

Early Intervention Programs For Schizophrenia

Successful in Increasing Recovery and Decreasing the Severity of Disability

Report by the California Council of Community Mental Health Agencies

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I. Introduction	1
<i>What is Early Intervention</i>	2
<i>Early Intervention Should Reduce DUP</i>	10
<i>When to Apply Early Intervention Strategies</i>	12
II. Strategies and Tactics for Reducing DUP	13
<i>Getting Symptomatic Individuals into Treatment Faster, Tackling Stigma and Establishing Easy Access to Community-Based Care</i>	13
1. The Norway Project (TIPS)	14
Principles of the Project	16
Methods	16
Study Inclusion Criteria	16
<i>How the Two Strategies Work</i>	16
<i>The General Population</i>	17
Health Professionals	18
Schools	18
<i>Results: Did They Reduce DUP?</i>	18
<i>Cost of the Program</i>	20
Summary	20
2. The Early Psychosis Prevention and Intervention Center (EPPIC) ..	20
Principles of the Project	21
Methods	21
<i>How Did EPPIC's Strategies Work?</i>	22
Results	23
3. Personal Assistance and Crisis Evaluation (PACE)	24
Young People, Prevention, and Early Intervention Center (YPPI)	25
Brookvale Early Intervention Center	25
Southern Early Psychosis Project	25
4. The Early Psychosis Initiative (EPI), British Columbia	26
Working with Community Resources	27
5. The Danish OPUS Project	28
Methods	28
Results	28
6. Help-Seeking Behavior Studies, University of Ulm, Germany	29
Methods	29
Preliminary Results	29
7. The Nova Scotia Early Psychosis Program	30
Early Psychosis Mentorship Program	30
Early Intervention in Schools	31
8. Prevention and Early Intervention Programs for Psychosis (PEPP), Canada	32
9. The Iris Program, England	33

Program Principles	33
III. Strategies and Tactics for Effective Treatment	34
<i>Assertive Community – Based Treatment from the Onset</i>	34
1. The TIPS Project, Norway	35
Psychosocial Rehabilitation	35
Medications	36
Family Work	37
Preliminary Outcomes	38
2. Early Psychosis and Intervention Center (EPPIC)	38
Case Management	39
Day Programming	41
Family Work	42
Psychoeducation	43
Cognitive Oriented Psychotherapy for Psychosis (COPE)	44
Treatment Outcome	45
<i>Assessment of Day Programming</i>	47
<i>Assessment of COPE</i>	47
3. Treatment Plans and Results from EPPIC Sister Programs	49
ACSEPT	49
South Brisbane Child and Youth Mental Health Services	50
On-going Research at EPPIC	50
4. Home-Oriented Management of Early Psychosis (HOMES), England	52
5. Prevention and Early Intervention Program for Psychosis (PEPP), Canada	53
<i>Case Management</i>	53
Family Work	54
Group Interventions	54
<i>RAP</i>	54
<i>YES</i>	55
<i>COSTS</i>	55
<i>CBT</i>	56
<i>Treatment Outcomes</i>	56
6. Early Psychosis Identification (EPI), British Columbia	57
7. Danish OPUS Project – Treatment Outcomes	58
8. Family Psychoeducation in Treatment of First-Episode Patients, Calgary	59
9. Nova Scotia Early Psychosis Program (NSEPP)	60

**IV. What Questions and Concerns is Current Available Research
Unable To Answer?**

60

V. Conclusion 63

Internet Resources 65

References 66

I. Introduction:

In the mental health community, attitudes about the prevention of severe and debilitating brain disorders, particularly schizophrenia, are starting to change as researchers begin to provide evidence that early intervention can successfully reduce disability. Schizophrenia, a type of psychosis, is the disorder that has received the most attention from researchers. As the Surgeon General reports in 1990, schizophrenia alone totaled \$15 billion in indirect costs (U.S. Department of Health and Human Services, 1999). Like the U.S., other countries are concerned about the magnitude of costs that stem from this debilitating disorder. For example, in Great Britain in 1996 the indirect and direct cost of schizophrenia totaled 4.1 billion pounds a year (Bosanquet, 2000). In Norway, yearly direct and indirect costs also total 4 NOK (Johannessen et al., 1999). Canada reports similar indirect and direct costs, totaling over 4.3 billion annually (Cassidy and Klymasz, 1995). In all NATO countries combined the costs connected with schizophrenia are estimated at more than 1% of the gross national budget (Cassidy and Klymasz, 1995). Of course these costs can never measure the enormous amount of human suffering that is associated with schizophrenia for both the individual enduring the disorder and his or her loved ones.

After nearly two decades of numerous scientific advances, schizophrenia, like other mental disorders, is no longer a medical or psychiatric mystery. There is still a small camp of clinicians and researchers who argue that schizophrenia remains true to the Kraepelin model. This camp argues that schizophrenia is a severe organic brain disease resulting in deterioration and chronic disability (Kraepelin, translated 1971). In short, schizophrenia is perceived as an illness that gets progressively worse, with no possibility of recovery. Even dimmer, the Kraepelin model argues that there is nothing human will can do to slow this process or diminish deterioration to the brain. On the other hand, this report will show that there is a growing field of evidence that argues that schizophrenia, or more broadly speaking, psychosis, is a condition that can be effectively treated in such a way that disability can be markedly reduced, remission is a possibility, and recovery is the goal.

As a top researcher in this field, Dr. Thomas McGlashan argues that more research about early detection and intervention is absolutely necessary. Reasons for this are not only because it causes high rates disability, human suffering, and impedes a large cost to society, but because new studies suggest that it may be possible to alter the natural history of schizophrenia. If this is true, why not support more research to find out how this can be accomplished and to what extent. As McGlashan (1996: 202) asserts, "clinical research findings in recent decades suggest that applying existing schizophrenia treatments as soon as possible in the course of the disorder may slow or even stop deterioration." In addition, there have been multiple studies about untreated psychosis in first-episode cases that have revealed that patients are often actively psychotic for a lengthy time period before they get help. The length of the duration of untreated psychosis has been associated with a slower and less complete recovery, increased risk of relapse, and substantial treatment resistance (Johnstone et al., 1986 and Wyan, 1991). Regardless of this, McGlashan (1996: 201) concludes, "Bringing treatment more rapidly to a person who has been psychotic is in itself enough to justify early detection efforts."

Some researchers have highlighted that the onset of schizophrenia or psychosis-related disorders occurs during the young adult transitional period of life and disruptions that are caused by the disorder's onset are particularly damaging during this time of change. The average onset age for males is twenty, and female onset is roughly a few years later (McGlashan, 1988). Of the individuals diagnosed with schizophrenia, about 50% have their onset between the ages of 15 to 24 (Varma et al., 1997). Unrecognized and untreated symptoms can alienate the young person from his or her family and friends, disjoining educational and vocational development, not to mention social networks and self-identity (Andery, 1997). Often such circumstances increase stress on the individual and the family,

exacerbating the untreated symptoms. Delayed treatment is more likely to be associated with police intervention and compulsory admission to psychiatric hospitals. Experiences such as these are obviously traumatic for both the individual and his or her family, as post-traumatic stress disorder may be an outcome of the experience (Andery, 1997). This may partially explain why non-compliance is also associated with individuals who undergo long periods without treatment. Lastly, other harmful secondary effects associated with longer DUP include social anxiety, depression, substance abuse, and homelessness (McGorry and Singh, 1995). For example, Mueser and colleagues found in a 1990 study that potentially half of the patients entering psychiatric treatment have significant drug or alcohol abuse histories.

Purpose of Report:

This report will begin by identifying the fundamentals of the international movement to identify and treat what researchers classify as “early psychosis”. After this has been clarified, the report will move on to address the various studies that have shown why early intervention has been effective. Here the report will explain the various strategies and tactics researchers around the world are currently using to get individuals into treatment sooner rather than later, reducing the duration of untreated psychosis or DUP. As it will be evident, stigma and misconceptions about mental disorders from both the general public and the health care system account for much of the lengthening of DUP that causes unnecessary human suffering as well as possibly increasing the severity of disability. Hence, finding effective means for raising awareness and reducing stigma is vital to the success of any early intervention program. The report will move on, taking a detailed look at what treatment consists of within early intervention programs, research trials, and clinics. Lastly, the report will identify where the current research fails to answer some of the important issues surrounding mental health care and the treatment of individuals with schizophrenia or other psychosis related disorders. In conclusion, this report will function to evaluate the strengths of early intervention strategies as a means of improving the quality of life for individuals who suffer from schizophrenia and psychotic disorders.

What is Early Intervention

In order to understand the fundamentals of early intervention, this report begins with an explanation of psychosis. Psychosis describes a mental state characterized by distortion or loss of contact with reality. It is a serious condition that is treatable. It consists of **positive symptoms** - delusions, hallucinations and thought disorders and **negative symptoms** - affective blunting, poverty of thought or speech and loss of motivation and **disorganized symptoms** - disorganized thoughts, behavior, and attention disturbance (Liddle, 1987). There are also a number of secondary features that often serve as a cue to the presence of psychosis. These features include sleep disturbance, agitation, behavior changes, social withdrawal and impaired role functioning. Psychosis can be caused by certain medical conditions as well as drug and alcohol abuse, but is most commonly a product of a variety of psychiatric or mental disorders such as schizophrenia, bipolar disorder, schizophreniform psychosis and schizoaffective disorder. **Early intervention seeks to uncover these disorders at the earliest point possible and begin appropriate treatment.** Although it is important to note that early intervention of psychosis is the primary goal, this report will focus on evidence that has been gathered in relation to psychosis found in schizophrenia. This is because the majority of research has investigated early identification and intervention issues with regard to schizophrenia and comparatively less research has investigated these issues with regard to other forms of psychosis.

Early intervention in first-episode psychosis is aimed at shortening the course and decreasing the severity of an initial psychotic episode, this in turn minimizes the many complications that can arise from untreated psychosis. Numerous retrospective and several prospective studies have found that the longer a person remained psychotic before treatment was initiated, the more likely he or she was to suffer more relapses, benefit less from receiving maintenance anti-psychotic medication, and benefit less from several years of intense treatment.^{1[1]} Due to these findings, a surge of researchers and clinicians urge their fellow colleagues to both study the effects of the **duration of untreated psychosis (DUP)** and practice policies that promote early intervention. Treatment should begin at the first sign of positive psychotic symptoms, but it also may be possible to intervene during the pre-psychotic, or prodromal phase. This is currently under debate and requires more evidenced-based research, but we will return to this topic about exactly *when* early intervention should take place in just a moment.

At this point, we shall continue to explore *why* a large number of researchers argue that early intervention is so important and continually conduct studies to test if early intervention will change the course of deterioration in schizophrenia commonly assumed by many in the mental health community, not to mention the general public. Currently, researchers involved in studying the effectiveness of early intervention admit that they are unsure of why early intervention improves outcome. Researchers agree that early intervention is effective because of one or both of the two following prevalent hypotheses in the field which center on the importance of reducing the duration of untreated psychosis.

The first general hypothesis is that the neurobiological processes that make schizophrenia a severe and chronic condition may be most active early in the course of the disorder. As Birchwood (2000:47) argues, “the course of psychosis is the most stormy at its onset and early in its manifest course...the first three years of treated or untreated illness offer a window of opportunity to prevent, or limit the potential decline in outcome.” Prospective studies have shown that for many subjects, there is a rapid period of progression of psychosis prior to, and following the first episode of psychosis. Researchers have labeled the period in which first-episode patients initially receive treatment as the “**critical period.**” At this time, mainstream mental health services focus their preventive efforts during this stage. Despite this more accepted pattern of treatment, researchers are very interested in trying to understand the development and onset of psychotic symptoms before this stage. As McGlashan (*in press*) argues, “psychosis in all of its schizophrenic spectrum manifestations has an existence long before the official onset...this process appears to be quite active 2-3 years before the onset and sometimes for 1-2 years after onset until a stable plateau is reached in the course of the disorder.” *Early intervention researchers are hoping that treatment that contains a combination of anti-psychotic medication, psychosocial rehabilitation that includes both the client and his or her caregivers, and assertive community care can function to limit the progression of disability caused by schizophrenia.*

Within this hypothesis lies a strand of researchers who have found some evidence in recent studies that demonstrates that *untreated psychosis results in alterations to brain tissue that irrevocably limit an individual's possibility of recovery.* Hence, the goal of early intervention is to start treating the psychosis before this process of toxicity occurs. Dr. Jeffery Lieberman, MD, of the University of North Carolina School of Medicine has been a leading researcher in this area. In a 1996 study of 118 first-episode patients, Lieberman and colleagues found that first-episode patients treated with conventional

^{1[1]} Please see: Johnstone, E.C., Crow, T.J., Johnson, A.L. and MacMillan, J.F. 1986. “The Northwick Park Study of First-Episodes of schizophrenia: Presentation of the Illness and Problems Relating to Admission.” *British Journal of Psychiatry*, 148:115-120. Also see Scully, P.J., Coakley, G., Kinsells, A. and Waddington, J.L. 1997. “Psychopathology, Executive and General Cognitive Impairment in Relation to Duration of Initially Untreated versus Subsequently Treated Psychosis in Chronic Schizophrenia.” *Psychological Medicine*, 27: 1303-1310. Also see, Loebel, A.D., Lieberman, J.A., Alvir, J.M.J., Mayenhorf, D.I., Geisler, S.H. and Szymanski, S.R. 1992. “Duration of Psychosis and Outcome in First Episode Schizophrenia.” *American Journal of Psychiatry*, 149: 1183-1188.

anti-psychotic medication soon after they first started to experience psychotic symptoms were more likely to respond to the medication, and respond quickly, than those who had experienced longer periods of untreated psychosis (Stephenson, 2000). When the patients were treated with anti-psychotic medication again after relapse, their response was slowed and subjects had less successful responses with each successive relapse. Lieberman believes this suggests some kind of neuro-degenerative event that possibly was slowed or halted by taking medication (Stephenson, 2000). Some evidence to support this comes from **magnetic resonance imaging (MRI) studies** of a subset of 55 patients from the sample. After two years of treatment, only the patients who had persistent symptoms or relapses experienced a further increase in lateral ventricle size, a condition that is commonly found in patients with schizophrenia.

MRI studies that examine the brain of individuals experiencing psychosis are rapidly growing and beginning to return results. A recent study conducted by Dominic Fannon and colleagues (2000) argues that using an unbiased methodology of volume estimation of the brain in patients experiencing first-episode psychosis can shed insight to questions that explore the “**biologically toxic**” theory. In this particular study, mean DUP was longer than the pivotal six months many researchers note, yet the length was only 28.1 weeks (basically 7 months), thus it was significantly shorter than other studies that have measured mean DUP ranging from one to two years. When comparing first-episode subjects to healthy subjects, Fannon et al. (2000) found that first-episode subjects had significantly lower whole brain volume, cortical gray matter volume, and temporal lobe gray matter volume in addition to significantly enlarged lateral and third ventricular volumes. Surprisingly, no relationship was found between positive symptoms, negative symptoms, or general psychopathology and temporal lobe volumes. In addition, no relationship was found between length of DUP or age of onset and regional brain volumes (Fannon et al., 2000). What do these recent findings tell researchers and clinicians about early intervention strategies? In short, results such as these illustrate that structural deficits in subjects’ with first-episode psychosis are not caused by long-term medication use and possibly are not related to severity of symptoms – although many other researchers would not agree with these conclusions. Yet according to Fannon et al. (2000) it is quite possible that changes in the brain occur either extremely rapidly within the first course of illness, that is less than six months, or abnormalities in the brain occur before any symptoms arise or surface.

Lieberman, like so many other schizophrenia researchers, continues to study the biological variables of first-episode schizophrenia through **neuro-imaging techniques** such as **CT studies, MRIs, pet scans, single photon emission tomography, and MRS studies**. Recently, Lieberman and colleagues have been studying the effectiveness of atypical anti-psychotics versus conventional anti-psychotics. Preliminary research suggests a possible neuro-protective benefit offered by the newer atypical anti-psychotics (Stephenson, 2000). Magnetic resonance imaging showed that the subjects treated with the newer atypical anti-psychotic, olanzapine, had no increase in lateral ventricle volumes after 12 weeks of treatment in comparison to an increase in volume for subjects treated with a conventional anti-psychotic, haloperidol (Stephenson, 2000). It is too early to state whether this beneficial outcome is the result of the olanzapine but it does suggest that atypical anti-psychotics may offer some neuro-protection.

Professor Ashok Malla of Western Ontario University is currently conducting clinical trials that test the “biologically toxic” hypothesis and is another leading researcher who has produced some preliminary evidence about the effectiveness of treating first-episode patients within the first six months of their initial psychotic episode. Malla et al. (2000) argue, by way of preliminary results, that complete remission of positive symptoms by 74% of the sample was achieved after one year. Of the population that was able to obtain this state of remission, 83% had a DUP of less than 6 months. When

the length of DUP was less than six months, the rate of remission rose to 85%. In fact, out of a sample of 88 subjects, the four subjects who assessed as having the highest levels of impairment throughout the trial also had the longest DUPs. Despite these strong numbers that support the effectiveness of early intervention, Malla's research, which offers analysis after one year is so new that it cannot evaluate if recovery can be maintained.

Like Lieberman's work, Malla's early intervention strategies include a low dose of atypical antipsychotics, usually risperidone or clozapine. The use of atypical anti-psychotics is because of what Malla and his colleagues found while working with recent onset patients in a study on drug effectiveness. A 1999 study by Malla et al. concluded that the atypical anti-psychotic, risperidone had a long-term impact on patient outcome. This retrospective study examined 31 subjects who had an efficacy or intolerance to typical antipsychotic agents after a mean of 3.5 years of therapy (Malla et al., 1999). The subjects had been maintained on risperidone for a mean of 1.7 years at the time of the review. The impact of switching to risperidone was assessed by comparing clinical variables for the patients with their own historic control data. The current levels of symptoms, side effects, and social functioning were also assessed by means of the Interview for Retrospective Assessment of Onset Schizophrenia, the Scale for Assessment of Positive Symptoms (SAPS), Scale for Assessment of Negative Symptoms (SANS), Brief Psychiatric Rating Scale (BPRS), and assessment of EPS using the Extrapyramidal Symptom Rating Scale. The findings demonstrate that the switch to risperidone created an average 30% reduction in psychotic and disorganized syndromes (Malla et al., 1999). For example, before the use of risperidone nearly all subjects had spent time in the hospital but after the switch only one patient needed to be hospitalized during the mean 1.7 years of treatment with risperidone. There was also a significant reduction in the utilization of in-patient resources after the switch. In terms of symptom reduction, the patients who had the shortest exposure to typical antipsychotics agents had the best response to risperidone – a 40% reduction in reality distortion syndrome ratings. Another important finding in this study was in relation to adherence to medication therapy. Rating of compliance with antipsychotic medication showed a greatly significant increase after the switch. Mean ratings increased in a range of implying good to excellent improvement (Malla et al., 1999). Unfortunately the study did show that measures of social stability characteristics such as employment and living circumstances did not increase. This particular finding suggests that better drug treatment still will not work to improve the level of disability that psychotic illnesses can impose on people. Therefore, the PEPP program, like other early intervention programs, is designed to reduce the duration of untreated illness and offer intensive treatment. For example, program elements such as multi-family education sessions and other psychosocial measures are noted as adding to the effectiveness of medication and compliance. We will return to investigating the tactics of Malla's early intervention program later in this report.

Researchers as well as clinicians are excited about further testing the preliminary results about the effectiveness of atypical anti-psychotics for another very important reason that relates to effectively treating patients in the "critical period". Not only have studies shown that atypical anti-psychotics also can reduce the effects of negative symptoms, something conventional anti-psychotics cannot do, but atypical anti-psychotics are much less likely to cause serious adverse effects, such as tardive dyskinesia (Stephenson, 2000). In short, patients appear to tolerate the drugs better and therefore are less likely to abandon treatment. For example, in a recent randomized trial involving 164 Chinese patients, led by Michael Phillips, MD, Harvard Medical School and Beijing Hui Long Guan Hospital, only 16% of patients receiving the atypical anti-psychotic clozapine had dropped out of the study compared to 25% of patients receiving a conventional neuroleptic, chlorpromazine (Stephenson, 2000). Unfortunately at this time there is only indirect evidence that suggests that untreated psychosis may be

“biologically toxic”. As Ho and colleagues point out from their recent research findings in the ongoing Iowa Prospective Longitudinal Study of recent onset psychosis, to effectively test the ‘toxic psychosis’ hypothesis biological measures must be used to provide direct evidence as to whether untreated psychosis represents an “active morbid process” (Ho et. al, 2000).

Although researchers in this field would agree that direct evidence is needed, modern scientific advances have begun to allow researchers such as Lieberman to undergo this type of study. As we have seen, preliminary results do show some support for the “biologically toxic” hypothesis. After reviewing schizophrenia follow-up studies across North America, McGlashan (1988) found that it may only take 1 year of active illness for deterioration or a “threshold of chronicity” to be reached. McGlashan further argues that during this process, “most of the neurological damage is already accomplished by the time it is possible to make a valid DSM-IV diagnosis” (McGlashan and Johannessen, 1996: 209). Researchers feel as if they have identified the primary deficit processes in schizophrenia such as the loss of connectivity in the brain (McGlashan and Johannessen, 1996). The next step is to be able to determine what factor causes this loss. For example, is the cause from endogenous neurotoxic processes such as the over transmission of dopamine or does the cause originate from genetically linked overpruning of cortical synapses?

Many researchers do agree on one point, “treatment resistance appears to be the rule rather than the exception in cases of established deficits” (McGlashan and Johannessen, 1996). McGorry et al. (1996) argue that there may even be a shorter “window of opportunity” to treat active psychosis. According to data that was collected from subjects at the EPPIC clinic in Melbourne between 1989 and 1992, outcome is good for subjects diagnosed with schizophrenia if the psychosis is treated within 1 to 6 months but if six months of untreated psychosis elapses, outcome is worse. The potential problem of this finding is that multiple studies have noted that DUP is typically anywhere from 1 to 2.5 years (McGlashan, 1999). Just another reason to focus on early intervention in an attempt to lessen the possibility of chronic outcome.

The second area of prevalent hypotheses among early intervention advocates suggests that effective early intervention may improve outcome by reducing the secondary effects of psychosis which include social and educational/vocational disruption, substance abuse, depression, and homelessness. In this case, reducing DUP and getting proper treatment during the “critical period” functions to limit the possibility of secondary morbidity that can handicap the rehabilitation and recovery process. It has also been argued that treating first-episode patients promptly and effectively during their initial experience with the mental health care system will increase compliancy rates of both medication and psychosocial rehabilitation (McGorry, 2000). It is well known that complete compliancy is difficult to maintain at high rates in the treatment of psychosis and related disorders. One research review reported incidence of non-compliance with antipsychotic medications ranging from 11 to 80% (Corrigan et al., 1990). Another review study found that in trials lasting 9 months or longer, one-third of patients who had agreed to participate had shown detectable non-compliance in medication-taking (Kane and Borenstein, 1985). A recent review of research attempted to uncover the causal mechanism of non-compliance among patients diagnosed with schizophrenia or psychosis. Strong correlates with compliancy included: a supportive family, social activity, and psychoeducation as part of treatment (Kampman and Lehtinen, 1999). In order to be effective, psychoeducation must include: distributing information about both the purpose and the side-effects of the medication, cognitive reformulation of family attitudes, home-based outpatient services, and the use of strategies designed to minimize the neuroleptic medication dose in order to avoid side-effects (Kampman and Lehtinen, 1999).

Another study that explores the health beliefs of individuals with schizophrenia, found that reluctance to seek treatment as well as failure to comply with anti-psychotic drug therapy originated

from patients' beliefs about side effects (Andrews et. al, 2001). On one level, subjects expressed that the most damaging side effect of complying with medication therapy was the fact they would be subject to stigmatization as "needing" to take medication to be "normal". On another level, 58% stated that they would rather be non-compliant than experience side effects. Despite this, the majority of respondents replied that they chose to look beyond the social and physical side effects and be compliant because they felt pressured by mental health staff. The value of highlighting this study is to illustrate that ***even with newer atypical anti-psychotics that pose fewer physical side effects; individuals receiving medication therapy are still at risk of non-compliance if other social effects of drug therapy are not addressed, such as stigmatization.*** In this study, stigma statistically was the most influential factor that caused non-compliance in the treatment of schizophrenia (Andrews et al., 2001). Additional research has found the following correlates with high rates of non-compliance: severity of positive symptoms, presence and degree of depressive symptoms, substance abuse, housing instability, and cognitive impairment which blocks one's insight into the presence of his or her illness.

Researchers in the field such as Patrick McGorry of Australia and founder of the EPPIC clinic in Melbourne would argue that in many cases a person may meet the DSM-IV criteria for psychosis but they are not receiving prompt assessments, antipsychotic medication (preferably atypical anti-psychotics), or psychosocial intervention. Why is this occurring? McGorry would argue much of it has to do with the stigma of getting treated for psychosis. This is not simply individuals avoiding help because of stigma but also doctors who do not "aggressively treat" their patients with psychotic symptoms because they feel that a diagnosis of schizophrenia is similar to stating that the patient will never recover, only deteriorate further (McGorry, 2000).

McGorry and his colleagues have conducted multiple studies about the "pathways to care" individuals suffering with psychosis take in order to seek help. The purpose of these studies is to determine how mental health providers can get appropriate treatment to those suffering in the fastest way possible and this assists in meeting the overall goal of reducing DUP. For example, Lincoln and McGorry (1995) conducted a study to examine the pathway of care for individuals experiencing first episode psychosis and found that the mean number of contacts per person before treatment was initiated totaled 4.9 contacts. According to Lincoln, "I can speculate that individuals initially look towards non-psychiatric sources of help to avoid contact with unfamiliar and stigmatizing services" (Lincoln and McGorry, 1999:59). As the researcher later points out, stigma remains a problem and lengthens DUP in a variety of ways.

First, mental illness is not viewed as a treatable illness. Individuals are reluctant to seek help because they believe the stereotypical image of mental disorders as having the ability of ruining their lives forever. Second, this sense of stigma is most damaging to the youth population the early intervention programs are targeting because youths are at a stage in life in which they are very insecure. Hence, seeking out treatment for such a stigmatized disorder is especially difficult for adolescents. This problem is further exacerbated by stigmatized images that depict incorrect messages about what mental disorders are like. As a result, adolescents, and the public in general, are misinformed about the kinds of symptoms that accompany mental disorders. In short, Lincoln found that *a major debilitating factor in help seeking that lengthens DUP is stigma.* Knight and colleagues (2001:137) agree, as they have recently assessed the public's increasing association of schizophrenia and increased dangerousness and violence. Their research illustrated that individuals receiving initial treatment for schizophrenia or related disorders, were aware of the public attitude towards their condition, and many delayed seeking treatment because they feared "public rejection".

There have been several other studies that have specifically focused on examining treatment delays in first-episode psychosis.^{2[2]} One of the most well known studies is the Northwick Park study. In a cohort of 253 first-episode patients, this study established that the interval between onset of psychosis and hospital admission was often more than one year (Johnstone et al, 1986). Of this treatment population, 18.2% had made at least nine contacts before reaching a person that assisted in their admission to the hospital. Leobel et al. (1992) found that men were consistently younger at age of onset of psychotic symptoms and the duration of untreated psychotic symptoms was more than twice as long for males compared to females. It is feasible to extrapolate that men are more hesitant to seek treatment for a mental disorder than women, resulting in lengthened DUP. Loebel et al., (1992) argued that deviant behavior amongst adolescents may be tolerated by the community and young males may be at particular risk of their illness going undetected. Therefore, the length of DUP is not only harmful in terms of biological changes or “toxicity” that can occur during this period, but environmental factors also co-occur that can be harmful to the individual’s ability to recover because these factors function to lengthen DUP.

Although researchers admit that more studies should be conducted on which factors influence the length of untreated psychosis, (McGlashan, *in press*), a few basic points have been addressed. First, there is a group of researchers who argue that in the time an individual is experiencing untreated psychosis much of their social world has fallen apart. Jackson, Hulbert, and Henry (2000: 213) refer to this process as the “de-railing” of a youth’s life. “They have lost social networks, friends and have not been able to build an identity for themselves...the message should be hopefulness not that psychosis will hang over them for the rest of their lives.” Second and even more devastating to the prospects of positive outcomes, researchers have noted that during this period, individuals experiencing untreated psychosis often self medicate their symptoms through drug and alcohol abuse. A study by Hambrecht and Hafner (1996) examined the prevalence rates of alcohol and drug abuse in a representative sample of 232 people with first episode schizophrenia. Alcohol abuse prior to onset was found at 24%, drug abuse at 14%. This is twice the rate of the general population. In one study of 120 first-episode schizophrenia patients in Australia, 70% were found to have a history in the previous year of illicit substance use, predominantly cannabis (Power et al., 1998). Recent research from a this same project in Australia that is attempting to study the relationship between cannabis and psychosis hoped to find that once the appropriate treatment was given to individuals experiencing early psychosis, daily cannabis use would cease (Edwards et al., 2001). Unfortunately, less than 50% of the habitual users cease their cannabis use. When assessed, users scored significantly higher on the BPRS (psychotic subscale, suicidality, and suspiciousness). Thus, the positive effects of treatment are nearly lost due to the adverse effect of cannabis use.

Third, a recent focus in early intervention work has explored the role of depression as how it affects later outcomes in recent onset patients. In general, findings demonstrate that increased insight into illness may play a role in assisting some individuals into seeking treatment for their symptoms (thus shorter DUP) but it also greatly increases the levels of depression experienced. As a result, many researchers argue that treatment and outreach strategies should reflect this information. A recent study of 257 first-episode patients over an 18-month period by Bentall and colleagues (2001) found that levels of depression were significantly higher among patients with better insight into illness. Author

^{2[2]} Please see: Helgason, L. 1977.” Psychiatric Services and Mental Illness in Iceland: Incidence Study with a 6 – 7 year Follow-up.” *Acta Psychiatrica Scandinavica*, 268, 111-137. Johnstone, E.C., Crow, T.J., Johnson, A.L. and MacMillan, J.F. 1986. “Presentation of the Illness and Problems Relating to Admission.” *British Journal of Psychiatry*, 148, 115-120. Loebel, A.D., Lieberman, J.A., Alvir, J.M.J., Mayerhoff, D.I. Geisler, S.H. and Szymanski, S.R. 1992. “Duration of Psychosis and Outcome in First-Episode Schizophrenia.” *American Journal of Psychiatry*, 149, 1183-1188.

note, that this population should be carefully monitored for suicidal tendencies. Unfortunately, even after 12 months, this same sub-group remained at higher levels of depression but researchers determined that the cause was no longer insight into illness but actually a dramatic reduction in self-esteem (Bentall et al., 2001). Therefore researchers argue that treatment for first-episode patients must address this issue or incidents of relapse will be more frequent and disruptive.

Lastly, some researchers argue that “secondary conditions” might possibly have existed before the onset of psychosis and are heightened or aggravated through DUP. For example, Strakowski et al. (1995) found that post-traumatic stress disorder prior to onset of psychosis might be a risk factor for the development of psychotic depression. Yet, researchers argue that in order to obtain convincing evidence about the influence of “secondary conditions” on DUP it would require a very large-scale epidemiological study (Jackson et al., 2000). There is a similar dilemma that occurs when researchers try to evaluate the role of an individual’s family. As Vaglum argues, “without a doubt, the family plays an important role in the treatment-seeking and treatment-receiving process of psychotic patients, but we have no clear evidence as to how strongly and in what ways they influence DUP” (Vaglum, 1996). Therefore most researchers leading the field agree that the current focus should be how to reduce the influence of stress, depression, and anxiety that often accompany an individual being treated for psychosis.

Of course it cannot be neglected that there are other views about DUP and its influence. Some researchers argue that shorter DUP or earlier treatment is a reflection of prognosis rather than its determinant (McGlashan, 1999). This hypothesis contends that those with a less severe course of illness are in a position to seek treatment earlier anyway. Patients with a poor prognosis like those with poor premorbid functioning who have insidious onset of illness full of negative symptoms and behave in such a way that they deny illness or avoid treatment until well after onset. Therefore, long DUP to this camp of researchers is simply the result of poor prognosis not that poor prognosis is a result of DUP (McGlashan, 1999). In addition, recent research originated from a team in France alternatively argues that poor premorbid functioning is independently associated with both DUP and poor outcome (Verdoux et al., 2001). These researchers further suggest that DUP may also be on the causal pathway between poor premorbid functioning and poor outcome. Yet in recent years, clinical research is beginning to churn out data that illustrates that DUP is independent of premorbid functioning (Loebel et al., 1992 and Larsen et al., 1996). Many researchers believe that these studies will further prove this preliminary belief after time elapses and data can include long-term assessments. For now researchers continue to focus on conducting clinical research to prove that DUP is not only a significant correlate of prognosis but independent as well.

Early Intervention Should Reduce DUP

As evident, the goal of early intervention is fairly clear, reduce DUP and the results will be a better outcome for the consumer. Whether the damage caused by untreated psychosis is primarily neurobiological, psychosocial or caused by an interaction between these two factors, better outcomes are associated with shorter duration of untreated psychosis. Researchers that support early intervention would also agree with Wyatt, who states that “although the view that early intervention improves the course of schizophrenia has not been wholly accepted by the psychiatric community, there is today little dispute that aggressive treatment of first-episode patients with antipsychotic medications is useful in decreasing the immediate adversities associated with acute psychosis”(Wyatt and Henter, 5:1997).

In addition, other supporters of early intervention sight that the majority of studies of first-episode schizophrenia and DUP find a significantly positive correlation between shorter DUP and better outcome (McGlashan, *in press*). Even if researchers can't agree that reduced DUP would better outcome, it cannot be ignored that the recent first-episode studies have found that untreated psychosis is long and therefore steps need to be made to assist people who are suffering from psychosis sooner. If DUP is such an important issue it is essential that we make a further investigation about how researchers measure the duration of untreated illness.

The research community that studies early intervention and advocates the merits of reduced DUP has recently made a concerted effort to not only standardize the definition of DUP but also to use the same methods to measure it. In the 1990s word spread among researchers that *DUP or duration of untreated illness should be defined as the interval between the onset of psychotic symptoms and the initiation of adequate treatment*. Researchers such as Keshavan and Schooler (1992) noted that the concepts related to the early course of the illness have been quite vague and unspecific. Most researchers today carefully outline their definition of DUP. McGorry et al. (1990) were some of the first to embark on this task and they developed the Royal Park Multi-diagnostic Instrument for Psychosis to address this problem of how to map the onset of the disorder. The process required systematically interviewing subjects and informants in order to study the relationship between the duration of illness and the complexity of clinical features in first-episode psychosis. Their research further illustrated many points about DUP and diagnosis. In terms of the length of DUP, researchers found that duration of untreated illness was significantly longer in patients that had schizophrenia (mean of 508.9 days) in comparison to patients diagnosed with other psychosis-related disorders such as schizophreniform disorders (mean of 28.1 days).

Other researchers have followed in the footsteps of earlier researchers and carefully have operationalized their definition of DUP. For example, in the TIPS study, which will be explored in further detail shortly, the first step is to define the onset of psychotic symptoms. This is when a subject scores a 4 or higher on the PANSS positive subscale and manifestation of psychotic symptoms such as delusions, hallucinations, thought disorder, or inappropriate/bizarre behavior in which the symptoms are not apparently due to organic causes. In addition, these symptoms must have lasted throughout the day for several days or several times a week, not be limited to just a few moments. As in most definitions of DUP, these researchers secondly noted that for the condition to be untreated this also means that subjects could qualify to be studied because they had not been treated properly. In the TIPS project adequate treatment is defined as receiving an antipsychotic drug for a sufficient amount of time so that it would lead to a clinical response in the average non-chronic patient. In another study it is evident that DUP can be defined slightly different. Ho et al. (2000) defined DUP as the time period from the onset of the first symptom to the initiation of neuroleptic treatment and the time period from the onset of a full positive syndrome to the initiation of neuroleptic treatment. Therefore this definition includes both the onset of positive symptoms like hallucinations and negative symptoms such as impairment in role functioning as well as the onset of full syndrome symptoms which refers to any of the five positive symptoms at a seventy level of moderate or worse (Ho et al., 2000). From this example it is clear that the differences in definition are very slight but they are apparent in some cases.

On the other hand, the definition of DUP can be exactly the same and some recent data reflects that reduced DUP does not improve outcome. Although this is not as likely a finding as reduced DUP improving outcomes, a recent study by Craig et al. (2000) demonstrates that even when steps are taken to use the exact same definition of DUP in order to ensure accuracy – the results are not always similar. In this 24-month clinical trial that measured the outcome of patients with first episode psychosis, DUP was defined as “the interval from first psychotic symptom to first psychiatric

hospitalization” (Craig et al., 2000) with patients who had previously received antipsychotic medications excluded. Despite the attempt to replicate data by using similar methodology, the study did not reflect a strong argument in favor of long DUP as a correlate to poor treatment outcome. In short, although not all current research that study the effects of DUP get the same results but most use the same basic format, defining DUP as the period of time that elapses after the “episode onset” and adequate treatment. This first step has been taken in order to create replicated data that supports the reduced DUP argument although some studies do not illustrate any evidence. As most researchers would argue, having different findings is acceptable and part of the process just as long as research measures are similar so that consistency is maintained.

Even though efforts have been made to define DUP in a like matter, there is still the challenge of obtaining information about the onset of symptoms from both the subject and the subject’s informants. In terms of reliability, researchers must develop intensive means to pinpoint when “episode onset” occurs in order to accurately note the time that elapses until treatment. This is a tedious process but absolutely essential for researchers, particularly because a strain of researchers argue that if DUP is less than six months, the patient has a significantly better rate of reducing his or her poor outcome level that is associated with schizophrenia-related disorders. Obtaining measurement of DUP typically consists of extensive interviews with both the patient and a number of informants, particularly family members. When patients acknowledge a psychotic symptom they are asked to trace it back to when it began. Similar questions are then asked of the family and other informants. Although this may seem to be less than perfect methodology, two or more clinicians can achieve significant inter-rater reliability (interclass correlation coefficient of .85) For example, in the TIPS project, clinicians were further trained to make proper assessment by reading numerous earlier case studies. In another first episode study, the onset date was determined from information obtained from the initial assessment as well as follow-ups, medical records, and interviews with the subject and his or her significant others (Craig et al, 2000). This particular study noted that through the course of treatment (in this case 24 months) onset date would be revised if more information were uncovered. This highlights the importance of assertive clinical attention to first-episode patients during research trials because after the acute phase subsides information pertaining to the onset of the illness may be easier to obtain or simply different than previously documented. If DUP is partially responsible for poorer outcomes it is essential that all clinical researchers make elaborate and accurate efforts to pinpoint the onset of illness.

When to Apply Early Intervention Strategies

The psychiatric community consisting of both clinicians and researchers is currently debating and aggressively studying *when* early intervention should be applied in order to obtain the best outcome. Early intervention is based on the proposition that schizophrenia is a process and that the actual breakdown into florid psychosis is only one stage of that process (Wyatt and Henter, 1997). As a result, many researchers have focused their attention on conducting early intervention strategies before psychosis manifests. Wyatt warns that the complications of treating psychosis in the earliest stage possible could lead to the possibility of over treatment, which could be both stigmatizing and have adverse side effects (Wyatt and Henter, 1997). Currently, the psychiatric community is more willing to accept that treatment should be applied at the first sign of positive psychotic symptoms or what researchers classify as the post-onset phase. It is at this point that intervention is targeted at keeping DUP as short as possible, preferably less than six months (Lincoln and McGorry, 1999). It is hoped that reducing DUP in the post-onset phase will provide secondary prevention by delaying the onset of the disorder or primary prevention by averting onset all together (McGlashan, *in press*).

Yet, as mentioned, researchers also have aggressively studied the effects of early intervention before psychosis can be diagnosed according to DMS-IV criteria in what researchers classify as **pre-onset phase**. *Pre-onset studies research the early premorbid, late premorbid, and prodromal phases*. Most research in this area has been conducted on the effects of early intervention measures during the **prodromal** stage. “The prodromal phase occurs when the individual experiences changes in feelings, thought, perceptions and behavior although they have not yet started experiencing clear psychotic symptoms such as hallucinations, delusions or thought disorder”(MHECCU, 16:1999). For most individuals, the prodromal phase represents the earliest manifestation of schizophrenia through these symptoms that can have psychotic elements and are proving to be highly predictive of imminent psychosis (Wyatt and Henter, 1997 and McGlashan, *in press*). Some areas where prodromal signs and symptoms occur include: depression, anxiety, irritability, mood swings, difficulty concentrating, memory loss, odd ideas, overvalued ideas, feeling somehow different from others, suspiciousness, sleep disturbances, loss of energy, loss of motivation, deterioration in role functioning, social withdrawal or isolation, loss of normal interests, preoccupations such as increased concern with spiritual/philosophical issues, and uncharacteristic rebelliousness (MHECCU, 17:1999). As evident from this list, these symptoms are non-specific and can result from a number of other psychosocial difficulties, physical disorders, or psychiatric disorders. Due to this vagueness, the psychiatric community has not validated the use of anti-psychotic medication during this phase although there are researchers who are currently studying the use of anti-psychotics and psychosocial interventions during this phase.

Researchers in favor of early intervention in the prodromal stage argue that understanding the psychotic prodrome assists in diagnosis and management of psychotic disorders, early detection of relapse, prospective studies of high-risk individuals, and prognosis (Yung et al., 1996). Numerous studies have noted that relapse can be detected earlier if there is a better understanding of how to identify prodromal symptoms that are specific to the individual patient (Birchwood, 1992). A more accurate characterization of the prodrome is said to help identify high-risk individuals when they first manifest subtle changes in mental state suggestive of impending psychosis. At this point new scientific instruments (i.e. CT studies, MRIs, pet scans, single photon emission tomography, and MRS studies) could be used to forge biological investigations that would identify any abnormalities evident before the development of acute psychosis (Yung et al., 1996). If research such as this could be conducted then “at-risk” or “high-risk” groups could be identified in a more systematic manner, reducing the possibility of including **false-positives** (people who do not go on to develop psychotic disorders).

Yet, as some researchers note, the problem with this line of research currently is that false-positives do end up being classified as high-risk individuals and could possibly end up being treated with anti-psychotic regimens that begin to draw attention to the issue of ethics such as should young people be treated with medication that can have adverse side effects or should people be stigmatized by being treated for a disorder that does not manifest (McGlashan, *in press*). Yung and colleagues (1999) admit that their research, which focuses on treatment during the prodromal phase, is risky because false-positives can be youths or young adults. Despite this, they argue that the risks are far outweighed by the benefits gained through this early treatment. As McGlashan points out, “the risk to benefit ratio has shifted considerably within one decade...novel antipsychotic agents have proven thus far to have a more benign side effect profile...as such, treatment of false positive prodromal patients with such agents, while unnecessary, is unlikely to be harmful (McGlashan, 9: *in press*).

Whether the psychiatric community is ready to agree with researchers who argue in favor of prodromal intervention is yet to be decided. Just this year, preliminary findings might sway the opinion of some who feel that the prodromal phase is too early to treat with atypical anti-psychotics. Studies

aimed at treating high-risk ‘pre-schizophrenic’ patients with low dosages of atypical anti-psychotic medications are underway at the University of Melbourne in Australia and Yale University Medical School. Australia’s PACE clinic recently reported preliminary findings that suggest that such preventive treatment reduces the likelihood that prodromal patients will progress to psychosis (Stephenson, 2000). We will further examine the PACE clinic findings, along with multiple other group findings as we turn to an investigation of the current tactics and strategies researchers and clinicians have employed in order to reduce DUP.

II. Strategies and Tactics for Reducing DUP

Getting Symptomatic Individuals Into Treatment Faster...Tackling Stigma and Easy Access to Community-Based Care

Now that it has been established that research provides evidence as to why DUP should be reduced, the focus of this reports turns to how researchers and clinicians have tried to meet this goal. The following section will investigate the various strategies and tactics researchers and clinicians have employed in order to reduce DUP. As it will be evident, these strategies typically include stigma-reducing devices such as education and awareness-raising that target professionals in the healthcare system as well young adults or those who work with youths. In addition, tactics almost exclusively rely on outreach services or accessible community-based treatment to reduce DUP. We begin by first exploring various programs in terms of exactly how the targeted population got into treatment sooner and to what extent DUP was reduced. This will include a discussion of how educational materials work to lessen stigma by using a recovery or rehabilitation model of psychosis, as well as rely a message targeted at youths that argues that getting treatment when symptoms can be identified is okay and shouldn’t be shameful. After these tactics have been examined, the focus will turn towards the treatment that subjects receive upon entering particular programs. This will illustrate how early intervention programs maximize the effectiveness of treatment with patients with short DUP and in return have better outcomes. Our interest is to consider how treatment is different for first-episode patients with reduced DUP. For example, do programs highlight the importance of medication compliance? Another important question to consider is, did reaching the targeted population earlier help to make the patients more willing to comply with treatment, both psychosocial and medication? There are many different aspects to treatment that will be addressed in order to evaluate if programs successfully decrease the amount of disability and loss of quality of life incurred by first-episode schizophrenia. At this time it is important to keep in mind that all of the programs addressed in the following pages are relatively recent. Due to this, an assessment about each program’s strength is limited to rather short term outcomes. Regardless of this, these programs and their evaluations will prove insightful to efforts made at improving the quality of life for those who are diagnosed with schizophrenia and in doing so hopefully reducing the cost incurred by this disorder on society.

1. The Norway Project - TIPS

The Norway project began when leading U.S. first-episode schizophrenia researcher, Dr. Thomas McGlashan of Yale Medical School collaborated with a team of fellow researchers interested in studying first-episode psychosis from Rogaland Psychiatric Institute in Norway. After years of interest

on the subject the project team concluded that clinical research needed to answer the question, “Will early identification of first episode psychosis lead to a better long-term prognosis? McGlashan was moved to take action to answer this question with hard data after a 1995 review of data conducted by Anthony Lehman and his colleagues at the University of Maryland and John Hopkins University concluded that three forms of intervention have demonstrated significant efficacy in clinical trials: (1) antipsychotic medications, (2) family education and support, and (3) programs of assertive community treatment (Lehman et al., 1995). The newly collaborated team sought to use these three elements in treatment, but the most important aspect was to find a way to get symptomatic individuals into treatment fast, hopefully within the first 6 months.

As the researchers worked on strategizing *how* they could get symptomatic persons into treatment quickly, they began with assessing what the average length of DUP was in the area. Earlier studies, as mentioned, note that the average length of DUP is long (1-2 years) and patients with schizophrenia often have a long period with non-psychotic signs of mental illness (prodromal symptoms) before the onset of psychosis (1-5 years) (Larsen et al., 2000). Researchers therefore tested the length of DUP in the area that would be the site of the experimental research, Rogaland County, Norway. A sample of 43 first episode patients, ranging from 15 to 65 years of age were included in the sample from the years 1993-1994. No subject had been hospitalized for symptoms previously (Larsen et al., 1996). The mean length of DUP from this sample was 2.1 years, yet there was quite a bit of variance. For example, women not only had a later onset than men but the mean DUP for females was 39 weeks versus males which averaged at 154.4 weeks (Larsen et al., 1996). Researchers also had similar results as earlier studies that found correlations between long DUP and poor outcome. Here longer DUP was associated with more motor retardation and more negative symptoms at hospitalization. This is particularly disheartening because negative symptoms are the hardest category of symptoms for medication to control (Larsen et al., 1996). Yet, the researchers found that this was only one of the more interesting but discouraging results of the study. When subjects were divided into long DUP and short DUP groups in order to compare similarities and differences, researchers found that 38% of the long DUP group had already tried neuroleptics prior to hospitalization when only 4.8% of the short DUP group subjects had done so (Larsen et al., 1996). Therefore part of the problem was that patients somewhere along the line had been exposed to treatment but either the treatment was inadequate or the individual did not continue treatment. Prior treatment is not an unusually finding in studies on first-episode schizophrenia. In the Northwick Park Study of first-episode schizophrenia, Johnstone et al. (1986) found that 41% of the patients had made two or more contacts with general practitioners without getting proper help, and 13% of the sample has made nine or more contacts with GPs. What the team of researchers concluded was that in order to reduce DUP, strategy needed to consist of more than just an aggressive educational and public awareness campaign targeted at stigma reduction and symptom identification. The project envisioned added a second, imperative element – easy treatment access. At this point, the 1993-1994 sample was set aside, as the collaborative team would later use this sample to compare results derived from the new experimental group that was about to be gathered.

Keeping in mind what they had learned through previous research evidence, the collaborative team focused on *two tactics to reduce DUP: community-based targeted educational programs and easy treatment access*. Here we begin to describe in detail the design of the Norway/TIPS project as well as the preliminary results of reduced DUP. What treatment consists of once subjects enter the TIPS program will be addressed later when treatment tactics are investigated.

Principles of the Project:

The program begins with one principle aim - to reduce DUP in order to identify if reduced DUP really leads to a better long-term prognosis. "Is DUP the causal mechanism that determines the outcome of the inflicted patient?" Of course reducing DUP has proven difficult. Reasons for treatment delay have a wide spectrum of variance, ranging from ignorance, denial, stigma, and lack of motivation to absence of information about early psychosis and lack of access to appropriate interventions (Johannessen et al., *in press*). Yet in mental health and help seeking, Jorm (1997) concluded that if mental disorders are to be recognized and early and appropriate action taken, then **mental health literacy** must be raised. This is not just education for the public, but mental health literacy needs to be raised for the entire healthcare system. Therefore, *the first strategy is a form of health promotion which researchers argue is the most effective when incorporating multi-level strategies including individuals, families, neighborhoods, schools, work places, and communities in addition to including use of the media* (Green and Kreuter, 1991 and Redman et al., 1990). Media-alone interventions do not work and community intervention will not work either unless the current organization of health services is modified to emphasize prevention and supply training for health and other community personnel (Johannessen et al., *in press*). In short, the strategy must be one with multiple access points, i.e. through the media, health services, schools, and the work place (US Department of Health and Human Services, 1994). It also cannot be forgotten that the services must be easily accessible. Health promotion for early intervention is totally pointless if services aren't available. This aspect constitutes the second major strategy of the TIPS project. In essence, TIPS's aims can be remembered as thinking of campaign material virtually "bombarding" health professionals, youths, and the general population and then people are offered convenient and assertive community treatment. Sounds like an optimal plan.

Methods:

The TIPS project is a prospective clinical trial designed to test whether the timing of treatment in first-episode psychosis can change the natural course of the disorder (Johannessen et al., *in press*). The trial contains three different sites: Rogaland County, Norway (370,000 inhabitants) which is the experimental site implementing the early detection strategies, and two control sites with no early detection strategies - Ullevål sector, Oslo, Norway (190,000 inhabitants) and Roskilde County, Denmark (100,000 inhabitants). In all sites first-episode, non-affective psychosis patients were treated with the same drug and psychosocial treatment protocol, as well as patient assessment with a common set of rating instruments at a baseline, 3 months, 1, 2, and 5 years.

Study inclusion criteria:

Living within the mental health care sector, 15-65 years of age, fulfilling the criteria for DSM-IV schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, brief psychotic disorder, psychotic disorder NOS, or affective disorder with mood incongruent delusions, individual must be experiencing active psychosis as measured by a score of four or greater on at least one of the PANSS positive items 1,3,5,6, and 9, have an IQ of 70 or above, and be willing to give informed consent. *Study exclusion criteria:* experiencing a prior psychotic disorder that meets one of the above outlined DSM-IV categories, having an endocrine disorder or neurological psychosis, or having prior exposure to adequate treatment. By comparing these sites, this study will address the specific question of whether an early detection system can be engineered – and whether it makes a difference in attitudes, knowledge, referral patterns, and DUP.

The Experimental Site:

Rogaland's population is 95% Caucasian, 60% urban living, and 30% are educated beyond the 13 years of obligatory public schooling. The medical health system is nationalized – as is the specialized psychiatric health care system – meaning all patients come through one system.

How the Two Strategies Worked

January 1, 1997 launched the TIPS project that consists of the two strategies researchers want to use to reduce DUP – early detection teams and an education program about early psychosis and the TIPS program. The TIPS project established a comprehensive, multi-level, multi-targeted information, education, and service delivery system to change DUP. Reducing DUP requires many targets: the treatment delivery system, community awareness, help-seeking behavior of families and individuals – etc. The TIPS system targeted the general population, health care workers, and schools to establish early detection through a better-educated populace and a better equipped one.

The first strategy represents easy access to community-based treatment and is embodied in TIPS **early detection teams**. The first step is to establish easy access to clinical attention: *This is done by integrating the detection strategies into the ordinary structures of the health system – it does not mean creating something different and unique.* The project uses detection team (DT) models that were originally designed by Falloon et al. (1996) and the detection team is attached to a pre-existing outpatient unit. The team consists of psychiatrists, psychologists, and psychiatric nurses/social workers. Public education efforts inform people about the availability of the DT, in which they are on call from 8am to 4pm, Monday through Friday. Outside these hours there is an answering machine and on the weekend the doctor on call at the psychiatric hospital takes over detection functioning, assessing emergency cases. Initial assessment is done over the phone, first deciding if it is a psychiatric problem. If so, a follow up assessment takes place in 24-hours in a location that is convenient for the individual - at home, school, in a GP's office or at the DT's office. The teams are highly mobile and work with an active outreach effort. Through this system of a guaranteed 24-hour assessment, easy access to care is evident. All DTs are trained to use the same scales, PANSS and GAF in cases where the problem sounds like psychosis. If the case is difficult the person is referred to a more comprehensive evaluation through the **Assessment Team (AT)**. If it is established through either the DT or AT that the individual is suffering from first-episode psychosis, patients meeting the inclusion criteria enter the study and receive the standard protocol, after giving informed consent. Patients who are not eligible receive information on how and where to find adequate help.

The second strategy implemented by the TIPS program is community-based education efforts. *General target populations include the public (patients, families, and friends), health care professionals, and schools (teacher and students).* The information campaign's goal is to inform about mental disorders in general and the early signs of serious psychiatric disorders in particular. The program tries to change the help-seeking behaviors of the population. The focus is on the positive outcomes of receiving help and possible recovery. This tactic works to reduce the stigma connected to both mental disorders and the profession of psychiatry. The campaign also stresses the importance of treatment for psychiatric disorders as being just as important as treatment for somatic disorders. The following are the specific tactics designed to target particular populations in Rogaland County.

The General Population:

In January of 1997 all households received a 12-page brochure with general information about the TIPS project. The program's motto read: "Psychiatric disorders have at least one thing in common with other disorders; the chance of getting well is better when treatment is started as soon as possible"(Johannessen et al., 14: *in press*). This message is directed at fighting the stigma of mental disorders that states that mental illness cannot be equated to the legitimacy of other somatic illnesses or disorders. Included in the brochure was general information on psychiatric disorders and psychosis with a symptom checklist signifying grades of severity, and how to contact the DT. Information was further dispersed through the local mass media (radio, TV, and newspapers). This included free editorial coverage as well as paid advertisements and other public relations strategies such as playing dramatic informational shorts before the screening of a film at the local movie house. A marketing company distributed items like postcards, bumper stickers, and T-shirts at movie theatres, restaurants, and other popular public gatherings eight times over a two-year period. Public meetings were held on a regular basis, including free lectures. Additional tactics include educational booklets issued in cooperation with a publishing company that specializes in psychiatric literature and a long theme series of "myth and reality" whole-page newspapers advertisements that assailed stigmatizing images of mental illnesses, such as images from the movie "One Flew Over The Cuckoo's Nest". In this case the stigmatizing image is counterpoised to a non-frightening or realistic image such as young people seeing their general practitioner.

Health Professionals:

This target population was especially trained to look for the early signs of psychosis and to learn how to access early help for patients exhibiting these signs of emerging psychosis. Educational programs were tailored especially for GPs, psychiatric nurses and other professionals that worked in the general health system. This information included a rating manual based on the PANSS and the DSM-III-R prodromal symptoms to be used with a video demonstrating a patient experiencing psychiatric symptoms. Open discussions were encouraged as part of the 3-4 hour training seminar for the above groups. The GPs remained updated with "newsletter updates" throughout the year as well as any preliminary results about the study.

Schools:

All High Schools were visited 2 times per semester (4 times per year) by the Detection Team. Separate educational programs were designed for students, teachers, and counselors, with counselors receiving the most amount of training. They supplied the educational materials to the schools that consisted of a movie, overheads and brochures. The key to TIPS success, researchers believe, is the way in which public relation efforts were coordinated. For example, a full-page ad in the local paper was addressed just to secondary school aged kids and noted that they would be learning about the "school of life"(this is referring to the tough mental health issues that life throws presents to teens) at school in the next week, and they did. Information enhanced one another through different mediums at similar times. This particular ad pictured a prestigious school official, stressing the importance of early detection. That same day of the newspaper ad, all pupils received a brochure that detailed the warning signs of psychosis and offered the TIPS number for advice, more information, or help. The same ad and brochure still-photos ran before movies in the next few weeks. Overall, this tactic works to continuously repeat the same message in a number of different of places but all within a matter of a few days – effectively bombarding the target population with information. (Details on marketing strategies are on file as well as materials used and distributed)

Results: Did They Reduce DUP?

The TIPS program will have a life of at least five years; therefore the current results derive from preliminary research that was conducted in 1998, 1999, and 2000. The complete assessment of the effectiveness of the program will not be available until 2002. Despite this, it will be evident through a discussion of preliminary results that the TIPS program is certainly doing something right, as DUP has greatly been reduced during the 3 years of the program as well as significant reductions in stigmatizing public attitudes associated with psychiatric disorders.

First, measuring the effectiveness of the education campaign on the public's awareness of psychosis and the level of stigma attached to psychiatric patients and psychiatry was approximated through the use of a public opinion poll. Polls were conducted in the experimental site, Rogaland, as well as two other Norwegian counties (Oslo and Telemark) for comparison in 1996. The results were similar for all three Norwegian counties. Polls were later conducted in 1998, 1999, and 2000 after the launching the educational campaign in Rogaland in 1997. In 1996, roughly two-thirds of respondents stated they had some knowledge about schizophrenia but after 3 years of the campaign, the proportion of people with knowledge about psychosis and severe psychiatric disorder rose to nearly 90% (Lohannessen et al., 18: *in press*). The primary sources of knowledge about schizophrenia were media sources such as newspapers, radio, and TV. This is why the TIPS project invested heavy resources in this area. Several questions in the poll addressed stigmatizing and negative attitudes, illustrating that education about early psychosis reduced stigmatizing attitudes significantly three years later. For example, there was a 20% reduction in those who believe that there is no recovery at all in schizophrenia and there was a 10% increase in those who think that schizophrenia is treatable (Johannessen et al., 19: *in press*).

A second major area of concern that researchers were hoping to change was the help-seeking patterns of individuals in order to assure that treatment is made available as soon as possible. In the early segment of the study thus far, many calls to the DT were anonymous and this pattern fell off dramatically through the three years. Researchers conclude that the lack of wishing to remain anonymous was the result of effective tactics to reduce the stigma of seeking treatment for psychiatric disorders (Larsen et al., *in press*). Another significant finding was an increase in the number of referrals that the DT received. In 1997, after less than one year of the TIPS program, there were 361 total calls to the detection team. By 1999 this number of calls had risen to 1,226 (Johannessen et al., *in press*). The largest source of referrals remained GPs and others from the health care sector but this source did decrease from the 1996 rate, illustrating that referrals sources were broadening with. 64% of study appropriate patients came from the healthcare sector such as outpatient clients, or even dual diagnosis clinics (Johannessen et al., 21: *in press*). This shows that symptoms had already lead them to get some kind of treatment, although it might not have been the most appropriate. In total, 117 contacts met the inclusion requirements and consented to be studied as first-episode patients.

Overall, the aim to reduce DUP with a the two strategies of community-based education and easy access to treatment worked to lower to mean DUP from 114.2 weeks in the 1996 sample to a mean of only 17 weeks in the experimental sample (Larsen et al., 2000). This means that on average, symptomatic individuals are getting treatment before DUP hits six months – the time at which some researchers believe is the point when “biological toxicity” begins to take effect and has irreversible damage. In addition, the average age at hospitalization in the post-TIPS program sample was also younger, 26.3 years in comparison to 28.4 years in the 1996 sample (Larsen et al., 2000). In general, the shorter DUP sample subjects had healthier premorbid adjustments, and less severe

psychopathology (Johannessen et al., *in press*). One problem that researchers on the project did note was that longer DUP patients are more likely to refuse study participation. This may bias against finding differences in DUP between intervention and control sites among included patients (Friis et al., 2000). Unfortunately, it is too early to fully assess the impact of this finding.

Cost of the program:

The yearly cost of the TIPS project totaled a sum of 2.6 million kroner – which equates to about 390,000 US dollars per year (Johannessen et al., *in press*). The total costs were pretty evenly split between the cost of the employees and needs of the detection team and the costs of the education initiative. Yet when one examines the cost that the project has in terms of how much was spent per person, 390,000 for a population of 370,00 adds up to just about 1 dollar per year per each person in the population. Unfortunately it is too soon to assess the long-term cost effectiveness of programs such as this, as this program is only in its third year, but the implications are rather clear. If programs such as this can effectively halt or deter the “biologically toxic” phase that sets in with long DUP, one dollar of preventive measures can be cost-effective when considering that the indirect cost of schizophrenia according to the Surgeon General the U.S. in 1990 totaled 15 billion dollars per year (U.S. Department of Health and Human Services, 1999).

Summary:

Although results have not yet been gathered about whether reduced DUP changes the course of schizophrenia, preliminary data does conclude that DUP can be reduced and the population obtained when DUP is shorter is symptomatically healthier. This means that the treatment group diagnostically consists of earlier forms of schizophrenia (McGlashan, 4: *in press*). Researchers note that the success in reducing DUP occurred because they implemented an important combination of community-based education as well as easy to access treatment and services. As one team researcher simply states, “educational efforts to raise consciousness about psychosis will survive only so long as identified clients can get what the education says is necessary”(Johannessen et al.,23: *in press*).

2. The Early Psychosis Prevention and Intervention Center (EPPIC)

In many ways, the workings of the TIPS program derived from principles and practices that have been outlined by the EPPIC program which is based in Melbourne Australia and run by leading early intervention researcher and advocate, Dr. Patrick McGorry. Of all the early intervention programs, EPPIC is the most elaborate as well as the longest running. The researchers who started EPPIC have designed the program to concentrate on the problem of long DUP and its adverse effects on the outcome of first-episode patients. The program represents the following principles that the majority of the research community that advocates early intervention also agrees with. *First, prolonged DUP is common and associated with slower and less complete recovery* (Helgason 1990; Loebel et al., 1992). *Second, the critical period for vulnerability to relapse and the development of disability is during the early years of onset* (Birchwood and MacMillan, 1993). These particular years often correspond to high-stress years of age transition and developmental changes, only exacerbating the disability incurred by the disorder (McGorry, 1992). Third, there may be a *particular toxic interaction between*

delay in treatment and the critical period, especially for those who meet the requirement for schizophrenia and where treatment delays are prolonged (Wyatt, 1991; McGorry and Singh, 1995). Lastly, *although first-episode psychosis is a highly treatment-responsive problem* (Lieberman et al., 1993), *young people have expressed that they often feel that they are treated in an insensitive and crude manner during their initial contact with psychiatric services* (McGorry, 1992). Keeping these points in mind, EPPIC's philosophy of a realistic approach to early intervention is to first find a way to reduce DUP and then to optimize the treatment and management of the disorders during the early years after detection. It is EPPIC's belief that in the long-term, such efforts will be prove to be cost effective (McGorry et al., 1996).

Principles of the Project:

EPPIC began in 1992 with a two-part mission statement. First, EPPIC aims to provide comprehensive community-based service to older adolescents and young adults experiencing the first-episode of a psychotic illness. Similar to the researchers at TIPS, EPPIC researchers are aware that early intervention and working to reduce DUP would simply not be effective if easy to access to treatment was not available. Therefore like TIPS, EPPIC contains an outreach element that is operated through a mobile service team of trained clinicians. Despite these similarities, EPPIC's mission statement goes a step further in noting their goals for treatment. EPPIC's policy is to also provide intensive and on-going care for approximately 2 to even 3 years after detection (McGorry et al., 1996). The goal of such lengthy and intensive treatment is to maintain the patient's social and occupational functioning during the first two years after the onset of the first-episode, therefore the disruption and distress that psychotic prodromal symptoms has induced can be addressed and further deterioration of the patient's social network and self-image is lessened or halted. It is important to note that EPPIC feels it is imperative that efforts be tailored to the adolescent or young adult populations. It is their belief that premorbid and prodromal symptoms play a key role in increasing the stressors of the transitional stage from teenager to adult. As McGorry et al (1996) argues, "Identity formation may be seriously clouded; the family structure may be stressed and stunted; the education and career may be cut off at the knees; the notoriously evanescent peer group may move on, leaving the young person struggling to recover and floundering badly." For this reason, EPPIC as well as its sister programs (which will be addressed later) specifically chose tactics that are designed with the 30 and under population in mind.

Methods:

During the 1980s, McGorry and fellow researchers studied populations of first-episode patients at the Royal Park Hospital, then a 179-bed psychiatric hospital that served the inner city of Melbourne, and finally an acute inpatient unit was established with the help of Aubrey Lewis Researchers. McGorry and others used the strategy of a recovery model for patients undergoing treatment for first-episode psychosis. What they discovered was that in order to really change the outcome for such patients, aggressive outreach efforts must be made to reduce DUP and provide easy access to community care. In order to test the effectiveness of the principles of the EPPIC program, this 1980s "generation" of patients was assessed so that they could serve as a "pre-EPPIC" sample. Once the sample of "post-EPPIC" patients was developed, a control sample was

drawn from this previously pooled population so that the sample could be precisely match according to the following variables: age, sex, diagnosis, marital status, and premorbid functioning as measured by the PSA (McGorry et al., 1996).

The sample created that would test the short-term effectiveness (after 12 months) of EPPIC's strategies and tactics for reducing DUP and improving outcome through treatment included 51 subjects that came in contact with EPPIC between March and October of 1993. Specific *inclusion criteria*: age of onset for first-episode psychosis is between 16 to 30, the individual is currently psychotic – as evidenced by delusions, hallucinations, marked formal thought disorder, or grossly disorganized, bizarre, or inappropriate behavior. *Exclusion criteria*: organic mental disorder, mental retardation, epilepsy, and inadequate command of English (McGorry et al., 1996). The catchment area for the EPPIC program at the time of this assessment was approximately 800,000, covering the metropolitan region of Melbourne. Yet, because EPPIC only services individuals under the age of 30, the size of that population drops to about 208,100 persons (McGorry et al., 1996). The program estimated that they would receive about 200 new cases a year. Important demographic features of the area include a large proportion of people who were born overseas and a high proportion from the lowest socio-economic status group (McGorry et al., 1996).

How Did EPPIC's Strategies Work?

The EPPIC program has two goals: to get symptomatic persons 30 or younger into treatment as soon as possible and to increase the possibility of positive outcomes through intensive community-based treatment during the early course of the disorder. Strategies that the EPPIC program used were very similar the TIPS program. An **Early Psychosis Assessment Team (EPAT)** was established as a mobile team to serve as the sole point of entry into EPPIC. Using mobile assessment tactics had a dual function as it sought to contact hard to reach populations (the homeless and substance abusers) and also educate the young adults and larger community about the importance of early intervention. As mentioned, there have been numerous studies that have revealed that first-episode patients often go to seek help for their symptoms but they are not effectively treated right away. EPAT addresses another problem that particularly plagues young people when they are feeling symptomatic. As Yung and colleagues (81:1999) argue, "young people may have difficulty understanding and interpreting psychotic experiences and their mental problems. This is often compounded by the family's lack of knowledge about psychosis, the ignorance of the wider community in general, and the stigma which is still associated with accessing care for mental health problems." Therefore stigma reduction is essential and EPAT's tactic to counter stigma included using a recovery model of psychosis. Changing negative and pessimistic attitudes about prognosis is essential to both getting GPs to diagnose psychosis earlier and reduce DUP as well as getting young adults into treatment faster because there is the message that treatment begets improved outcome.

Increasing public awareness about the benefit of early treatment and the possibility of recovery was accomplished by EPAT through creating networks and alliances within communities. The goal was to promote the recognition of psychosis and to provide information about available services and how to access them. Target audiences include: primary health care professionals and other professionals that have contact with young people such as school/university counselors and social workers. These groups are in addition to EPAT's tactic of addressing the public in general by appearing on national radio and TV shows and promoting national campaign such as Schizophrenia

Awareness Week and Mental Health Week (Yung et al., 1999). In order to educate EPAT has developed two different series of videos – one for the general public and one for primary physicians.

EPAT also provides a comprehensive and readily accessible service of assessment to young people. They use methods that engage the consumer because they believe that if the “patient” is in charge they will feel less threatened by the situation (Yung et al., 1999). EPAT strives to reduce the stress on the patient and therefore conducts assessments where the individual chooses in order for it to be the most convenient. Lastly they have the role of working with families at the point of initial contact in order to educate the family about the crisis. They provide psycho-education to families and the patient at this time, typically in the home. This system provides a less stigmatizing environment for treatment and will aid young people’s retention in the services because they have been assisted personally and individually. Similar to TIPS, all assessments take place in a non-threatening environment such as home (40%) or school (21%), and are typically the choice of the patient (McGorry et al., 1996).

Researchers conclude that the effectiveness of EPAT’s community education and networking took place quickly because the pattern of referrals altered within the second six months of the program. In the second six months of the program, 69.2% of referrals came from non-psychiatric sources instead of only 49.8% of referrals after the first six months (McGorry et al., 310:1996). EPAT also used the tactic of repeat visits to individuals who initially refused an assessment. Keeping with EPPIC’s principle of wanting to minimize the trauma associated with initial psychiatric contact, the team worked to build trust with patients and effectively reduced the use of police transport for involuntary commitments. Police transport was required in only 8.5% of all involuntary admissions (McGorry et al., 1996). Even police contacts with the patient population decreased by 22% when EPAT underwent community outreach efforts (Yung et al., 1999).

A further strategy that EPPIC employed was to try to avoid the use of hospitalization entirely and if that is not possible then EPPIC reduced hospital stays to as short as possible. In order to facilitate this process another team of clinicians formed the **Early Psychosis Assessment and Community Treatment Team of (EPACT)**. This team is basically a mobile home treatment service and using this system allows those patients with adequate family support and low risk of self-harm or violence to avoid hospitalization. It is possible that community knowledge about this form of non-threatening treatment functioned to both lower stigma about receiving psychiatric treatment as well as reduced some of the fear young persons have about getting treatment. (The actual workings of the treatment program will be discussed in the third section of this report, when the topic of effective treatment and aftercare is addressed.)

Results:

Both the pre and post EPPIC groups were assessed by a variety of measurements at four different periods of time: point of entry, at recovery or stabilization of psychotic symptoms, at 3 months post-recovery or 6 months post-recovery and at 12 months post-recovery. The outcomes were compared on a variety of variables. At this point in time we are concerned with the measures of reduced DUP in the post-EPPIC sample in order to see if the strategies and tactics were effective. After a thorough investigation of the treatment component of EPPIC, this report will discuss those results and if they effectively improved outcome and compliancy rates. The results show that using the tactic of the EPAT is effective in reducing DUP. DUP for the post-EPPIC sample averaged at 158.9 days, which is reduced from the pre-EPPIC average of 193.7 days

(McGorry et al., 318:1996). The results reveal an apparent trend for the duration of untreated psychosis to be reduced in the post-EPPIC sample of approximately by one month. A reduction in DUP was even more apparent in the schizophrenia subgroup, averaging a reduction rate of five months. These are promising results because evidence establishes that reduced DUP assists in attaining a better treatment outcome. This report will return to the results of this EPPIC study after we examine the elements of its treatment program in section three.

3. Personal Assistance and Crisis Evaluation (PACE)

Although it is not the purpose of this report to examine early intervention efforts that take place during the prodromal phase, the PACE program which is linked to the EPPIC program in Melbourne Australia discussed above is worth mentioning briefly for our purposes of identifying strategies and tactics for reducing the stigma of receiving psychiatric care. PACE's efforts are particularly insightful because they are geared towards younger patients who are often under the age of 18. Clients who attend PACE are between the ages of 14 and 30, the age range most at risk of onset of psychosis. When PACE was developed in Australia in the early 1990s, the system of health care was somewhat similar to the U.S. Unlike Britain, the United States and Australia do not have health care systems that automatically link a child to a general practitioner in his or her community and it is an unfortunate reality that children do not see their GPs on a regular basis. As a result, PACE doesn't use an awareness strategy directed solely at GPs and healthcare providers but targets other primary care facilities and networks of individuals who come in contact with young people frequently such as teachers, school counselors, social workers, and youth workers (Yung et al., 1996).

Because PACE is a sister clinic to the EPPIC program, they were able to use the services of EPAT as well as the literature EPPIC had designed for GPs, social counselors, social and youth workers. Yet, PACE put even further emphasis on the issue of preventive treatment. A main goal of PACE's education campaign was to argue that people's perceptions about getting treatment for mental health issues should not reflect the attitude that one does not need assistance until they are *sick enough* (Yung et al., 1999). Yung et al., (1999) note that the benefits of treating youths before they are in the grasp of a full-blown psychotic illness is that the individual has the capacity to be motivated to attend meetings and participate in a way that acute psychosis doesn't prohibit.

Another important tactic that PACE used to get youths into treatment revolved around labeling. First, PACE is considered a "crisis" and "assistance" facility, not a psychiatric facility. Not only did clinic directors refuse to use the word psychosis in the naming of the clinic but also the facility itself is located in a general outpatient health center in order to not risk the impact of youths being stigmatized for seeking psychiatric services. This may not be a direct approach to tackling stigma – but researchers felt it was a necessary step to take in order to get youths into treatment and to avoid attendance problems once in treatment. Youths were not labeled "psychotic" because at this early phase (the prodromal phase) it is very possible that patients do not make the transition into a frank psychotic disorder. In addition, the PACE clinic in its hopes to limit the impact of stigma and keep the experience as devoid of stress as possible, did not tell people about the possibility of developing schizophrenia. The need for intervention and admittance into the PACE clinic was purely to deal with current problems or symptoms that were bothering the youth.

Although researchers have evaluated the effectiveness of PACE in terms of how often the program is able to treat patients in the prodromal stage, for our purposes it is important to note that PACE received most referrals (50.9%) from the mobile outreach unit, EPAT (Yung et al. 1996; Yung et al.,

1999). This demonstrates that even though tactics can be designed to address the issue of stigma and promote self-help seeking, it is still important to utilize outreach efforts in the community because the youth population is also a hard to reach population. This is a message that Australia has heard loud and clear and currently there are multiple early intervention clinics popping up all over the country to meet the needs of transitional-age youths. There are three that are rather noteworthy for their outreach efforts, preventive approach to psychosis, and their tactics used to appeal to the youth population. Due to the fact that most programs grew from exemplified behavior from EPPIC and PACE, this report will briefly mention their efforts.

Young People, Prevention and Early Intervention Center (YPPI)

This program is located on the central coast of Australia and has a catchment area that represents the fastest growing population area in the state. This area also contains a high proportion of youths (22% of the population is 14 and younger), high levels of unemployment, and low-socio-economic indicators. Due to these factors, prevention of mental illness, particularly psychosis, has taken a slightly more proactive approach because most youths of the area do not see private healthcare physicians. The YPPI center uses the strategy of integrating mental and physical health services within the community. There is a strong partnership between two separate social service divisions – mental health services and youth health services. The priority groups within the project are persons aged 14-19 years, at risk of suicide or practice self-harm, or persons with a serious mental illness. In addition to educating the community about psychosis and the importance of early intervention, YPPI also emphasizes prevention measures for depression and other major mental illnesses that run the risk of suicide. Similar to PACE's tactics, YPPI attempts to reach youths with emotional problems by using a **“youth health”** model. *This tactic of early intervention suggests to the young person that their mental health is just as important as their physical health and that if treatment is sought and received early, recovery is possible.*

Brookvale Early Intervention Center

Located in a residential neighborhood in northern Sydney, this center uses the strategy of an informal, non-clinical atmosphere that contains recreational devices such as a pool table to be youth friendly. In many ways it is like the consumer-run drop-in centers that are sprouting up around the U.S. This particular center is for young adults from 18 to 30 years of age who have experienced first-episode psychosis within the last two years. Tactics used to get people into treatment include: care coordinators making home visits or interventions in order to deliver services in the least traumatic and stigmatizing manner, as well as community education. In terms of education, program workers give presentations to youth organizations, college campuses, and other people who work with youths such as counselors, and conduct a series of workshops for general practitioners.

A last noteworthy program is the *Southern Early Psychosis Project (SEPP)*. It is part of an integrated health service model with a catchment population of about 350,000. Similar to EPPIC, its targets are young people 30 years of age or younger who are experiencing first-episode psychosis. Strategies used to get people into treatment early center around education and awareness efforts. Seminars and workshops that focus on early identification skills have been conducted for GPs and professionals in community health centers. This has also extended to school and college counselors, as well as other youth service providers. The larger community is also involved in the mental health promotion phase through media exposure and public forums.

In sum, the programs that derive from Australia illustrate the two basic strategies that have been evident so far in all approaches to reducing DUP: tackling stigma through public awareness and education and offering easier access to community-based treatment.

4. The Early Psychosis Initiative (EPI)– British Columbia

EPI is not a research-based project, such as TIPS, EPPIC, or PACE. Instead it is a once funded project provided by the Ministry of Health in the Province of British Columbia. EPI is an inter-ministry and inter-agency initiative that has forged a network of partnerships to execute its goals. Partners with the Ministry of Health include the Ministry for Children and Families (MCF) and regional representatives of MCF and regional health authorities, the Ministry of Education and regional counseling and special services representatives, the BC Schizophrenia Society and the Canadian Mental Health Association. Overseeing the one-year program is an agency called the Mental Health Evaluation and Community Consultation Unit (MHECCU). This agency functions to foster and facilitate early intervention initiatives through disseminating information to service providers in the form of educational seminars, workshops, and materials. The agency also functions to bridge and integrate the various partners who are taking part in this initiative. In many ways MHECCU functions much like CIMH does in the state of California.

As part of EPI, various health regions in British Columbia have implemented strategies aimed at improving services to young people who are in the early stages of psychosis. The aim of the project, which began September 1, 1999 and is currently in operation, is to enhance the recognition of early signs and symptoms of psychosis so that effective treatment can be initiated as soon as possible. Because EPI's function is to reduce DUP through strategies of education and health promotion, in addition to integrating health services in order to make treatment easily accessible, it is important to examine closely. It is also helpful to investigate this program carefully as it could represent a possible model or template of early intervention programming for the state of California.

Although funding to start the initiative was designated for one year only, the funding was to lay a foundation or “establish” a legacy of regional initiatives that would improve identification and intervention for young persons with the early signs and symptoms of psychosis. Therefore, British Columbia is making a long-term commitment to designing a system of care with early intervention strategies built into the core of the services they provide. For our purposes, this report examines some of the materials that MHECCU distributed to providers in order to study what strategies were utilized in order to implement such a large-scale project in British Columbia. With this accomplished, the report turns to investigate the outreach and educational efforts of the BC Schizophrenia Society in order to observe how one partner in this venture is making early intervention education a priority in their advocacy efforts.

The first strategy evident is that services must be integrated. In order to do so an “inter-ministry working group” was formed with representatives from all partners of EPI. This working group consists of representatives from:

- ❖ Child and youth serving ministries - Health, Children and Families, Education, Advanced Education, and the Training and Technology Ministry
- ❖ Key community advocacy and consumer organizations – The Canadian Mental Health Association, the British Columbia Schizophrenia Society, regional planners, and experts in early psychosis.

The working group members liaison with their regional staff to facilitate inter-regional communication and cooperation and progress towards common objectives. A cited initial goal is for partners to increase their collaboration, particularly service providers to ensure effective case management and continuity of care.

A second strategy evident is that EPI wants to increase the caregiver's and health professional's ability to respond to individuals in need. The ability to do this would decrease DUP. This step requires education that uses tactics that change attitudes among both the general community as well as health professionals. Service providers need to be educated not only about the importance of reduced DUP on outcome (both functional and economic) but also that psychosis and schizophrenia-related disorders should be treated under a recovery model. There should be the promotion of a therapeutic alliance that is strengthened by minimizing the trauma and disruption associated with the psychotic process. Additional targeted goals under this strategy include: improving assessment protocols for those exhibiting prodromal or first-episode symptoms to increase accuracy of diagnosis, refining referral practices to maximize utilization of appropriate treatment and support resources, and reforming service structures to increase access and flexibility of opportunities for initial assessment and continuing engagement.

A third strategy used is to supply materials and facilitate understanding in multiple workshops, seminars, and videos. For example, manuals were prepared both for professionals who work with youths as well as for physicians that outlined multiple different elements about why reduction of DUP is necessary. Other areas of emphasis in education manuals include: specific early warning signs, how to make an accurate assessment, how treatment should be initiated and what kinds of medications and psychosocial/psycho-educational options should be sought.

Working with Community Resources:

The BC Schizophrenia Society as an advocacy organization and partner in the EPI program and can be examined as an example of how program materials can be put into practice through outreach and community education efforts. Although the EPI program began last year, the BC Schizophrenia Society has been outreaching to the community with educational efforts about schizophrenia for numerous years with a program called *Partnership Education*. Strategies from this program have been modified slightly to emphasize the importance of early intervention but targeted audiences and presenters remain the same.

Partnership Education uses a “presentation-model” that consists of a panel of three guest speakers – a person with a psychiatric diagnosis, a family member, and a mental health professional. The “partnership” stresses that both the person with a psychiatric disorder and his or her family member should play important roles in treatment. More importantly, having presenters be individuals who have personal experiences with psychiatric disorders and getting treatment demystifies receiving mental health care. Target audiences for this presentation include: transit drivers, police officers, medical students, social workers, elementary and high school students, church groups, and psychiatric nursing and physician students.

Having years of experience, the BC Schizophrenia Society did not have a problem modifying the *Partnership Education* material with the manual about early intervention. The presentation, geared towards high school and college students, makes two main points. First, early intervention can start treatment at a stage in which the person's biology is more receptive to treatment. Efforts stress that studies show that reduced DUP and early treatment can lead to significantly improved recovery and outcome. Second, untreated psychosis should not be ignored because the psychosocial development of a young person during this time period is vital and not seeking help will interrupt personal and social

development, academic and vocational efforts, and strain the family. In addition to this modified version of *Partnership Education*, the BC Schizophrenia Society outreaches with videos to doctors, teachers, and counselors as well as performs a popular elementary school puppet show to educate fourth graders about mental illness.

5. The Danish OPUS Project

This study was carried out between 1998 and 1999 with a catchment area of 1.5 million people in the greater Copenhagen area. The researchers' hypothesis was that if they could increase co-operation with the primary health sector, they could reduce DUP. The strategies they chose to use in order to increase co-operation with the primary health sector relied mainly on educational efforts. The strongest point of emphasis was on educating general practitioners. In conjunction with focusing the educational efforts on how to identify phases of schizophrenia, prodromal symptoms, and positive psychotic symptoms, general practitioners were invited to refer any patient suspicious of schizophrenic development to the study. Educational efforts were also made to a lesser extent to social services, high schools, and other clubs and organizations that attract lots of young adults. The OPUS project does not target families and the larger community with their education efforts. The mobile outreach efforts evident in EPPIC and TIPS were not present in the OPUS project. As a result, OPUS relied on educational efforts to reduce DUP and hoped that educating professionals in the health sector would create a system of straightforward or more accessible treatment.

Methods:

There were two different samples drawn in order to test if the educational efforts and increased co-operation with the primary health sector functioned to reduced DUP. A parallel control sample was detected without using any early detection strategies. A second, experimental sample was drawn using early detection methods. Inclusion criteria for the sample included: the individual being between the ages of 18 and 45 with either untreated first episode schizophrenia or recent onset schizophrenia. The experimental sample totaled 172 patients and the parallel control sample totaled 90 patients.

Results:

Surprisingly, the OPUS project illustrates that after an elapse time of 19 months, educational efforts and increased co-operation with the primary health sector resulted in no reduction of DUP. Researchers argue that this might be because they did not make the effort to educate the general public about the signs and symptoms of early schizophrenia or psychosis. As a result, self-referrals and parental/familial referrals did not increase as they did in other studies that included efforts to educate the general public. A second reason why a reduction did not occur could possibly be because mobile detection and outreach was not used and therefore hard to reach populations, such as young adults, remained hard to reach.

The importance of these results is to note that when early detection project are designed, an aggressive and holistic approach needs to be taken. This means education for health and social service professionals, youths, and the general public. Secondly, easy access to care does not equate to primary physicians having the ability to recognize symptoms and refer patients. It must be remembered that prodromal and acute symptoms more often than not assist in making patients become a hard to reach population. Due to this, early detection requires active outreach.

6. Help-Seeking Behavior Studies from the University of Ulm – Germany

Similar to other first-episode researchers that have been discussed, these German researchers agree that studies on help-seeking behavior patterns in first-episode patients is important because it demonstrates where efforts should be made in order to reduce DUP and get treatment to symptomatic persons quickly. Due to this importance, this particular study doesn't measure reduced DUP but focuses on the patient's help-seeking behavior on the pathway to psychiatric care. The goal is to identify the contacts patients had before admission, in the time between the first symptom and the first contact with a helper and the time between the first contact and admission. In addition, the researcher also wanted to note the coping strategies of these symptomatic people, particularly the tendency towards substance abuse. By doing so, this study illustrates where educational and outreach efforts should be focused.

Methods:

The study sample was drawn from a region in southern Germany that has a catchment area of about 460,000 inhabitants. Inclusion for the sample is status as a first admit for psychosis meeting the DSM-IV criteria for schizophrenia, schizophreniform disorder, or brief psychotic disorder. The goal is to acquire fifty sample subjects. Thus far, the study has 32 subjects, 20 males and 12 females. The average time of untreated positive symptoms is 69 weeks, 170 weeks for untreated negative symptoms, and 258 weeks for untreated prodromal symptoms. At time of admission, sample subjects are interviewed using the Retrospective Assessment of the Onset of Schizophrenia (IRAOS) as well as a questioned about their coping behavior.

Preliminary Results:

Within the sample, 72% of the patients searched for help before admission. In terms of first contacts, 42% sought help through mental health professionals, with a much smaller percentage (13%) seeking help through a general practitioner. Findings further show that there were high individual differences in DUP and help-seeking behavior. For example, patients who sought help through psychosocial facilities had the shortest elapse time (138 weeks) between the first symptom and the first help-seeking contact. Those sample subjects who sought help from mental health professionals had mean DUP of 211 weeks and those who sought help from general practitioners had a mean DUP of 218 weeks. In terms of coping strategies, numerous types were noted. 28% stated that they turned to alcohol while 69% stated that the major strategy they used were diversions such as listening to music or watching T.V.

The important point researchers want to stress is that most symptomatic subjects did not seek help through their general practitioners first. These preliminary results suggest that information campaigns with the aim of reducing the duration of untreated psychosis should be addressed to a broad general public with active outreach efforts, not only to professionals – whether it be just general practitioners or mental health professionals.

7. The Nova Scotia Early Psychosis Program

The Nova Scotia Early Psychosis Program was established in 1995 as a partnership between the Department of Psychiatry, Dalhousie University, and the Nova Scotia Hospital. The overall mission of the program is to optimize mental health care for residents of Nova Scotia by providing expert consultation and clinical care for people in the early phases of psychosis, and to conduct research while developing community mental health education programs. Again, this program is designed to reduce DUP by getting symptomatic persons into treatment early and therefore this report is paying attention to the program's work in terms of what methods they have used that can be noted as successful. This report will examine two different tactics the Nova Scotia Early Psychosis Program has designed and implemented. Both programs, The Early Psychosis Mentorship Program and The Program for Early Intervention in Schools, utilize educational strategies to increase awareness within target populations.

Early Psychosis Mentorship Program:

The purpose of this program is to provide physicians and other multidisciplinary health and education professionals with up-to-date information on early detection and effective treatment of psychosis. The program is basically a series of workshops and seminars that educates professionals in roughly six areas:

- ❖ How to alter the course of major mental illnesses with early detection and intervention
- ❖ How to assess and treat early psychosis
- ❖ How to implement psychoeducational programs for consumers and families
- ❖ How to treat resistant psychosis
- ❖ How to evaluate extrapyramidal signs and symptoms
- ❖ How to deal with the relationship between substance use and psychosis.

Sessions are designed to facilitate networking among professionals. All workshops are led by psychiatrists and psychiatric nurses that use real cases to discuss principles through videotaped examples and small group discussions. When the program began in 1996 sponsors were able to foot the costs, unfortunately session participants now have to pay for the workshops. Major costs of the program develop from the production of case-based teaching videos, catering, facilitators' salaries, and other costs of producing take home materials such as copies of slide materials, case study examples, relevant research articles and a list of references. To solve this problem of costs, the program actively is seeking core funding as well as sponsorships. To facilitate regional implementation, in 1999 the program involved some regional clinicians as co-facilitators in a "train the trainer model". This functions to bring program materials to a larger population as well as hopefully to other areas of Canada and beyond.

Thus far, evaluations of the programs have shown that 181 different professionals have participated and these participants represent the source of one-third of clinical referrals. Pre and post test data demonstrates an increase in knowledge in the key content areas. The majority of participants are nurses at 46%, with other notable percentages being psychiatrists (11%), psychologists (10%), and social workers (8%). In the years that the program has been in place it has grown in demand from the

regional to the entire providence with requests for more workshops and new modules to address additional topics. Participants report high satisfaction with the program thus far.

Conclusions and future directions for the program include: means to acquire core funding so that workshops can be offered with no fee to the professional, increase the use of “train the trainer model” so that implementation of practices and ideals taught in workshops can be implemented throughout the providence, and explore the option of using a tele-psychiatry network for distance education.

Early Intervention in Schools:

Much like the above program designed to educate professionals about early psychosis, this program seeks to educate school and university professionals about early psychosis in an attempt to reduce DUP among students. As it has been evident, the age of onset for major mental illnesses, particularly psychosis-related disorders, is during late adolescence or young adulthood. The Nova Scotia Early Psychosis Program found in 1995 that school and university professionals had very little knowledge about psychosis. Recognizing that student service staff, teachers, and university counselors are in a key position to facilitate the early detection of psychosis, the program identified this population as priority to receive information about psychosis.

The process of educating this target population began with developing educational resources that would be used through workshops and seminars. Then the program directors set out to reach the target populations. A brochure was developed describing the workshop and was forwarded with a letter of invitation to relevant regional school board staff, as well as principals of junior and senior high schools. A similar strategy was taken among universities, targeting workshops for university counselors and health services staff. In addition the media was contacted and press releases described the goals of the education initiative. Lastly, program directors collaborated with the Nova Scotia Teachers Association to have the workshop included in their provincial professional development conference and a provincial conference of adolescent mental health.

Much like the elements of the health professionals workshops, educational material was presented with case examples, videos, small discussion groups, and take home resources and references. Learning objectives included: defining psychosis, stressing the importance of early detection, describing how school and university professionals can play a key role in early detection, identifying the medical approach to the treatment of brain disorders, discussing the complications of adolescent substance abuse, discussing the importance of limiting disruption to adolescent development, discussing the importance of fast “pathways to care” and a model of recovery, and identifying the process of referring students to proper help.

The results of these efforts were six total sessions/workshops that educated 223 participants. The majority of attendees were counselors (43%), in addition to school psychologists (14%), teachers (9%), and others such as school administrators, social workers and education programmers. Evaluations of the workshops by participants reflected that 74% felt that the program content was excellent. Another added addition was that the workshops gained extensive print and radio media coverage resulting in heightened awareness and interest from the public. The initial success of these efforts has prompted program directors to not only continue to provide the workshops but also to expand the workshop to offer more detailed educational information. In addition, program directors have begun to find methods of having on-going dialogues with the target population so that they can have a means for gaining more information if they have problems or questions.

8. Prevention and Early Intervention Program for Psychoses (PEPP) – London, Ontario

PEPP is a community-based treatment program for first-episode patients and their families. Information about PEPP is distributed through a public awareness model that uses an additional tactic of not labeling a “psychotic episode” as a long-term condition. The main objective of PEPP is to provide early assessment and phase specific treatment of psychotic disorders in individuals who have either never been treated before or have received no more than one month of total treatment. The strategy here is to keep the patient who seeks help or treatment from being labeled a “mental patient”. The idea is that treatment will be sought because an adolescent, his or her family, or even referring general practitioners will be more willing to accept that treatment is being sought for an “episode” rather than a debilitating disease. The stigma is not attached to the individual seeking treatment.

The PEPP program has released some preliminary results after two years of being up and running. Early case detection is similar to TIPS but certainly not as extensive. The catchment area of London, Ontario ranges around a population of 390,000 and is mostly urban. When the program began back in 1997, funding was limited to only \$5000 and pamphlets and information about PEPP were disseminated to family physicians and other health care workers until further and more extensive funding could be acquired. By February of 2000 enough funds had been established, (about 25 to 30 thousand dollars), to execute an assertive-community based detection phase that focused on a massive distribution of educational materials through multiple media sources, much like the TIPS project. The goal was to use as many effective methods as feasible in order to inform both the public any other possible referral sources about the early signs of psychosis as well as information about PEPP and getting treatment. Additional funds were even raised by family groups that became involved with PEPP in earlier years and wanted to increase and support the future and more expansive goals of the program. Ideas on how to make the posters, pamphlets, and the messages contained within them effective were established through involving consumers (patients and their families) from the project’s conception. Over 10,000 pamphlets and posters were sent to venues such as public and university libraries, pharmacies, high school and college campuses, physician and walk-in clinics, shopping malls, churches, and all social service agency buildings. Further strategies to reach the general public include bus advertisements, press releases, interviews with local TV news programs, radio interviews, commercials, desk calendars, and a website. Funding to partake in these activities was further contributed by forging partnerships with community businesses. In addition, the PEPP team worked to establish referral sources through school-based counseling services in both high schools and colleges (Schotlen, 2000).

The assertive-outreach approach implemented in early 2000 so far has demonstrated significant improvements in the number of individuals referred to PEPP. Increases came from the non-health sector such as through community services and self/friend/or family referrals although the primary source of referrals continues to come from the inpatient hospital unit. The median DUP also decreased substantially from the 1997 length of a mean of 25.6 weeks to 12.9 weeks in 2000. Similar to strategies used by TIPS and EPPIC, the PEPP program seeks out hard to reach youths through forging connections with family physicians, guidance counselors and teachers, counseling and health services providers, and all other community agencies that are likely to come into contact with youths. Once referred, an experienced clinician makes assessments within 24 to 48 hours – no exceptions. Assessment begins with an initial interview that then becomes more detailed through the use of an assessment team of experts that includes a psychiatrist, a nurse case manager, and professionals from other fields such as psychology, social work and occupational therapy. It is at this point that the PEPP

program stresses that alarming labels and medical jargon will work to further upset the patient and his or her parents or loved ones. Thus successful engagement equates to providing a calm and quiet environment as well as involving the family as much as possible. This is seen as a crucial time to create an important trusting connection with family members who are able to provide helpful information regarding the client's current condition.

What can be clarified at this point is that if DUP is less than 6 months, remission rates for PEPP subjects are high – 85% if the diagnosis is not schizophrenia – merely “psychosis”. Unfortunately the preliminary results are only for two years and Dr. Malla states it is far too early to tell if remission will be sustained in follow-up studies. So far improvement is associated modestly to length of DUP but not to length of the prodromal period.

9. The IRIS Program, England

This particular method of reducing DUP is somewhat different because it focuses on strengthening detection of emerging psychosis through integrating health services, physical and mental. This is different than earlier tactics that have been discussed such as increasing awareness through education or using mobile outreach services to locate hard to reach populations. The tactic of integrating health services is also facilitated in England where health services are nationalized, unlike the U.S. Despite this, examining the IRIS program's tactics for reducing DUP is helpful by giving a different perspective on early intervention efforts.

Program Principles:

Using integrated health services to reduce DUP is not a relatively new idea. In fact, the foundation of the strategies evident in the IRIS program date back to one of the first early intervention programs, the Buckingham Project in 1984. The Buckingham project, which was spearheaded by leading early intervention researcher Ian Falloon, sought to reduce DUP as well as prevent relapse by offering integrated health services and psychosocial support which focused on stress management. The project clinic sought to represent the ideal “community-based” health center where general practitioners were trained to note “early warning signs” of prodromal schizophrenia (Falloon et al., 1996). Falloon relied on the assumption that trust was already built into the relationship between an adolescent or young adult and their GP. Because this relationship exists, GPs, nurses and staff should be educated about how to properly assess “at-risk” mental statuses. This assessment also included an assessment of the stressors in the individual's life as well as making sure that there was a support system for the individual at this time. The GP would then be the primary physician in the individual's treatment. Mental health specialists would be brought in, but only for additional assessment and consultation – the GP remained the leading physician who continues to build a strong alliance with the individual through individualized care and home visits. Additional strategies used once assessment is concluded and the individual is receiving treatment: educate patient and caregivers immediately and thoroughly, focus work on stress management for the patient and the family, and target neuroleptic medication.

The IRIS program follows these same strategies with one important addition, mental health care and primary care should be responsible for having strong ties and the two different types of physicians should be treated as equals in terms of the importance of their work. Like Falloon's model, the GP remains the central doctor using psychiatrists and psychologists as specialists. The IRIS model stresses

that youth are particularly untrusting of adults they don't know – so treatment that is coordinated by their GP feels more secure but this does not mean that referral care to psychiatrist and psychologists is not as important. Being treated by all three doctors is also intended to reflect that mental and physical health is equally important. The fact that the GP is well educated about mental health therefore demonstrates this importance of treating mental health symptoms promptly, just like somatic ailments. The core tactics within IRIS include stressing the importance of youth and user friendliness, early and assertive engagement, treatment being provided in the least restrictive and stigmatizing environment, and a family-oriented approach (MacMillan and Shiers, 2000).

Although IRIS program designers have used Falloon's work as a foundation they also believe that integrating health services can only work if awareness and education about psychosis and mental health problems are increased among health professionals and the general public. Education to these populations should focus on how very hopeful and positive early detection is. Three keys for education programs to stress: knowledge of how symptoms and signs emerge, understanding the importance of early treatment, and how to access services.

IRIS program designers mention three solutions for increasing early intervention:

- (1) Create a GP and Primary Health Team – These physicians will need to know the right questions to ask patients and how to refer their patients to the right specialist. They also will function to get the family involved.
- (2) Mental health professionals should act as quickly as possible when dealing with the onset of psychosis and refer patients back to their community health centers where an alliance with their GP is already fostered.
- (3) Commissioners of Services – Suppliers of community services need to be familiar about what they supply to their communities and understand the cost effectiveness for early intervention in order to realize how it should be stressed.

Unfortunately the effectiveness of the IRIS program currently has not been measured. Despite this it is evident that reducing DUP requires a particular health system – one which may not be relevant to the private healthcare sector in the U.S. but does have possible implications to ways that public sector mental health care (through SSI/SSDI) can improve their services through strong integration.

III. Strategies and Tactics for Effective Treatment

Assertive Community-Based Treatment from the Onset

As we have seen, reducing DUP is a primary goal for researchers and advocates of early intervention, but strategies for effective use of early intervention does not stop at this point. As mentioned in the introduction, the majority of today's researchers who study schizophrenia and psychosis-related disorders agree that initial treatment, or treatment during the "critical period", is greatly significant to the overall outcome for the individual undergoing first-episode psychosis. Furthermore, it has been argued by many early intervention advocates that treatment for patients with shorter DUP is more effective because the symptoms (positive and negative) can be remised more readily, particularly if DUP is less than six months. In the following section of this report, the treatment strategies used in early intervention programs will be examined. Some programs we have previously discussed in terms of tactics used to reduce DUP and now the exploration of such programs will continue through investigating the effectiveness of treatment strategies. In addition, other studies

have focused just on treatment strategies in first-episode patients as well as relapse prevention efforts and these approaches will be addressed as well. In all cases, the effectiveness of treatment will be questioned if researchers have been able to produce preliminary results and treatment evaluations. Just as researchers are not clear about the long-term effects of shortened DUP, the long-term effectiveness of different types of treatment are yet to be seen. Despite this, it is imperative to assess the different tactics and strategies that are being used to make treatment more effective. This is important because effective treatment is more likely to result in lower relapse rates, higher quality of life for both the symptomatic individual and his or her loved ones, reduced disability, and thus reduced long-term cost to society.

1. The TIPS Project - Norway

The TIPS project seeks to study if shortening DUP functions to change the course outcome of schizophrenia in the long term. Because length of DUP is being studied as a causal mechanism it is important that treatment remains the same among all three different study groups – the one experimental group in Rogaland, and the two control groups Ullevål sector in Oslo and Roskilde in Denmark. This will ensure that length of DUP is the causal mechanism for better outcome. Just this last May, program researchers have just released preliminary outcome levels of the subjects in different samples. First, an outline of the treatment repertoire of the TIPS programs will reflect the general consensus among early intervention advocates – that is, *treatment should contain of a mixture of medication, family work/education, and psychosocial therapy/education that places emphasis on continuity*. Second, available preliminary results will be released.

Psychosocial Rehabilitation:

First, TIPS project researchers feel *psychosocial rehabilitation* is an important part of the treatment efforts directed towards first episode psychotic patients. The patients' needs in this area show considerable variations, and local rehabilitation resources may also vary. Because of this, the treatment protocol does not give specific instructions, recommendations or guidelines for psychosocial rehabilitation. It is part of the integrated individual treatment, and the explicit responsibility lies with the person who is responsible for the treatment. This reflects a broader belief that psychosocial rehabilitation should be individually tailored to meet the needs of the patient. Despite this, researchers point out that the following are important points about the relationship between psychotherapeutic treatment and program subjects.

- (1) All patients included in the project will be offered psychotherapy.
- (2) As the patients' needs show considerable variations, the frequency, duration and therapy technique of the consultations will vary between patients, and also within the course of the treatment for each patient.
- (3) In some cases the therapist will, for long periods of time, have to work primary on establishing contact or on getting the patient to show up for appointments or taking medicines. Other patients may be highly motivated for treatment and therefore enter a more insight-oriented process.
- (4) A main focus of the therapists will be to help the patient develop internal coping strategies and thus improve the understanding and acceptance of illness related experiences and the

need for treatment. Focus will also emphasize loss, giving hope, family and personal development and encourage reintegration in to the society.

In the TIPS program the psychotherapist has the responsibility for other areas of the patient's treatment, including medications and psychosocial rehabilitation. Active outreach is also one of the psychotherapist's explicit responsibilities, and includes calling if the patient does not show up for an appointment and, if necessary, conducting home visits. The psychotherapist is free to have contact with the patient's family if necessary (general information, planning of visits or vacations, crisis intervention etc.), provided that this contact does not counteract the organized family work. The duration of the treatment is at least two years, with a minimum of one planned consultation a week. Total duration should constitute at least 30 minutes a week.

Medications:

The second area of treatment is *medication*, and TIPS project researchers have also outlined a standard protocol of treatment, favoring the use of atypical anti-psychotics. During the acute phase, the first drug of choice is olanzapin 10 mgs with maximum dosage not exceeding 30 mg. Persistent positive or negative psychotic symptoms after eight weeks on maximum dosage will lead to a change of medication. Persistent olanzapine-associated side effects will also lead to change of medication. Serum levels are examined when patients have been treated with stable dosages for four weeks, and serum levels should be examined if dosages above 20 mgs are considered. For patients below 18 years the first drug of choice is risperidone that can be gradually increased up to 6 mg (recommended dosage is 2-4 mgs). Patients that do not respond to this dosage will try to use risperidone up to 10 mg. Persistent positive or negative psychotic symptoms after 6 weeks on maximum dosage will lead to a change of medication. The third drug of choice is for patients with persistent drug side effects on both olanzapine and risperidone (such as significant weight gain on both or weight gain on olanzapine and EPS on risperidone) is another atypical anti-psychotic, perfenazin. This should be administered in gradually increasing dosages with the maximum dosage at 16 mg. Maximum observation time on maximum dosages is six weeks. If a patient has been treated with a stable dosage for four weeks or experiences distinct extrapyramidal side effects than the serum level of perfenazin should be examined. Further dosages are based on the results of this examination. Persistent positive or negative psychotic symptoms after eight weeks on maximum dosage will lead to a change of medication. The fourth drug of choice is clozapine up to 600 mg/day. Patients that do not respond to, or develop serious side effects on clozapine should be treated individually.

The TIPS program further specifies how medication should be used after the acute phase is over. When the psychotic symptoms remit, the patient continues on the same drug into the maintenance treatment phase. The duration of maintenance treatment is dependent on the patient's disorder.

Schizophrenia: The dosage should be kept at the same level for three months after symptom remission. Patients that respond to the minimum effective dosage (perfenazin 8 mgs, risperidone 1 mg, olanzapine 5 mgs) should continue without changes of dosage in the follow-up period. For other patients the dosage may be gradually reduced to half the dosage of the acute phase but not lower than minimum effective dosage after three months of stabilization. Recommended length of maintenance treatment after first episode is minimum 2 years and maximum 5years. Final recommendations are made at the one-year follow-up. Only patients in the subgroup "good prognostic features", with a rapid

response to medication and absence of any negative or positive symptoms in the follow-up period (including the absence of minor relapses with PANSS scorings of 3) are given the option of a planned stop of medication after the one-year follow-up. Patients with disorders that evolve into schizophrenia are treated as patients with schizophrenia.

Schizoaffective disorder, delusional disorder or psychosis NOS: Maintenance treatment as for schizophrenia or schizophreniform disorder, dependent on the length of the psychotic episode as evaluated at the one-year follow-up.

Brief Psychotic Disorder: The dosage should be gradually reduced to one-half of the maximum dosage but not lower than the minimum effective dosage and duration of low-dose maintenance treatment one year, terminated with a gradual tapering after the diagnosis of brief psychosis is confirmed at the one-year follow-up.

Patients with affective disorders: Patients with three or more bipolar episodes, or with two episodes in one year are recommended maintenance treatment with mood-stabilizing agents. Patients that relapse after discontinuation of maintenance treatment should start with the same drug that they responded favorably to during their first psychotic episode (be aware of very rapid relapses after discontinuation of clozapine). Patients that relapse after reductions in maintenance dosages should continue with the same drug in higher dosages. It should be considered that a possible problem is compliance and this should be tested. Repeatedly noncompliant patients should be treated individually.

Family Work:

The third area of treatment that the TIPS project stresses is *family work*. The family work is based on extensive studies and long-lasting international experience of what could be of good help to the family. Few studies of family intervention in schizophrenia have included the families of only first episode patients; earlier studies have been with patients whom already have had a protracted course of illness. A positive attitude is shared among family, patients and clinicians. Studies have shown that treatment programs for psychotic patients that include family work as a part of the treatment, give good results regarding relapse and re-hospitalization.^{3[3]} Family work is referred to as psycho-educational work. This means procurement of knowledge and advice on how to deal with the illness. The families are included as important resource persons in the treatment of the patient. They receive help and education in applying the knowledge in dealing with the daily life with the patient in a better way.

The psychoeducative family work takes place in a group with four other families. The goal is to achieve better coping with the illness and the strain, which follows. The psychoeducative multi-family model is the model TIPS applies. This combines the most effective treatment elements. The multi-family group usually will last for two years. This model contributes to families and patients making use of both the health services and each other to cope with problems in a better way. The model also contributes to reducing myths, enhancing the participants' social network and allowing families to benefit from each other's experiences. This leads to better coping for both patient and family. The meetings concentrate on solving problems that arise in the daily company between patient and relatives. Through extending the network around each family through multi-family groups, a number

^{3[3]} Please see: McFarlane, W.R., Lukins, E., Link, B., Dushay, R., Deakins, S.A., Newmark, M., Dunne, E.J., Horen, B. and Toren, J. 1995. "Multiple-family Groups and Psychoeducation in the Treatment of Schizophrenia." *Archives of General Psychiatry*, 52: 679-687.

of additional effects are obtained compared to offering families help individually. Guilt and feeling of shame connected to the illness are reduced. In the groups the participants are also given the opportunity to benefit from others' experiences, and the group offers a community. The treatment effect of the family education is estimated by measuring the expressed emotion at the start and conclusion of the groups. After one and two years in the group, both patients and relatives are asked if they were satisfied with the arrangement. In this project, family is defined as parents, stable and close stepparents, spouse, stable and close live-in-partner, children over 18 years and siblings over 18 years. If siblings are under 18 years of age, they have to be considered individually, and may be invited to some meetings.

Preliminary Outcomes:

The first finding is in relation to the diagnostic stability. Simonsen and colleagues (2001: 277) had a strong interest in investigating the how brief psychosis, schizophreniform disorder, and schizophrenia may evolve. In order to do so, they were curious to study if initial diagnosis at entrance into TIPS would remain the same or change or the course of treatment. True to their hypothesis, most diagnoses did stay the same except a large number of individuals with schizophreniform disorder who in the course of one year met the criteria for schizophrenia. The importance of this finding is that this population already had longer DUPs and low premorbid adjustment scores, thus illustrating that early intervention strategies could not be as effective on individuals who were not detected and effectively treated promptly.

An additional area where preliminary results are available is in an examination of the stability of representative cognitive functions in a group of patients with first-episode schizophrenia spectrum disorders (Rund et al., 2001). A battery of eight different neuropsychological tasks, ranging from verbal learning to backward masking, was given at baseline and after one year of treatment. The only significant improvement was among schizoaffective patients. This is comparable to the majority of research in the field that argues that cognitive deficits are in place by the onset of the disorder and change very little thereafter. Despite this, less than half of the individuals who entered the TIPS develop full-blown schizophrenia in the course of one year. Multiple other disorders that reflect symptoms of early psychosis are present, such as schizoaffective disorder, mood disorders with psychotic symptoms and brief psychosis. Even though individuals with schizophrenia do not illustrate better cognitive functioning after one year does not mean that these individuals cannot live stably in the community or experience a higher quality of life.

Unfortunately at this time, researchers with the TIPS project have not yet evaluated the effectiveness of the family work, psychotherapy, or medication compliance in relation to reduced DUP. They have established one finding in this area having to do with compliancy with treatment in general, meaning compliancy with supportive therapy, medication, psychosocial rehabilitation and family work. Thus far, the compliancy rate of the Rogaland or experimental sample after one year is 85%. Researchers argue that the reason for such high compliancy rates is due to all the different elements of the program – creating a treatment contract, building and creating a relationship on trust, approaching the patient through psychotherapy not just the illness, and strengthening parental and patient knowledge through psychoeducation.

2. Early Psychosis Prevention and Intervention Center – EPPIC

Similar to the way EPPIC programs pioneered the design of programs that implemented early intervention strategies and tactics, EPPIC uses different and innovative strategies to treat first-episode psychosis as well. Due to the clinic's long life, EPPIC, and programs that have developed out of the original clinic that opened in 1992, demonstrate a multiplicity of methods. In addition, some programs have been active long enough to be evaluated for effectiveness, at least in the short-term. We begin by examining treatment tactics used within the first EPPIC sample discussed previously and investigate the effectiveness of the program as well as the relationship between shorter DUP and improved outcome. Then we will examine other treatment models that researchers may not have been able to completely evaluate yet but nevertheless are important to discuss in order to completely understand the depth of various different strategies available. In doing so, we can investigate which practices are associated with the best outcomes.

As it has been mentioned, coping with stress constitutes a large portion of the emotional strain faced by individuals who are undergoing first-episode psychosis. As a result, it only makes sense that researchers and program design specialists have gone to great lengths to test which elements of treatment are the most effective in promoting recovery. Just as clinicians hypothesized, coping with stress is more and more difficult for patients as DUP lengthens. A recent study by MacDonald and colleagues (1998) found that first-episode patients cope much better with the stress of the onset of their illness if they feel that others are there to support them. Coping mechanisms are also more effective and problem solving oriented if the individual perceives he or she is capable of having choices in the course of their life and psychotic condition (MacDonald et al., 1998). Unfortunately studies have also shown that the longer DUP is, the more likely the individual is to withdraw from his or her social support system and this individual will also utilize problem solving coping mechanisms less and less. Thus, it is important that intervention takes place at the beginning of this process and proper tools are administered to ward off potential procedures which could increase the possibility of relapse. EPPIC has attempted to achieve this goal.

Case Management:

The treatment model used for the post-EPPIC sample that received early intervention efforts centered on the outpatient case management system. This sample had an average DUP of 158.9 days (about five and a half months). This system of treatment utilizes a therapist case manager model in which all aspects of treatment go through one person, the case manager. EPPIC researchers argue that this model safeguards the continuity of care. Full-time case managers carry individual caseloads of approximately 40 patients, and each patient also sees a psychiatrist regularly (McGorry et al., 1996). The features of case management include: assessment of client needs, arrangement of a comprehensive service plan to meet these needs, arrangement of service delivery, monitoring and assessing services, and evaluation and follow-up. Most patients voluntarily dropped out of therapy between 2-4 years, suggesting that help was needed in recovering from a mental disorder, rather than assistance in dealing with persisting mental illness (Edwards et al., 1999).

Using this model of treatment, the EPPIC program stresses the importance of the clinician-patient relationship; it is the center in which all treatment revolves. The therapist/case manager works to completely listen to the experience that the patient is having. Case managers meet with the

client/patient at the very latest two days after admission. The most important quality of the case manager is his or her accessibility, to both the patient and the family. The second is flexibility and the third is the maintenance of optimism. Overall the case manager promotes the message of recovery and that the patient will be involved in the recovery process. Lastly the family's suggestions are heard and incorporated with the approval of the patient. The more a case manager gets to know a patient, the more he or she can understand how to design the best treatment program.

The EPPIC case management system outlines what tasks should be undergone in each phase of disorder and its subsequent treatment. They argue that the use of phases is effective because it illustrates a line of progress and validates the possibility of recovery. In general, the tasks of a case manager include: minimizing the duration of active psychosis, preventing the toxic effects of medication using low-dose drug strategies, avoiding inpatient admission where possible, humanizing admission when it is necessary, and actively seeking and treating secondary problems.

- ❖ *Acute Phase:* During this phase tasks include engaging in and developing a working therapeutic relationship with the patient and his or her family, conducting a comprehensive assessment of the individual and his family, provide symptomatic relief and containment. Medication forms a central place for management. During this initial stage for first episode patients, coming to an agreement about the methods for dealing with the situation may not be easy because the patient and case manager may not see things the same way and forging a relationship based on trust can take time. It is also important at this point for the case manager to help the person feel as if they should not just rush into a return to normal activities although patients are encouraged to do so gradually.
- ❖ *Early Recovery Phase:* During this phase, case managers monitor progress, better understand the patient's illness, and facilitate recovery. This is a time when premorbid issues are examined, such as was the patient depressed before psychotic symptoms emerged. In the EPPIC sample, case managers made sure that young subjects did not associate their own identity with that of psychosis. *It was stressed that these individuals are something else besides that experience.* The case manager worked to help define this difference. This is also a time for psycho-education for the family and the patient. Information about medications, psychosis, and recognition of early warning signs to prevent relapse is taught.
- ❖ *Late Recovery Phase:* Here, most patients recover at this point but 70% are projected to relapse within 2-3 years and another 50% are projected to stop taking their medication within ten months (Edwards et al., 1999). Therefore, case managers spend an extensive amount of time on discharge planning. Case managers stress that symptoms that pertain to relapse are difficult to see and pick up on and that both the patient and family members will get better at doing so.

Another aspect of the EPPIC program's treatment is that once the indications for inpatient treatment are no longer met, the individual is quickly placed into outpatient treatment and makes use of the mobile treatment services. The program began with 21 inpatient beds but because of the use of the mobile treatment unit, the unit was reduced to only 14 beds. Using a mobile treatment unit enabled those patients with adequate family support and low-risk of self-harm or violence to avoid the disruption or trauma of hospitalization. The mobile treatment unit works in conjunction with the DUP reducing strategy discussed earlier - the Early Psychosis Assessment and Community Treatment Team (EPACT). The mobile treatment unit has reduced the average number of inpatient treatment days from 25 average days in 1992 to an average of only 12 days in 1996 (McGorry et al., 1996).

Day Programming:

Once the first episode patient begins to enter the recovery phase, he or she begins day programming that consists of a number of different classes and foci. The patient is expected to make the experience individual – meaning he or she chooses what subjects to participate in to foster recovery. The message of recovery is the center of the day program and is seen as a way to mold treatment that reflects an active belief that patients can live meaningful, satisfying, and hopeful lives even with the limits of illness. Recovery functions to reactivate the sense of self many patients feel they have lost when they are first treated. In order to foster recovery, EPPIC’s day program emphasizes the therapeutic value of group-based day treatment. In addition, participants collaborate with clinicians and family members (when applicable) to create his or her own program derived directly from the participant’s stated needs and goals. This functions to ensure a meaningful and empowering experience. The goals of the EPPIC day program are summarized as follows:

- ❖ Promote recovery from a psychotic episode
- ❖ Facilitate recovery of previous competencies and the development of new skills
- ❖ Prevent, delay, or reduce the severity of relapse
- ❖ Facilitate maintenance of community connections and foster reintegration into the community
- ❖ Minimize disruption and conflict within the individual’s social network
- ❖ Assist adjustment to, and working through, developmental stages
- ❖ Enhance independent functioning
- ❖ Maximize life satisfaction
- ❖ Minimize effects of stigma

Attendance in the day program begins toward the end of the acute phase of illness and participants still continue with treatment through the organization of the case manager. Individuals who are experiencing marked negative symptoms or have a high level of social anxiety are assisted by their case managers during the self-referral process, but only if the individual has expressed an interest in the day program. Hence, EPPIC consumers are not required to complete day programming but case managers explain that this activity is extremely helpful in recovery. The structure consists of “focus groups” where participants, based on their choice, are placed in classes that reflect individual recovery goals or interests. The “classes” are on a ten- week schedule and model the structure of schools and universities. This likens the day program to a learning institution where valuable skills are acquired. The program typically includes fifty patients at one time and classes are conducted in a group setting. All involvement is seen as time-limited, with participants setting goals that are particularly pertinent to young adults recovering from first-episode psychosis. The variety of classes that young people have to choose from is divided into five broad categories and offers a wide variety of activities to get involved with.

The five categories include:

- ❖ *Social Recreation*: Provides enjoyable social activities to maintain and develop social skills and networks, and to encourage access to community activities and resources.

- ❖ *Vocational:* Minimizes the loss of work and study skills, encouraging the development of prevocational skills and establishing realistic vocational plans based on knowledge of the available options and recognition of personal interests, skills, and values.
- ❖ *Creative Expression:* Utilizes a range of mediums (music, writing, dance, and art) through which participants can express their creativity and enhance their self-esteem. As a result of involvement there is an increase in the motivation to be active.
- ❖ *Health Promotion:* Focuses on the broad issues of physical and mental health with a particular emphasis on those issues pertinent to the age of the population such as sexuality, physical fitness and nutrition. In addition, the participants learn important stress management skills and these skills are considered vital to the achievement of recovery and the maintenance of “wellness”.
- ❖ *Personal Skills Development:* Develops a range of skills and strategies that enhance the person’s ability to integrate the experience of psychosis, to cope with everyday life and to achieve optimum potential. In order to do this psychoeducation includes a discussion on topics such as stigma, substance abuse, anxiety, depression, relapse prevention, and social support. There is also a peer support component as well as role-playing sessions.

Family Work:

Family work is also considered a critical component in the treatment of patients within the EPPIC program. This is particularly important because on average, 63% of EPPIC subjects live with their parents (Gleeson et al., 1999). The program leaders at EPPIC stress that family support is essential because if it can be successful then it can reduce secondary morbidity such as PTSD and substance abuse (Gleeson et al., 1999). The EPPIC program argues that family intervention should take place in the context of four stages.

- ❖ *Stage One - Perceptions and Explanations:* The family may come into the situation feeling guilty, confused and full of anxiety. The subtle nature of prodromal symptoms may also make the situation confusing and parents or caregivers are unsure when to get the person into treatment. Therefore, families with high-risk adolescents need to be ready to access information about the early warning signs with accessible assessment services for early detection.
- ❖ *Stage Two: After Detection - Grief and Stress:* The family is greeted with a general diagnosis and antidotal evidence suggests that families are at risk themselves for stress disorders or depressive symptoms. Families must be made aware that this is a high stress period which may include hospitalization and decisions about treatment that are difficult. In short, this results in trauma for the family. Families themselves should be obtaining psychiatric services. If parents don’t get to vent their concerns to a case manager or treating physician, psychoeducational sessions are less effective and the engagement of the family is less likely to work (Gleeson et al., 1999). Evidence shows that at this time the hardest part for the family is the ability to process all the information they need to know about the illness and deal with all the grief at the same time. The EPPIC program therefore wants the place that the information comes from to be a supportive environment. Clinicians at EPPIC further recognize that family members don’t all have the same needs or deal with the situation in the same way.
- ❖ *Stage 3: Toward Recovery: Coping, Competence, and Adaptive Functioning:* Here the family is a partner in making recovery work. The illness may be more severe or more treatment resistant than average and in each case the family has different needs that are individually addressed. Individual situations leave them at different points of more or less hopelessness, increasing the risk of depression.

- ❖ *Stage 4: First Relapse and Prolonged Recovery:* Studies have shown that recovery requires the support of loved ones. Expressed emotion (EE) studies show that family's with high measures of expressing emotional over-involvement or criticism place their loved one at risk of relapse at a rate of 50% compared to only 21% in families that have low measures of expressed emotion or (EE) (Kuipers and Raune, 2000). Basically the family's well-being and their ability to deal with the stress and change of having a family member with a mental illness plays a huge role in the patient's ability to not relapse – hence on-going and intensive support is necessary. The EPPIC program further stresses that this is particularly important in first-episode patients because they are young adults whose lives have been disrupted and they need assistance in both getting back on track and staying there.

EPPIC puts these strategies into a working plan, assuming that families can effectively work together with clients and clinicians – *together as a team to have the best treatment available*. EPPIC case managers are also flexible in order to meet the needs of the family. Family work is stretched across the scope of EPPIC with special consultant psychiatrist and designated family workers. The system focuses on the staff being involved with the family and this is in contrast to the exclusion of the family during inpatient situations. Everything is packaged simply and aims to be user-friendly for family members who might feel threatened and uncertain. There are videos and “package materials”. Families can be interviewed together and separately in a forum where they can ask questions and get answers. Clinicians wish to assess how much the family knows about psychosis, the impact of psychosis on family members, concurrent stressors, family patterns of communication and problem solving, and family coping sources. Specific help is given for those in specific situations – violence, extreme levels of distress, those with language barriers and the added stress.

Recently, EPPIC has tried to structure family psychoeducation programs to be more culturally sensitive. For example, some sessions have been conducted in native languages, such as with a recent special session conducted in Greek. Clinicians feel that the session was particularly successful because it brought together families with similar cultural issues surrounding coping mechanisms. Sessions, such as this one, take place in an informal setting so that family members feel comfortable sharing and opening up to others who may have similar concerns or feelings. The sessions are also led by at least one clinician who is of the same cultural heritage.

Psychoeducation:

Psychoeducation is provided in both a group setting as well as families individually with their clinician. The education process begins at the first point of contact. Most families are eager for a diagnosis and explanation. Clinicians are careful to explain the risk of a premature diagnosis and the need for a thorough organic screening. Relatives are informed that “first-episode psychosis” is not a condition that they have caused. Family members may share many of the negative stereotypes about schizophrenia-like disorders – just like the general public. At this early stage, diagnosis, treatment and short-term recovery are the focus of the family's concerns. They may also be working to assist their loved one in a way so that they can stay home during the acute phase. Families also learn how psychoses can confusion and make a patient delusional, which in turn can lead to conflict with the family. Awareness of this possibility helps to minimize the extent of misinterpretation. Clinicians at EPPIC use the stress-vulnerability model to explain “why” psychosis onset has occurred, emphasizing a broad psychosocial approach. The family is usually naïve to the mental health system and their views

are not yet tainted. If there is a history of mental illness in the family, their experience may be averse but these negative attitudes can be countered by education and an alliance between the client, family, and clinician.

Cognitively Oriented Psychotherapy for Psychosis (COPE):

This intervention tactic aims to help each person adapt to the onset of the psychotic illness and its effects on his or her self-concept, identity development, and self-esteem (McGorry et al., 1996). In essence, COPE's function is to work against secondary morbidity. COPE is not designed to control positive symptoms such as delusions or hallucinations. Currently COPE is being evaluated for effectiveness at EPPIC. Currently we can investigate the tactics used in the COPE as they have added to the outcome for EPPIC subjects that will be discussed shortly.

Keeping in toe with EPPIC's philosophy about first-episode treatment truly as a means of recovery, COPE works to help first-episode patients learn how to handle their illness. The COPE team consists of 4 psychologists and 2 psychiatrists.

- ❖ *Assessment:* This is the initial phase of COPE. The symptoms are charted and observed for changes. There is also a detailed discussion about the disorder, its dysfunction and florid psychotic symptoms. The patient should also actively be monitoring his or her own symptoms or moods using a journal or diary. The therapist should note changes or deterioration in the elements of the patient's various life domains – social, intimate, occupational, study, leisure, and so on, before, during, and after the episode, to determine: length of the total period of “unwellness”, level and duration of highest and best period of functioning, and impact of psychosis on functioning and developmental tasks (Jackson et al., 2000).
- ❖ *Alliance:* Here the doctor and patient forge a trusting and open relationship. This is essential to good patient outcome. COPE is designed to adapt to a target population that is mostly young and inexperienced. COPE therapists have therefore found that humor works to support the strengthening of the therapist-patient relationship.
- ❖ *Adaptation:* Here the therapist assesses the person's experience of psychosis and identifies distortions in his or her thinking. Much of this has to do with ways that the person sees his or her self-worth, capacity to adapt, and life goals. In first stage of this process the therapist instills hope, arguing that patients have the power to improve their own self-worth and control their outcome. Afterward, the therapist challenges the patient's distorted stereotypes – especially those brought on by psychosis itself. The next step involves taking action. This can involve small goals that the patient focuses on in order to obtain a reward such as returning to work. Lastly, the therapist conducts a comprehensive review of the person's progress that illustrates how far the patient has come and this enhances self-esteem.

The *fourth phase* is vital because it addresses *secondary morbidity*, which includes co-occurring conditions that must be dealt with in addition to the psychosis. At this stage clinicians must work hard to prevent the onset of secondary disorders as methods of coping with psychosis such as alcohol and drug abuse. In comparison to chronically ill schizophrenics, first-episode patients have a secondary morbidity level with wide ranges. For example, rates reported for specific secondary conditions such as depression range from 7% to 75% (Bermanzohn and Siris, 1992). The prevalence rate of alcohol or drug abuse in the chronic schizophrenia population is suggested to be as high as 60% (Bland et al.,

1987). Some researchers argue that psychological distress is a precursor to a psychotic episode such as PTSD or anxiety disorders but most researchers argue that only large-scale epidemiological studies will be able to produce convincing evidence of this theory (Jackson et al., 1999).

Co-morbid factors that are prevalent in first-episode cases that are targeted for treatment through COPE are typically depression and social phobia. Depression and anxiety is characteristically related to just finding out about their illness. They have lost some form of status or hope for the future. Some researchers feel that psychotic admits to the hospital can be traumatized simply through the experience of admission (McGorry et al., 1991). The entire experience, particularly if it is forced treatment, can trigger nightmares and the experience is not fully addressed by therapists and doctors – COPE makes sure that it is. Younger patients particularly struggle to find their identities even without the added stress of a mental disorder. COPE is built on the fact that the illness is going to impact the person's sense of self (Jackson et al., 2000). First episode patients must go through stigma, a reduction of life opportunities and a demoralizing loss of self-esteem. In order to treat these conditions – work should be cognitive and behavioral which COPE accomplishes through a step-by-step process.

In addition to all of the following forms of treatment it is standard practice at the EPPIC clinic to use low-dose neuroleptics during the acute phase. For disturbed behavior, benzodiazepines and lithium are used.

Treatment Outcome:

As mentioned previously, EPPIC's tactics functioned to reduce DUP. At this point the report will examine if the reduced DUP sample also resulted in better treatment outcome. If we begin by just examining the difference in length of costly hospital stays it is evident that shorter DUP is cost effective. The pre-EPPIC and post-EPPIC samples were first evaluated on this level after 12 months of the EPPIC program being up and running. Pre-EPPIC patients required more hospitalizations in their first twelve months with an admission rate of 3 or more times per year for 17.6% of the sample when the post-EPPIC sample's rate was only 7.8% (McGorry et al., 1996). The duration of the initial admission was significantly shorter in the post-EPPIC sample with a mean length of 39.5 days versus the pre-EPPIC sample's length of stay at 54.1 days. Within the end of three months of treatment, the post-EPPIC sample had reached a remission rate of 63% (Power et al., 1998) Reductions of this magnitude represent significant potential cost savings. In addition, total inpatient days were also reduced by half (61.6 to 31.3) in the post-EPPIC or reduced DUP sample (McGorry et al., 1996). McGorry notes that this might not be due to reduced DUP but the outpatient case management system that was able to effectively treat patients in their homes.

When investigating the effectiveness of treatment, another important area to investigate is adherence to treatment. In order to assess this, EPPIC researchers use a number of sources, namely the subject, the case manager, and a relative or informant. Overall, McGorry and fellow researchers found that adherence was up in the post-EPPIC sample. The post-EPPIC sample was able to remain stable on less medication than the sample with longer DUP. For example, after 12 months, the pre-EPPIC subjects on neuroleptics (chlorpromazine) took an average dose of 295.6 when the post-EPPIC subjects took an average of 143.3 (McGorry et al., 1996). The neuroleptic dosages were less in both the acute and post-acute phases. The data reveals a significantly smaller amount of subjects taking neuroleptics because fewer of the post-EPPIC sample met the criteria for schizophrenia. McGorry also feels that another reason why so many subjects did not need medication after twelve months is because many were young and had positive attitudes that they would recover if they underwent treatment (McGorry et al., 1996).

In terms of adhering to medication, McGorry notes that there are numerous points to keep in mind when thinking about effective medication compliance. First, many young people want to stay in the treatment program but do not want to have to take medication. Some threaten that if they have too they will leave or drop out of the program. McGorry and fellow EPPIC clinicians feel that during the acute phase, medication adherence should be enforced but because the clinic feels strongly about treatment being individualized and oriented towards prevention and recovery, clinicians allow subjects that are not diagnosed with schizophrenia to refuse medication (McGorry et al., 1996). If this occurs in a subject who has been diagnosed with schizophrenia or schizophreniform disorder, the subject stays on neuroleptics for at least 12 months. If positive symptoms persist, they are very reluctant to allow cessation of medication. (Unfortunately there is no percentage breakdown on compliance at this time but this information will be available in May of 2001).

Another measure of treatment effectiveness is symptomatic outcome. When researchers measured the difference in negative symptoms they found an interesting pattern. For pre-EPPIC subjects, negative symptoms were not as strong as in the post-EPPIC sample with a BPRS measure at entry ranging from 25.7 to 27.5 (McGorry et al., 1996). Within three months of treatment, 80% of post-EPPIC subjects had a 20% or greater reduction in the BPRS psychotic subscale score (Power et al., 1998). After six months of treatment the post-EPPIC sample's BPRS measure dropped to 8.1 when the pre-EPPIC sample dropped only to 11.2. Researchers admitted they are not certain why this is the outcome. McGorry states that assessment measurements confirm what Baldessarini et al (1995) argued - that is, good remission and low subsequent levels of positive symptoms are possible with lower doses of neuroleptics. In addition to treatment with low dose neuroleptics, the post-EPPIC sample underwent intensive psychosocial management that was also associated with lower sustained levels of negative symptoms during the 12-month follow-up period. Unfortunately at this time, researchers remain unable to state whether the reduction involves "primary" or "secondary" negative symptoms. The EPPIC clinic further conducted measures of post-traumatic stress disorder. Using the structured interview for PTSD, the post-EPPIC sample had a mean rate of only 6.7 in comparison to the pre-EPPIC groups' mean rate of 10.6 (McGorry et al., 1996).

Outcome in terms of functioning further displayed improvements for the post-EPPIC sample. In terms of the Quality of Life Scale (QLS), scores for the post-EPPIC sample were significantly higher, between 23 to 25% (McGorry et al., 1996). Other measures demonstrate that the treatment that EPPIC offered worked well increase functioning. For example, the mean SANS after 12 months was 27.8 for the pre-EPPIC sample and only 18.8 for the post-EPPIC sample (McGorry et al., 1996). The researchers in this particular case also offered one unique measure of their own. A consumer survey revealed that post-EPPIC patients were more content with their treatment, especially the assistance EPPIC grants to building strong family relationships. The survey also noted that more emphasis should be on the continuity of care.

Two recent studies at EPPIC also offer further evidence of a positive correlation between short DUP and improved outcome. First, deterioration of cognitive functioning in schizophrenia was assessed with regard to DUP. Using the subscales of the WAIS-R, Amminger and colleagues (2001) assessed cognitive deterioration once stabilization occurred after the first psychotic episode. They found that longer DUP, male gender, higher premorbid IQ and younger age at admission were significant predictors of cognitive dysfunction. A second study by Gleeson and colleagues (2001) illustrated that despite the negative impact of long DUP on treatment outcomes, secondary morbidity might be just as harmful to treatment goals because it is such a strong predictor of relapse. In this particular examination of first-episode patients who had reached remission of positive symptoms, cannabis users were far more likely to return to experiencing positive symptoms. Both research

findings support what this report has echoed repeatedly – *an effective early intervention program reduces DUP and then offers assertive case management through community based treatment in order to prevent relapse, which greatly increases if co-occurring disorders, such as substance abuse and depression, are present.*

Assessment of Day Programming:

The effectiveness of the program was measured by evaluating a variety of assessment means among the EPPIC participants who had participated in the day program in comparison to those who did not. To control for extraneous variables, sample subjects were selected because there was no significant difference between the two groups among a range of variables such as age, sex, age of onset, distribution of diagnoses, length of DUP, level of education, marital status, or level of symptomatology at entry to EPPIC. Researchers found that individuals who entered the day programming option consisted of a sector of the EPPIC patient population that exhibited poorer functioning prior to the development of their illness. At time of entry, the day program group did show both a slightly longer mean DUP as well as a trend of having a higher level of negative symptoms (Francey et al., 1999). When the two groups were assessed after six months in the EPPIC program, the group in day programming reflected better symptom assessments on all measures, including the QLS, SANS, and PANS. Analyzing preliminary results, Francey et al. (1999) argue, “that the role of a group-based psychosocial program in helping clients to contain and limit the negative effects of a psychotic episode or to develop a ‘holding pattern’ in which deterioration is prevented, may be significant.”

Assessment of COPE:

A recent evaluation of the COPE program conducted by Jackson and colleagues (1998) demonstrates that psychosocial treatment may be responsible for a sizeable fraction of improved treatment outcomes among the post-EPPIC sample. Researchers at EPPIC compared three groups of patients – those who were offered COPE and accepted, those who were offered COPE but refused, and those who were treated before EPPIC programs were offered. Comparing these three groups allowed researchers to obtain a measure of COPE’s treatment effect. In order to control extraneously variables, measures were taken to ensure that subjects within the three samples contained similar socio-demographic and diagnostic characteristics. Those measured were on an outpatient status at the time the 12-month study began and thus severe positive symptoms had mostly remised. If the individual was receiving COPE, one forty-minute session was completed each week. Groups were measured before treatment was applied to the COPE group and researchers found no significant differences on the I/SO, Explanatory Model scale, SANS, or BPRS measures (Jackson et al., 1998).

The most significant difference found was COPE’s ability to reduce I/SO scores from an average of 3.42 to 2.29 (Jackson et al., 1998). A further important findings was that the COPE population had slightly higher scores on the two measures of secondary morbidity when evaluated during pre-treatment yet when evaluated at post-treatment there was no increase in these measures when both other groups had an increase in these measures. *Thus, COPE may not have been able to significantly reduce these measures, but COPE was able to contain secondary morbidity among those who*

participated unlike non-participants whose measures of secondary morbidity increased (Jackson et al., 1998). Generally, results suggest that psychotherapeutic interventions provide further changes in the individuals' attitudes towards receiving treatment in addition to improved outcome through mildly reducing negative symptoms.

In sum, EPPIC researchers lead by Dr. Patrick McGorry have shared preliminary data that suggests that their treatment plan which includes medication, psychoeducation for patients and families, and intensive psychosocial activity such as day programming and COPE can effectively work to increase the quality of life, decrease the amount of disability, and be cost-effective. In addition, this treatment greatly enhanced benefits gained from a sample with shorter DUP. From the EPPIC example it seems a combination of reduced DUP and intensive community based treatment equals an opportunity to offer first-episode patients the possibility of recovery.

Recently EPPIC researchers re-examined the results of this prospective study in order to measure if effective treatment has the ability to mitigate the effect of a prolonged DUP on outcome. This recent study goes one step further to investigate if DUP is an independent variable that causes poor outcome. In order to examine this, researchers at EPPIC used the Quality of Life Scale (QLS)(Heinrichs et al., 1984) to make assessments after twelve months of treatment in both the pre-EPPIC and post-EPPIC samples. When researchers began to examine the role of DUP and the role of treatment, the first obstacle they came across was the severely skewed distribution of DUP. This was particularly evident in the pre-EPPIC sample. What researchers noticed when carefully looking at the data, is that when median values were examined the length of DUP in the post-EPPIC group was actually longer than the pre-EPPIC group. This study therefore re-examined the earlier finding that suggested that the efforts made by EPPIC, such as the mobile assessment team, were effective in reducing DUP. If you recall mean DUP did decrease for the post-EPPIC sample but why it did so was because there were far fewer extremely long DUPs as in the pre-EPPIC sample. Therefore the mobile assessment unit can still be viewed as successful even though it did not reduce the median DUP because it did effectively reach the "hard-to-reach" persons, who had been suffering from psychosis the longest (Carbone et al., 1999). In addition the median DUP not being reduced in the post-EPPIC sample also suggests that more cases were brought in that probably would have been cases of very long DUP but with outreach strategies they were treated earlier.

Another important point was that if median DUP was actually longer in the post-EPPIC sample did this affect their QLS scores? In order to answer this question properly, researchers analyzed QLS scores in conjunction with the subject's length of DUP and whether or not the subject was offered the assertive and holistic treatment model embodied in the EPPIC program. The results show that short (less than 4 weeks) DUP and the EPPIC treatment model created the highest QLS scores (Carbone et al., 1999). But in the pre-EPPIC sample the short DUP group also had high QLS scores. In fact there was not a statistical difference between the outcomes of the two groups. In addition, results demonstrated that if DUP was longer than 6months, QLS scores were significantly lower in both the post-EPPIC sample (mean score ranges from 67.1 to 57.5) and in the pre-EPPIC sample (mean scores ranges from 64.6 to 58.6). The group that benefited the most from the treatment the EPPIC program offered was in the less than 6 month of DUP category. For these subjects, QLS scores averaged 12 points above the pre-EPPIC subjects (Carbone et al, 1999). Overall, this research demonstrates that shortening DUP to a point of less than 6 months in conjunction with holistic treatment outcome is best. *If the proper treatment is not offered in this early stage, it is obvious that positive outcome levels are not as high. The EPPIC researchers argue that this treatment should consist of a low-dose neuroleptic strategy combined with more intensive and specialized phase-specific psychosocial interventions.*

If there was not any improvement in the group of subjects with DUPs longer than 6 months it is also possible that new directions in treatment should be sought, such as cognitive therapy or clozapine. The researchers and mental health professionals at the EPPIC clinic have attempted to tackle the complicated cases in which individuals have positive symptoms that are treatment resistant. In most early intervention programs, such as EPPIC, 15% to 20% of individuals are treatment resistant and almost always these are individuals with a diagnosis of either schizophrenia, schizophreniform disorder, or schizo-affective disorder (Edwards et al., 1999). TREAT (treatment resistance early assessment team) was developed to focus on first-episode patients with enduring symptoms. As McGorry et al. (1999) argues, this is particularly important because if positive symptoms persist during treatment then the entire purpose of reducing DUP is pointless – the individual is still enduring psychosis that could possibly be toxic to the brain. TREAT comprises of specialty trained senior clinicians within the EPPIC program. If an EPPIC patient's positive symptoms do not remiss after three months of treatment, the patient is placed under the care of TREAT and encouraged to take clozapine (Edwards et al., 1999). Individuals with continuing positive symptoms may then undergo a further step, STOPP (systematic targeting of prolonged positive symptoms). This is a form of psychological therapy that draws on numerous techniques such as behavioral and cognitive approaches in order to get positive symptoms to cease (Edwards et al., 1999). The argument at EPPIC is that individuals suffering from persistent positive symptoms need more aggressive psychological treatment because they have shown in measurements to have the highest rates of damaged self-esteem, depression, and shame. STOPP builds upon the COPE model and its four phases. In addition, STOPP emphasizes building an identity that is separate from the psychosis and directly attacks stigma.

3. Treatment Plans and Results from EPPIC Sister Programs:

Alfred Community Service for Early Psychosis Treatment (ACSEPT) – This program is part of an expansion of programs that follow EPPIC principles and hope to tap into some of EPPIC's success in early treatment effectiveness. ACSEPT grew out of a pilot program that started in 1997 in Inner South East and Middle South Melbourne. Together the area has an estimated population of 148,000 persons under the age of 26.

Within Australian mental health services the clinic is unique because it is housed in a youth and adolescent mental health agency with the target population being transitional aged youths (16-26 years of age). The treatment provided is also unique because ACSEPT does not provide their own system of day programming but uses existing services in the community. The advantages of this system include increasing diversity, normalizing seeking treatment for mental problems for individuals in the community, relative freedom from the stigma of receiving mental health services, and flexibility to use and chose services necessary. Using this structure is an attempt to better co-ordinate the work in early psychosis treatment and recovery of inpatient services, crisis assessment, and continuing care teams for both adults and adolescents with a larger array of community health services and disability support services. In this way there is a network of services and support available that consist of general practitioners, youth and recreation services and accommodation services.

In order to properly coordinate services with available community programs, the ACSEPT project has six coordinators based in the child and adolescent agency who spent half their time doing clinical work and the other half is spent working as a liaison with the adult psychiatric and disability support services that make up the network of early psychosis services. ACSEPT has five goals in terms of bettering treatment and early intervention. These goals include: professional training and education,

community development, family information and support, educational prevocational and disability support services.

At this early date there are unfortunately no statistics on the success of this program. Despite this, *it should be noted that a system that integrates community-based treatment for transitional aged youth has been implemented in Australia that emphasizes using other community service providers to help detect and treat mental disorders. Reasons for doing so that are sighted include avoiding stigmatizing the young person and strengthening the connection between the importance of treating the mind as well as the body.* Notes thus far stress that the program is most successful when it is able to successfully coordinate with other available service providers. Doing this requires individuals devoted to just this project/clinic from both the clinic itself as well as within other service agencies and providers. For example, if disability support services is to be a provider than at least one individual within that service must devote his or her manpower solely to coordinating with ACSEPT and providing clinic users services.

The South Brisbane Child and Youth Mental Health Services: This treatment model is also new and born out of EPPIC but it's focus is treating children 18 years of age and younger who present signs of major mental illnesses such as psychosis, mood disorders, and eating disorders. In terms of severity the young person is assisted through inpatient, day inpatient, or outpatient treatment. All programs are centered on the philosophy of getting proper treatment early the first time and developing trust and positive experiences with mental health services so that care will be continued. Therefore like EPPIC programs, this program also is built on a recovery model, arguing that young persons need an active support system helping them through their illness. Due to this, this treatment program not only offers psychoeducation for parents but educational and support groups for siblings.

On-going research at EPPIC: Unfortunately the following research projects are only in the early stages but each appear to be very promising when complete – so we will introduce them and keep abreast on any data that might possibility be released in the future.

- ❖ *Very low-dose neuroleptics trial:* This is measuring the effectiveness of low-dose risperidone in people ages 16 to 30 who are experiencing a first non-affective psychotic episode. This tests if a daily dose of 2mg of risperidone over four weeks helps those who are otherwise non-responsive after four weeks of standard treatment. Of the non-responders, a portion of the sample starts receiving a larger dose, 4mg, or a combination of 2mg of resperidone and lithium therapy. The subjects will be evaluated after 63 days and then again in 12 months. Assessments are made at beginning, at 63 days, and after 12 months using the following scales: Royal Park Multidiagnostic Instrument for Psychosis (RPMIP), Brief Psychiatric Rating Scale(BPRS), the Scale for Assessment of Negative Symptoms(SANS), the Clinical Global Impression Scale(CGI), and the Subjective Global Impression Scale(SGI). The initial response rate to the change in treatment so far has been better than expected at 60% - 70% of the experimental group responding. Yet it is too early to note if these forms of treatment have any effective on remission.
- ❖ *Recovery Plus:* This is a randomized control trail in which clients from EPPIC who continue to experience persisting hallucinations, delusions or thought disorders after three months of treatment are invited to participate in – which includes a 12 week intervention phase. The study aims to measure the effectiveness of a specific form of cognitive-behavioral therapy or STOPP, the use of clozapine as compared to a standard antipsychotic, and the combined effective of these two treatment methods. This is a three-year project with no initial results yet.
- ❖ *Cannabis and Psychosis Project:* This project seeks to target effective intervention, management, and treatment for patients who use cannabis and suffer from a psychotic illness. The objective of

the project is to study the link between cannabis use and relapse and cannabis use and poor response to treatment. Research will be based around a randomized control trial with pre and post-test assessment and 6 month follow up. The experimental group will receive an intervention based on a cognitive-psychoeducational format across 6-10 sessions focusing on aspects of cannabis use, psychosis and the relationship between the two. It is hypothesized that relapse rates will be lower, response to treatment better, and levels of persisting symptoms lower amongst the experimental group.

- ❖ *The Delayed Project:* This project is an evaluation of the clinical and economic effectiveness of a purpose-designed Early Psychosis Detection and Treatment program. (Basically it studies the very tactics and strategies we want to know about and determines if they are effective) It will study two key strategies used to reduce treatment delays and improve client outcomes. In addition, the study wishes to uncover if one program can be designed that can create the same results in various communities. The delay project is testing this through three approaches. First, a community awareness campaign is designed and is being implemented, focusing on early intervention and detection of psychosis. Second, there is an effort by EPPIC to reduce the DUP among a group of first-episode patients over a 12-month period. Third, the rate and degree of recovery among clients who are within the catchment of the campaign are being compared to a control sample without the first two efforts (like the TIPS project). The aim is to determine whether the early detection program designed by EPPIC improves client outcome independently of the duration of untreated psychosis. The delay project compares the rate, degree of recovery and 12-month outcomes of a sample treated at EPPIC with a similar group of first episode clients being treated by a mental health service in another area. The latter service does not have early detection efforts. The study will evaluate the cost effectiveness and standard EPPIC treatment to that of the comparison generic clinical service. Preliminary data from this study might be available in May of 2001.
- ❖ *LifeSPAN:* This study aims to investigate suicide prevention strategies in early detection with youths. The aim is to find effective ways to educate clinicians about what signs to look forward in “at-risk” kids as well as what are effective therapeutic treatments. The project investigates how to bring proper identification within a system of integrated services. The hope is that research will provide strategies that demonstrate effectiveness.

4. Home-Oriented Management of Early Psychosis (HOMES) – England

This particular treatment method is not an on-going program per se but the researchers who designed and conducted the study advocate that home-based treatment is an effective alternative to hospitalization in first-episode psychosis depending on elements related to family and social support. Researchers created this program out of an already existing Adult Community Treatment team which is a mobile treatment team available 24 hours a day for the treatment and assessment of adults having psychiatric problems and prefer to have home-based management instead of hospital admission. HOMES was dedicated solely to the treatment of first-episode psychosis and sought to identify how this unique group of new patients could be treated in the comfort of their homes instead of a hospital setting. Researchers argue favorably for this system particularly with first interventions because like other researchers, (McGorry), Fitzgerald and Kulkarni (1998) believe that home-based treatment may function to get people into treatment earlier because they can avoid the stigmatizing image of a

“mental patient” as well as any other secondary effects that can arise due to a traumatic experience in the hospital.

Fitzgerald and Kulkarni (1998) were pleased with their initial findings that illustrate that home-based treatment did not reduce compliance and significantly increased QLS. For example, when researchers compared the QLS scores of the hospitalized group to the home-based treatment group, the QLS for the latter group was an average of 43.3 points higher. Research further pointed out that this is not due to the two groups having different levels of symptom severity. When the two groups were being designed, only the level of social and/or family support was the factor that determined which subjects were placed into which group. If the subject did not have a supportive environment that could be provided for home-based treatment than hospitalization was used and vice versa for subjects with a supportive environment. Researchers measured the severity of symptoms of all subjects during initial assessment. The results using the BPRS, SAPS, and the SANS all illustrated that there was no significance difference amongst the two groups in terms of symptom severity. In short, the degree of initial psychopathology did not predict the success of home-based treatment.

Researchers did come to one important conclusion regarding the length of DUP. They found that longer DUP was associated with a less positive outcome in home-based treatment. Why this is, researchers did have the capacity to measure but they agree with other early intervention advocates that longer DUP is generally associated with less positive outcomes.

Researchers further stressed that a supportive environment is absolutely essential to success in home treatment and if programs like this are developed, clinicians must perform extensive assessments before determining that treatment should take place in the home. Elements that clinicians should look for include: supportive environment, availability, lack of pre-existing family dysfunction, and strong coping skills.

In taking this information and relaying it to the issue of early intervention in California among transitional age youth, it is apparent that home-based treatment may be a viable option. First, many of these youths are still at home when symptoms begin and home-based treatment would not disrupt their normal lifestyle quite as drastically as hospitalization. Second, researchers argue (Larsen et al., 1998) that when family and support systems intervene early in the course of illness, attitudes reflecting hope in recovery are more likely to be present. Having the power of positive attitudes surrounding the patient has created superior treatment outcomes in numerous different clinical trials. Lastly, attempting to get adolescents to receive treatment might be more likely if services are available in the safety and comfort of their own homes if a capable support system is available.

5. Prevention and Early Intervention Program for Psychosis (PEPP):

PEPP utilizes an assertive case management model, modified to suit the needs of young people and their families. Families are a fundamental part of the central framework of treatment. Case managers function to hold the treatment components together, but most importantly the case manager is the central therapeutic unit of the team. They are responsible for building a trusting and working relationship with the individual in treatment as well as his or her family or caretakers. In short, the case manager sees the client through states of acute symptomatology to recovery with all the ups and downs in between. Treatment is based on thorough community care as well. The case management system

relies on strong alliances that have been built with schools and colleges – thus efforts go to the targeted population. Most are treated through outpatient services and only during acute episodes is a psychiatric setting used.

Like most early intervention programs, anti-psychotics are used. The choice of anti-psychotic medication is decided through treatment protocol with the first choice being low doses of risperidone. If there is no response, or the drug treatment is not tolerated, alternative medications are used such as olanzapine, quetiapine and lastly clozapine. The case manager is responsible for having a wide knowledge of medications and side effects, which is imperative because this individual educates the client and his or her parents about medication issues throughout the duration of program treatment.

Case Management:

The work of case managers within the PEPP program is distinctive because the main goal is to return PEPP subjects to school, work, or routine daily living as soon as possible. The case manager makes meaningful ties to employers, working to get a symptomatic client reinstated if he or she was demised due to untreated symptoms. A caseworker will work with school officials to receive a sick leave of absence for a client instead of being dropped from courses and also travels to workplaces and school environments in order to educate the people that come in contact with the clients' experience using plain, non-medical language. For example, a case manager would not use the term "schizophrenia" or "psychosis" but instead explain that the condition causes difficulties with concentration and memory loss. If returning to school or work is not yet possible, then the case manager, with the assistance of school officials, uses cognitive tests to determine what kind of independent study can take place at home.

Keeping with the philosophy that this episode is temporary, case managers do not place PEPP clients in housing that accommodates or is suitable for individuals with chronic or severe mental illness. In most cases, subjects are still residing with their parents, or chose to reside with family during the treatment and recovery process. If this is not the case, some form of transitional housing is located but case managers do not encourage subjects to apply for public assistance except on the temporary basis. *The continual message from the PEPP program echoes that symptoms are temporary, treatable, and recovery is inevitable if the program is followed.*

The case manager is further responsible for keeping an informal and open dialogue flowing between the psychiatrist, psychologist, patient, and family members. In addition, the case manager is accountable for assessing the client's psychosocial needs such as needs for housing, finances, interests, and hobbies as well as accessing other community resources for treatment of drug and alcohol abuse. One important task of the case manager is to encourage and coordinate peer groups for recovery. During the treatment process, progress assessments are made during the third, sixth, and twelfth months. The twelfth month review is very comprehensive in order to evaluate if the patient is ready for only "medication management" because he or she no longer needs the attention of intensive case management. After a review within the second year of medication-only treatment, and the client is making little or no progress, then a multi-disciplinary review can help identify how additional psychosocial treatment can be re-entered into the treatment regime. So far approximately 10% -15% of clients are likely to require intensive case management services beyond the two-year period.

Family Work:

Family intervention consists of two components: a psycho-educational workshop and individual family intervention provided by the social worker, case manager, or psychiatrist. First, the workshop consists of an eight-hour interdisciplinary team effort that provides an overview of psychosis through lectures, slide presentations, video materials and open discussions with family members of first episode clients. The overall purpose of the workshop is to impress upon the relatives that psychosis is a brain disorder that can be positively influenced by family participation in the recovery process. Specific topics such as diagnostic uncertainty, stigma, substance abuse, identity, and resuming functioning are covered with the notion that these concepts should be re-visited and knowledge should be continuously gained about them throughout the course of treatment. Secondly, there is individual family intervention, which is based on addressing the needs of different and unique families. Some families want common contact and others do not, thus programs must be tailored individually in order to reach successful engagement with either party. The family members, client, and case manager meet during the assessment period or shortly thereafter in order to identify their goals and concerns for treatment. At that time further meetings are established that will take place either within the home or at the clinic. The key to success is for the case manager to work hard to open lines of communication and trust between the often-estranged client and his or her family. In the future (January 2001), the PEPP program will be implementing a multiple family group intervention program in collaboration with Dr. William McFarlane of Portland, Maine.

Group Interventions:

Recovery through Activity and Participation (RAP)

Although the PEPP program identifies that a prompt return to school, work, or routine daily living is a priority goal, the program does recognize that this is not appropriate for all clients – particularly right away. RAP provides simple low-stress activities that enhance daily functioning and work towards personal goals. This monitors the individual through the early stages of recovery. RAP takes place twice a week in an outpatient setting and is client-centered where activities are individually chosen in order to help clients meet their current goals. A client enters the group with the help of his or her case manager and exits the group when an evaluation demonstrates that the client has met his or her goals.

Program Goals:

- ❖ To aid in the assessment of daily functioning
- ❖ To gain skills essential for role functioning
- ❖ To increase structure during the week
- ❖ To provide on going support and encouragement
- ❖ To increase social interaction
- ❖ To increase activity tolerance
- ❖ To encourage personal responsibility for recovery

Youth Education and Support Group (YES):

The rationale behind this form of intervention derives from a basic principle that makes early intervention programs unique, that is, coping with first onset mental illness is particularly difficult for a young adult who is already dealing with a number of difficult and stressful life changes. In addition, the onset of psychosis is also a form of severe trauma to the maturing identity of an adolescent. YES offers an environment where adolescents and young adults (ages 15-24) can come together and share their common problems and find ways to make responsible choices. The group offers a supportive atmosphere that is limited to eight different sessions – each of which is centered on one of the following themes:

- ❖ Creating Goals and Formulating Expectations
- ❖ Self-Identity
- ❖ Peer Pressure and Drug and Alcohol Abuse
- ❖ Relationships and Medications
- ❖ Stigma and Strategies
- ❖ Social Skills and Recovery
- ❖ Returning to School and Work and early Warning Signs
- ❖ Review and Celebration

Cognitively Oriented Skills Training Group (Costs)

The program designers at PEPP feel that it is very important to work on the cognitive deficits that have arisen due to the untreated symptoms of first-episode psychosis. This is particularly important because with clients ranging from 15 to 24 years of age it is important that they are able to return to work or school without heavy cognitive losses. It is also clear that one's ability to maximize his or her cognitive potential has often been further compromised by a prolonged phase of untreated symptoms. It is the belief of the program directors at PEPP that a group model of cognitive skill instruction enhances attention and concentration through verbal and visual exercises, facilitates communication and social skills, and stimulates individuals through group interaction. Yet research on the effectiveness of cognitive therapy so far has only been in relation to chronically ill individuals who have suffered from their disorder for years, if not decades – and this is not the case for those undergoing the PEPP program. As a result, PEPP programmers feel that the outcomes could be far more positive and effective than these earlier studies show.

Cognitive Behavioral Therapy (CBT)

A psychologist provides this form of treatment and PEPP researchers feel it is important because research has illustrated for nearly three decades that this form of treatment is effective. CBT decrease rates of anxiety and depression, symptom severity and frequency, and reduces hospitalizations and relapse rates among those with psychotic disorders. In addition, PEPP researchers feel that it is very possible that this form of treatment could be even more effective on first-episode patients. Most clients

spend one to two days a week doing CBT and the duration of treatment typically ranges from 6 to 12 months.

Objectives of CBT

- ❖ Reduce co-morbid psychopathology such as anxiety and depression
- ❖ Reduce psychotic symptoms
- ❖ Improve self-efficacy, self-esteem, and reduce self-stigmatization

Summary:

Overall the PEPP program promotes a message of recovery from symptoms and recovery to a functional status at the earliest point possible. The treatment program is two years long but there is and will be follow-up and on-going case management for participants. Together these treatment strategies such as *assertive case management, family work, RAP, YES, COSTS and CBT* have created preliminary results that show that patients not only return to their occupations but quality of life measures significantly improve. It is too early to see exactly how this will affect long-term outcome but researchers are optimistic that PEPP will bring stability and recovery to roughly 80% of the clients who receive their services.

Treatment Outcomes:

As previously discussed in the first part of this report, early findings from the PEPP program have been rather encouraging. For instance, Dr. Malla of the PEPP program found that if DUP was kept at six months or less, remission of positive symptoms was extremely high. After one year in the early treatment program, Malla and colleagues (2001) further established the following results. Length of DUP was able to predict the extent of positive symptoms (SAPS) and Hamilton Anxiety Scores but was unable to predict the level of negative (SANS) or depressive (CDS) symptoms at one year. Therefore, DUP can clearly be linked to the magnitude of positive symptoms but it might not be linked to the extent of negative or depressive symptoms. Some other researchers, such as Patrick McGorry from the EPPIC program would find this information good news, as his team argues that negative and depressive symptoms possibly can be effectively reduced and controlled by assertive case management and community based treatment during the “critical period”.

Another PEPP research team, Norman and colleagues (2001) also found evidence that DUP may not play a role in cognitive functioning. A battery of cognitive tests were administered shortly after admission to PEPP. Although several variables such as gender, premorbid adjustment, education and handedness were related to cognitive functioning, no relation was found between DUP and cognitive performance. This finding further supports a growing field of research that argues that in order to cease cognitive impairment in schizophrenia, intervention may need to take place before initial onset of psychosis (prodromal phase).

Unfortunately, the one-year long PEPP program has not assessed the effectiveness of their case management strategies during treatment. This data will be interesting to see once an assessment takes

place in about six months because the treatment model is based on models used and mostly developed by EPPIC. Replication of EPPIC's success among a different population would be of valuable interest to any organization or group looking for evidence of the adaptability of the EPPIC model.

6. Early Psychosis Identification (EPI) - British Columbia:

This particular program has spent substantially more time building up its tactics and strategies for increasing awareness and detection than actually enhancing strategic treatment strategies with first-episode patients. Like many other programs, the goal is to offer community based care. The first step that project designers address is beginning with proper assessment, or making the first contact count. This may mean that assessments are conducted in the privacy of the individual's home or through other means of effective outreach efforts. Other elements of proper initial treatment include getting the family involved if possible and immediately beginning psychoeducation, integrating current services providers, and making thorough and repeated assessments.

In terms of treatment, the program specifies that it should represent the following principles:

- Contain specialized programs
- Assertive case management
- Family involvement
- Take place in the least restricted environment
- Each treatment plan should be tailored to the needs of the individual.
- In terms of medication, they have one important rule "start low and go slow".

As it has been mentioned atypical anti-psychotics are preferable because they do not create as many side effects and as a result clients are more likely to stay in the program. This program also feels that minimizing side effects is essential because it contributes to high levels of compliance. Overall this program estimates that the use of low-dose atypical anti-psychotics will be responded to by 60% of persons within 12 weeks (MHECCU, 41:1999). Another 25% of clients will respond more slowly.

In terms of what elements of psychoeducation should be stressed, the project promotes an emphasis on self-esteem building, cognitive therapy, coping and stress management skill building, a combination of additional family and group therapy, and if necessary therapy to address signs of substance misuse.

The community mental health agencies that span British Columbia try to offer these services. Unlike other programs, EIP does not have any preliminary statistics to report at this time. Evaluations in terms of effectiveness of outcome as well as cost effectiveness should be analyzed and available by May of 2001.

7. Danish OPUS Project – Treatment Outcomes

Although the Danish OPUS project did not employ all of the outreach tactics used by TIPS, EPPIC, and PEPP programs in order to reduce DUP, examining recent results from the OPUS project for first-episode psychosis demonstrates that reducing DUP is not the only effective method to improve outcome. Recalling an earlier discussion, the OPUS project did not apply aggressive outreach efforts to the general public. Instead, aggressive outreach efforts were applied only to primary care physicians, teenagers, and individuals who come in contact with young adults (i.e. school counselors). Researchers concluded that an additional factor that led to the inability to reduce DUP was that a mobile assessment team did not facilitate accessing treatment. Despite these findings, OPUS project leaders continued with a second area of research that evaluated the effectiveness of assertive community-based treatment among first-episode patients regardless of length of DUP. The findings demonstrate that despite a failure in significantly reducing DUP, proper and extensive treatment can improve outcome and decrease the possibility of relapse.

The OPUS project did offer assertive community-based treatment for inclusion populations that was structured and based upon a fusion of the EPPIC and TIPS models. OPUS team treatment consisted of: at least once a week contact from case manager, individually designed treatment programs, multifamily education groups, psycho-education, social skills training, and medication free of charge. Jeppesen and colleagues (2001) assessed the effectiveness of these programs for both individuals experiencing first-episode psychosis, as well as their family members, if possible. Assessment took place upon entrance into the OPUS program and after one year. In addition, a control group was assessed at baseline and after one year of receiving standard treatment. Measurements for patients included PSE, SANS, and SAPS. Measurements for family members included interviews about satisfaction with treatment, expressed emotion (FMSS), burden of illness (SBAS), and general well being (GHQ). The results demonstrated that assertive community based treatment did have some very positive effects on outcome. The experimental group improved more than the control group with a stronger reduction in psychotic dimensions. Also noteworthy, team treatment had a significant effect on reducing negative symptoms. For example, 52% of team patients experienced an improvement in anhedonia when only 31% of the standard group did (Ventegodt et al., 2001). In addition, team treatment significantly reduced the symptoms of avolition, demonstrating improvement among 50% of patients and deterioration among less than 20% of patients, whereas nearly 35% of the standard group deteriorated. Lastly, family members included in the treatment group expressed a better willingness to be interviewed and had considerably higher scores on SABS, GHQ, and EE after the 12 months (Jeppesen et al., 2001). Overall, both team patients and their family members expressed a significantly higher level of satisfaction with treatment. This is extremely noteworthy, as various researchers have argued that satisfaction among both patients and their support systems is associated with reduced rates of relapse and increased medication compliancy.

The OPUS project further wanted to explore the relationship between team treatment and suicidal behavior. It has been long established by researchers that suicidal behavior is frequent among first-episode patients. OPUS researchers hypothesized that higher levels of client satisfaction would decrease suicidal thoughts, plans, and attempts. Surprisingly, results illustrate that suicidal thoughts and plans were reduced almost evenly in both the treatment and standard groups (Nordentoft et al., 2001). On the other hand, client satisfaction rates were significantly higher on the Client Satisfaction Scale among treatment group participants. For example, treatment group subjects expressed a strong

acceptance of repeat treatment if necessary, whereas standard group subjects did not express even ½ as much acceptance. OPUS project leaders argue that using the experimental treatment could dramatically improve compliancy rates.

The final arena of research that OPUS has recently released explored the relationship between substance abuse and outcome in treatment for first-episode psychosis. Peterson and colleagues (2001) wanted to explore the effectiveness of team treatment on first-episode patients who were also substance abusers. Prospective studies have shown that treatment outcomes such as symptom level and functional status are worse among patients with dual diagnosis than among individuals with single disorders. The problem is certainly valid, as 75 subjects out of 335 total patients, or 24%, were substance abusers at entry into the program (Peterson et al., 2001). After a year of team treatment, OPUS researchers only found that team treatment was mildly effective in controlling continued substance abuse but was not more effective in reducing symptoms of first-episode psychosis. This finding clearly demonstrates that early intervention strategies must continue to attempt to reach young people before substance abuse is utilized as a method of self-medication for untreated symptoms of major mental illness.

8. Family Psychoeducation in Treatment of First-Episode Patients - Calgary:

This is an on-going study that looks at family intervention beyond just assisting in reducing relapse rates. The study has several different aims. First, clinicians are to educate family members for three primary reasons – (1) so they clearly understand the possibility of relapse and that causes for relapse are biological and psychological, (2) so they too can identify potential relapses (3) so they can also be able to cope with relapses. A second major aim of the treatment program is to reduce the distress and burden family members may be experiencing. This is vital for their mental health – not just the family member who is dealing with emerging psychosis.

Study after study have shown that individuals with mental disorders relapse less when the environment, particularly that of the individual's family, is less full of stress. The Calgary family program is particularly designed to meet the needs of a first-episode family – and therefore the project length for participants is three years. The program consists of individualized family treatments and specialized short-term groups, discharge planning and continuous involvement in the program if a family chooses to do so. So far preliminary outcome results are promising. More than 75% of families are actively involved and for these families there is a significant improvement in psychological well being, burden and care giving at the 6-month, 1 year and 2-year follow-up periods. Overall this randomized trial illustrates the effectiveness of psychoeducation that uses both individualization and group participation to enhance well-being, hence further reduce the high incidence of relapse.

The Calgary Family Psychoeducation Program, much like the PEPP and OPUS programs, is based on the work of Dr. William McFarlane, who advocates on behalf of family intervention, psycho-education, and multi-family groups. It is therefore just at this point to highlight some of the impressive data McFarlane's programs have recently displayed. NIH funded a five-year clinical trial that aimed to compare patient and family caregiver outcomes among participants randomized to psycho-educational multiple-family groups (MFG) or standard care (Dyck et al., 2001:259). Positive and negative symptom status was monitored monthly for two years. Interviewers further assessed family caregiver stress, burden, and health. Controlling for baseline, participants in the MFG had significantly reduced relapse, hospitalization, and negative symptoms. Caregivers attending MFG groups reported reduced

perceived stress and anger, as well as reduced doctor visits and frequency of their own medical conditions. It is clear that MFGs have the potential to be strong tools in reducing the cost of treatment if performed within the community.

9. Nova Scotia Early Psychosis Program (NSEPP)

Although this particular program is very new and is really just in the primary stages of evaluating their work, two recent research studies attempt to demonstrate the importance of outpatient treatment and family psychoeducation. Richard and colleagues (2001) compared the rate of hospitalization and suicide among first-episode patients who were either treated in a hospital setting or part of the model early psychosis program after one year of treatment. Of the individuals diagnosed and treated in a hospital setting, 18% were re-hospitalized within one year, whereas only 8% of the outpatient diagnosed sample was hospitalized. In addition, there were four suicides committed among the hospital diagnosed sample and none among the outpatient sample. Although this may seem like evidence that the outpatient treatment is superior – this is not the case. Research illustrates that individuals with long DUPs are the individuals who eventually end up being treated in a hospital setting. Their assumption is that DUP additionally accounts for poorer outcome.

A second study, containing better methodology, evaluates the effectiveness of family psychoeducation programs on a first-episode patients' treatment outcome. Crown and colleagues (2001) evaluated the program through assessing participant satisfaction, measures of knowledge, family members' experience of caregiving, and level of expressed emotion. Data illustrated success in all of these areas. The next step of these researchers will be to compare these measures in relation to evaluations conducted with the caregiver and their loved one experiencing first-episode psychosis.

Although neither of these studies provides clear evidence that outpatient treatment and family psychoeducation are absolutely essential to better treatment outcomes for individual experiencing first-episode psychosis. The strong interest in using both these strategies to reduce the long term cost of treatment by reducing the likelihood of hospitalization during relapse illustrates that many international programs have faith and see promise in utilizing the community and the family in offering effective treatment.

IV. What Questions and Concerns is the Current Available Research Unable to Answer?

Unfortunately there are a number of questions that current research is unable to answer. The main reason for this is that it is too soon for current data and recent studies to provide any evidence of long-term results. Most advocates of early intervention strategies even agree that caution should be taken into account when thinking about future possibilities and implications. Although recent studies have offered the hypothesis of “biological toxicity”, direct evidence is still not available because long-term effects cannot be assessed (Ho et al., 2000). Yet as evident in this report thus far, there are numerous reasons why the mental health community should be committed to developing models of detection and intervention.

First, numerous researchers have noted that individuals suffering from psychotic symptoms are not seeking treatment promptly. Why they are not doing so has not been determined yet but it is clear that

the combination of influencing factors includes stigma or misconceptions about seeking treatment, lack of ability to identify symptoms, inaccessibility of proper places to seek help, and that the symptoms themselves impair many from getting the help they need. As this report has demonstrated, outreach efforts that target the “hard to reach” population of teens and young adults has been successful in offering earlier treatment. In addition, there have been multiple efforts to educate young adults, health professionals, and the general population about the warning signs of psychosis and why getting treatment is a step towards recovery. The effectiveness of these efforts is a bit easier to assess because rates of DUP can be measured in projects such as TIPS, EPPIC, and PEPP. Although the long-term implications could mean that if public education and awareness campaigns cease, stigmatizing attitudes could return to initial pre-campaign levels. This remains to be seen at this time.

A second key finding is that early intervention in most studies is correlated with better immediate outcome or outcome that has been measured for roughly two to three years. What is unknown is what are the causal mechanisms that determine this better outcome. Is it just reduced DUP or is it just getting proper treatment? Another camp of researchers would argue that it is neither and that the cause is determined by the illness that manifests after the onset of psychotic symptoms. They argue that non-schizophrenia related psychosis would not become as debilitating in the long-term anyway. For example, a recent study by Ho et al.(2000) argues that a possible reason why their sample did not correlate shorter DUP to better outcome as in earlier studies from the EPPIC program was because their sample did not have as many subjects diagnosed with affective psychosis. Instead, the sample included more subjects with a diagnosis of schizophrenia. The results didn't show that shorter DUP increased QLS scores or reduced symptom severity. On the other hand, even though these researchers argue that there is not enough evidence to even suggest that short DUP is correlated with better prognosis they do state that early intervention is imperative because, “such long durations of untreated psychosis are clearly undesirable, since the psychotic experience is usually unpleasant, bewildering, and painful to the patient and his or her family” (Ho et al., 813:2000).

A third possible, but thus far inconclusive finding, is that alternative treatments which comprise mainly of assertive community-based care for first-episode patients could add to the predicted cost savings in treating psychosis. In terms of mental health policy we are forced to ask the important question of whether early detection and intervention programs will be cost effective in the long term. To date there is no research that provides the long-term results of the outcome of both reduced DUP and community-based treatment systems. Without long term results we unfortunately cannot make evidence-based estimations on cost savings. Yet the magnitude of the direct and indirect cost of schizophrenia is so severe that the incentive to establish alternative methods of detection and treatment is very appealing to nations across the globe. As evident in both the TIPS and EPPIC projects, early detection strategies in conjunction with community-based treatment, illustrate that long-term cost savings are highly likely. *Some researchers predict that two factors will reduce cost in conjunction with each other. First, better prognosis due to early detection or short DUP and second the use of treatment services that can be received through community mental health centers which would provide an array of supportive social services that will be less costly than treatment that requires hospitalization.* In order to do this an investment must be made to increase education as well as enhance community-based services and integrate them with other social services. The aim is to decrease the direct cost of schizophrenia and psychosis-related illnesses, in which direct costs are identified as the actual dollar expenditure on the illness. In addition, indirect costs will be targeted for reduction. Indirect costs are often not as noticeable but much more severe. Indirect costs include not only the cost of the loss of productivity from the patient but also the loss of productivity from the

patient's caregivers and family (Bosanquet, 2000). It is important to note that assessing the impact of both costs is imperative.

Fortunately, EPPIC has recently reported some preliminary data about their services in order to examine if EPPIC's community-based treatment is able to reduce direct costs of illness by psychosis. Researchers compared the direct cost of treatment in the pre-EPPIC sample to the direct costs of treatment on the post-EPPIC sample. After one year of treatment, cost-effectiveness ratios were determined for both the pre-EPPIC and post-EPPIC subjects. Measures of functioning such as QLS or SANS scores were translated into costs saved by means of improvement and reduced cost of treatment because treatment was performed in the community. Data illustrates that it was 91% cheaper to gain a one-point improvement in the SANS and 46% cheaper to gain a one-point improvement in the QLS using the EPPIC model of treatment (Mihalopoulos et al. 52:1999). Data further shows that the post-EPPIC group averaged almost ½ as many inpatient days as the pre-EPPIC group, creating a major cost reduction (Mihalopoulos et al., 1999). Even when assessing the cost of one-year of community based treatment, researchers found that the yearly cost of treatment for a patient reduced from \$ 24, 074 per client in the pre-EPPIC sample to \$ 16, 964 per client a year in the post-EPPIC sample (Mihalopoulos et al., 1999). Further analysis does reveal that outpatient treatment offered is more expensive, but this is still dramatically counter-balanced by the savings made by the reduction in inpatient care. Although EPPIC program designers are pleased with these results they note that potential savings must also be used to build up the system of community care. If community based treatment is under-funded then hospitalizations will just increase because proper treatment is not available.

One recent study about healthcare in Spain demonstrates this point. The study by Salvador-Carulla et al (1999) examined the first three years of treatment for first-episode schizophrenia patients. The purpose of the study was to examine the cost effectiveness of community-based treatment versus only inpatient hospital treatment in another region. Both communities were roughly the same size and contained the same socio-demographics but had very different systems of mental health care. Over the course of three years the direct costs of care for community-based treatment was significantly less except for the third year. In the first and second years, costs were as much as 35% lower by using community-based care. Only in the third year did costs for community-based care exceed costs for hospital care. This was due to chronic patients continuing to be hospitalized and recovering patients often still using some services that the community-based program provided, such as occupational therapy. But this doesn't take into account two important factors. First, the hospital was continually adding new patients at a cost 35% higher than community-based care. More importantly, subjects receiving community-based care seemed to be less of an indirect cost to society. For example, throughout the 3 years, roughly 37% of the subjects were employed and 45% lived independently (Salvador-Carulla et al., 1999). On the other hand, only 25% of the subjects in the hospital-based care setting were employed during the study and less than 35% lived independently. *Clearly this study shows that community-based care is a more cost-effective method of caring for patients with first-episode schizophrenia.*

Keeping this example in mind, one can only imagine the possible deduction in costs if early intervention strategies succeeded. If we considered what the Spanish mental health care example demonstrates, even if DUP is not found to be the causal mechanism of prognosis, it is evident that early detection and treatment among a community setting is far less costly than in a hospital-like setting with no other services provided. Add to this the argument that young adult lives will be less disrupted and stigmatized by hospitalization and it is clear that early intervention programs are not only cost-effective but potentially will be quite cost reductive.

Although cost effectiveness of early intervention is likely, this does not mean that community-based care should be skimmed down during treatment. Studies have shown that intensive outpatient treatment should continue for approximately two years or the incidence of relapse and the prospective damage relapse causes is not really reduced. In short, if treatment is insufficient than the benefits gained from early intervention are lost. For example, a recent study of an early intervention program in Holland explored this issue by asking the question of whether a yearlong post treatment day program that reflected the principles of early intervention treatment could assist in preventing psychotic relapse in first-episode patients (Linszen et al., 1998). The treatment program included a combination of patient-centered psychosocial treatment, drug maintenance, psychosocial education for families or caregivers as well as intensive drug treatment for those whom treatment applied. Like many of the programs that this report has explored thus far, the intensive intervention program was successful in reducing relapse rates and increasing drug compliancy. On the other hand, Linszen and colleagues argue that if treatment ceases to be active, such as through case management or drug compliancy, than poor outcome will result. Linszen et al (1998) even argue that treatment should remain intensive for a minimum of five years in order to ensure that positive treatment efforts will be sustained.

V. Conclusion

As this report has demonstrated, it is clear that early intervention programs are a step in the right direction for the treatment of severe mental illness. Early intervention is a positive step for multiple reasons, even though the research is not yet entirely conclusive. How can this be? First, untreated psychosis, or any other severe mental illness, is devastating to a young person's quality of life. Age of onset for severe mental illness coincides with other major life changes, making the experience even more overwhelming and disruptive than expected. If a young person's life is "derailed" by untreated severe mental illness, than it is necessary to take the proper and extensive measures to mend the condition appropriately from the start. This includes not only increasing the ability of detecting symptoms from the initial stage but also enhancing and improving the initial treatment young people receive. Doing so requires a strong community-based mental health system of care that can efficiently collaborate with other social service sectors to ensure recovery. For example, many early intervention programs offer treatment that is designed to enhance the patient's life skills such as stress management and family psychoeducation. These skills are then linked to other social services – such as education and vocational rehabilitation. The mental health community must be willing to collaborate, if not coordinate, services that will work to reduce the possibility of relapse.

Secondly, the body of research that supports early intervention is rapidly growing. This body of evidence is no longer restricted to just findings that illustrate that low DUP is associated with increased positive outcomes. Research is beginning to demonstrate that low doses of atypical antipsychotics are highly effective in the treatment of psychosis. In addition, individual and family psychoeducation, as well as cognitive therapy, has been proven an effective component to decreasing the possibility of relapse. Ongoing research is absolutely crucial in order to perfect best practices treatment.

In all, the possibility of early intervention strategies being successful will depend on the capacity to reduce the stigma that surrounds mental illness. This will require that physicians, policy-makers, educators and the public in general to accept that severe mental illness should and can be treated effectively. Recovery from mental illness is possible. Doing so is facilitated by the ability to detect symptoms when they initially manifest and to obtain proper treatment by a skilled and attentive clinician. If the stigma continues, early treatment will not be sought and young adults that could

possibly be deterred from the tragedies that accompany untreated mental illness will not be helped. Early intervention strategies can be implemented in California, demonstrating to the rest of the U.S. that the long-term outcomes of severe mental illnesses, such as schizophrenia, can be altered for the better. It is possible that early intervention is prevention – that is, the prevention of the development of chronic and costly psychiatric disabilities.

^{4[1]} Please see: Johnstone, E.C., Crow, T.J., Johnson, A.L. and MacMillan, J.F. 1986. “The Northwick Park Study of First-Episodes of schizophrenia: Presentation of the Illness and Problems Relating to Admission.” *British Journal of Psychiatry*, 148:115-120. Also see Scully, P.J., Coakley, G., Kinsells, A. and Waddington, J.L. 1997. “Psychopathology, Executive and General Cognitive Impairment in Relation to Duration of Initially Untreated versus Subsequently Treated Psychosis in Chronic Schizophrenia.” *Psychological Medicine*, 27: 1303-1310. Also see, Loebel, A.D., Lieberman, J.A., Alvir, J.M.J., Mayenhorf, D.I., Geisler, S.H. and Szymanski, S.R. 1992. “Duration of Psychosis and Outcome in First Episode Schizophrenia.” *American Journal of Psychiatry*, 149: 1183-1188.

^{5[2]} Please see: Helgason, L. 1977. “Psychiatric Services and Mental Illness in Iceland: Incidence Study with a 6 – 7 year Follow-up.” *Acta Psychiatrica Scandinavica*, 268, 111-137. Johnstone, E.C., Crow, T.J., Johnson, A.L. and MacMillan, J.F. 1986. “Presentation of the Illness and Problems Relating to Admission.” *British Journal of Psychiatry*, 148, 115-120. Loebel, A.D., Lieberman, J.A., Alvir, J.M.J., Mayerhoff, D.I. Geisler, S.H. and Szymanski, S.R. 1992. “Duration of Psychosis and Outcome in First-Episode Schizophrenia.” *American Journal of Psychiatry*, 149, 1183-1188.

^{6[3]} Please see: McFarlane, W.R., Lukins, E., Link, B., Dushay, R., Deakins, S.A., Newmark, M., Dunne, E.J., Horen, B. and Toren, J. 1995. “Multiple-family Groups and Psychoeducation in the Treatment of Schizophrenia.” *Archives of General Psychiatry*, 52: 679-687.
