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Recognizing Possible Schizophrenia in the Primary Care Setting: A Brief Information Sheet

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RECOGNIZING POSSIBLE SCHIZOPHRENIA IN
THE PRIMARY CARE SETTING: A
BRIEF INFORMATION SHEET

A Scholarly Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

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This Scholarly Project by: Susan H. Winchester

Entitled: *Recognizing Possible Schizophrenia in the Primary Care Setting: A Brief Information Sheet*

has been approved as meeting the requirement for the Degree of Doctor of Nursing Practice in College of Natural and Health Sciences in School of Nursing, Program of Nursing Practice

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ABSTRACT

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Schizophrenia occurs in about 1.1% of the population in the United States--more than 2.2 million. Over 100,000 patients will be diagnosed with schizophrenia in the United States this year. As of 2016, there is no cure for schizophrenia but the treatment success is high (over 50% completely recover or are much improved with relative independence). The cost of schizophrenia is estimated to be over $6.2 billion. Most people with schizophrenia are seen by a primary care provider before they receive referral to a mental health professional. In fact, primary care visits are six times higher in the six years before a first episode psychosis in patients with schizophrenia than in patients without schizophrenia. This frequency is not easily tracked by individual providers. More than 15 schizophrenia screening tools are available. Providing a brief education and selecting a short screening tool could quickly update primary care providers, possibly lead to earlier intervention for patients, and greatly improve the quality of life for those with schizophrenia and for their families. A Delphi review included 41 experts in the initial round, 34 in the second round, 21 in the third round, and nine in the fourth round. The fifth round was the validation of the tool and included 21 experts, although not necessarily the same experts.

KEY WORDS: Schizophrenia, mental health, primary care.

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CHAPTER I

INTRODUCTION

Background

People with prodromal symptoms of schizophrenia initially seek help from primary care providers (PCPs). These people see their PCP at a greater rate than people without an eventual diagnosis of schizophrenia. Because schizophrenia occurs in only about 1-2% of people world-wide, providers only see a very small patient population in their normal work week. Primary care providers are not trained extensively in the diagnosis of schizophrenia but could be able to detect prodromal signs if they had a brief information sheet so they knew what to look for. This Doctor of Nursing Practice scholarly project sought to provide such an information sheet.

Purpose of the Study

Schizophrenia has received an undeserved reputation. Mass murders occur more than 20 times each year in the United States; most of these tragedies are reported by the media as being committed by people with schizophrenia. However, "detailed media reports of the perpetrator's behaviors, when available, suggest states of psychotic mania, defining bipolar disorder, not schizophrenia" (Lake, 2014, p. 214). Thus, schizophrenia becomes the "buzzword" defining mass killers and other violent criminals, creating even more stigma for those who suffer from this persistent, chronic disease. In fact, people with schizophrenia are rarely a danger to anyone but themselves.

Rather than contributing to the hysteria surrounding the idea of schizophrenia, there must be a better way to identify those with or at risk for schizophrenia. The purpose of this capstone project was to identify specific characteristics and symptoms that present an opportunity to conduct a simple screening in primary care. Educating PCPs when to screen for schizophrenia and giving them a short efficient information sheet would enable those patients to access mental health services in a timelier fashion. There is a real-life reason for this: 60% of patients with appropriate medication do not have relapses, improving their quality of life immensely ("Schizophrenia Facts and Statistics," 2010).

Primary care is usually the initial setting for a person with schizophrenia to present with symptoms. Because PCPs do not often see patients with schizophrenia (less than 2% of the population) and usually have received no special formal training in the diagnosis of schizophrenia beyond their initial schooling, an information sheet would be helpful in quickly identifying those patients in need of follow up by mental health professionals. Although PCPs could treat patients with schizophrenia in their practice, the time necessary for patient education, family education, and follow-up care is limited in primary care.

Need for the Study/Project

**Prevalence of Schizophrenia in the
General Population**

According to the National Institute of Mental Health (2016), the prevalence rate for schizophrenia in those persons over age 18 at any given time is 1.1% of the population or approximately 51 million people worldwide (see Figure 1).

- 6 to 12 million people in China (a rough estimate based on the population)

- 4.3 to 8.7 million people in India (a rough estimate based on the population)

- 2.2 million people in United States

- 285,000 people in Australia

- Over 280,000 people in Canada

- Over 250,000 diagnosed cases in Britain. ("Schizophrenia Facts and Statistics," 2010, p. 10)
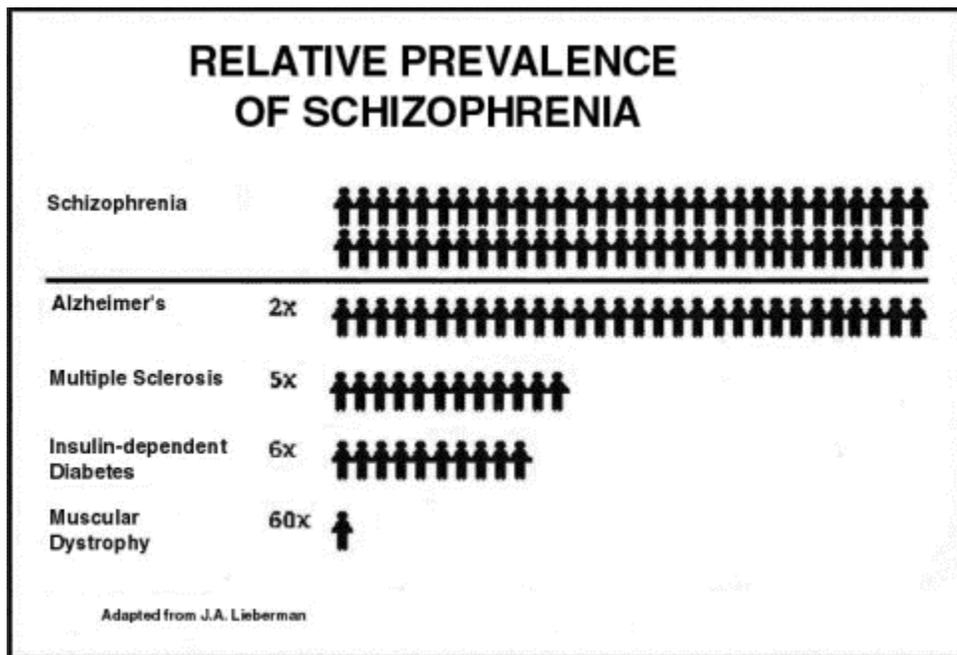
Figure 1. Relative prevalence of schizophrenia ("Schizophrenia Facts and Statistics," 2010, p. 8.)

Where are the people with schizophrenia? Six percent are homeless or live in shelters, 6% live in jails or prisons, 5-6% live in hospitals, 10% live in nursing homes, 24% live with a family member, 28% are living independently, and 20% live in supervised housing ("Schizophrenia facts and statistics," 2010, p. 5). More than half of

all people diagnosed with schizophrenia completely recover or are much improved and relatively independent. However, 15% are dead, mostly from suicide.

Schizophrenia tends to occur more often in young males, requiring a higher hospitalization rate between the ages of 15 and 40. Sometimes psychosis appears relatively rapidly over a few weeks or months. More often, however, it develops over months or even years. Psychotic symptoms emerge after problems with anxiety, depression, social relationships, and work or school performance (Hafner & an der Heiden, 2008).

Financial Impact

The cost of schizophrenia in the United States in 2013 was estimated at more than $155 billion including direct health care costs, indirect and non-healthcare costs, unemployment, and productivity loss due to caregiving (Cloutier et al., 2016). Schizophrenia affects 1-2% of the population worldwide. Severe and disabling as this disease is, the prognosis for this diagnosis can be debilitating in itself. However, with proper medication, recovery is possible. A prodromal phase can last about six months (for purposes of diagnosis).

However, a study in Scandinavia showed increased visits to primary care for a period of six years prior to diagnosis for those with schizophrenia as compared to those without diagnosis (Norgaard et al., 2016). This might be a window of opportunity for an earlier diagnosis and hence earlier treatment, improving the quality of life for these patients.

Research Study Question

The following research question guided this scholarly project:

Q1   Would a brief information sheet help primary care providers recognize possible schizophrenia?

To help formulate an information sheet and guide the search for evidence, a PICOT statement was developed: P = Patient population, I = Intervention or issue of interest, C = comparison intervention or issue of interest, O = Outcome, and T = Time frame. The patient population in this scholarly project was patients with possible schizophrenia. The intervention was a brief information sheet. The comparison intervention was patients with possible schizophrenia who were evaluated by the brief information sheet as compared to those patients with possible schizophrenia who are not evaluated by the brief information sheet. The outcome would be better health screening and referral to a mental health provider. The time frame was during an office visit with a primary care provider.

Schizophrenia is an often overlooked disease; with prompt diagnosis and appropriate medication, patients can have a very positive future. Twenty years after diagnosis, more than 50% of patients have recovered or live independent lives. Unfortunately, more than 15% commit suicide. If more education is done with PCPs and a brief information sheet is available, more patients could be helped earlier.

Objectives of the Doctor of Nursing
Practice Scholarly Project

Although only about 1% of the population receive a diagnosis of schizophrenia, it is one of the most devastating diagnoses a patient can receive. The course of this disease can require expensive hospitalizations and multiple treatments over the course of a

patient's life. Most people with undiagnosed schizophrenia present at the office of a PCP. This provider will only see schizophrenia in less than 1% of his/her patients. However, people with schizophrenia present at primary care more than those without schizophrenia, making primary care an unrecognized opportunity and an appropriate gateway to care. Indeed, the sooner schizophrenia is diagnosed, the better the prognosis. If more education is done with primary care providers and a brief information sheet is available, more patients can be helped earlier. Thus, this scholarly project had the following objectives:

1. Prepare information on detecting possible schizophrenia at the primary care level

2. Identify at least one appropriate screening tool

3. Conduct a Delphi review of this information—five rounds

4. Develop a pilot program utilizing this information that would be appropriate and effective in primary care

Definition of Schizophrenia

"Schizophrenia is a persistent, often chronic, and usually serious mental disorder affecting a variety of aspects of behavior, thinking, and emotion" (Rosenberg, 2009, p. 10). Over the past 20 years, evidence has accumulated that schizophrenia is biologically based; even more will be learned with genetic advancements. Patients with psychosis, delusions, or hallucinations might have thinking that is disconnected or illogical. Social withdrawal and disinterest might be associated with schizophrenia.

Schizophrenia is a brain disorder that affects how people think, feel, and perceive. A hallmark symptom of schizophrenia is psychosis, such as experiencing auditory

hallucinations (voices) and delusions (fixed false beliefs). Symptoms of schizophrenia might be divided into the following four domains:

- Cognitive symptoms. Neurocognitive deficits (e.g., deficits in working memory and attention and in executive functions such as the ability to organize and abstract); patients also find it difficult to understand nuances and subtleties of interpersonal cues and relationships.

- Mood symptoms. Patients often seem cheerful or sad in a way that is difficult to understand; they often are depressed (Frankenburg, Xiong, & Albucher, 2018).

- Negative symptoms. Decrease in emotional range, poverty of speech, and loss of interests and drive; the person with schizophrenia has tremendous inertia.

- Positive symptoms. Psychotic symptoms, such as hallucinations, which are usually auditory; delusions--beliefs that the majority of people do not hold; and disorganized speech and behavior.

According to the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V; American Psychiatric Association [APA], 2013), the patient must have experienced at least two of the following symptoms to meet the criteria for diagnosis of schizophrenia: delusions, hallucinations, disorganized speech, disorganized or catatonic behavior, and negative symptoms (or reduced functioning). At least one of the symptoms must be the presence of delusions, hallucinations, or disorganized speech.

Continuous signs of the disturbance must persist for at least six months, during which the patient must experience at least one month of active symptoms (or less if

successfully treated), with social or occupational deterioration problems occurring over a significant amount of time. These problems must not be attributable to another condition APA, 2000). In 2013, the American Psychiatric Association removed schizophrenia subtypes from the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) because they did not appear to be helpful for providing better-targeted treatment or predicting treatment response.

For the purpose of this paper, however, DSM-IV (APA, 2000) criteria were used. Although the DSM-V was published in 2013, there was still controversy about its contents. From a survey of 2,828 psychiatrists and psychologists, more than half of the providers responded they were not using the new criteria nor was it critical for billing (Cassels, 2014). The most significant change in the schizophrenic diagnosis was the removal of sub-types. This was not critical for the first diagnosis in primary care as well as referral to mental health resources.

CHAPTER II

REVIEW OF THE LITERATURE

A literature search was performed using both EBSCO host and PsychInfo. Boolean phrase searches included "primary care schizophrenia," "prodromal schizophrenia," "primary care," "mental health," "schizophrenia diagnosis," "schizophrenia screening," and "schizophrenia costs." A Google search was also performed to find stand-alone websites with information, e.g., NIH, NIMH, and schizophrenia. More than 200 article titles were scanned and 40 were reviewed. In addition, the scholarly project research advisor, Dr. Kathleen Dunemn, provided articles on clinical practice guideline development. Even though a clinical practice guideline was not developed, this article was used to help develop the brief information sheet.

**Historical Changes in the Treatment of
Schizophrenia: A Brief Review**

Over the past 20 years, the concept of recovery has emerged in the mental health field, guiding both policy and practice in the United States. Departing from the traditional medical model of care, consumer autonomy and choice became the hallmarks of a recovery-oriented mental health system. Also, a collaborative relationship has emerged between patient and provider.

In the 1960s, deinstitutionalization of mental health facilities and converting to community-based care failed as did the Community Support Program of the 1970s and

the Consumer/Survivor movement in the 1980s and the early 1990s (Stein et al., 2015).

While all of these changes were made with the best of intentions to be the most effective

form of mental health services for people with serious mental illnesses, these efforts were

not successful, leaving adults with mental illness and their families repeating cycles of

hope and despair (Stein et al., 2015).

The Community Mental Health Act (CMHCA) was passed in the 1970s (Stein et

al., 2015). Community Support Programs were established to reform the whole mental

health system to try to address problems created by deinstitutionalizing the mentally ill.

These programs had goal such as continuous community treatment and support services,

assertive crisis and outreach services, and coordinated community care through case

management. Initially employment, independent living, and education emerged. This

movement started with patient and family advocates who organized for patient rights,

protections, and a voice in the treatment decisions. Outcomes from research showed

community support would be effective but the resource intensive needs of these programs

precluded large-scale reforms (Stein et al., 2015).

The Consumer/Survivor Movement (CSM) met with more resistance from

professionals already in the field (Stein et al., 2015). Legislation introduced advanced

mental health planning councils. "However, ideological tensions between consumers,

psychiatric survivors, and family advocates alienated mental health professional and

tended to undermine the overall effectiveness of the movement" (Stein et al., 2015, p.

35).

Finally, in the 1990s, the Recovery Movement began to shape social policy (Stein

et al., 2015). The idea that people with serious mental illness could live meaningful and

satisfying lives, even with the complete absence of psychiatric symptoms, emerged. The recovery paradigm included assisting individuals in pursuing their preferred futures, managing symptoms, and overcoming psychological consequences that came with mental illness. The push toward recovery-oriented started in earnest and began to turn the tide of attitudes toward mental illness (Stein et al., 2015). There have been significant challenges to this transformation of mental health delivery systems due to a lack of consensus in defining recovery, limited research on mental health outcomes, difficulties implanting recovery practices in community mental health settings, and shortages in the mental health profession. But finally, providers were starting to listen to patients.

Another way to study the effectiveness of these programs was to research adults' mental illness personal experiences. The research journal *Schizophrenia Bulletin* began publishing first-person accounts written by patients and their families in 1979. More recently, patients and families have become activists. Gumber and Stein (2013) used these published pieces to study the narratives of the author's views (patient views) of the mental health system. Although consistent, this study did not address the changes in the mental health system as experienced by adults with schizophrenia over time.

Then came qualitative research by Stein et al. (2015) that focused on how adults with schizophrenia perceived the care they received over the course of the changes in the mental health system. This research examined the engagement of patients with the mental health system and their subjective experiences and how that perspective had changed over time.

One of the questions from this study asked, "What factors do these consumers identify as being most important to their mental health and personal well-being?" (Stein

et al., 2015, p. 36). Shorter hospitalizations and more services with case managers who listened and involved the patient in the process were the more prevalent themes. Adults who were in the system longer tended to view mental health services as more important to their well-being while those with shorter term involvement cited family and relationships as more important. Many patients believed access to mental health services significantly improved their quality of life and even their ability to still be alive.

Synthesis of the Literature

The literature showed a promising period of time during which a patient with schizophrenia would visit primary care during the prodromal phase of this disease, providing an opportunity to recognize early symptoms. In the DSM-V (APA, 2013), the diagnostic criteria for schizophrenia delineated a prodromal period of six months. The International Classification of Diseases and Related Health Problems, usually called by the short-form name International Classification of Diseases (ICD-10) is the standard diagnostic tool for epidemiology, health management, and clinical purposes and was adopted by the World Health Organization (2009). The ICD-10 is the latest version and is critical for billing, which is a stark reality for both primary care and mental health care. The ICD-10 includes any prodromal phase in its diagnostic criteria; however, it acknowledged psychotic symptoms might occur during a prodromal phase of weeks or even months with specific symptoms, e.g., loss of interest in work, personal appearance, and social activities in combination with a mild degree of depression and anxiety.

This prodromal phase could last even longer. A study by Hafner (2015) showed a period of up to five years of negative and cognitive psychiatric symptoms could occur in adults who were eventually diagnosed with schizophrenia with a year of increasing

psychiatric symptoms leading up to their diagnosis. While the psychiatric symptoms might not be prominent enough for a textbook diagnosis, there was evidence that early diagnosis and efforts to minimize the duration of psychosis were vital as these were associated with a better prognosis including less positive and negative symptoms, greater likelihood of remission, better social functioning, and a better long-term outlook.

In Denmark, with free access to a public healthcare system, the primary care physician acts a gatekeeper to secondary healthcare (Norgaard et al., 2016). For most adults with chronic disease, the first contact on the diagnostic pathway is the primary care physician. There are three phases to the prodromal period: (a) the time from symptoms onset until the initial contact with the primary care physician (patient delay), (b) from that first contact to the development of so many symptoms that a diagnosis of schizophrenia can be made, and (c) when the disease is evident but not yet diagnosed (the diagnostic delay). Reducing the time from the first presentation to the primary care physician and the diagnosis and appropriate treatment was the goal.

Norgaard et al. (2016) analyzed attendance and help-seeking patterns of adults with schizophrenia as they presented to primary care by counting (a) face-to-face contacts with PCPs in their offices and emergency off-hours and (b) face-to-face contacts for up to six years prior to a first schizophrenia diagnosis. Identifying 21,894 people with the diagnosis for schizophrenia, the study used a population control of 437,880. The mean age at first schizophrenia diagnosis was 34.35 years of age (Norgaard et al., 2016).

The largest difference between the two groups was the increase in out-of-hours services (more for identified schizophrenia than for the control group) but the pattern was consistent in both groups for primary care contacts during the one to two years (of the six

years) leading up to the diagnosis (Norgaard et al., 2016). Another pattern that emerged was no psychiatric contact until three to four years before diagnosis, which would indicate psychiatric symptoms such as depression and anxiety prior to actual psychosis. This study indicated the paths to diagnosis were long and might lead to other diagnoses for several years until the patient actually received the diagnosis of schizophrenia.

In contrast was a study conducted by Andersen et al. (2013) in Canada where patients with regular contact with their primary care physician reduced the likelihood of having contact with emergency care facilities and inpatient care hospitals. Andersen et al. found this regular care increased the time interval to the first visit with a psychiatrist but did not indicate whether or not this was detrimental.

Post-diagnosis trajectories were studied by Cole, Apud, Weinberger, and Dickinson (2012) who found three premorbid subtypes of schizophrenia: (a) normal academic and social functioning before and until diagnosis, (b) normal academic and social functioning deteriorating with time until onset, and (c) poor functioning during childhood and further deteriorating during the years before diagnosis. In 2015, Austin et al. published a study that again showed a long duration of undiagnosed schizophrenia was associated with a more severe, positive symptoms course of the disease.

"Increased help-seeking behavior in the prodromal phase of schizophrenia might be a window of opportunities for earlier diagnostics" (Norgaard et al., 2016, p. 225). This study from Scandinavia found individuals with schizophrenia had increased visit rates during the six years prior to diagnosis as compared to age- and gender-matched individuals. In general practice, the study found undiagnosed schizophrenia (those patients who were later diagnosed with schizophrenia) resulted in more primary care

visits that those without schizophrenia. These increased visits would probably not be detectible by the PCP as the percentage of patients eventually diagnosed with schizophrenia is only a little over 1% of the general population. The results of this study "demonstrate that patients with schizophrenia show vulnerability several years before a distinct presentation leads to a diagnosis" (Norgaard et al., 2016, p. 232).

Summary of the Literature Review

In reviewing the literature on schizophrenia in the primary care setting, it became apparent that most patients with possible schizophrenia came in contact with PCPs before they came into contact with mental health providers. Because schizophrenia is only seen in about 1% of the population, the symptoms could easily be missed by PCPs who are not looking for the disease.

In 2015, a review article conducted by Addington, Stowkowky, and Weiser looked at screening tools for diagnosing those at clinical high risk for psychosis. Seventeen instruments studied in peer reviewed articles were used to determine which ones might be most suitable for screening for prodromal symptoms and/or psychosis--a determining symptom for schizophrenia. The majority of the screening instruments were under-explored with poor validation. So how is a PCP without an extensive background in mental health expected to know how to screen for this disease process? The appropriate information sheet should be short, easy for both the patient and the provider to understand, and easy to interpret.

The purpose of the literary search and synthesis was to find and compare research articles on prodromal schizophrenia, how primary care handled these patients, primary care's attitudes toward schizophrenia, and analysis of screening tools available. By

synthesizing this information and presenting a brief information sheet with which to work, PCPs might be able to detect and refer those patients who might be at risk for schizophrenia.

Many articles were found on prodromal symptoms. One article focused on primary care's attitude toward schizophrenia and how it changed with post-graduate education on this disorder. Other articles pointed out the great cost of care, both direct and indirect. Research for family education was highly encouraged and support for the whole family was emphasized.

Theoretical Framework

The Stetler (2001) model of research utilization to facilitate evidence-based practice was used to guide this scholarly project. A study done by the nursing department of Baystate Medical Center emphasized the use of research findings as well as other sources of information (Stetler, 2001). This project used external evidence from research as well as internal evidence from credible nurse practitioners. The Stetler model uses six phases; the following explains how each phase was used by this project.

- Phase I: Preparation was the scholarly project statement of the problem.

- Phase II: Validation was the research into the problem statement.

- Phase III: Comparative evaluation was the Delphi review used for the scholarly project.

- Phase IV: Decision making was one of the outcomes of the Dephi review.

- Phase V: Translational application will be the pilot project following the defense of the scholarly project.

- Phase VI: Evaluation will take place after the pilot project.

The Delphi review was the model used for Phase III (comparative evaluation) of this scholarly project. The Delphi technique uses a series of questionnaires or "rounds" of information as a structured process. Because panel composition can influence ratings, a combination of psychiatric nurse practitioners, primary care nurse practitioners, and nurse practitioner students from both specialties were sought.

Although clinical practice guidelines were not developed, the standards for them were reviewed in terms of how the information sheet was developed. The Institute of Medicine (cited in Norgaard et al., 2016) provided eight standards for developing clinical practice guidelines (CPGs):

- Standard 1   Establishing transparency

- Standard 2   Management of conflict of interest

- Standard 3   Guideline Development group composition

- Standard 4   Standard 4 Clinical practice guideline-systematic review intersection

- Standard 5   Establishing evidence foundations for and rating strength of recommendations

- Standard 6   Articulation of recommendation

- Standard 7   External review

- Standard 8   Updating. (p. 1)

The steps to developing a clinical practice guideline (or, in this case, an information sheet) are as follows:

1. Identifying and refining the subject area

2. Convening and running development groups

3. Assessing evidence identified by systematic literature review

4. Translating evidence into recommendations

5. Subjecting guidelines to external review.

According to this article, "high priority topics have the potential for evidence-based practice to improve health outcomes, minimize undesirable variations of care, and reduce the burden of disease and health disparities" (Rosenfeld & Schiffman, 2009, p. 8). Feasible topics were (a) those with enough high-quality published evidence to craft guidelines, (b) some systematic reviews already published, and (c) those that used a clear definition of the conditions under consideration. The current topic for the scholarly project was both high-priority and feasible due to the significant impact of patient outcomes and the development of a brief information sheet.

CHAPTER III

METHODOLOGY

Project Design

The design of this scholarly project was a non-experimental Delphi review of a brief information sheet. The screening would harm no one, neither the provider nor the patient, whether he/she had schizophrenia or not. A Delphi review was accomplished with a panel of experts over the internet through Survey Monkey, which was anonymous.

Setting

The setting for the Delphi Review was Survey Monkey, which is an online survey development cloud-based software founded in 1999 by Ryan Finley. SurveyMonkey provides free, customizable, anonymous surveys that can be posted on social media.

Sample

This scholarly project used a random sample based on providers who completed the Survey Monkey survey. The sample was obtained from Facebook groups who were specifically nurse practitioners, both family and psychiatric, as well as nurse practitioner students.

Project Mission, Vision, and Objectives

The mission of this project was to help PCPs recognize possible schizophrenia in their patients so the patient could receive services from a mental health provider. The vision for this project was to help recognize that schizophrenia is an often overlooked

disease with which patients can have, with prompt diagnosis and appropriate medication, a very positive future. Twenty years after diagnosis, more than 50% of patients have recovered or live independent lives but more than 15% commit suicide. If more education is done with PCPs and a and a brief information sheet is used, most patients with undiagnosed schizophrenia could be helped in a timelier manner, resulting in a better prognosis.

The objective of this project was to produce a brief information sheet so it could be disseminated to primary care providers in many settings, providing better, earlier results for patients with schizophrenia.

Instrumentation

Using *Critical Appraisal and Selection of Data Collection Instruments: A Step-By-Step Guide* (Dunemn, Roehrs, & Wilson, 2017), the following four steps were used to determine the appropriate data collection instrument: Step I--Conceptualizing the proposed quantitative research project, Step II--Find an existing instrument for the proposed study, Step III--Critical assessment of the proposed measurement instrument including any concerns about the proposed instrument, and Step IV--Decision to select or non-select the data collection instrument for the study of interest.

The Delphi technique was used to reach a consensus on whether a brief tool for schizophrenia would be helpful to those providers in a primary care setting. The first round of questions identified the responders and their knowledge of the symptoms of schizophrenia. The second round concerned preferred learning style and preferred method of learning. The third round took into consideration the data from the first round and was concerned with where the responders sought their continuing education and

where providers preferred to get their education. A fourth round concerned the need for more information in a brief form. The final survey asked a yes or no question concerning the proposed brief information sheet.

Survey Monkey was used to develop the initial survey. A posting was done on Facebook on several sites for nurse practitioners, nurse practitioners in businesses, psychiatric-mental health nurse practitioners, and nurse practitioners networking group. Responders were asked to send an email to the researcher's email (to bypass spam filters). This was about 50% effective. Then private messaging was used, which was more successful. About half the responders came from this group. Surveys were then posted on the group pages and then through private messaging.

<p align="center">**Data Analysis Procedure**</p>

After the surveys were completed, the researcher evaluated the brief information sheet in the following manner:

1. Was the level of evidence sufficient?

2. Was the quality of evidence sufficient?

3. Were the guidelines (brief information sheet) relevant to both providers and patients?

4. Were the guidelines (brief information sheet) flexible to accommodate different ages and clinical settings?

5. Did the guidelines (brief information sheet) answer the economic indications for the provider (length of a limited visit, time spent to understand information)?

6. Did the guidelines (brief information sheet) provide enough information for the provider in such a way that they fit into everyday clinical practice?

7. Were the guidelines (brief information sheet) safe?

8. Would the guidelines (brief information sheet) improve the quality of care and the patient's quality of life?

9. Were the guidelines (brief information sheet) complete for the objectives (Rosenfeld & Schiffman, 2009)?

Duration of the Plan

- August-September 2016--Completed research and first draft of proposal to Dr. Dunemn

- October 2016--Prepare second and final drafts to Dr. Dunemn

- November 2016--Defend proposal November 14th

- December 2016-May 2017--Received Institutional Review Board approval (see Appendix A), reviewed literature, started asking for panel of experts; gathered information, finalized panel of experts, put together list of symptoms, reviewed screening tools, prepared draft of information, submitted to panel of experts with a May 30, 2017 deadline for suggestions/criticisms (a consent form was sent at this time—see Appendix B)

- March 2019--Revised information as needed and resubmitted to experts for final review, completed scholarly project including comments from panel of experts, submitted scholarly project to committee

- March 5, 2019--Defended scholarly project

- Submit to peer-reviewed journals and present at conferences

Ethical Considerations

The sample was obtained from Facebook groups who were specifically nurse practitioners, both family and psychiatric, as well as nurse practitioner students. These experts were sent the initial round of questions and were emailed the second, third, and fourth rounds through Survey Monkey. The validation survey was two years later and although most of the same Facebook groups, the participants probably differed from the original experts. The surveys were completely anonymous. No ethical considerations were found.

Resources/Personnel/Budget

Resources were the University of Northern Colorado library, research advisor, library researcher, gallons of coffee, and lots of paper and time. Personnel were the internet panel of experts and the scholarly project student. No budget was anticipated except for submission to an editing expert before submitting to committee.

CHAPTER IV

DATA ANALYSIS AND RESULTS

The purpose of this scholarly project was to identify a brief schizophrenia screening tool that could be used in the primary care setting. Research showed the earlier the possible diagnosis and subsequent treatment, the better the outcome for the patient. Since no validated screening tools were identified through research, one was constructed utilizing guidelines from the DSM-IV (APA, 2000).

Survey One

Of the 41 responders to the first survey (see Appendix C), 11 were psychiatric nurse practitioners, nine were primary care nurse practitioners, five were nurse practitioners from other fields (integrative family, assistant professor of nursing, adult health, palliative care), two were psychiatric nurse practitioner students, five were primary care nurse practitioner students, one was a psychologist, four were therapists, and three were registered nurses (see Table1). Fourteen had been in practice for over five years, 12 had been in practice for more than a year, seven were new to practice, and six were not yet in practice (see Table 2). Of the 41 responders, only 12 or 29.27% felt confident about and were comfortable recognizing schizophrenia. Another 12 or 29.27% responders did not feel comfortable recognizing schizophrenia although they did it as part of their provider role. Three of the responders felt that they could recognize schizophrenia while another 15 were not sure how to recognize it (see Table 3).

Table 1

Career Title/Role

Answer Options	%	*N*
APRN Psychiatric Nurse Practitioner	26.8	11
Primary Care APRN	22.0	9
Other APRN	12.2	5
Psychiatrist	0	0
MD, not Psychiatrist	0	0
PA Psychiatry	0	0
PA Primary Care	0	0
APRN Student Psychiatry	4.9	2
APRN Student Primary Care	12.2	5
Psychologist	2.4	1
Therapist	9.8	4
Other	19.5	8
Other (please specify		14

- PMHNP Student
- RN in PMHNP school
- RN, BSN psych
- Graduating this week :D
- Integrative Family NP
- Graduating this week, will be working in primary care
- Assistant professor of nursing
- Licensed Masters Social Worker
- Adult Health
- Staff Counselor- College Mental Health Clinic
- Clinical Social Worker
- Palliative Care NP
- Crisis counselor
- RN

Table 2

Length Participants Have Been in Practice

Answer Options	%	N
0-6 months	4.9	2
6 months to 1 year	12.2	5
1-5 years	29.3	12
5 years or more	34.1	14
Not yet in practice	14.6	6
Other	4.9	2
Other (please specify)		4

Table 3

Experience in Recognizing Possible Schizophrenia

Answer Options	%	*N*
I do this in my role as a provider and feel quite comfortable with it	29.3	12
I do this in my role as provider, but am not fully comfortable with it	29.3	12
I seldom see patients with schizophrenia and am not sure how to recognize it	12.2	5
I am a student, but feel comfortable that I can recognize schizophrenia	7.3	3
I am a student, but and not fully comfortable with recognizing schizophrenia	12.2	5
Other (please specify)	12.2	5

- I've worked with population in the mental health clinics and hosp.
- I have experience in nursing patients with schizophrenia as an RN. I feel sure I would recognize it in clinical practice as a FNP. However, I have not encountered such a patient yet. I would refer to psychiatrist.
- Occasional experience and not fully comfortable
- I seldom see patients with schizophrenia and have some idea how to recognize it but am not extremely confident about it.++
- I have come across clients/patients who are diagnosed already, however can't say I've observed the behaviors associated

Fifty-six percent of providers screened for schizophrenia every day while 31.7% screened when they felt it was necessary. One respondent said it should be assessed at every visit while another said screening should be done informally at every visit and a formal screening should be done at wellness visits (see Table 4).

Table 4

How Often Participants Felt the Need to Screen for Mental Health

Answer Options	%	*N*
I do it with every patient every day	56.1	23
I do it when necessary	31.7	13
I do it if a patient asks for it	2.4	1
Other	9.8	4

Other (please specify) 7
- Initial dx interview, periodic assmt, testing as needed
- I work as a home care nurse
- Not currently in direct patient care but feel it should be assessed at every visit.
- Informal screening in every patient encounter, formal screening at wellness visits and when symptoms prompt me to do so.
- I do not have a screening tool that I use, but it is part of my history and discussion with the patient.
- I think it's needed more, but not sure how to
- Initial Assessment at start of therapy with CCAPS. Ideally I retest every 3 to gauge efficacy of treatment

While 22 out of 41 respondents thought their current screening for schizophrenia was excellent or good, 20 of 41 responders wanted more information about schizophrenia and how to recognize it. (see Table 5)

Table 5

How Well the Current Screening Process Is Working

Answer Options	%	*N*
I think my screening process is excellent	17.1	7
I think my screening process is good	36.6	15
I would like more information and knowledge about schizophrenia and how to recognize it	46.3	19
Other	2.4	1

Sixty percent of the responders did not know that appropriate treatment could modulate brain changes in people with schizophrenia (see Table 6). Generally, there was agreement in the symptomology of schizophrenia (see Table 7). Nineteen or 33% used the screening tool in their electronic medical records (EMR) system. Only one responder said his/her office did not use EMRs (see Table 8).

More information on screening was requested by 19 or 47.5% of responders. The remaining 22 responders requested more information on symptoms, family education, treatment strategies (which was not a part of this research), and referral information (see Table 9). Other information was requested such as differentiating between schizophrenia and bipolar with hallucinations, pediatric vs adult symptoms, and age groups (this was also not part of this particular research project; see Table 10).

Table 6

Treating Schizophrenia as Early as Possible Can Prevent or Slow Those Changes and Improve the Quality of Life of Those Patients

Answer Options	%	*N*
I knew that.	39.0	16
I didn't know that	61.0	25
Other (please specify)		1

Note "prevent" may be less likely than "modulate"

Table 7

Symptoms That Made You Think a Patient Might Have Schizophrenia

Answer Options	%	*N*
Auditory hallucinations: Do you hear things that other people don't hear?	90.2	37
Visual hallucinations: Do you see things that other people don't see?	90.2	37
Hallucinations: Are these things scary to you?	75.6	31
Delusions: Do you believe things that other people don't believe? Do you think people are following you?	95.1	39
Does your television or radio talk directly to you?	80.5	33
Is someone or something telling you to do things that you wouldn't ordinarily do?	85.4	35
Are you becoming less interested in things around you or in things you used to enjoy?	26.8	11
A decrease or lack of personal hygiene?	68.3	28
Increased feelings of isolation	34.1	14
A lack of understanding or social nuances or social cues	41.5	17
A general sadness that is difficult to understand	17.1	7
Reduced functioning	61.0	25
Disorganized speech	85.4	35
Other	4.9	2
Other (please specify)		1

Table 8

Screening Tools Used for Mental Health or What Was Provided in Electronic Health Records

Answer Options	%	*N*
The Adult Symptom Screener screens for the following common DSM-IV diagnoses: Depression; Generalized Anxiety Disorder; Panic Disorder; Social Anxiety Disorder; Obsessive-Compulsive Disorder; PTSD; Bipolar Disorder; Eating Disorder; Alcoholism; Drug Abuse; ADHD; Personality Disorder; and Schizophrenia/Psychosis.	33.3	13
A mental health screening tool is provided with my EHR and I use it, but I don't know what it is called	15.4	6
A mental health screening tool is provided with my EHR, but I don't use it.	5.1	2
I don't use electronic health records	10.3	4
Other	35.9	14
Other (please specify)		17

- Complete hx /battery of psych testing as needed
- DSM V criteria
- Facility I work in is not fully electronic yet
- Emr does not have a screwing tool
- PHQ-9 and GAD-7 are the only screening tools I have used.
- None of the above
- The only ones I have used in all of my clinical settings are PHQ 9, GAD 7 and WURS for adults.
- I don't use anything with my EHR. I look up things when I need more information or consult a friend who practices in mental health
- Phq 9, GAD 7, WURS
- Variation of GAD7, PHQ2/9, tools suggested by UTD.
- None available on the current EHR
- I do not diagnosis in this position, nor have I officially diagnosed
- I don't know if there is one with the ehr
- CCAPS
- Edmonton Screen it screens for depressions, anxiety, pain, nausea, insomnia, dyspnea, nausea
- SBIRT
- I am a professional assessor for people in crisis. I use an ehr, but not for diagnosis.

Table 9

Additional Information to Better Recognize Schizophrenia

Answer Options	%	*N*
Information on screening	47.5	19
Information on symptoms	15.0	6
Family education	15.0	6
Referral information	10.0	4
Other	12.5	5
Other (please specify)		8

- None, thank you.
- Would like to have all of them. Would be extremely helpful. Thanks
- New treatment evidenced base research
- All of the above
- Treatment strategies
- It's hard to get mental health referrals
- Treatment options
- All of the above

Table 10

Additional Information Requested

Answer Options	%	*N*
Other	100	3

Other (please specify)   6

- None
- What age group do it normally effect?
- Information on symptoms, family education and referral information would also be helpful.
- Differentiating between schizophrenia and bipolar with hallucination features.
- Pediatrics vs. Adult (differences in symptoms, how to recognize it earlier, genetic components, and if you are aware of anything natural that helps......like having adequate Vitamin D levels helps most mental health disorders, or factors that make it worse.....such as sleep deprivation, diet, lifestyle factors etc.
- When should a patient be inpatient and when is it safe for them to be outpatient?
- How to encourage compliance with treatment.
- Side effects of treatment that need monitoring.
- Different levels of schizophrenia ? what initial behaviors indicate possible schizophrenia dx ?

Survey Two

Of the 33 responses received from the second survey (see Appendix D), 17 reported they received their education from an article in a peer reviewed journal, 15 from an in-person class or conference, continuing medical education or webinar. Only eight reported a one-page information sheet with links to more information would be preferred, which was this researcher's expected preference. These answers in particular dictated the questions for the third survey (see Table 11).

Table 11

Most Efficient Way to Receive Educational Information About Schizophrenia

Answer Options	%	N
Drug rep in my office with drug recommendations	2.9	1
An in-person class or conference, CME or webinar	47.1	16
Drug rep at a dinner with drug recommendations	2.9	1
An email from a drug rep	2.9	1
An email from a national organization not associated with a particular drug	23.5	8
A mailed one page information sheet with links to more information	23.5	8
A multi page copy of research dealing with schizophrenia	17.6	6
Article in a peer reviewed journal	52.9	18
General articles	14.7	5
Other (please specify)	5.9	2
• e-mailed by my team at work, or in a professional's Facebook group		
• In person training at conference or class, and/or Webinar.		

The kind of mental health screening tool varied from a tool that patients fill out ahead of time to just letting a patient ask questions about depression during the patient visit (see Table 12). Challenges to reading new information were as expected with 61% saying they were just really busy. Forty-two percent said they already had stacks of information on their desk, floor, etc. One responder reported thinking about schizophrenia was scary to her/him. Two did not think they would understand it or did not want to treat it (see Table 13). Adding one thing to their day was another question to

judge what stressed providers. Nineteen wanted more time; 16 wanted more exercise;

11-12 wanted more money, education, and peace; and one asked for self-paced education

on mental health topics (see Table 14).

Table 12

Kind of Screening Preferred by Professionals for Mental Health

Answer Options	%	*N*
I prefer a screening tool that the patient fills out ahead of time and I review before seeing the patient	35.3%	12
I use the screening tool in my EMR	29.4%	10
I prefer a tool that I fill out while asking the patient questions	41.2%	14
I prefer a more informal approach to mental health screening, a few questions to determine if further information is needed	29.4%	10
I prefer to let the patients ask me if they feel depressed or if they feel the need for mental health screening	5.9%	2
Other (please specify) • Full 1-2 intake interview, psyc testing if approp. • Psych eval if not straightforward dx	5.9%	2

Table 13

Some Challenges Preventing Professions from Reading New Information on Schizophrenia

Answer Options	%	*N*
No time, I am just really busy	61.8	21
Other issues are more important to me	20.6	7
Since only 1% of the population have schizophrenia, I really don't see the information being useful to my practice	5.9	2
I have stacks of research and information already sitting on my desk, floor, etc.	41.2	14
Thinking about schizophrenia is scary to me	2.9	1
Would I even understand it?	5.9	2
I don't want to treat this disease	5.9	2
Other (please specify) • Tend to research more when I have a current pt w/schiz. • Nothing I read about it often	5.9	2

Table 14

One Thing That Could Be Added to a Professional's Day

Answer Options	%	N
Time	55.9	19
Money	35.3	12
Meditation	26.5	9
Exercise	50.0	17
Travel	23.5	8
Education	32.4	11
Peace	35.3	12
Other (please specify)	2.9	1
• Self-paced education on various topics related to mental health		

Interesting to this researcher was PCPs either had mental health care available in their offices or knew to whom to refer patients. Only one PCP reported working in rural areas with few mental health resources. Of the mental health professionals, only seven reported the PCPs in their area knew how to refer to them. Two mental health professionals reported they did not know if PCPs knew they were there, three said they should send out some information, one reported he/she thought the doctors would not want to refer to them for mental health, and two reported they did not know how to get information to PCPs (see Table 15).

Table 15

The Following Applied if in Primary Care or Other Non-Psych Professions

Answer Options	%	*N*
I feel competent diagnosing and treating schizophrenia	21.4	6
I have others in my office that I can refer mental health patients to	21.4	6
I know what resources are available in my community to refer mental health patients to	39.3	11
I have a list of mental health providers I can refer to	39.3	11
Other (please specify) • Not enough resources in the community for mental health issues and there is still quote a stigma about getting help for mental health issues. • I work in a few rural areas with little mental health professionals • I am a mental health practitioner	10.7	3

The next question was interesting as it could be another area for a research project--if the mental health provider knew whether primary care providers knew they were available in the community for mental health referrals. Only 7 of 22 providers answered this question yes, leaving a whole area of training to show mental health providers how to connect with primary care (see Table 16).

Table 16

Whether Primary Care Clinics Knew About Mental Health Providers in the Area and How to Refer Patients to Them

Answer Options	%	*N*
I don't know	9.1	2
I should send them some information	13.6	3
I think the doctors would be against sending patients to me	4.5	1
I'm not sure how to go about letting them know	9.1	2
Yes	31.8	7
Other (please specify)	31.8	7

- N/A
- Some outreach has been done
- NA
- Na
- Not applicable
- Provide mental health within private entity - prison
- I do urgent care

Preferred learning styles were also addressed in this survey. The styles were spread over video (13), audio (7), written (13), hands on (14), and the standard nursing practice of "see one, do one, teach one" (10; see Table 17).

Table 17

Preferred Learning Style

Answer Options	%	*N*
Video	38.2	13
Written	38.2	13
Audio	20.6	7
See one, do one, teach one	32.4	11
Hands on	44.1	15
Other (please specify)	0.0	0

Survey Three

Only 19 responses were received for this survey (see Appendix E), perhaps due to the title sounding similar to the other surveys. The first two questions in this survey once again reviewed profession choice and years in practice. Sixteen of 21 responders screened for mental health with every patient, every day, while five screened only when necessary (see Table 18). Various screening tools were reported including the Adult Symptom Screener (see Table 19).

This survey indicated a need for this topic as an independent continuing education unit as 71.4% preferred that method. This would be another area for another research project. This choice had been left out of the first survey. Thirty-one percent wanted an in-person class and 21% asked for a review article (as opposed to 15.79% as an article in a peer-reviewed journal; see Table 20).

Table 18

Screening Frequency for Mental Health

Answer Options	%	*N*
With every patient, every day	76.2	16
When necessary	23.8	5
If a patient asks for it	0.0	0
I would screen more if I had more knowledge or a screening tool	9.5	2
Other	4.8	1

Table 19

Familiarity with Adult Symptom Screener and Access to It

Answer Options	%	*N*
I use it	9.5	2
I use the mental health screener in my EHR	23.8	5
I use another screening tool	61.9	13
I refer patients that I think may have mental health issues	0.0	0
I feel uncomfortable dealing with mental health issues	4.8	1
Other	0.0	0
Other (please specify)	0.0	0

Table 20

Preference for Receipt of More Education on Schizophrenia, Particularly How to Recognize It and Family Education

Answer Options	%	N
Independent continuing education units	71.4	15
An in-person class or conference	33.3	7
A research paper	4.8	1
A review article of research papers	19.0	4
Article in peer reviewed journal	19.0	4
Other	0.0	0
Other (please specify)	4.8	1

The American Journal of Psychiatric Nursing was the number one choice with 38.89%. The audience for this magazine was psychiatric and most of the responders were psychiatric providers. This would not necessarily reach primary care providers (see Table 21). The American Association of Nurse Practitioners was the preferred conference (61%) and would be a logical place to present this topic. The Institute for Functional Medicine and Barkley (nurse practitioner study courses) were also mentioned. The other conference was also mental health focused and the proposed audience for this research was primary care (see Table 22).

Further research should be done into what kind of knowledge primary care providers needed concerning mental health and how mental health providers could make PCPs aware of them.

Table 21

Type of Peer-Reviewed Journals Read

Answer Options	%	*N*
Journal of Primary Care and Community Health	15	3
Open Access Journals (700 journals)	10	2
Journal of Community Health	5	1
BMC Family Practice	10	2
Mental Health and Prevention	0.0	0
Journal of Mental Health and Human Behavior	5.0	1
Journal of American Psychiatric Nurses Association	40	8
American Journal of Nursing	30	6
Journal of Professional Nursing	20	4
Other	10	2
Other (please specify)	15	3

Table 22

Conferences That Would Be a Good Fit for This Topic

Answer Options	%	*N*
APNA	35	7
AANP	65	13
NPACE	20	4
Other	5	1

Survey Four

Survey four received nine responses to the six questions (see Appendix F).

Regarding the first question, eight providers agreed extra education was needed to help

primary care recognize possible schizophrenia and one provider commented, "I don't

know enough about primary care to answer this question." Eight providers agreed to the

second question regarding whether a list of symptoms would be helpful to primary care

providers to help them recognize possible schizophrenia. One provider commented, "I

don't know enough about primary care to answer this question" and another provider

added "prodromal symptoms." The fourth question brought a very practical answer (see

Table 23).

Table 23

Would a Mental Health Screening Tool Be Helpful and Practical for Primary Care Providers?

Answer Options	%	*N*
Yes	87.5	7
No	12.5	1
Other (please specify)		2

- I don't know enough about primary care to answer this question
- primary care providers have no time for scales

An article in a peer-reviewed journal for primary care providers as an educational tool received 100% agreement (fifth question). There were two additional comments: "I don't know enough about primary care to answer this question" and "If they would take the time to read it." In answer to the sixth question, a one-page list of symptoms with quick questions to ask patients and links to other realistic information in the primary care setting received a 100% agreement. Answers were primarily yes but one outlier indicated she/he did not know enough about primary care to answer.

Survey Five

One more survey was sent (see Appendix G), asking whether a brief information sheet would be helpful to primary care in recognizing possible schizophrenia. Of 21 responses, 20 were positive with three comments. No comment was given on the one "No" answer so it was not possible to determine the reason.

Summary

The experts who answered the surveys agreed that a brief schizophrenia screening tool would be especially helpful to those providers in primary care. Although provider

time is particularly limited in primary care, if a provider noticed the symptoms mentioned

in the tool, he or she could use the tool to ask specific questions in a timely manner.

Making the most of a provider's time is especially necessary due to time restraints in

daily practice.

CHAPTER V

DISCUSSION

Although the scope of the group for developing and review of the brief information sheet was predicted to be smaller than the recommendations in the *Clinical Practice Guideline Development Manual: A Quality Driven Approach for Translating Evidence Into Action*" (Rosenfeld & Schiffman, 2009, pp. 1-73), the group of experts was actually larger, while still diverse and well-qualified. The article called for a group of 14-20 participants but the group for this scholarly project was 41 for the first round of questions and 31 for the second round of questions including primary care nurse practitioners, psychiatric nurse practitioners, a psychologist, several therapists, and both primary care and psychiatric nurse practitioner students.

Results of Surveys

The first round of questions determined there was little understanding of schizophrenia in primary care and knowing the symptoms of this disease would be helpful to those providers. Once the first surveys were answered, it was obvious the question was too broad to do a single Delphi review. Using both mental health providers and PCPs gave enough information to see the need for more education in the primary care setting but a screening tool was not found to be useful at this stage. The mental health providers used a variety of screening tools but did not use electronic health

records. The primary care providers used electronic health records and these PCPs had their own mental health screening tools.

A screening tool without the accompanying knowledge would do little to encourage primary care providers to recognize possible schizophrenia. Thus, this researcher concluded that advancing the knowledge of primary care providers concerning schizophrenia was a future goal.

Unintended Consequences

Many more respondents were received than anticipated. The questions were too broad for three surveys and the information collected led to more questions. Preferred learning methods were more diverse than expected. This researcher had more knowledge than was required by the scope of the project and found it difficult to pare down the information needed. The surveys pointed to a great need for family education for both primary care and mental health care providers. This project did foster dialog between primary care and mental health care, resulting in some Facebook discussions that were outside the parameters of the project.

Clinical Guideline Objective Outcomes

Objective One Outcome

The first objective was to prepare information on detecting possible schizophrenia at the primary care level. Objective one was met through a literature search performed using both EBSCO host and PsychInfo. Boolean phrase searches included "primary care schizophrenia", "prodromal schizophrenia", primary care, mental health", schizophrenia diagnosis", "schizophrenia screening", and "schizophrenia costs." A Google search was also performed to find stand-alone websites with information, such as NIH, NIMH, and

Schizophrenia. More than 200 article titles were scanned and 40 were reviewed. In addition, the scholarly project research advisor, Dr. Kathleen Dunemn, provided articles on clinical practice guideline development. A subsequent literature search in November 2018 found more than 2,000 articles using the words "schizophrenia" and "primary care schizophrenia." Another eight updated articles were found among the more than 240 reviewed.

Objective Two Outcomes

Objective two concerned the quality of the evidence. In addition to the peer reviewed journal articles, both the World Health Organization (2009) and the National Institute of Mental Health (2016) deemed this an important subject. The Psychiatric Rehabilitation Journal, Early Intervention in Psychiatry, Diagnostic and Statistical Manual of Mental Disorders, Society of Psychiatry Psychiatric Epidemiology, Schizophrenia Research, Journal of Clinical Psychology, Journal of Abnormal Psychology, World Journal of Psychiatry, Clinical Handbook of Schizophrenia, Psychiatric Annals, Acta Psychiatricia Scandinavica, and the Psychiatric Quarterly published articles on this topic.

Objective Three Outcomes

A brief information sheet relevant to both providers and patients was objective three. "Most general practitioners see one or two people with a first episode psychosis each year," according to an editorial written by Shiers and Lester (2004), joint directors of the National Development Network for Early Interventions. They went on to say that improving the knowledge and competency (concerning psychosis) was not enough: "The concept of early intervention puts the onus on primary care…to make them accessible,

non-stigmatizing and relevant" (Shiers & Lester, 2004, p. 1452). A long-term prognosis for those with psychosis shows outcomes at the two-year mark could strongly predict outcomes 15 years later. Therefore, this guideline and a quicker possible diagnosis would be relevant to the primary care provider and improve the patient's quality of life.

Objective Four Outcome

An information sheet that was flexible enough to accommodate different ages and clinical settings was the outcome for the fourth objective. This information sheet is applicable to both children and adults, although most schizophrenia is initially apparent in young adults (see Appendix H.

Objective Five Outcome

Making sure the information sheet answered the economic indications for the provider (length of a limited visit, time spent to understand information) was the outcome for the fifth objective. One of the comments expressed during the Delphi review was PCPs would not have time to do anything else in their limited time. However, this brief information sheet would remind the provider and also give the patient time to think about it (if it was posted on the wall in the office).

Objective Six Outcome

Objective six was to provide the information in a way that the PCP could refresh her/his knowledge while reviewing the information sheet with a possible patient. The brief information sheet would provide this knowledge as part of a quick exam.

Objective Seven Outcome

Objective seven was to have the information sheet be safe. Asking several questions and observing specific behavior was harmful to no one. Beginning treatment sooner would greatly enhance outcomes for patients.

Objective Eight Outcome

Objective eight was to have the brief information sheet actually improve the quality of care and the patient's quality of life. Any early intervention in the case of a patient with possible schizophrenia would improve the life of that patient and his/her family as great financial and emotional costs are associated with undiagnosed schizophrenia.

Objective Nine Outcome

Objective nine was to have the brief information sheet be complete for the objectives. The guideline covered the overview of a patient with schizophrenia. Asking the questions in a non-judgmental way would give the patient a chance to voice any concerns they might have.

Summary

This evidenced-based scholarly project sought to help primary care providers recognize possible schizophrenia in the primary care setting. This quality improvement project delved into the need for specific education on schizophrenia and how best to deliver that education in a practical manner. The primary care setting is often a very fast-paced environment due to the number of patients seen and their primary complaints. However, patients with schizophrenia visit their primary care provider at a greater rate than those without schizophrenia. Knowing how to recognize possible schizophrenia

during those visits could get patients to a mental health provider much sooner and

increase the quality of life for those patients and for their families. This scholarly DNP

project was very satisfying, particularly when the researcher found no short questionnaire

had been studied to any degree. Three comments made during the validation (fifth)

survey were especially convincing:

> Absolutely relevant in PC and even inpatient setting! A screening tool for would
> be great for at risk patients.

> Yes--these questions are absolutely essential to incorporate into the ROS as a part
> of every H & P. I ask these very questions to each of my patients on a daily basis.
> Thank you for posting these vital questions, so that other APNs can incorporate
> them into all patient encounters.

> Some of these are obviously more targeted toward psychotic illness, some toward
> general mental health, which is good! These are all things a GP should be aware
> of in their patients. The one about doing things that others find easy does seem a
> bit too general in my opinion. The only thing I would say is perhaps the TV one to
> be a little more specific and it could say "tell you to do things, or seems like it is
> talking directly to you". Or perhaps something about feeling distracted by
> bothersome or scary thoughts to the point where it is hard to function. Seems
> good overall!

Conclusions

Moving forward in practice, the conclusion was made that a one-page information

sheet might prove to be the most effective tool for primary care (see Appendix H), an

article in a peer-reviewed journal would be second, and an educational session at a

conference would be the third most effective. While this project focused primarily on the

recognition of possible schizophrenia, other mental health symptoms also need to be

addressed. Useful pieces of information gathered in this project pointed to the more

prevalent use of electronic health records in primary care than in mental health.

Therefore, the PCPs with electronic health records would be more likely to use the

mental health screening tool within that system rather than an outside screening tool.

Another great use of this information would be a pilot study. Sending this sheet to primary care clinics and urgent care clinics and suggesting they post this information would add no extra time burden to clinicians. Providing this information sheet to patients would also be helpful in some cases.

Limitations to Methodology

A lack of social media knowledge on the part of this researcher made the Delphi method a challenge. As the research proceeded, newer ways to collect the data were found. Although more surveys were requested and sent out, the first survey collected 41 responses. The second survey collected 33 responses and the third survey collected 19 responses. These responses were deemed sufficient by the researcher. More providers had expressed willingness to participate, but the privacy aspect of the survey responses made it impossible to determine who was unable to respond. The third survey had an error in one question that listed APRN primary care twice and this resulted in one responder's answer being counted twice. As the surveys were sent, more and better worded questions were thought of but three surveys were what was proposed to the responders and that was deemed sufficient by the researcher.

In the third survey, several responders messaged back that they had already completed the survey which spoke to how the survey titles were worded. Clearer differentiation between the titles might have produced more responses. However, many more responses were received than initially expected.

Limitations to Project

Mental health is such a diverse subject that even the small part chosen here pointed to many other avenues, different diagnoses, destigmatizing mental health,

learning pathways for clinicians, and time limitations of primary care providers. There is a long way to go to figuring out how to best serve the mental health population in general.

Recommendations for Future Research

Clearly expanding the role of the primary care provider in the areas of mental health knowledge would be helpful, especially to newer PCPs. Having updated continuing education units for those providers could encourage expansion of mental health knowledge. Having a laminated summary to post on the office wall would be a great reminder. Handouts could be made for patients who might be interested. Future research could examine the different aspects of mental health and how PCPs might recognize those symptoms.

Future research could include all those areas. Putting this scholarly project into practice would be a great area by presenting it at a conference, submitting it as a poster at a conference, or publishing it in a journal for primary care providers.

This could be done as a pilot project by sending it to state agencies like the Behavioral Health Education Center of Nebraska, to primary care offices, and to quick clinics with follow up to see how it was received and perceived by providers and patients.

Doctor of Nursing Practice Evaluative Criteria

Five criteria (E = Enhances; C = Culmination; P = Partnerships; I = Implements; E =Evaluates [EC as PIE]) put forth to be fulfilled by a final DNP project were agreed upon by the American Association of Colleges of Nursing and National Organization of Nurse Practitioners Faculty (cited in Waldrop, Caruso, Fuchs, & Hypes, 2014, p. 300).

Enhances Health Outcomes

Early recognition of possible schizophrenia could lead to earlier appropriate treatment and enhanced quality of life. The gap of knowledge concerning schizophrenia in the primary care setting was found in the Delphi review by comparing both primary care providers and mental health providers. A quick review of the symptoms of schizophrenia by PCPs would aid them in recognizing possible schizophrenia when seeing their patients, providing a quicker referral to mental health providers. Recognizing this health risk sooner would lead to an enhanced health outcome for these patients.

Culmination of Practice Inquiry

Meeting the requirement of using "knowledge and competencies gained in the doctoral program to enact change" (Waldrop et al., 2014, p. 302) was accomplished through the literature review and the Delphi review. In the literature review, evidence was found that early detection of schizophrenia was indeed possible in primary care (Austin et al., 2015) who initially saw these patients (Addington et al., 2015). In the Delphi review, primary care providers asked for more information on schizophrenia and indicated their willingness to use that information. With early intervention comes the real possibility of modulating long-term brain changes in patients with schizophrenia. This change in primary care methodology (recognizing possible schizophrenia) is "pragmatic and practical, likely to be used in the real-world setting in a timely, reproducible, and sustainable fashion" (Waldrop et al., 2014, p. 302). This change "can interface with the electronic health record and could satisfy the required clinical quality measures from the Centers for Medicare and Medicaid" (Waldrop et al., 2014, p. 302).

Partnerships

The partnership between primary care and mental health care was evident in the answers to the Delphi review questions. These inter-professional partnerships were enhanced by sharing information on personal and professional knowledge, challenges to recognition of mental health issues, and the challenges in primary care to have the knowledge and time to take the extra step. Future partnerships could also occur as the project endures after completion. Using the information guidelines would enhance partnerships between the primary care provider and the patient--the consumer of health care services.

Implementing Evidence into Practice

The specific clinical situation of a patient with possible schizophrenia will be enhanced. The evidence found during this project has been compressed into a usable, practical, brief information sheet for primary care (see Appendix H). Using a one-page sheet for recognizing possible schizophrenia would make it possible for a primary care provider to easily assimilate the information in a time-efficient manner. This sheet could also be posted in the primary care office for patient education. Helping primary care to recognize mental health patients has a "larger scale societal value" (Waldrop et al., 2014, p. 302) by educating more people about mental health issues.

Evaluation of Healthcare and
Practice Outcomes

While the initial results of this Delphi review were promising, further research and education are needed to enhance the knowledge of PCPs concerning mental health. Improvements could be made in the number of referrals PCPs make to mental health providers. Improving the outlook of patients with schizophrenia would be an

improvement in healthcare outcomes. Improving the way primary care providers refer patients to mental health providers would improve practice outcomes. Educating mental health providers in how to interact with primary care providers could be a possible topic for more research and education.

Summary

If this screening tool could be provided to primary care offices on a colorful handout where it could be posted in patient rooms, it would remind both the patient and the provider to use the screening tool if appropriate.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL

NORTHERN COLORADO
UNIVERSITY OF

Institutional Review Board

DATE:	March 26, 2017
TO:	Susan Winchester, MSN< APRN-BC
FROM:	University of Northern Colorado (UNCO) IRB
PROJECT TITLE:	[1040720-2] Recognizing Schizophrenia in the Primary Care Setting: A Delphi Review
SUBMISSION TYPE:	New Project
ACTION:	APPROVAL/VERIFICATION OF EXEMPT STATUS
DECISION DATE:	March 26, 2017
EXPIRATION DATE:	March 26, 2021

Thank you for your submission of New Project materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

Susan -

Thank you for your patience with the UNC IRB. Your application is thorough and clear and there are no requests for revisions or additional materials that need to be submitted for subsequent review.

Best wishes with your doctoral capstone research project and don't hesitate to contact me with any IRB-related questions or concerns.

Sincerely,

Dr. Megan Stellino, UNC IRB Co-Chair

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Sherry May at 970-351-1910 or Sherry.May@unco.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.

APPENDIX B

**CONSENT FORM FOR HUMAN PARTICIPATION
IN RESEARCH**

Informed Consent - No signature document

(University of Northern Colorado)

CONSENT FORM FOR HUMAN PARTICIPATION IN RESEARCH

UNIVERSITY OF NORTHERN COLORADO

Project title: Recognizing Possible Schizophrenia in the Primary Care Setting

Student: Susan H. Winchester, MSN, APRN (DNP Student)

Academic Advisor: Kathleen N. Dunemn, PhD, APRN, CNM, School of Nursing

Project advisor: Kathleen N. Dunemn, PhD, APRN, CNM, School of Nursing

Phone number: (970) 351-3081/ (803) 409-8391 e-mail: Kathleen.Dunemn@unco.edu

Expert Consensus via a Delphi Study

The purpose of this capstone project is to evaluate the evidence on schizophrenia in the primary care setting: how the disease can be recognized in the early stages in the primary care setting and which evaluation tool is the most effective. Planning how to implement the recommendation as a clinical practice guideline and evaluate outcomes is the final phase of this project.

The Delphi method is a structured communication method that utilizes a questionnaire to survey experts in two or more rounds. Information from the literature review on schizophrenia in primary care is used to develop the first round of questions regarding symptoms and screening.   The response from the first round will be anonymously shared with participants in the second round. Participants will gain additional knowledge through the shared responses of their colleagues. Anonymity reduces the impact of feelings of embarrassment, judgements, fear of repercussions, the bandwagon effect, and influences of personalities dominating the process. The Delphi method has been used in healthcare and other industries and is of value where there is uncertainly or lack of empirical knowledge. It is anticipated that two or three rounds will be necessary but not more than four rounds.   All Delphi surveys will be sent and returned electronically within the firewall on the intranet. It is expected that each participant wild spend approximately 15- 20 minutes to complete each round of the Delphi process.

The purpose of this e-mail is to invite your participation. Participation is voluntary and all responses will be kept anonymous. The data collected will be kept on a password protected thumb drive that is accessible only by the nurse practitioner (DNP student) and her advisor. There are no foreseeable risks to participants. This is a quality improvement project to evaluate the evidence for recognizing schizophrenia in the primary care setting and evaluating a screening tool to be used. Past and existing patients will not benefit from this project as there is no direct intervention. The potential benefit for future patients is improved knowledge of recognizing schizophrenia in the primary care setting. Future clinicians may benefit from having a clinical recommendation to follow.

Participation is voluntary. If you begin to participate, you may decide to stop or withdraw at any time. Your decision will be respected and will not result in a loss of benefits to which you are otherwise entitled. If you have any questions, please contact one of the undersigned.

Having read the above document and having had an opportunity to ask any questions, please access and complete the attached document, "Phase One: Delphi Study Round One Questions." Please return the completed survey to susan@nctc.net.

By completing and returning the questionnaire, you give us permission for your participation. You may keep this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact Sherry May, IRB Administrator, office of Sponsored Programs, Kepner, Hall, University if Northern Colorado, Greeley, Co 80639. Phone 970-351-1910.

Kathleen N. Dunemn, PhD, APRN, CNM   Susan H. Winchester, MSN, APRN

Kahtleen.Dunemn@unco.edu

970-351-3081

This informed consent will be e-mailed and accompany each round of the Delphi study

APPENDIX C

SURVEY ONE

Question #1: What is your career title/ role (you may indicate more than one if applicable)

Answer Options:

APRN Psychiatric Nurse Practitioner

Primary Care APRN

Other APRN

Psychiatrist

MD, not psychiatrist

PA Psychiatry

PA primary care

APRN student psychiatry

APRN student primary care

Psychologist

Therapist

Other

Other (please specify)

Question #2: How long have you been in practice?

Answer Options

0-6 months

6 months to 1 year

1-5 years

5 years or more

Not yet in practice

Other

Other (please specify)

Question #3: What has been your experience in recognizing possible schizophrenia?

Answer Options:

 I do this in my role as a provider and feel quite comfortable with it

 I do this in my role as provider, but am not fully comfortable with it

 I seldom see patients with schizophrenia and am not sure how to recognize it

 I am a student, but feel comfortable that I can recognize schizophrenia

 I am a student, but and not fully comfortable with recognizing schizophrenia

 Other (please specify)

Question #4: How often do you feel the need to screen for mental health?

Answer Options:

 I do it with every patient every day

 I do it when necessary

 I do it if a patient asks for it

 Other

 Other (please specify)

Question # 5: How well do you feel your current screening process is working?

Answer Options:

 I think my screening process is excellent

 I think my screening process is good

 I would like more information and knowledge about

 schizophrenia and how to recognize it

 Other

Question #6: Research shows that brain scans can detect changes as schizophrenia progresses. Treating that schizophrenia as early as possible can prevent or slow those changes and improve the quality of life of those patients.

Answer Options:

 I knew that.

 I didn't know that

 Other (please specify)

Question #7: What symptoms would make you think that a patient may
have schizophrenia?

Answer Options:

Auditory hallucinations: Do you hear things that other people don't hear?

Visual hallucinations: Do you see things that other people don't see?

Hallucinations: Are these things scary to you?

Delusions: Do you believe things that other people don't believe? Do you think people
are following you?
Does your television or radio talk directly to you?

Is someone or something telling you to do things that you wouldn't ordinarily do?

Are you becoming less interested in things around you or in things you used to enjoy?

A decrease or lack of personal hygiene?

Increased feelings of isolation

A lack of understanding or social nuances or social cues

A general sadness that is difficult to understand

Reduced functioning

Disorganized speech

Other

Other (please specify)

Question #8: What screening tools do you use for mental health or what is provided in your electronic health records?

Answer Options:

The Adult Symptom Screener screens for the following common DSM-IV diagnoses: Depression; Generalized Anxiety Disorder; Panic Disorder; Social Anxiety Disorder; Obsessive-Compulsive Disorder; PTSD; Bipolar Disorder; Eating Disorder; Alcoholism; Drug Abuse; ADHD; Personality Disorder; and Schizophrenia/Psychosis.

A mental health screening tool is provided with my EHR and I use it, but I don't know what it is called

A mental health screening tool is provided with my EHR, but I don't use it.

I don't use electronic health records

Other

Other (please specify)

Question #9: What more information would you like to have to better recognize schizophrenia?

Answer Options:

 Information on screening

 Information on symptoms

 Family education

 Referral information

 Other

 Other (please specify)

Question #10: What other questions would you like me to address?

Answer Options:

Other

Other (please specify)

APPENDIX D

SURVEY TWO

Question # 1: Consent form

Question # 2: How is the most efficient way for you to receive educational information about schizophrenia?

Answer Options

Drug rep in my office with drug recommendations

An in-person class or conference, CME or webinar

Drug rep at a dinner with drug recommendations

An email from a drug rep

An email from a national organization not associated with a particular drug

A mailed one page information sheet with links to more information

A multi page copy of research dealing with schizophrenia

Article in a peer reviewed journal

General articles

Other (please specify)

Question #3: What kind of screening do you prefer for mental health?

Answer Options:

I prefer a screening tool that the patient fills out ahead of time and I review before seeing the patient

I use the screening tool in my EMR

I prefer a tool that I fill out while asking the patient questions

I prefer a more informal approach to mental health screening, a few questions to determine if further information is needed

I prefer to let the patients ask me if they feel depressed or if they feel the need for mental health screening

Other (please specify)

Question # 4: What are some challenges in your day that might prevent you from reading new information on schizophrenia?

Answer Options:

No time, I am just really busy

Other issues are more important to me

Since only 1% of the population have schizophrenia, I really don't see the information being useful to my practice

I have stacks of research and information already sitting on my desk, floor, etc.

Thinking about schizophrenia is scary to me

Would I even understand it?

I don't want to treat this disease

Other (please specify)

Question #5: If you could add one thing to your day, what would it be? Okay, so you can choose more than one

Answer Options:

Time
Money
Meditation
Exercise
Travel
Education
Peace
Other (please specify)

Question #6: If you are in primary care or other non-psych professions, which of the following apply?

Answer Options:

I feel competent diagnosing and treating schizophrenia

I have others in my office that I can refer mental health patients to

I know what resources are available in my community to refer mental health patients to

I have a list of mental health providers I can refer to

Other (please specify)

Question #7: If you are a mental health provider, do the primary care clinics in your area know where you are and how to refer to you?

Answer Options:

I don't know

I should send them some information

I think the doctors would be against sending patients to me

I'm not sure how to go about letting them know

Yes

Other (please specify)

Question #8: What is your preferred learning style?

Answer Options:

Video

Written

Audio

See one, do one, teach one

Hands on

Other (please specify)

APPENDIX E

SURVEY THREE

Question # 1: Consent Form

Question # 2: What is your career title/role (you may choose more than one answer if applicable)?

Answer Options:

APRN psychiatric

APRN primary care

APRN other

Psychiatrist

MD, DO, not psychiatrist

PA psychiatry

PA primary care

APRN student psychiatry

APRN primary care

APRN other

Psychologist

Therapist

Other

Other (please specify)

Question #3: How long have you been in practice?

Answer Options:

0-6 months

6 months to 1 year

1-5 years

5 years or more

Not yet in practice

Student

Other

Other (please specify)

Question #4: How often do you screen for mental health?

Answer Options:

With every patient, every day

When necessary

If a patient asks for it

I would screen more if I had more knowledge or a screening tool

Other

Question #5: 33% of respondents said that they used an Adult Symptom Screener. Are you familiar with that or do you have access to it?

Answer Options:

I use it

I use the mental health screener in my EHR

I use another screening tool

I refer patients that I think may have mental health issues

I feel uncomfortable dealing with mental health issues

Other

Other (please specify)

Question #6: Many respondents asked for more education on schizophrenia, particularly how to recognize it and family education. How do you prefer to receive this education?

Answer Options:

Independent CEUs

An in-person class or conference

A research paper

A review article of research papers

Article in peer reviewed journal

Other

Other (please specify)

Question #7: If you would read this type of article in a peer-reviewed journal, which journals do you read?

Answer Options:

Journal of Primary Care and Community Health

Open Access Journals (700 journals)

Journal of Community Health

BMC Family Practice

Mental Health and Prevention

Journal of Mental Health and Human Behavior

Journal of American Psychiatric Nurses Association

American Journal of Nursing

Journal of Professional Nursing

Other

Other (please specify)

Question #8: What association conferences do you attend or what conferences would you think would be a good fit for this topic?

Answer Options:

APNA

AANP

NPACE

Other

APPENDIX F

SURVEY FOUR

Question # 1: Consent Form

Question # 2: Is extra education needed to help primary care recognize possible schizophrenia in their patients so that they can be referred to a mental health provider?

Answer Options

Yes

No

Other

Question #3: Would a list of symptoms be helpful to primary care providers to help them recognize possible schizophrenia?

Answer Options:

Yes

No

Other

Question #4: Would a mental health screening tool be helpful and practical for primary care providers?

Answer Options:

Yes

No

Other

Question #5: Would an article in a peer-reviewed journal be helpful to primary care providers?

Answer Options:

Yes

No

Other

Question #6: Would a one page list of symptoms with quick questions to ask patients and links to other information be realistic in the primary care setting?

Answer Options:

Yes

No

Other

APPENDIX G

SURVEY FIVE

Question #1: A Brief Information Sheet

What do you think--Would primary care find the following brief information sheet helpful in recognizing possible schizophrenia?

<div align="center">

With some specific knowledge,

Schizophrenia Doesn't Have to Be Scary

</div>

If you have a patient with possible delusions, hallucinations, disorganized speech,

disorganized or catatonic behavior, or reduced functioning,

<div align="center">

ASK THEM

</div>

Do you ever hear things that others don't hear?

Do you ever see things that others don't see or things that seem to be out of the corner of your eye, like something scurrying across the floor?

Do voices, or the television, or the radio tell you to do things you really don't want to do?

Do you ever think that you have a specific mental ability or special power that others don't have?

Do you find it hard to do things that other people seem to do easily?

Do you ever feel scared or paranoid about things that may happen to you or to your family?

If the answer to any of these questions is yes, please refer them to a local mental health provider. If you have any of these symptoms, please tell your doctor.

APPENDIX H

BRIEF INFORMATION SHEET

With some specific knowledge,

Schizophrenia Doesn't Have to Be Scary

If you have a patient with possible delusions, hallucinations, disorganized speech,

disorganized or catatonic behavior, or reduced functioning,

ASK THEM

- **Do you ever hear things that others don't hear?**

- **Do you ever see things that others don't see or things that seem to be out of the corner of your eye, like something scurrying across the floor?**

- **Do voices, or the television, or the radio tell you to do things you really don't want to do?**

- **Do you ever think that you have a specific mental ability or special power that others don't have?**

- **Do you find it hard to do things that other people seem to do easily?**

- **Do you ever feel scared or paranoid about things that may happen to you or to your family?**

- **If the answer to any of these questions is yes, please refer them to a local mental health provider. If you have any of these symptoms, please tell your doctor.**