possible—while acknowledging individual needs and preferences. Prescribers use COMPASS, a computer-based clinical decision-making tool developed specifically for NAVIGATE, to guide sessions with clients and inform evidence-based medication strategies.

The length of treatment for individuals in NAVIGATE is two (2) years or more, if necessary.

Oregon's Early Assessment and Support Alliance (EASA)

The Early Assessment and Support Alliance (EASA) is a coordinated statewide network of programs in Oregon that provides information and support to individuals who are experiencing their first episode of psychosis; information and support is also provided to family members. EASA serves young people ages 12 to 25 years who are experiencing symptoms of psychosis for the first time.[50]

The program provides intensive team coordination similar to the evidence-based program Assertive Community Treatment. EASA has incorporated many evidence-based practices into the program's treatment components, including cognitive behavioral therapy, supported housing, and peer support. T The staffing model includes a comprehensive clinical staff made up of a program director, clinical supervisor, clinical case manager, prescribing medical professional, peer support specialist, Supported Employment specialist, occupational therapist, and a psychiatric nurse. These teams work toward the goal of identifying first episodes of psychosis as soon as possible (within the first 12 months) in order to minimize the negative impact on the lives of individuals and their families.

The leading components of this model are outreach and engagement, focus on individual strengths, vocational and educational support and placement, gradual pharmaceutical intervention, and person-led counseling.[51] The clinical team works with individuals in five phases of care lasting approximately six months each, with the entire program lasting approximately two years on average. Each phase includes specific goals and interventions as the person transitions through the program. These phases of care include: assessment and stabilization, adaptation, consolidation, transition, and post-graduation.

Phase one begins with rapid outreach to and engagement with the individual and family. During this phase, the clinical team focuses on assessing all medical conditions, including psychosis and

[50] EASA Community. (n.d.). *About EASA*. Retrieved from http://www.easacommunity.org.
[51] Sale, T. (n.d.). *Gaining Momentum in early psychosis*. Retrieved from https://www.nami.org/getattachment/About-NAMI/NAMI-News/SAMHSA-Sponsored-Webinar-The-Growing-Momentum-in-E/Gaining-Momentum-in-Early-Psychosis-NAMI-Webinar.pdf.

any substance abuse-related disorders. The team works on stabilization of all aspects of the individual's life, including housing, finances, and family supports.

After the initial stabilization period, the team begins to focus on crisis and relapse prevention during phases two and three. Individual and family group process continues throughout these phases, as needed. Personal goal planning begins in phase two and is finalized in phase three. Additionally, the individual and clinical team develop a long-term plan in phase three.

During phase four and five, the individual gradually develops and implements an ongoing treatment relationship and recovery plan with providers. The individual continues to participate in individual and group therapy. During phase five, the individual is invited to participate in events and mentoring as well as provide feedback on development activities.

While these phases exist as a framework, EASA is committed to flexible, rapid engagement as dictated by individual need. The process is driven by the personal pathway to care for the individuals served.

Prevention and Recovery in Early Psychosis (PREP) Program

Prevention and Recovery in Early Psychosis (PREP) is an innovative, strengths-based treatment model developed in 2006 at the Felton Institute in a collaborative effort with the University of California San Francisco. The partnership created a suite of services comprising five practices proven to be independently successful in treating early psychosis, which was designed to achieve synergy from their cumulative impact.[52] The PREP program began its work in San Francisco in 2008, quickly following with an expansion to Alameda County in 2009.[53] Today, the program serves five northern and central California counties. Recognizing the unique makeup of each geographical location, the program is flexible in its stipulations and requirements in order to provide area-specific, budget-appropriate, community-centric care.

The clinical team is composed of clinical staff and paraprofessionals, and a strong component of the team structure now includes peer and family supports. Vocation/education specialists, licensed therapists trained in evidence-based practices for psychosis interventions, senior clinical assessors, and peer supports create a team tailored to the distinctive and intensive needs of individuals experiencing a first episode of psychosis.

The target population served by PREP are individuals experiencing their first psychotic episode within a two-year period. Generally, the people enrolled are youth or young adults between the

[52] Felton PREP. (n.d.). About PREP. Retrieved from: http://www.prepwellness.org
[53] Dr. Nev Jones (personal communication, July 6, 2016).

ages of 14 and 35 years living with a schizophrenia spectrum diagnosis, with some locations expanding eligibility criteria to include bipolar spectrum and major depressive disorder. Additionally, one program site includes those whose comprehensive assessment suggests that they are at high risk for having their first episode within two years.[54]

Constructed of independently effective practices, the combined service menu provided by PREP provides uniquely tailored care to individuals and their families. Most notably, using intensive psychosocial treatments, individuals are often treated with lower doses of medications and experience fewer hospitalizations.[53] The comprehensive, strengths-based treatment model includes such services as extensive outreach and community education, Cognitive Behavioral Therapy for Psychosis, multi-family groups, strengths-based treatment planning and care, and individual placement and support.[55] Generally providing care for up to two years, the PREP team works collaboratively with an individual's professional and personal support system to ensure transition back into the community for treatment, education and/or employment, and social connections.

[54] Felton PREP. (n.d.). *PREP Intake process.* Retrieved from: http://www.prepwellness.org

[55] Felton PREP. (n.d.). *Effectiveness of PREP*. Retrieved from: http//www.prepwellness.org

Appendix 3: Best Practice FEP Care Models: Summary of Core Components

Domains	Common Components	RAISE Connection	OnTrackNY[56]	RAISE Navigate ETP	EASA	PREP
Team Structure/ Roles	• Team Leader/Director • IPS/Supported Employment and Education Specialist • Psychiatrist/ Prescriber **Recommended minimum role requirements for FEP**[57] • Team Leader	• 1.0 FTE Team Leader (licensed clinician) • 1.0 FTE Individualized Placement and Support (IPS) Specialist • 0.2 FTE Team Psychiatrist • 0.5 Recovery Coach/Skills Trainer (licensed clinician) **Total:** 2.7 FTE[58]	• 2.0 FTE staff provide the roles of Team Leader, Primary Clinician, Recovery Coach, and Outreach Coordinator • 1.0 FTE IPS Specialist • 0.3 FTE Prescriber • 0.2 FTE Nurse **Total:** 3.5 FTE.[59]	• 1.0 FTE Team Leader/Director • 0.5 FTE Supported Employment and Education Specialist • 0.2 FTE Psychiatrist/ Prescriber • 0.5 FTE IRT Specialist and Family Psychoeducation Provider	• Program Director • Supported Employment Specialist • Prescribing Medical Professional • Clinical Supervisor • Clinical Case Manager • Peer Support Specialist • Psychiatric Nurse • Occupational Therapist	• 1.0 FTE Program Manager • 1.0 FTE Vocation/ Education Specialist • 0.5 FTE Psychiatrist or Nurse Practitioner • 1.0 FTE Senior Clinician • 2.0 FTE Staff Therapists/Case Managers

[56] In June 2013, the New York State Office of Mental Health announced *OnTrackNY*, an initiative designed to implement Coordinating Specific Care (CSC) programs in the downstate region. For this project, the RAISE Connection program model was modified to increase flexibility and to allow for staff time to do CSC outreach and evaluations for eligibility. Source: NIMH. http://www.nimh.nih.gov/health/topics/schizophrenia/raise/nimh-white-paper-csc-for-fep_147096.pdf.

[57] At minimum, teams should have a main leader or coordinator who is responsible for the client's overall treatment plan and programming. In addition, each client should have a team member who provides in-depth individual and family support, suicide prevention planning and crisis management, and assistance with access to community resources and supports. This can be the Team Leader or Primary Clinician. Case management can also be provided, if needed, by the designated primary clinician or by another team member. Each team should have a psychiatrist or prescriber who works with clients on issues of medication, management, wellness, and side effects. Teams should also have a Supported Employment specialist to work with clients on re-entry to school or work, as well as team members who can work with clients on goals that require social or coping skills training as well as attention to substance use. Each team must have someone dedicated to establishing and maintaining a referral network and evaluating potential clients as described in the *Coordinated Specialty Care for First Episode Psychosis Manual I: Outreach and Recruitment*. Source: NIMH. http://www.nimh.nih.gov/health/topics/schizophrenia/raise/csc-for-fep-manual-ii-implementation-manual_147093.pdf

[58] Typical staffing for a caseload of 25.

[59] Typical staffing for a caseload of 30-35.

Domains	Common Components	RAISE Connection	OnTrackNY[56]	RAISE Navigate ETP	EASA	PREP
	• Individual and Family Support Specialist • Crisis Case Management • Outreach Coordinator • Psychiatrist/ Prescriber • Supported Employment Specialist			• (Optional) 0.5 FTE Peer Specialist **Total:** 2.2 – 2.7 FTE[60]	**Total:** N/A[61]	• 0.5-1.0 FTE Peer Specialist • 1.0 FTE Family Peer Specialist • 1.0 FTE Office Manager • 0.5 FTE Research Assistant **Total:** 8.5-9.0 FTE[62]
Inclusion/ Exclusion Criteria	**Inclusion Criteria:** • Age range: 12-40 • Experiencing symptoms of psychosis for the first time **Exclusion Criteria:** Symptoms cannot be due to: • Substance use • General medical condition • Better accounted for by a primary mood disorder	**Inclusion Criteria: All Should Be Met** • Age range: 15–35 years (Maryland 15–35; New York 16–35) • Diagnoses: schizophrenia, schizoaffective and schizophreniform disorders, delusional disorder, psychosis not otherwise specified (NOS) • Duration of symptoms of	**Inclusion Criteria:** • Age range: 16-30 years • Have recently begun experiencing psychotic symptoms, such as hallucinations, unusual thoughts or beliefs, or disorganized thinking • Duration of symptoms of psychosis: > 1 week and < 2 years **Exclusion Criteria:** Symptoms cannot be due to: • Substance use	**Inclusion Criteria:** • Age range: 15-40 • Diagnoses: Schizophreniform disorder, schizoaffective disorder, schizophrenia, brief psychotic disorder, and psychotic disorder (NOS) • For individuals whose acute psychotic symptoms have remitted or been	**Inclusion Criteria:** • Age range: 12-25 • Experiencing symptoms of psychosis for the first time	**Inclusion Criteria[63]:** • Age range: 14-35 • Experiencing symptoms of psychosis for the first time • Diagnosis: Schizophrenia spectrum • Duration of symptoms of psychosis: < 2 years

[60] Typical staffing for a caseload of 30.

[61] Total FTE was not evident; however, the team aims for 1:10 total FTE (not per clinician) and the lead clinician caseload is limited to 1:20-25.

[62] Based on original program FTE in San Francisco County.

[63] Some locations are expanding eligibility to include bi-polar spectrum and major depressive disorder. Additionally, one program site includes those whose comprehensive assessment suggests they are at high risk for having their first episode within two years.

Domains	Common Components	RAISE Connection	OnTrackNY[56]	RAISE Navigate ETP	EASA	PREP
		psychosis > 1 week and < 2 years • Ability to speak and understand English • Anticipated availability to attend the clinic for 1 year **Exclusion Criteria:** • Other diagnoses associated with psychosis: o Substance-induced psychotic disorder o Psychotic affective disorder (e.g., major depressive or manic episode with psychotic features) o Psychotic disorder due to a general medical condition • Medical conditions that impair function independent of psychosis • Intellectual disability	• General medical condition • Better accounted for by a primary mood disorder	stabilized or those experiencing first episode • Individuals must be recovering from FEP with < 6 months of cumulative exposure to antipsychotic treatment		
Key Services	• Family psycho-education • Recovery-based individual therapy • Case management or	• Family and individual psychoeducation • Individual and group therapy • Supported Employment and	• Family and individual psychoeducation • Psychotherapy • Case management • Supported Employment and Education	• Individual family therapy • Supported Employment and Education • Medication management	• Person-led counseling • Vocational and educational support and placement	• Cognitive Behavioral Therapy for Psychosis • Supported Employment and Education

Domains	Common Components	RAISE Connection	OnTrackNY[56]	RAISE Navigate ETP	EASA	PREP
	comprehensive community support services (e.g., housing, education, employment, income support). • Medication management • Relapse prevention planning	Supported Education • Outreach services with connection to appropriate community resources • Medication management • Substance abuse treatment • Safety planning for family and clients • Crisis and relapse planning • Occupational therapy	• Structured behavioral interventions (e.g., social and coping skills) • Individualized medication treatment and wellness planning • Individualized safety planning	• Individual Resiliency Training	• Gradual pharmaceutical intervention	• Multi-family groups • Individual placement and support • Outreach and community education
Team Features	• Flexible engagement • Shared decision-making **Additional recommended team features:** • Small caseloads • Frequent team meetings • Central point of referral • Coordinating entry to the program	• Outreach and engagement • Recovery-based approach based on client and family goals • Assist clients with knowing rights and available benefits	• Flexible engagement • Shared decision-making • Recovery focus • Treatment is geared toward young adults • Work very closely with the family	• Shared decision making • Work very closely with the family or significant others	• Flexible, rapid engagement • Outreach • Focus on individual strengths	• Strengths-based treatment planning and care • Outreach • Weekly team meetings • Weekly case conference attended by all

Domains	Common Components	RAISE Connection	OnTrackNY[56]	RAISE Navigate ETP	EASA	PREP
	• Connecting with community partners[64]					
Psychiatric Consultation and Medication Management	Use of evidence-based protocols or standardized algorithms for medication management[65]	• Well-defined protocols for medication selection in line with evidence-based treatments • Follow medical algorithms to avoid overuse of meds or problematic use of meds for this population • Comprehensive multidisciplinary psychiatric and psychosocial evaluation	• Pharmacological treatment recommendations based on standardized guidelines • Routine monitoring of signs, symptoms, and side effects through standardized questionnaires	• Individualized pharmacological treatment with shared decision making • Utilize COMPASS, a computerized clinical decision-making tool to: ○ Facilitate client-prescriber communication ○ Guide prescribers in sessions with clients ○ Provide guidance about evidence-based medication strategies to inform client-prescriber decision making about treatment	• Gradual pharmaceutical intervention • Person-led counseling	Individualized

[64] Addington, D.E., McKenzie, E., Norman, R., Wang, J., & Bond, G.R. (2013, May). Essential evidence-based components of first-episode psychosis services. *Psychiatric Services, 64*, 5, 452-457. Retrieved from http://ps.psychiatryonline.org/doi/full/10.1176/appi.ps.201200156.

[65] Pharmacotherapy typically begins with a low dose of a single antipsychotic medication and involves monitoring for psychopathology, side effects, and attitudes towards medication at every visit. See Heinssen, R.K., Goldstein, A.B., & Azrin, S.T. (2014, Aprils 14). *Evidence-based treatments for first episode psychosis: Components of coordinated specialty care.* National Institute of Mental Health. Retieved from http://www.nimh.nih.gov/health/topics/schizophrenia/raise/nimh-white-paper-csc-for-fep_147096.pdf.

Domains	Common Components	RAISE Connection	OnTrackNY[56]	RAISE Navigate ETP	EASA	PREP
Typical Length of Stay	2-5 years	Critical Time Intervention (CTI): 2 years	Critical Time Intervention (CTI) model; time-limited three-phased intervention that occurs over a span of approximately 2 years	• Weekly engagement for 6-12 months • Monthly engagement for 12-18 months • After 2 years, collectively decide on next best steps	Up to 2 years	Up to 2 years
Approach to Transitioning to Lower Levels of Care	Transition into ongoing care after 2-5 years	Collaborative process involving the client, their relatives and important others, and members of the team; assessment of the client's progress in achieving treatment goals in key domains and identification of areas that require additional work. Considers client's personal vision of stability, success in community, functioning, and personal autonomy	Clients stay with the OnTrackNY team for an average of 2 years. Transition planning begins 6 months prior to discharge and involves the following steps:[66] • Review of experience with the OnTrackNY program • Review of practical considerations that may impact community care options • Development of a transition plan • Utilizing recovery coaching interventions for focused work to enable participant to implement transition plan	After 2 years, collectively decide on next best steps at the same or less intensive levels (e.g., monthly or every 2 months for check-in); some may transfer treatment, others may discontinue with the knowledge that they may return in the future	Assumption that individuals will transition to individualized supports; planning for long-term supports begins early, with supports in place prior to discharge; goal is to return to normal life with ongoing support	Collaborative process involving the individual's professional and personal support system to ensure connection back to the community

[66] OnTrackNY. (2015, March 25). *Primary clinician's manual*. Center for Practice Innovations at Columbia Psychiatry, New York State Psychiatric Institute, and New York State Office of Mental Health. Retrieved from http://www.ontrackny.org/portals/1/Files/Resources/PrimaryClinicianManual_2015.03.25_Final.pdf.

Domains	Common Components	RAISE Connection	OnTrackNY[56]	RAISE Navigate ETP	EASA	PREP
			• Identifying and reviewing "tools in the toolbox" • Conducting skills check-up and honing skills for implementing transition plan • Arranging community field trips • Helping the family prepare for transition			
Other EBPs	• Peer Support • Illness Management Training	• Peer Support groups	• Peer Support (in development)		• Cognitive Behavioral Therapy • Supported Housing • Peer Support	• Peer and Family Support

Appendix 4: First Episode Psychosis Care Models – Brief Descriptions and Links for More Information

Model	Description	More Information
EASA	The Early Assessment and Support Alliance (EASA) program in Oregon has been doing FEP Care for over 15 years and is a very expansive program. They looked at interesting funding strategies to take a population approach and set up a good infrastructure to provide training and support. It is a Coordinating Specific Care model (CSC) based on the Australian Practice Guidelines for Early Psychosis.	http://www.easacommunity.org/easa-services.html http://www.easacommunity.org/PDF/Practice%20Guidelines%202013.pdf – Practice guidelines.
EDAPT	EDAPT serves individuals from around the Sacramento region, ages 12-40 years, who have insurance and are in the early stages of psychosis. This recovery-based treatment approach provides services for 2 years, focusing on: 1) reducing and managing symptoms and distress and 2) improving individuals' ability to achieve success in independent roles.	http://earlypsychosis.ucdavis.edu/edapt

Model	Description	More Information
SacEDAPT	SacEDAPT serves Sacramento County residents, ages 12-30 years, who have Medi-Cal or are uninsured and are in the early stages of psychosis. Collaboration between UC Davis Department of Psychiatry and Sacramento County Mental Health provides state-of-the-art care to transition-age youth who are experiencing the earliest stages of psychosis. This program is funded through MHSA/Prop 63.	http://earlypsychosis.ucdavis.edu/sacedapt
NAVIGATE	NAVIGATE is a CSC treatment program featuring a team of specialists who work with each client to create a personalized treatment plan. Led by John Kane, they train clinical staff at real-world clinics around the country to use the program.	http://navigateconsultants.org http://navigateconsultants.org/materials/ – Guides for team members, directors, prescribers.
Ohio FIRST	Ohio FIRST is a program for FEP; they were providing FEP before the set-aside. They provide training and support.	http://www.nasmhpd.org/sites/default/files/Ohio webinar all presenters.pdf
OnTrackNY	OnTrackNY builds on the RAISE Initiative. It is an innovative, evidence-based team approach to providing recovery-oriented treatment to young people (ages 16-30 years) who have recently begun experiencing psychotic symptoms. This program is led by Lisa Dixon.	http://ontrackny.org/

Model	Description	More Information
PIER	PIER is a model out of Maine with excellent findings. This model's critical feature is community outreach by a clinical team to school professionals, general practitioners, pediatricians, and other key groups to educate and inform about the early signs of mental illness. Under the direction of William R. McFarlane, M.D., the PIER staff has more experience with systematic implementation of preventative and family psychoeducational interventions than any other group in the U.S.	http://www.piertraining.com/pier-model/
RAISE	Recovery After an Initial Schizophrenia Episode (RAISE) project is funded by the National Institute of Mental Health (NIMH). RAISE is a large-scale research initiative that began with two studies examining different aspects of CSC treatments for people who were experiencing FEP. RAISE ETP focused on whether or not the treatment worked. RAISE IES studied the best way for clinics to start using the treatment program.	http://www.nimh.nih.gov/health/topics/schizophrenia/raise/evidence-based-treatments-for-first-episode-psychosis-components-of-coordinated-specialty-care.shtml http://www.nimh.nih.gov/health/topics/schizophrenia/raise/published-articles.shtml – Published articles related to RAISE.
RAISE Early Treatment Program (ETP)	RAISE ETP is designed to be implemented in diverse community clinics across the U.S., led by John M. Kane, M.D.	https://raiseetp.org https://raiseetp.org/studymanuals/index.cfm – Manuals for directors, families, teams, psycho-pharmacologists.

Model	Description	More Information
RAISE Implementation and Evaluation Study (IES)	RAISE IES explored how to implement a specially designed CSC treatment called the Connection Program. The researchers created two specialty care clinics for treating first episode psychosis, one in New York and one in Maryland. The project examined the clinical and administrative aspects of establishing such specialty care clinics, and developed tools and materials that others may use to start their own CSC programs. The study also looked at factors that affected clients' and family members' satisfaction with treatment, as well as clients' outcomes after participating in the Connection Program. Dr. Lisa Dixon, M.D., is a professor of psychiatry at Columbia University in New York and the director of the Center for Practice Innovations at the New York State Psychiatric Institute-led RAISE-IES.	http://www.nimh.nih.gov/health/topics/schizophrenia/raise/raise-questions-and-answers.shtml - 21

Appendix 5: Does FEP Care Work?

The above description of FEP Care programs and their various elements begs the question of whether FEP is effective, relative to usual care, which, at least in the short-term, is assuredly less expensive than the comprehensive, intensive, multi-disciplinary team-based FEP teams. The short answer is that, yes, FEP Care does yield superior outcomes. Several years ago, international studies that preceded the recent spate of well-controlled studies in the United States established a solid evidence base.[67] However, because of their greater relevance to our own context in Texas, the recent U.S.-based studies will be reviewed here. The NIMH RAISE studies mentioned repeatedly above represent the most compelling research designs to date. Two large research teams, one associated with RAISE-NAVIGATE/ETP and one with RAISE-Connection, have published encouraging findings.

Kane and colleagues reported in the *American Journal of Psychiatry* in 2015 that, especially when receiving RAISE-NAVIGATE's version of FEP Care within the first 17 months of psychosis onset, participants had better quality of life and were more involved in work and school.[68] FEP Care was better than care-as-usual at helping people remain on a normal developmental path. The NAVIGATE study was conducted across 34 clinics in 21 states. Researchers also examined the costs of FEP Care versus care-as-usual and found that FEP Care was less expensive per unit of improvement in quality of life.[69] In addition, FEP Care costs less than $9,000 per person per year on average, less than two thirds the cost of providing intensive care when it is typically provided, after years of suffering, and not much more than the cost of a week's worth of inpatient psychiatric care.

The RAISE Connection study conducted in New York and Maryland also reported positive outcomes.[70] Lisa Dixon and her colleagues reported in 2015 that symptoms declined in FEP Care participants and scores on measures of occupational and social functioning increased over time. The researchers also examined rates of remission—defined as not having any symptoms

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[67] See for example, the review by Alvarez-Jimenez, M. et al., (2009). Preventing the second episode: A systematic review and meta-analysis of psychosocial and pharmacological trials in first-episode psychosis. *Schizophrenia Bulletin, 37*(3), 619-630. At the time of this comprehensive review of studies worldwide, only one was from the U.S.

[68] Kane, J.M., et al. (2015). Comprehensive versus usual community care for first episode psychosis: 2-year outcomes from the NIMH RAISE early treatment program. *American Journal of Psychiatry, ajp in Advance*, 1-11.

[69] Rosenheck, R., et al. (2016). Cost-effectiveness of comprehensive, integrated care for first episode psychosis in the NIMH RAISE early treatment program. *Schizophrenia Bulletin, 42*(4), 896-906. (Advance Access, doi: 10.1093/schbul/sbv224).

[70] Dixon, L. et al. (2015). Implementing coordinated specialty care for early psychosis: The RAISE Connection program. *Psychiatric Services, 66*(7), 691-698. Marino, L., et al. (2015, May). The RAISE Connection program for early psychosis: Secondary outcomes and mediators and moderators of improvement. *Journal of Nervous and Mental Disease, 203*(5), 365-371.

exceeding "mild" on a widely accepted symptom measurement interview tool—and found them to be significantly increased after FEP Care. Secondary outcomes reported by Marino and colleagues, which focused more extensively on dimensions of consumers' quality of life and predictors of outcomes, also were found to be enhanced by RAISE Connection. Researchers reported that treatment fidelity, family involvement in care, and consumer engagement in care were significant mediators of improvement in both social and occupational functioning (cognitive processing speed was also observed to be a significant moderator of improvement in occupational functioning).[71]

We mentioned at the outset that people often do not receive any treatment for several years after the first onset of mental illness. Because studies of FEP include control groups of people receiving "care as usual" treatment early in the illness process (and often from specialty mental health providers, versus less-well-trained primary care providers), these studies might actually *under*estimate the benefits of the model. While the "care as usual" provided to control groups might represent non-comprehensive care (unlike the evidence-based practices embedded in FEP Care), it may be much more promptly delivered than what is normally the case.

[71] Marino et al. (2015). *Moderating variable*s are characteristics of individuals or other predicators of outcome that, although not necessarily affected by the intervention, have the potential to be correlated with outcomes. *Mediating variables* represent various measures of the intervention, itself, or proximal effects of the intervention, that may correlate with outcomes—that have the potential to "mediate" the overall effect of the program on consumer outcomes..

Appendix 6: What is Happening in Texas?

Using federal state mental health block grant set-aside funding, the Texas Department of State Health Services (DSHS) has prompted the implementation and demonstration of FEP Care in two phases. The first phase engaged two community mental health providers and the second phase is launching eight new providers contracted to deliver FEP Care. In this section, we describe the two phases and briefly summarize an effort at the UTSW Department of Psychiatry to develop a comprehensive psychosis center that would include an FEP Care program connected to research on psychosis.

Phase 1 FEP Care Demonstrations in Dallas and Houston

The Texas Department of State Health Services (DSHS) has used federal mental health block grant funding to subsidize FEP Care demonstration programs in various communities. The FEP Care roll-out has occurred in two stages. In the first stage, the Substance Abuse and Mental Health Services Administration (SAMHSA) asked states to set aside 5% of their mental health and substance abuse block grant funding to develop FEP Care program demonstration projects. In the second and current stage, SAMHSA asked for a 10% set aside, effectively encouraging states to invest more deeply in FEP Care.

Stage one in Texas led to demonstration projects in 2014 located in Houston and Dallas. FEP Care programs were implemented by Metrocare Services (Dallas) and by The Harris Center for Mental Health and IDD (Houston), each of which received training in the RAISE Connection model of FEP Care. We conducted interviews with DSHS staff and key informants at Metrocare Services and The Harris Center for Mental Health and IDD (The Harris Center), which informed the following descriptions of these two phase one programs.

According to DSHS staff key informants, certain implementation parameters were required of both programs.[72] First, the two programs were required to serve only uninsured, non-Medicaid patients. This proved to be a significant barrier to serving some people in need, but according to one key informant from another state who had some contact with the programs, it also served as an incentive to move consumers out of the program once they achieved a modicum of clinical improvement. Fortunately, this requirement is being lifted in the phase two statewide implementation.

Another requirement was that the two providers contract with local University of Texas (UT) branch researchers to evaluate their services. For our study, we interviewed Dr. Jane Hamilton,

[72] Reese Carroll and Warrant Stewart (personal communication, April 15, 2016).

one of the researchers studying FEP Care implementation at The Harris Center, and we found the research model to be very comprehensive and well-tailored to the program model.[73]

Finally, we will mention a few additional relevant requirements: 1) the inclusion criteria for programs required that a person's diagnosis be less than two years old, 2) programs were required to obtain training in an evidence-based model (both programs received training from Lisa Dixon's RAISE Connection group), and 3) programs were required to deliver an average of seven hours per week of service to consumers on the team.[74]

The Harris Center for Mental Health and IDD in Houston

At the time we interviewed FEP Care program leaders at The Harris Center in April of this year, they had been implementing the FEP Care program for 19 months.[75] We also interviewed one of the evaluators of this program, Jane Hamilton, and she reported that the program had already established an effective team.

Program leaders Kemi Sells and Brent Lawless indicated that The Harris Center team consists of a part-time psychiatrist, a team leader, three therapists, and four other clinicians, including an education/employment specialist and a peer specialist. The therapists are trained to deliver Cognitive Behavioral Therapy for Psychosis (CBT-P) to consumers, as well as family-based interventions.[76] Other clinicians provide case management, family support, peer support, psychosocial rehabilitation (including Supported Education/Employment) and education on mental illness. The team uses intervention manuals from the OnTrackNY program, a multi-site derivative of RAISE Connection in New York State. The Harris Center has even individualized some of the program manuals for its program, and collaborators from UT-Health Sciences Center (UTHSC) are working on developing intervention guidance for addressing the negative symptoms of schizophrenia (representing a potentially significant advance in care). Clinicians sometimes meet with UTHSC experts to review difficult cases. The team is larger than our recommended staffing structure for a team serving 50 consumers, as outlined earlier in the paper, but our key informants indicated that The Harris Center program has the capacity to serve 65 consumers at any given time.

As indicated above, to be eligible for services, consumers cannot have any form of insurance,

[73] Jane Hamilton, University of Texas Health Sciences Center-Houston (personal communication, July 20, 2016).

[74] However, this requirement has since been reduced to an average of five hours per week per consumer. Dr. Carol North and Katy McDonald of Metrocare Services, (personal communication, April 8, 2016).

[75] Kemi Sells and Brent Lawless (personal communication, April 22, 2016).

[76] According to key informant, Jane Hamilton, clinicians on the team have received formal certification in CBT-P, which required submitting taped sessions to national experts. (Personal communication, July 20, 2016).

must be between ages 15 and 30 years, have a qualifying diagnosis[77] that is not more than two years old, and reside in Harris County. While the program does receive referrals from the Harris County Psychiatric Hospital and other providers outside of the LMHA, at the time of our interview, most referrals had originated within The Harris Center, itself.

Metrocare Services in Dallas

We interviewed Dr. Carol North and Katy McDonald of Metrocare Services in April 2016 to learn about their program, which began serving consumers in February 2015.[78] Metrocare Services implemented its version of FEP Care under the same state-required stipulations outlined above.

The Metrocare program also is rooted in the RAISE Connection model and it consists of two teams serving 30 consumers each. Like the Houston program, there is a close collaboration with a university partner (University of Texas Southwestern), which provides evaluation and research services. Overall program direction is provided by Dr. North, who is associated with both Metrocare and the University of Texas Southwestern (UTSW), with Katy McDonald serving as clinical program manager. Each of the two FEP Care teams consists of the following staff (some work with both teams):

- Team leader (also a licensed therapist),
- Prescriber (who works with both teams),
- Case manager,
- Vocational rehabilitation and supported employment specialist,
- Family support specialist, and
- Cognitive mediation specialist (who works with both teams).

Dr. North and Ms. McDonald reported that the teams work somewhat like ACT teams, in that their services are provided primarily in the community (versus the office). Instead of a peer support position, the program uses a family support specialist, which the program has found to be "invaluable" in helping families obtain resources and navigate the system of services. The team's clinicians focus heavily on case management and helping people learn to use community resources such as public transportation, libraries, social services agencies such as social security, and low-cost sources of clothing, for example, in order to meet their basic needs. Additional evidence-based services include Supported Employment, Supported Housing, CBT, and cognitive remediation therapy.

The same inclusion criteria used at The Harris Center in Houston are also employed by Metrocare: they serve people ages 15 to 30 years residing in Dallas County who have had a

[77] Qualifying diagnoses can include any psychotic disorder, including bipolar disorder with psychotic features and major depressive disorder with psychotic features. Jane Hamilton (personal communication, July 20, 2016).
[78] Carol North and Katy McDonald (personal communication, April 8, 2016).

psychosis-related diagnosis for less than two years. However, Dr. North and Ms. McDonald also indicated that potential consumers cannot have a history of substance use and that they must have low incomes (two-and-a-half times below the federal poverty level). They reported the program has the capacity to serve up to 90 individuals at one time, but, as of the time of the interview, they had not yet reached their minimum goal of 60 consumers served.[79]

Metrocare originally attempted to recruit consumers from its data base of about 53,000 people that it was serving at the time, but the process was hampered by the fact that, not unlike other providers' electronic health records (EHR), Metrocare's EHR did not have a field to indicate the date of a person's first psychotic episode on which a report could be run. But even when consumers were identified by individual chart reviews, the majority had some form of insurance and had to be excluded. In the end, Metrocare also reviewed another statewide data base of other eligible consumers served in the Dallas area; they also offered educational events and delivered presentations to area hospitals in hopes of receiving referrals.

Phase 2 Demonstrations in Eight LMHAs Statewide

With its 10% state block grant set-aside, DSHS decided to dramatically expand FEP Care programs in Texas. Eight new programs are currently in the process of being implemented statewide.[80] Programs must obtain training from national experts in either the RAISE NAVIGATE or RAISE Connection/OnTrackNY models and peer specialists must be included on the teams. DSHS staff want to provide administrative encouragement and support for programs to focus on producing good outcomes, as opposed to establishing extensive requirements concerning the processes of care. (This may be an important development as some key informants reported that achieving the target average number of hours of service per client has been difficult and has hampered the program's success.)

DSHS' decision to drop the requirement that teams must serve those without any insurance will be helpful to Texas FEP Care programs in a variety of ways. First, whether it serves low-income or middle and high income youth or young adults, FEP Care teams often actively recruit into services people with Medicaid or other insurance (whether their own or their parents'). Second, phase one programs in Texas have found that when their consumers obtain insurance (often with the program's help and sometimes because they obtained employment), they have to drop them from the program. Finally, limiting inclusion to people without insurance also creates a disincentive to educate the community about first episode psychosis and discourages referrals to the program, because so many people in need will not be eligible for the program.

[79] Again, the criterion of no insurance was a problem and the program has lost many consumers because they were eligible for Medicaid, and the program wanted to help many of these consumers obtain the insurance for which they were eligible.

[80] As of late July 2016, DSHS was not yet at liberty to disclose the location of the phase two FEP Care programs. Reese Carroll (personal communication, July 27, 2016).

As all of our national and in-state expert key informants noted, engaging consumers in services is the most challenging aspect of FEP Care, even without the barrier of insurance as an exclusionary criterion.

Progress in FEP Research, University of Texas Southwestern Medical Center

Research efforts focused in biomarker identification led by Dr. Carol Tamminga, the distinguished Chairman of Psychiatry at the University of Texas Southwestern Medical Center, look to shift psychotic disorder diagnoses from being based solely on clinical phenomenology to including biologically meaningful differentiations. Dr. Tamminga's most recent project drew on, as she put it, "neurobiological heterogeneity among psychosis cases to delineate subgroups independent of their phenomenological manifestations."[81] Through this research, three neurobiologically distinct psychosis biotypes were identified and it suggested that multiple pathways exist that lead to homogeneous psychosis manifestations. At the same time, as Dr. Tamminga pointed out, her research may explain the "marked heterogeneity observed across laboratories on the same biomarker variables when DSM diagnoses are used as the gold standard."[81]

Dr. Tamminga reports that only in the past decade has the field of psychiatry begun to move toward considering brain abnormalities and other biological correlates of psychosis as helping to re-cluster or re-classify psychotic disorders.[82] Biomarker identification facilitates the opportunity for early risk detection, identification, and intervention in psychotic disorders. Assessing and treating psychosis as an inherently biologically based disease warrants mental health disorders to be viewed as equivalent to other physiological diseases. As with most progressive psychiatric research, Tamminga notes that funding, in a non-self-sustaining project, continues to be of concern. Additional studies will require philanthropic support, research monies, and state and federal financial investment.

As mentioned above, Dr. Tamminga envisions a psychosis center at UTSW that would link FEP Care to cutting-edge research on biomarkers. There is potential for UTSW and the broader Dallas community to lead the nation in developing a more scientifically grounded approach to FEP Care.

[81] Clementz, B.A., et al. (2016, April 1). Identification of distinct psychosis biotypes using brain-based biomarkers. *American Journal of Psychiatry, 173*(4).
[82] Carol Tamminga, MD. (personal communication, April 8, 2016).