

**EXPLORING THE IDENTIFICATION AND TREATMENT OF ADOLESCENT
ANXIETY IN PRIMARY CARE: THE PERCEPTIONS OF PRIMARY CARE
PROVIDERS'**

by

Kelly Rice Williams

BS, University of Pittsburgh, 2012

MPH, University of Pittsburgh, 2015

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This dissertation was presented

by

Kelly Rice Williams

It was defended on

April 1, 2019

and approved by

Mary Hawk, DrPH, Associate Professor, Behavioral and Community Health Sciences,
Graduate School of Public Health, University of Pittsburgh

Todd Bear, PhD, MPH, Assistant Professor, Behavioral and Community Health Sciences,
Graduate School of Public Health, University of Pittsburgh

Ana Radovic, MD, MSc, Assistant Professor, Pediatrics, School of Medicine,
University of Pittsburgh

Dissertation Advisor: Jeanette Trauth, PhD, Associate Professor, Behavioral and
Community Health Sciences, Graduate School of Public Health, University of Pittsburgh

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ABSTRACT

Anxiety is the most prevalent adolescent behavioral health condition. Impairments caused by anxiety negatively impact educational performance, and social and emotional functioning. Moreover, future consequences of undetected and untreated anxiety include increased risk for other behavioral health conditions, obesity, and smoking. Despite the high prevalence of anxiety and the chronic nature of untreated anxiety, only about one third of youth with anxiety disorders receive treatment, constituting a public health problem.

No national guidelines exist for primary care providers regarding the identification and treatment of adolescent anxiety. Moreover, anxiety-specific research in pediatric primary care is limited. As such, this qualitative interview study sought to understand what factors, at the provider, organizational-, and policy-level, influence primary care providers decisions and capacity to identify and treat adolescent anxiety.

Of the 22 providers interviewed, nearly all perceived identification of adolescent anxiety as part of their professional role. Providers were divided on how anxiety should be identified. Half of providers believed a short, systematic screening tool would be beneficial for initial identification. Others perceived it was necessary to utilize anxiety screening tools only after the potential concern was identified. While a majority of providers had prescribed medications for adolescents with anxiety, not all providers viewed it as their role to prescribe and/or manage

medication treatments. Several providers viewed their role as initiating treatment until the adolescent was able to see a specialist, while other providers commented on treatment roles as being strictly referral based. Barriers including lack of time, experience, training, and comfort, fear of medication side effects, and not having an embedded behavioral health provider were discussed as limiting factors on primary care providers' capacity to treat anxiety.

Future research should focus on how both the identified factors influencing primary care providers' capacity to treat anxiety and their treatment role perceptions impact decisions to routinely screen for anxiety. Efforts to standardize primary care providers' capacity for anxiety treatment and identification may decrease treatment gaps; the development of evidence-based national guidelines and expectations may facilitate increased primary care providers' confidence with implementing treatment plans and may support increased resources, training, and education from an organizational standpoint.

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PREFACE

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1.0 INTRODUCTION

The first chapter presents literature specific to the treatment of adolescent anxiety in primary care, focusing on why the under-treatment and under-recognition of adolescent anxiety is a public health concern. Next, primary care practices are introduced as a viable setting for the identification and treatment of adolescent anxiety disorders. Screening tools and two types anxiety treatment are introduced followed by a discussion of general barriers faced by primary care providers (PCPs) in the identification and treatment of adolescent mental health conditions. Clinical care guidelines are subsequently outlined to highlight discrepancies in treatment support PCPs may receive for specific conditions (e.g., ADHD, depression, and anxiety). Consequently, literature focused on PCP role perceptions and levels of confidence in identifying and treating mental health conditions is discussed.

This chapter concludes with an outline of the primary aims of the study. As a way to organize the above evidence and identify significant gaps, the disease screening framework created by Wilson and Junger in conjunction with tenants of Social Cognitive Theory are explained as a conceptual framework to explore how primary care providers' awareness, skills, comfort level, and the environment in which they operate influence the identification and treatment of adolescent anxiety.

Several things are important to note about chapter 1: (1) Throughout the discussion of the major areas reviewed, literature specific to adolescent anxiety in primary care is often sparse. As

such, supporting and contrasting literature specific to other conditions, namely ADHD and depression, are referenced. (2) Many key factors discussed in chapter 1 were identified based on the social ecological framework. The figure below serves as a reference. (3) Adolescents are defined as being 13 to 18 years of age. The word youth is used in reference to samples that include persons anywhere from 3 to 18 years of age.

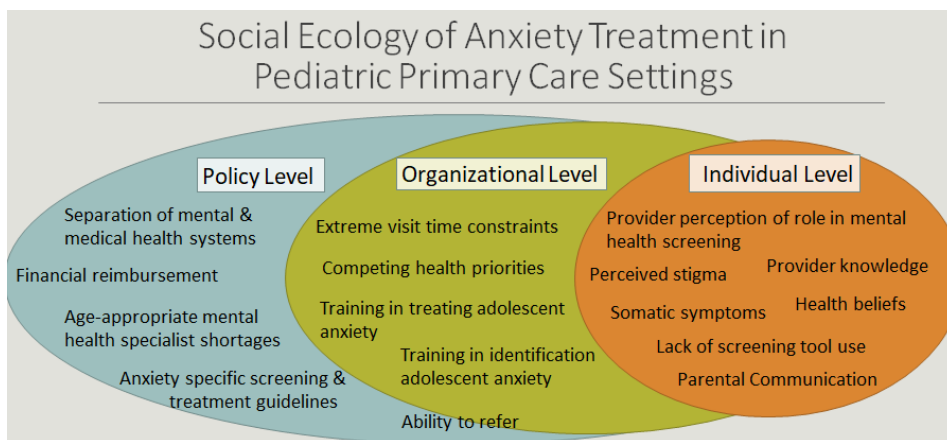


Figure 1. Ecological Factors from Non-Anxiety Focused Literature

Chapter 2 presents the methodology of this exploratory qualitative research study to understand the totality and interplay of factors that may influence a primary care provider's decision to identify and treat adolescent anxiety in primary care. Participant selection, data collection, data analysis, and the inclusion of expert interviews are presented. Chapter 3 provides the results of the study. Quotations are displayed throughout this section. Chapter 4 provides an interpretation of study results including interpretation based on existing evidence in the literature and the perspectives of three expert interviewees. The final chapter provides concluding remarks and presents possible avenues for future research.

1.1 BACKGROUND

In any given year, 13 to 20% of American youth (ages 3 to 17) have a diagnosable mental disorder.^{1,2} Youth can experience mental health conditions across the spectrum from attention deficit hyperactivity disorder (ADHD), to anxiety disorders and depression, to serious mental illnesses such as schizophrenia.³ Literature states that among child and adolescent psychiatric disorders the most common are anxiety disorders, with prevalence of anxiety (26.6%)⁴ being higher than depression/dysthymia (11.7%),⁴ substance use disorders (11.4%),⁴ and ADHD (8.7%)⁴ for adolescents. Even when considering how the above disorders co-occur with anxiety, anxiety is still the most common.^{5,6} For example, depression and anxiety co-occur:⁶ anywhere from 25 to 50% of youth experiencing depression experience anxiety. Interestingly of youth experiencing anxiety, 10 to 15% experience depression.⁷ Adolescent anxiety disorders focused on in this dissertation include generalized anxiety, phobias, separation anxiety, and panic disorders.⁸ High adolescent anxiety prevalence rates are one major reason researchers and practitioners must endeavor to develop national guidelines for primary care providers regarding the identification and treatment of adolescent anxiety.

1.1.1 Prevalence of anxiety in youth

A variety of estimates exist regarding prevalence of anxiety in youth. Prevalence estimates of anxiety disorders for American youth range from 2.6 to 20% (before the year 2009).^{9,10} A more recent lifetime prevalence estimate of anxiety disorders for U.S. adolescents (ages 13 to 18 years old) is 26.6%, excluding post-traumatic stress disorder.⁴ This estimate comes from a landmark 2010 nationally-representative study utilizing data from the National Comorbidity Survey-

Adolescent Supplement (NCS-A) (n=10,123).⁴ International studies estimate a point prevalence ranging from 3.1 to 17.5% of youth anxiety disorders.¹¹ Some international studies report even higher rates. For example, a German study of students ages 12 to 17 years old found a cross-sectional anxiety prevalence rate of 18.6% using a diagnostic interview tool.¹² Prevalence rates appear to vary based on age of the population, mechanism for diagnosis (self-report vs diagnostic interview), Diagnostic and Statistical Manual of Mental Disorders (DSM) version/anxiety confirmation criteria, and current versus lifetime diagnosis. See table 1 for other prevalence rates presented in the literature.

Table 1. Anxiety Prevalence Evidence

Population	Prevalence	Evidence	Study Considerations
n=776 1983 (age 9-18) At least 1 Dx Any Dx 1986 (age 11-20) At least 1 Dx Any Dx	Per 100, 1 year: 5.5-14.3% 29% 1.9- 7.9% 17.7%	Gurley D, Cohen P, Pine DS, Brook J. Discriminating depression and anxiety in youth: a role for diagnostic criteria. <i>J Affect Disord.</i> 1996;39(3):191-200. ¹³	Rates for at least 1 anxiety diagnosis and for any anxiety disorder; community sample in NY state; parent/child interview assessment; assessment questions changed at second time-point; DSM-III-R
n=210 ages 8, 12, 17 At least 1 Dx Any Dx	1.0-12.9% 21%	Kashani JH, Orvaschel H. A community study of anxiety in children and adolescents. <i>The American journal of psychiatry.</i> 1990;147(3):313-318. ¹⁴	Rates for at least 1 anxiety diagnosis and for any anxiety disorder; community sample in Missouri; Child Assessment Schedule; DSM-III
Ages 14-24 years old (majority of studies max age was 19)	Lifetime: 9.3-27% 12 month: 8.6-20.9%	Costello EJ, Egger HL, Angold A. Developmental epidemiology of anxiety disorders. In: Ollendick TH, March JS, editors. <i>Phobic and anxiety disorders in children and adolescents.</i> New York: Oxford University Press;2004.p. 334–80. ¹⁵	Review of epidemiologic literature; any anxiety disorder; n ranging from 172 to 3,021; DSM III-R; DSM IV; CICI; K-SADS; DISC; DIS
n=78,042 ages 2-5 ages 6-11 ages 12-17	1% 2.9% 4.1%	Ruth Perou RHB, Stephen J. Blumberg, Patricia Pastor, et al. <i>Mental Health Surveillance Among Children — United States, 2005–2011.</i> Centers for Disease Control and Prevention 2013. ^{16,17}	Current diagnosis; parent-self report data National Health Interview Survey and National Survey of Children's Health data in 2007

Dx: Diagnosis

1.1.2 Potential causes of anxiety disorders

Several factors have been implicated in the development of anxiety disorders including genetic, biological and environmental factors. For instance, there is evidence that individuals who have a parent(s) with anxiety have a higher likelihood of having an anxiety disorder;¹⁸ a result of genetic and environmental factors.^{19,20} Factors associated with anxiety disorder incidence include: parenting styles/behaviors,^{20,21} life circumstances/stressors,^{20,22} negative emotionality/temperament,^{20,22} and dysfunction with biochemical/“neural-circuitry”.^{20,22,23}

1.1.3 Anxiety, depression, and ADHD impairments

Hallmark characterizations of anxiety disorders include fears^{24,25} (e.g., daily life routines²⁵; social situations^{24,25}), being separated from home or a “loved one”,²⁵ presenting with somatic symptoms,²⁴ worrying/negative thoughts,^{24,26} and having difficulty sleeping.²⁵ Moreover, there is a correlation between anxiety severity and the detrimental effects of somatic symptoms.⁵ In addition to this physical suffering¹ caused by anxiety in adolescents, scholastic performance,^{1,5} grades,⁵ missed days at school,^{5,9} concentration,²⁷ and familial and peer relationships^{1,28,29} are negatively affected.

Depression in adolescents is associated with feelings of sadness; behavioral pattern changes regarding eating, sleeping, and energy; as well as difficulties with attention, school, and relationships.³⁰ When depression is severe, symptoms can lead to self-harm, including suicide.³⁰ Attention deficit hyperactivity disorder (ADHD) in adolescents is also associated with negative outcomes related to scholastic work, relationships, and daily functioning.³¹ Depression and ADHD have been highly researched as these diagnoses cause great impairment to youth

specifically regarding academics and relationships. A six-year longitudinal study of youth ages 9 to 13 (n=1,420) by Ezpeleta et al., showed anxiety disorders are associated with the same level of impairment in academic and relational domains.^{24,32} As impairments caused by anxiety are similar to impairments caused by depression and ADHD, equal prioritization in screening and treatment research is ethically motivated.

1.1.4 Economic costs of childhood mental health conditions

Mental health disorders in children cost approximately 247 billion dollars annually (2007) in mental health services, health, productivity, and crime.^{1,33,34} Moreover, child mental health disorders are predictive of adult mental illness; 50% of all adult lifetime cases of mental health issues began in adolescence (age 14) with mental disorders/symptom onset.^{3,11,35,36} In any given year, 18% of adults experience anxiety disorders in the U.S. (approximately 40 million people).^{37,38} National health care cost estimates for adults with anxiety disorders is 42 to 46.6 billion dollars a year in both indirect costs (e.g. morbidity such as percent of lost income or productivity due to anxiety and mortality³⁹) and direct costs (e.g. services at mental health institutions, physician office visits, hospitalizations, nursing home care, and support costs such as physician training³⁹) (1990).³⁹⁻⁴²

A major reason why youth with mental health issues, including anxiety disorders, are initially seen in primary care settings (75% of youth with mental health issues)² is these disorders typically present with somatic symptoms.^{5,9} Somatic symptoms are presenting physical symptoms that may stem from behavioral health issues and or are medically unexplainable. Somatic symptoms include headaches,^{27,28,43} gastrointestinal issues,^{27,44} chest pain,^{5,45} tachycardia,⁵ dizziness,⁵ nausea,⁵ vomiting,⁵ breathing difficulties,⁵ and insomnia.²⁷ Under-

recognition of anxiety disorders⁴¹ combined with the presentation of somatic symptoms may lead primary care providers (PCP) to order expensive, unnecessary diagnostic tests.^{5,38,41} This etiological uncertainty regarding physical presentations of anxiety may also result in an excess number of and needless medical visits that may not provide treatment necessary for symptom alleviation.⁵

1.1.5 Public health significance

If anxiety goes undetected and untreated, research shows the disorder course is typically chronic.⁵ Untreated anxiety disorders in adolescents negatively impact educational performance,^{6,8,24} and social and emotional functioning.²⁴ Having an anxiety disorder as an adolescent increases future risk of depression,^{8,24,46,47} eating disorders,²⁴ substance use,^{8,24,46,47} obesity,^{28,48} and smoking.^{28,49} As adolescent anxiety disorders have both negative acute and future consequences, preventative measures such as identification (i.e., screening) and subsequent treatment may lead to a decrease in associated consequences of the disorder.^{6,35} Moreover, anxiety disorders occur earlier than other mental health disorders. For example, anxiety disorder onset is 5 to 10 years before the onset of depression -- early onset provides the medical community the opportunity to intervene earlier and potentially reduce future risk of depression and substance use.¹⁸ High prevalence of anxiety in the U.S. adolescent population paired with negative individual and social costs constitutes a significant public health problem and highlights the need for proper treatment.

1.2 DISPARITIES IN PEDIATRIC ANXIETY TREATMENT

Analysis of the National Health and Nutrition Examination Survey (NHANES 2001 to 2004) found only 50.6% (+/- standard error 3.4) of youth with any mental disorder and 32.2% (+/- standard error 14.3) of youth with anxiety disorders received treatment.^{50,51} In a 2018 report from a national non-profit, Child Mind Institute, they stated that 80% of children and adolescents “never get help” but do not reference where the original data is from. Treatment gaps are pronounced for youth with mental disorders,⁵² and perhaps more pronounced for anxiety disorders.

1.2.1 Treatment gaps

Chavira et al., conducted a study to assess prevalence of specific mental health disorders and associated treatments in a sample of youth ages 8 to 17 years old who had seen a PCP in the past year.⁵³ Findings show that the most prevalent mental health issue was anxiety followed by ADHD and depression.⁵³ Most importantly, this study provides evidence that significant treatment disparities exist for youth anxiety; only 9% of youth with anxiety had ever been treated with medication compared to the 20% of depressed youth and 79% of youth with ADHD.⁵³ Twenty-eight% of youth with anxiety had ever received counseling for their disorder compared to the 40% of youth with depression and 33% of youth with ADHD.⁵³ This study highlights a treatment gap for anxiety compared to treatment for ADHD and depression. It is important to note that level of severity for either anxiety or depression plays a role in a provider’s treatment type decision (i.e., therapy, medication, or both).^{54,55}

Merikangas et al. conducted a cross-sectional study using a subsample of adolescents 13 to 18 years old who were interviewed in the national NCS-A survey and whose parents also filled out a self-administered questionnaire regarding their children.⁵² Results showed only 17.8% of adolescents with anxiety received disorder-specific treatment compared to disorder-specific treatment rates for ADHD (59.8%) and mood disorders (37.7%).⁵² Results from Chavira and Merikangas mirror each other in their findings that ADHD is treated more frequently than other disorders, especially anxiety disorders. Not linked to either above the above discussed studies, there may be several reasons for ADHD being treated more frequently compared to other mental health conditions including FDA approval of drug treatment,⁵⁶ recommendation guidelines,⁵⁷ diagnostic comfort,² and the external nature of symptoms.

Kataoka et al., (2002), analyzed data from three national surveys (e.g. National Survey of American Families, National Health Interview Survey, and Community Tracking Survey) to examine the “unmet” mental health service (e.g., doctor, mental health counselor, therapist) needs of youth.⁵⁸ Analysis revealed that of youth who needed services, 88% of Hispanic youth and 76% of white youth did not receive care in a 12-month period.⁵⁸ They also found that 87% of uninsured youth and 73% of publicly insured youth did not receive care.⁵⁸ Results from this study provide evidence of disparities in the reception of youth mental health care by ethnicity and insurance type.

1.2.2 Low identification: a factor in treatment disparities

A study of an integrated health care system (e.g. all providers can see the same electronic medical record; care providers, locations, and insurance coverage are integrated)⁵⁹ using parental and adolescent structured interviews found the detection of both depression and anxiety was low

in youth (11 to 17 years of age).²⁹ Specifically only 22% of the 51 participants (with depression/anxiety) were recognized by this health care system for these disorders.²⁹ Early identification is the necessary first step in providing adequate treatment to mitigate the increased risks adolescents face regarding “substance abuse, depression, and suicidality”, as well as increased behavioral and physical risks over time.⁶⁰

1.2.3 Summary

Over the past twenty years, the need for identification of behavioral health conditions in primary care settings has become a discernable and important conversation among researchers and practitioners. Between 12% and 22% of youth in primary care offices have a mental health disorder.⁶¹ Specifically, screening and treatment in primary care offices for certain behavioral health conditions (e.g., ADHD and depression) have been increasingly well received by providers.^{62,63} However, the same is not true for anxiety disorders, as anxiety disorders frequently go undetected and without detection, untreated.^{10,24,52} The detrimental effects of untreated anxiety as well as the future health risks underscore the necessity for early identification and subsequent treatment of anxiety in adolescents.

1.3 PRIMARY CARE SETTINGS

Primary care is an ideal setting for identification and treatment (including referrals to treatment) of adolescent anxiety disorders.⁶⁴ Primary care providers (PCPs) are likely to be the first point of routine contact with the health care system a youth will have. According to the National Health

Interview Survey (2017) 96.1% of persons under the age of 18 were reported to have a “usual place of health care”; with usual care locations most often being doctors’ offices (74%) and clinics (24.5%).⁶⁵ Thirty-three percent of youth have family medicine physicians as their usual source of care.^{66,67} Moreover, pediatric primary care providers are used by 90% of youth for health care needs.⁶⁸ For youth six to 18 years of age, in primary care settings, the lifetime prevalence of anxiety disorders ranges from 6.6 to 17%.^{69,70} The data supports primary care is used by a majority of youth and youth in these settings have behavioral health needs specific to anxiety disorders.

Typically, the process of identification and treatment for children who do receive services related to their mental health occurs solely in the primary care setting.^{71,72} Historically, rates of identification of behavioral health issues in youth have been increasing for PCPs (e.g., pediatricians and family medicine physicians). A study of community-based pediatricians and family practitioners (n=425) found an increase in psychosocial issue identification (6.8 to 18.7%) for youth ages 4 to 15 years old from 1979 to 1996.^{56,73} In summary, there are three substantial reasons as to why primary care practice settings are ideal for the identification and treatment of adolescent anxiety disorders: (1) adolescents have generally high levels of access to primary care offices⁷⁰; (2) adolescents who have anxiety disorders (recognized or not) are overwhelmingly seen in primary care offices^{24,57}; and (3) there is an increasing trend of providers in primary care offices identifying specific behavioral health issues.

In a position paper put forth by the American Academy of Pediatrics and the American Academy of Child and Adolescent Psychiatry (2009) there was a strong push to acknowledge primary care clinicians have the ability and the responsibility to initiate mental health identification and treatment for youth with ADHD, depression, anxiety, and substance use

concerns.³⁵ Several reasons have been proposed for why primary care practice is the most suitable location for the identification and care of pediatric mental health issues³⁵ that are specific to the primary care provider and settings in which they practice (see table 2).

Table 2. Unique Characteristics in Pediatric Primary Care

Provider	Setting
Rapport building skills ³⁵ , including trust ³⁶	Conversations in a setting associated with little to no mental health stigma ³⁵
Longitudinal aspect of developmental care ^{36,68} Lifestyle promotion ³⁶ Reinforcement of child/family strengths ³⁶ Recognition of adverse events/stressors ³⁶	Appointments Orientation towards family ^{35 74} Routine well-child visits; Holistic care Acute need appointments
Communication with variety of specialists ³⁶	Co-location of mental health providers possible ³⁵

Specific to the setting of primary care, there is some consensus in the literature that receiving mental health treatment from PCPs/primary care settings versus receiving treatment from mental health specialists/mental health specific settings may be perceived as less stigmatizing.^{2,56,75,76} Stigma can be reduced merely from not having to go to a mental health clinic⁷⁰ and instead going to a primary care location. Primary care is often not thought of as a usual place of care for mental health problems by the general public. Primary care providers also tend to see adolescents as well as their families in visits over the course of the child’s development, which can foster a trusting relationship which is a factor in mediating stigma and levels of comfort.⁷⁰

Youth, as well as adults,⁷⁷ experiencing emotional distress due to anxiety are more likely to go to a general care provider as opposed to a mental health specialist for treatment, with one reason being the somatic nature of symptoms.^{5,77} Contradictory evidence exists according to the National Survey on Drug Use and Health (2015) 13.3% of adolescents’ ages 12 to 17 years obtained emotional/behavioral care at both inpatient or outpatient mental health settings (i.e. specialty mental health settings) and only 2.7% of these adolescents were obtaining emotional/behavioral care from predications or family physicians.⁷⁸

Much literature exists on barriers to receiving mental health services. While there are many barriers to mental health services such as insurance/financial barriers³⁵ and waiting times for appointments⁵⁶ the following two barriers will be discussed in turn as they relate to the potential need for identification/treatment capabilities in primary care: (1) lack of pediatric mental health specialists,^{2,71} and (2) presentation of somatic symptoms leading to visits with primary care.⁵

1.3.1 Lack of pediatric mental health providers

Currently in the United States there are approximately 8,300 practicing child and adolescent psychiatrists (2016) who have a potential clientele of over 15 million.⁷⁹ Comparatively there are 58,726 general pediatricians, 4,703 internal medicine-pediatric trained physicians (2011)⁸⁰ and 87,650 family practice physicians (2010)⁸¹ who provide care for up to 33% of all youth.⁶⁶ There is a need for increases in child and adolescent-specific psychiatry, as mental health services reach only 20% of the youth in need of such services (2013).⁷⁹ Moreover evaluation/treatment conducted by age-appropriate mental health specialists occurs for “only a small fraction of [youth]” as reported by the US Bureau of Health Professions.⁷⁹ Shortages in this profession stem from factors such as a reduction in “child and adolescent psychiatry residency training programs”,⁸² cost of specialized training⁸³ paired with declining funds for graduate medical education,⁸⁴ managed care/health plan payments^{83,84} and “a devalued image of the profession”.⁸⁴

Not only is there a relatively limited supply of psychiatrists specifically trained to work with youth, rural geographic regions and areas with low socioeconomic status (SES) in the US experience limited or no access to age-appropriate mental health services and/or a maldistribution of child psychiatrists.^{79,85,76} Locations that are both urban and academic centers

have reported that access to child psychiatrists is not a severe burden.⁸⁵ In Pennsylvania (PA), every county has been designated by the Health Resources and Services Administration (2017) as having too few mental health providers and services.⁸⁶ This designation is substantiated by the American Academy of Child and Adolescent Psychiatry (AACAP) who report PA as having a “severe shortage” of practicing child and adolescent psychiatrists (2015), with 33 counties not having at least one practicing child and adolescent psychiatrist.⁷⁹

One way the Pennsylvania Department of Humans Services is attempting to remedy the shortage of mental health specialists is through the Telephonic Psychiatric Consultation Service Program (TiPS).⁸⁷ TiPS provides consultation services for primary care providers (and others) who need to or want to consult child psychiatry experts regarding behavioral health concerns faced by their patient population.⁸⁷ While this program is an excellent resource for PCPs as it was “designed to increase the availability of child psychiatry consultation teams, regionally and by phone, to primary care providers (PCPs)”,⁸⁸ the program can only be utilized on behalf of patients on Medical Assistance.⁸⁷

The importance of utilizing PCPs in areas with limited access to age-appropriate mental health services is underscored by locational and transportation barriers to the few practicing child and adolescent psychiatrists that are available. While telemedicine is a growing mechanism to connect patients with mental health providers, it is by no means consistently available.⁸⁹ It is reasonable to look to PCPs for both identification and treatment of non-serious mental illness such as adolescent anxiety.^{82,85}

1.3.2 Somatic symptoms

Physical presentations of symptoms may be one reason why appointments are set at primary care as opposed to a mental health clinic. As previously noted, physical complaints are common for persons with anxiety or depression and these somatic symptoms are one reason why anxiety and depression often go undiagnosed.⁶⁴ Youth frequently go to primary care settings, over the course of multiple visits, with concerns regarding “neurologic, pain, autonomic, or gastrointestinal tract symptoms” and often these complaints are met with null test results for physical conditions.⁹⁰

Abdominal pain, headaches, and chest pain are three symptoms that often present during pediatric primary care visits.⁹⁰ Campo et al., (2003) conducted a case-control study of youth ages 8 to 15 years old with and without recurrent abdominal pain in primary care practices. Results showed that 79% and 31% of youth with recurrent abdominal pain met the clinical criteria for anxiety and depression respectively.^{90,91} While anxiety can be the main diagnosis when a patient presents with physical (somatic) symptoms, certain physical health conditions may be associated with anxiety in adults such as irritable bowel syndrome, chronic obstructive pulmonary disease and heart disease.⁹² However, as evidenced above, anxiety can often be the primary health concern affecting youth and the physical ailments presented are truly somatic of this mental health disorder.

1.4 SCREENING TOOLS: ADOLESCENT ANXIETY IN PRIMARY CARE

There has been a movement to incorporate mental health screening^{34,63} into primary care.

Specific to adolescent anxiety, reliable, effective and feasible screening tools exist. The purpose

of this section is to provide an overview of available anxiety-specific screening tools for primary care providers, not to determine the “best” option.

To note, the following are guidelines to determining if the measures below have good psychometric properties: (1) Cronbach's alpha at or above 0.70 demonstrates acceptable levels of item inter-relatedness⁹³; (2) intraclass correlation coefficients of .075 to .90 demonstrate good test-retest reliability⁹⁴; and (3) the higher the correlation (i.e. Pearson Correlation) between youth-reported measure and parent-reported measure, the more agreement there is between the two measures.

1.4.1 Screen for Child Anxiety and Related Emotional Disorders (SCARED)

SCARED is a validated parent and child self-report screening tool for anxiety disorders in youth ages eight years and older.^{6,95,96} It was developed at Western Psychiatric Institute and Clinic. Three versions of the SCARED tool exist, the original 38-item version, the 41-item version, and the 5-item version. All three versions yield a five-factor solution: panic/somatic, generalized anxiety, separation anxiety, social phobia, and simple/school phobia.^{95,97} Factor analysis was conducted on an initially developed 85-item scale, which was used to reduce the scale to 38-items.⁹⁸ Psychometric properties for this original study used a sample of children (n=341) and parents (n=300), with 88 children and 86 parents participating in test-retest reliability five weeks post first administration.⁹⁸ The following are reported psychometric properties for total score and each of the five factors found: (1) internal consistency ranged from alpha=0.74 to 0.93; (2) test-rest reliability interclass correlation coefficients ranged from 0.70 to 0.90, and (3) parent-child agreement for all correlations ranged from 0.20 to 0.47, $p<0.001$.⁹⁸

In a second study, psychometric properties of the 41-item SCARED was assessed using a sample of youth ages nine to 18 (n=190) and their parents (n=166).⁹⁵ Authors then reduced the 41-item scale to 5-items “by selecting the single item from each of the 5-factors which loaded the highest in the discriminate function analysis”.^{95,99} They found similar psychometric properties compared to the properties of the 41-item scale.^{95,99} Results from this study are presented in Table 3. Results are presented in table format because authors do not explicitly report the 5-item scale statistics. The reason, as stated above, is because the 5-item properties are similar to the properties of the 41-item scale. The 5-item SCARED is likely to be the most efficient way for primary care providers to identify anxiety disorders experienced by youth as the time it takes for assessment and scoring are relatively short, thereby posing less of a visit time threat.

Table 3. 41-item SCARED Psychometric Summary

Psychometric Properties	41-item SCARED tool
Internal Consistency Remainder coefficients Coefficient alphas	0.34-0.67 (all 41 items) 0.9 (child & parent totals)
Factor Structure Coefficient alphas	0.78-.087 (for each of the 5 factors)
Parent-Child Correlations Total anxiety score	p=0.32, p=0.0001
Cut-off point of 25 Child SCARED discriminating Anxiety to non-anxiety Anxiety to depression Anxiety to disruptive	sensitivity 71%; specificity 67% sensitivity 71%; specificity 61% sensitivity 71%; specificity 71%

1.4.2 Multidimensional Anxiety Scale for Children (MASC)

MASC⁶ is a reliable and valid screening tool for anxiety.^{96,100,101} This 39-item scale includes four subscales (e.g., physical symptoms, harm avoidance, social anxiety and separation, panic).¹⁰¹ The original scale was developed utilizing an initial sample for factor structure and

validity assessment. This scale was subsequently assessed for test-retest reliability and validity at two-time points (three weeks and three months) with a new sample.¹⁰²

A more recent study by Wei et., al., (2014) was conducted to test the validity of MASC using a sample of youth diagnosed with an anxiety disorder based on a structured diagnostic interview with youth and their parents (n=488).¹⁰¹ For internal consistency reliability of youth and parent report respectively, Cronbach's alpha for total MASC was 0.88 and 0.87, with alphas ranging from 0.64 to 0.87 for subscales.¹⁰¹ Pearson correlations between youth and parent report for youth seven to 12 years old was 0.29 (total MASC) and ranged from 0.16 to 0.47 for subscales.¹⁰¹ Pearson correlations between youth and parent report for adolescents 13 to 17 years old was 0.35 (total MASC) and ranged from 0.27 to 0.57 for subscales. The Pearson correlations mean that there is only weak to moderate agreement between youth and parent reports. While MASC is a promising tool for anxiety identification, validation in the adolescent primary care population is needed.

1.4.3 Spence Children's Anxiety Scale (SCAS)

SCAS follows DSM-IV anxiety disorder dimensions and assesses anxiety (e.g., generalized anxiety, social phobia, separation anxiety, obsessive-compulsive disorder (OCD), and fears of injury) symptom severity in youth ages eight to 14 years old.¹⁰³⁻¹⁰⁵ The developer of the SCAS reports 44-item scale takes approximately 10 minutes for an adolescent to complete.¹⁰⁴ In total, 38 of the 44-items are symptom specific to anxiety and these 38 items were selected from 80 initial items.^{106,107} Using a sample of adolescents 13 and 14 years old (n=875) a study found: (1) internal consistency of total scale having a coefficient alpha of 0.92 and subscale alphas ranging

from 0.6 to 0.80 and (2) in a 12 week test-retest (n=362) total score reliability coefficient of 0.63.¹⁰⁵

1.4.4 The Patient Health Questionnaire for Adolescents (PHQ-A)

PHQ-A is an instrument that can be used to screen 13 to 18-year-old adolescents for generalized anxiety, panic disorders, eating problems, mood problems, and substance abuse.^{103,108} A study conducted by Johnson et, al., assessed the validity of PHQ-A using a sample of adolescents ages 13 to 18 years old (n=403) who were seen in primary care. Diagnosis of a disorder made by PHQ-A was validated through a clinical diagnosis made by a mental health professional. Through professional diagnosis, 4.2% of the sample was identified as having an anxiety disorder and 5% were identified by PHQ-A.¹⁰⁸

Reported psychometric properties of PHQ-A are as follows: (1) 75% sensitivity (i.e. proportion of persons the scale finds has the condition, who actually do have the condition); (2) 92% specificity (i.e. proportion of persons the scale finds does not have the condition, who actually do not have the condition); (3) 89% accuracy (i.e. cases identified correctly); and (4) 0.65 diagnostic agreement (i.e. moderate agreement between the scale and a mental health professionals assessment –criterion validity).^{103,108} There are several advantages for the PHQ-A as it has been validated in an adolescent population, was developed specifically for primary care physicians,¹⁰⁹ takes five minutes to score,¹⁰³ has acceptable levels of sensitivity, specificity and accuracy, and screens for mental health issues that may be comorbid with anxiety. The tool, however, could be taxing to the adolescent as this self-report measure has 83 items¹⁰³ and it does not screen for as many anxiety disorders as SCARED 5-item tool.

1.4.5 Generalized Anxiety Disorder Scale (GAD-7)

GAD-7 was developed to incorporate criteria from DSM-IV and initially started with 13 items.¹¹⁰ This 13 item scale was tested on adult patients in 15 different primary care sites across 12 states over two phases to: (1) determine final scale items (n=1654) and (2) determine test-retest reliability (n=236).¹¹⁰ Seven items had correlation scores of 0.75 to 0.85 with the total scale. Based on these results, the authors found internal consistency of $\alpha=0.92$ and intraclass correlation of 0.83 for GAD-7.¹¹⁰ This measure can be self-administered or administered by the provider; administration takes approximately two to five.¹¹¹

1.5 SYSTEMATIC SCREENING

The extant literature demonstrates if one can identify a youth experiencing anxiety and treat that diagnosis, symptoms and future risks would be greatly reduced.⁶ Research has found that systematic screening by age group may be more feasible than identifying children at high risk.³⁴ Systematic screening for anxiety may remove a potential barrier of defining “at-risk” youth for the disorder – as there is evidence youth experiencing mental health risk factors (i.e., disadvantaged families) have low rates of being identified and the provider may not be able to connect risk factors (known or unknown) to mental health concerns.¹¹² Moreover occurrence of systematic screening does not preclude identification of children at-risk for mental health conditions.¹¹²

1.5.1 Evidence for and against systematic screening

Zuckerbrot et al., conducted a feasibility and acceptability study in three pediatric primary care offices regarding implementation of a “2-stage adolescent identification” depression screening protocol.⁶³ Overall results indicated providers accepted the paper screener and limited time was needed for the screener (4.6 minutes), suggesting screening feasibility. Providers in the study were able to screen approximately 79% of their patients. The other 21% of patients were not screened for a variety of reasons including refusal (2.9%), eligibility status, and other administrative reasons.⁶³

Hacker et al., conducted a study using a sample of pediatricians who had been mandated to conduct behavioral health screenings.¹¹³ Results of the study are mixed. Providers were receptive to and used screening tools. Many felt that mental health discussions were “normalized” due to the universality of screening. However, providers also reported not uniformly trusting the screening scores as they felt (1) literacy levels influenced parents’ responses, and (2) question comprehension was often difficult.¹¹³

Berger-Jenkins et al., (2011) conducted a study to assess the feasibility of screening youth (five to 12 years old) in low-resource primary care settings whose patient population was “primarily African American and Hispanic”.¹¹⁴ This study compared outcomes before implementation of a routine mental health screener and after implementation.¹¹⁴ While results did not show a significant increase in youth screened over the two-time points, concerns about mental health issues were voiced significantly more often by parents after implementation.¹¹⁴

Within the literature reviewed, there have been no reviews of how screening for anxiety impacts clinical outcomes.^{34,44} Results from a literature review conducted by American Academy of Pediatrics Task Force on Mental Health found that using a validated mental health screener

was “useful” in various visit types such as maintenance, acute, and risk appointments.³⁴ However, this Task Force paper only presented evidence regarding screening tools validated in youth populations for depression, drugs, maternal depression, and domestic violence. As such, screening tool usefulness specific to anxiety disorders is left to be determined.

1.5.2 Other sources of information used for identification

Often providers rely on their own or parental observations/descriptions of youth behavior and functioning to identify a mental health concern.⁷⁵ Relying on parental concerns is an important part of building a trusting relationship with patient’s family and provides key insight into issues that may help PCPs identify health and behavioral health issues.

However, it has been reported that not even half of parents who have concerns regarding their child’s behavioral/mental health will mention them, let alone discuss concerns with their children’s physicians.⁶⁶ Parents may not bring such concerns up to PCP’s due to (1) feelings of doubt regarding PCP’s ability to treat mental health conditions; (2) prioritizing physical health ailments; (3) treatment being administered by a different health care provider;⁶⁶ (4) parental feelings of wanting to be viewed as competent by provider, which is compounded by feelings of embarrassment and/or guilt, or (5) parents may not know what the adolescent is experiencing. If providers are not using validated identification tools and are relying on parents to express concerns in order to help them identify behavioral health concerns, there may be a risk of a youth with a diagnosable mental illness not being identified and subsequently not being treated. Systematic screening, as evidenced by Berger-Jenkins (2001), may prove as a technique to increase parental disclosures of mental health concerns to primary care providers.

1.5.3 Specific research is needed

It can be hypothesized having reliable and valid screening tools may improve PCPs in recognizing adolescent anxiety if they trust, feel equipped to use, and have time to utilize the tool. Evidence for this hypothesis has yet to be fully developed, and counter-evidence does exist in the literature. As outlined in the latter section, validated screening tools for anxiety for primary care settings are available to PCPs. Despite the existence of these tools and other sources of information, the problem of under-recognition of anxiety persists.⁴⁴ Research specific to PCPs who see adolescent patients is needed to understand unique aspects of anxiety identification in their practice settings and if systematic screening is a potential solution to under-identification.

1.6 TREATMENT: ADOLESCENT ANXIETY IN PRIMARY CARE

While there are various treatment methods for adolescent anxiety (i.e., attention bias medication, exposure therapy, family therapy, parental education²²), this review will focus on cognitive behavioral therapy (CBT) and selective serotonin reuptake inhibitors (SSRIs) as these are commonly compared and recommended in the literature as first line treatments.^{115,116} The most common efficacious non-pharmacologic therapy is CBT.⁹⁶ While CBT provides youth with education, management, and coping skills, it is not always conducive to the treatment of youth with moderate or severe anxiety.⁹⁶ Also, it is not a therapeutic technique commonly used in primary care settings.¹¹⁷ Moreover, as mental health specialists are most likely to provide CBT, “access to this specialized treatment” is a major barrier to receiving it.¹¹⁸ While cutting-edge technological advances are beginning to allow for computer and web-based care delivery, not all

geographic areas with limited access to mental health services have been reconfigured for such novel solutions¹¹⁸ and future research is needed to assess the reliability and effectiveness of these methods as well as telehealth solutions.

Medication treatment (e.g., SSRIs) for adolescent anxiety disorders can be used in a multimodal approach with CBT or sometimes as a stand-alone intervention; both of which have been shown to be effective treatments.^{116,118} A randomized comparative treatment study called Child/Adolescent Anxiety Multimodal Study (CAM) compared CBT, sertraline (a SSRI), the combination of CBT and sertraline, and a placebo medication in the treatment of youth ages seven to 17 years old who had three common pediatric disorders (generalized anxiety, social phobia, and separation anxiety).¹¹⁹ Overall, results of CAM study provide evidence that the combination of CBT and sertraline produce higher response rates compared to the other treatment conditions but that there was no significant difference between response rates for CBT versus sertraline.^{118,120} Remission rates followed a similar trend to response rates, with combination treatment remission rates being 46 to 68% compared to just sertraline (34 to 46%), just CBT (20 to 46%), or placebo (15 to 27%).^{112,115}

Recently, a meta-analysis (2017) of 115 studies was conducted with the purpose of comparing CBT and various medication treatments for effectiveness in treating anxiety disorders in youth.¹²¹ Generally, this report found that CBT is an effective treatment for improving anxiety symptoms based on study designs of treatment vs. no treatment and wait-list comparison.¹²¹ The report also found SSRIs reduced more anxiety symptoms compared to placebo medications.¹²¹ However, this review was not able to produce results comparing CBT to SSRIs as too few studies comparing the two exist.

There are no US Food and Drug Administration (FDA) approved medications for youth experiencing anxiety disorders other than OCD.¹¹⁶ Specifically, SSRIs have been shown to be a more effective treatment for pediatric anxiety disorders compared to placebos through seven different randomized medication trials.^{116,122} Moreover, SSRIs are currently the “medication of choice” for treatment,^{96,116} despite an FDA (2004) announcement regarding risk of suicidality and SSRIs.¹²³ In terms of treating anxiety, there has been a reported increase in SSRI prescriptions from primary care providers.^{85,124,125}

1.7 IDENTIFICATION AND TREATMENT BARRIERS: PRIMARY CARE

Evidence presented thus far showcases that the identification and treatment of adolescent anxiety are appropriate for providers in a primary care setting (i.e., high prevalence, appointment frequency, available screening tools and treatments, familial relationships). Unfortunately, in primary care settings, less than one in three youth who have mental health issues are identified as such.³⁴ It has been consistently presented in the literature that only 20 to 30% of youth are identified as having anxiety and or depression,²⁸ with the rest being undiagnosed or misdiagnosed. Key barriers to the identification and treatment of adolescent mental health conditions by primary care providers are presented below.

1.7.1 Lack of training/education

A barrier to identification of emotional disorders for primary care physicians is lack of training and education (i.e., knowledge and skills) regarding specific disorders and subsequent

treatments.^{2,36,71,75} Since 1990, residency programs for pediatricians have undergone continuous changes to accreditation requirements regarding childhood mental health conditions.¹²⁶ In 2000, the Accreditation Council for Graduate Medication Education (ACGME) required specific mental health curricular content for residency training program (e.g. one month “experience in behavioral and developmental aspects of pediatrics” and screening, counseling, and referral experiences), but has since moved to mandating these programs to employ a certified faculty “in development and behavioral pediatrics” and a similar one month experience mentioned previously.¹²⁶ For pediatric nurse practitioners, developing skills to assess and treat mental health conditions is possible through passing the “Pediatric Primary Care Mental Health Specialist Exam”.^{127,128}

In order to support training of residents, in 2002, the American Board of Pediatrics developed a certification for pediatricians that would allow them to have a developmental and behavioral subspecialty. To date, 775 pediatricians have been awarded this certification.^{126,129} Depending on the state, there is currently only one subspecialist pediatrician for every 59,000 or 300,000 children.^{126,129} As with most accreditations for different graduate-level disciplines, stipulations from ACGME can be implemented and interpreted numerous ways. Also, even with a subspecialty certification now available, the few who do receive this are reported to have limited time with residents who could learn from their expertise.^{126,129} Even though pediatrician behavioral health training has been undergoing constructive changes, the literature states there is still not “an adequately trained pediatric workforce in the areas of developmental and behavioral health.”¹²⁶

A study comparing questionnaire responses of pediatricians who were members of the AAP in 2004 (n=687) and 2013 (n=510) found 65% of pediatricians in 2004 and 66% of

pediatricians in 2013 reported a lack of treatment training for adolescent mental health problems.^{126,130} Further evidence that current training requirements for residency programs are not sufficient in closing the gap in the proportion of children who are unrecognized and untreated in pediatric primary care settings can be found in a 2014 survey of directors of pediatrics residency programs (n=99). Seven programs were reported to have a rotation for residents specifically for mental health and all other programs incorporated mental health education into “another rotation”.¹³¹

An important set of outcomes in this study came from directors reporting on level of resident mental health knowledge (e.g. poor/fair, average, and very good/excellent).¹³¹ Regarding ADHD treatment, 57% of directors reported they felt their residents’ knowledge was very good/excellent while only approximately 22% of directors and 15% of directors respectively, reported feeling their residents knowledge of depression and anxiety treatment as being very good/excellent.¹³¹ Anecdotally this may be due to the residents’ pediatric preceptor being more comfortable in treating ADHD compared to depression and anxiety. Several solutions for training improvement have been proposed including new mental health curricula, practice assessment of mental health skills, and immersion experiences in primary care practices.¹²⁶

1.7.2 Shortage of mental health providers

The shortage of mental health providers specializing in adolescent populations,¹²⁶ as previously discussed, is a barrier to receiving age-appropriate care in the mental health care system. Shortages of these mental health providers also present as a barrier to PCPs who want to identify and or treat their adolescent patients for mental health conditions. If the PCP does not feel confident or have the educational background and training to administer testing or treatment,

they would need to refer the child and family to a mental health specialist. Often physicians report that there is a shortage of psychiatrists they can refer to,¹¹³ and even if there is a mental health specialist they can refer to, having that referral occur in a “timely fashion” is variable.^{71,85,56,75}

Treatment delays due to referrals could negatively harm the adolescent or could jeopardize the trust relationship between PCP, the youth, and parents if the youth/parents are expecting immediate support but are not seeing that occur. Also, parents may not act on the referral due to negative perceptions and stigma of mental health services,⁷¹ leaving the youth untreated for an identified mental health condition.

1.7.3 Rural barriers

There is a paucity of specific research regarding how geography influences identification, treatment and future outcomes for adolescents with anxiety. Using evidence from other health conditions in regards to how rurality influences treatment may provide insight into similar factors influencing anxiety treatment and outcomes.

For instance, literature points to several barriers to mental health care that may be more pronounced for rural communities compared to urban communities such as, “access to affordable care”, transportation, and stigma.¹³² Two qualitative studies (focusing on different health topics: management of childhood obesity and reproductive health care) found similar barriers to care as reported by rural physicians. The common barriers reported were lack of time in appointments, lack of resources, and familial attitudes.^{133,134} Providers managing childhood obesity uniquely mentioned barriers such as a limited clinical knowledge, lack of reimbursement, lack of specialists, and high prevalence.¹³³ Providers in the reproductive health perception study

reported “they had a greater role in providing contraceptive care than did non-rural physicians” and that a foremost barrier to pre-contraception care were rural norms.¹³⁴

Another study conducted by Colon-Gonzalez et al., (2013) investigated rural providers (e.g., family physicians, internists, and OBGYNs) attitudes towards mood disorder care for their female patients.¹³⁵ Specific to rurality, providers reported mental health care barriers including low SES and unique pressures of acceptability of having a mental health condition in rural society.¹³⁵ Research focusing on unique barriers to anxiety treatment that rural providers face is warranted. Factors reported in studies focused on other health conditions may serve as a starting point to determine if such factors apply to adolescent anxiety.

1.7.4 Other individual, organizational- and system-level barriers

Barriers occurring within the primary care visit include time constraints,^{5,71,126} provider concerns about embarrassing or stigmatizing their patients^{2,5} and reaction of their patients’ parents/guardians regarding presence or possibility of a mental health condition.⁵ Other barriers persist on the insurance system level^{56,71} such as “inability to obtain separate reimbursement for assessments and well-child care when both are included in a single visit”,^{46,136} and “inadequate levels of reimbursement”.^{75,126,136} Williams et, al found several factors pediatricians reported as to why they would not make a behavioral health diagnosis in general: (1) missing comorbid conditions; (2) meeting full criteria of the disorder; (3) discrepancies from presentations and child/parental report; (4) negative impact of labeling and parental acceptance; and (5) their own personal comfort, experience, and training.²

Looking internationally, the National Institute for Health and Clinical Excellence (NICE) recommends use of a program called Beating the Blues to reduce CBT treatment barriers for

primary care providers.¹³⁷ Beating the Blues is a computerized program that also reduces patient-level barriers such as transportation and offers patients “anonymity” as they can receive treatment from any location they choose (given they have an Internet capable device).¹³⁷ While there are various models of care that integrate mental health and physical health, a comparison of such models is outside the scope of this review.^{76,138} However, as a summary of factors that may reduce barriers to mental health care in primary care, the relevant and high-level results from a review conducted by the Canadian Collaborative Mental Health Initiative are outlined below.

The Canadian Collaborative Mental Health Initiative conducted a review of “the impact of collaborative mental health care using experimental methodologies in the primary care setting” (n=38 studies).¹³⁹ In this report, there was one relevant review of a collaborative care model for youths experiencing mental illness in the United Kingdom. Authors reported details of the models components are limited but the overall goal is to “improve management of mental health problems within the general practice setting” by the provision of services focused on mental health education, training and consultation to and for PCPs.¹³⁹ The model was compared to usual mental health care over the span of a year.¹³⁹ Results found that patients reported “feelings of being less stigmatized” and general practitioners reported “high levels of satisfaction with the service”.¹³⁹ Overall, the entire report found collaborative relationships at the provider- and system-level between primary care and mental health require time, supportive structures such as co-located services, and treatment guidelines.¹³⁹

1.7.5 Summary

Many of the above-reported barriers are generally presented in the literature regarding mental health conditions and are not specific to anxiety. One approach to hypothesizing about anxiety

specific identification and treatment barriers is using the extant literature focused on other mental health conditions. However new research is needed to confirm or disconfirm these hypotheses and generate new data specific to adolescent anxiety in primary care. Looking towards models of care developed to improve mental health care in primary care is another avenue to generate anxiety specific hypothesis.

1.8 GUIDELINES: ADHD, DEPRESSION, ANXIETY

For clinical care processes and decisions to be standardized, clinical practice guidelines are often developed to influence medical care providers such as clinicians.¹⁴⁰ For pediatricians and family practitioners¹⁴¹ to learn about evidence-based practice guidelines and recommendations regarding certain physical health and behavioral health conditions they would reference clinical practice guidelines put forth by the American Academy of Pediatrics (AAP). The AAP is a large, national organization represented across the US (59 chapters) and Canada (7 chapters),¹⁴² dedicated to ensuring youth receive optimal care from providers who are AAP members.¹⁴³ The purpose of the section that follows is to present guidelines and recommendations from various organizations, including AAP, as they relate to three most common mental health conditions experienced by youth: ADHD, depression, and anxiety. The order in which condition guidelines are presented is based on the level of guidance available. As such, anxiety is presented last because no guidelines outside of Bright Futures exist for primary care providers for either identification or treatment.

1.8.1 ADHD guidelines

In 2000, the AAP recommended pediatricians should evaluate for ADHD¹⁴⁴ and in 2001, published ADHD treatment recommendations.¹⁴⁵ Similar to varying reports of anxiety prevalence rates, AAP guidelines for ADHD mention varying prevalence rates.¹⁴⁴ Unlike anxiety, the FDA has approved medication treatment (stimulants) of ADHD for youth three years and older.⁵⁶ The guideline also notes that the media and the public have expressed high levels of interest in processes that enable identification and treatment of ADHD.¹⁴⁴ Treatment guidelines for youth ages 12 to 18 year old experiencing ADHD state that approved FDA medications “should” be prescribed by the PCP, and behavior therapy (in-school or home) may also be prescribed.¹⁴⁵ It has been postulated that the attention of the public, the externalizing nature of this disorder, along with the AAP recommendations, facilitated a “major campaign” to disseminate knowledge and toolkits specific to ADHD broadly.⁶²

1.8.2 Depression guidelines

The AAP does not currently have guidelines for identification and treatment of depression targeted to pediatricians or family practitioners. The AAP website does provide facts about adolescent depression, treatment options, and case vignettes to help providers think through different circumstances relating to these disorders.^{25,146} For depression, AAP provides specific pharmacologic treatment options as well as a more nuanced guide for a “good diagnostic evaluation” of depression.¹⁴⁶

Specific to primary care, U.S. Preventive Services Task Force (USPSTF) (2009) recommended depression should be screened for routinely for adolescents’ ages 12 to 18 years

old.³⁴ The recommendation stems from their review of the literature that in primary care settings, depression screening tools are accurate in identification of depression in adolescents.^{34,147} USPSTF also stated that while there is a lack of direct evidence regarding the association of screening and better health outcomes in this population, they “...found adequate evidence that treatment of MDD [major depressive disorder] detected through screening in adolescents is associated with moderate benefit (for example, improved depression severity, depression symptoms, or global functioning scores).”¹⁴⁷ Similar to ADHD, FDA has approved the use of medication (i.e., SSRIs) for youth six years and older experiencing depression.⁵⁶

Several other governmental entities have focused their attentions on adolescent depression. For example, the Healthy People 2020 objective MHMH-11.2 specifically is to “increase [by 10%] the proportion of primary care physician office visits where youth aged 12 to 18 years are screened for depression”.¹⁴⁸ This objective arose from evidence citing that from 2005 to 2007, depression screening for this population occurred in only 2.1% of these visits as reported by CDC/NCHS and National Ambulatory Medical Care Survey.¹⁴⁸ In 2003, the President’s New Freedom Commission (2003) made several policy recommendations regarding child and adolescent mental health screenings -- including that screening specific to depression and substance use should take place in primary care settings for adolescents that are at high-risk.³⁴

1.8.3 Anxiety guidelines

Similar to depression, the AAP website provides facts about adolescent anxiety, treatment options, and case vignettes to help providers think through different circumstances relating to these disorders.^{25,146} However, information specifically relating to diagnoses of anxiety is

lacking. The AAP website refers clinicians to DSM-IV or ICD 10 criteria and to use “standardized anxiety tools”²⁵; no recommendations or reference links are provided on when and how to use the tools. While presenting the above-mentioned information on the official AAP website is a step in the right direction, an official guideline specifically focusing on the availability of screening tools and treatment in PCP offices is needed to begin standardization of clinical care for adolescents with anxiety in pediatric primary care settings.

Interestingly, AAP does support the provision of guidelines for an initiative called Bright Futures. Bright Futures was started in 1990 by the Health Resources and Services Administration’s Maternal and Child Health Bureau to promote national health for youth.¹⁴⁹ A major function of Bright Futures is advocating for states to include Bright Future guides/toolkits into Medicaid coverage policies.¹⁴⁹ Currently the Medicaid youth benefits called Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefits allows primary care providers to bill for behavioral health screening, including anxiety screens (e.g. SCARED).¹⁵⁰ However, the guidance is vague as screening is recommended when concern is brought up by the provider, the parent, the patient, or when risk factors are known.

Neither USPSTF, HealthyPeople 2020, the New Freedom Commission, nor the FDA has published official guidelines, recommendations, national health objectives or approvals regarding the screening and treatment of adolescent anxiety. However, to improve identification of behavioral and emotional issues in pediatric primary care settings, American Academy of Pediatrics Task Force on Mental Health put forth a recommendation that these primary health care settings should implement programs for mental health detection, citing high rates of common disorders, including anxiety.^{34,151}

1.9 IDENTIFICATION AND TREATMENT PERCEPTIONS: PROVIDERS

1.9.1 Role and responsibility

American Academy of Pediatrics conducts a Periodic Survey that is representative of “approximately 80% of pediatricians”.⁶² Results using a random sample of respondents from the 59th Periodic Survey (2004) showed several notable findings: (1) in respondents’ practice settings, 27% thought ADHD was extremely/very prevalent compared to 9% who thought depression and 8% who thought anxiety was extremely/very prevalent; (2) 90% of the sample felt responsibility for identifying ADHD and eating disorders; (3) 80 to 90% felt responsibility for identifying depression, substance abuse, anxiety disorders, and behavioral issues; (4) 70% believed it was their role to treat and manage ADHD and (5) “less than one-third thought that it was their responsibility to treat or manage any other condition” such as depression, anxiety disorders, behavior problems, learning disabilities, substance use and eating disorders.⁶²

The first finding of this survey is startling, as there is clear evidence anxiety disorders and depression are highly prevalent in the general pediatric patient population. This discrepancy between provider beliefs and prevalence data may stem from several factors including a lack of mental health awareness, lack of mental health training, or confusion regarding the most recent prevalence studies. Regardless, these survey results clearly find pediatricians overwhelmingly believe they are responsible for identification of the above-mentioned behavioral health conditions (findings 2 and 3), which may be indicative of an attitude that could aid in the facilitation of mental health screening uptake. While results show belief in responsibility, results also showcase that belief in the pediatricians’ roles to treat anxiety is relevantly low compared pediatricians’ belief in their role to treat ADHD.

Factors contributing to providers' role acceptance of screening and treating ADHD in their patient population have been already mentioned throughout the introduction chapter. Much of provider comfort with recognition and treatment of ADHD is credited to PCP-specific practice parameters (i.e., standardized clinical practice guidelines) concerning this disorder, as mentioned previously.⁸⁵ Moreover, ADHD screening tools are relatively straightforward questionnaires.¹⁵² Literature points to another treatment facilitator, which is the fact that medications used for ADHD treatment are "relatively safe",⁶² and once treatment begins, noticeable behavioral improvements can occur in a short timeframe.¹⁵² Success in treating adolescent anxiety is said to be less immediate and consistent¹⁵² and as mentioned before, no FDA medications have been approved. This is evidence leading to one hypothesis that not knowing or seeing success/clinical effects of anxiety treatment as being a barrier to identification and treatment of anxiety disorders.

As anxiety is unique from ADHD, future research should explore views about identification and treatment from the primary care providers' perspective specific to anxiety, as identification methods for the latter disorders may not prove fruitful for anxiety. Future research should assess how providers define their responsibility to identify and treat anxiety disorders, what identification and treatment processes entail, what their preferred method for identification is, what factors would support their identification method, and if screening guidelines are necessary, needed, and helpful.

1.9.2 Comfort and confidence

Of the literature reviewed, there is an apparent consensus that PCPs report recognizing certain child and adolescent behavioral health concerns (i.e., ADHD, mood, and anxiety disorders) are a part of their professional role.⁸⁵ However, level of comfort and confidence diagnosing and

treating behavioral health disorders varies by condition. Lack of training may lead providers not to feel comfortable with both the diagnostic/screening process and treatment of pediatric mental health conditions.^{5,136}

While there is limited literature regarding primary care providers' levels of comfort treating anxiety in their pediatric patients, a 2005 survey study conducted by Fremont et. al., investigated pediatricians' and family medicine physicians' (n=200) treatment comfort levels regarding several behavioral health disorders in youth including attention deficit disorder (ADD), anxiety, depression, and bipolar.⁵⁶ One major finding from this study was both pediatricians and family medicine physicians were less comfortable diagnosing bipolar affective disorder compared to ADHD, anxiety, and depression. Interestingly, authors report anxiety and depression as one category (e.g., 56% of pediatricians and 82.4% of family medicine physicians reported being comfortable diagnosing anxiety/depression),⁵⁶ making it impossible to know the sample's comfortability making a diagnosis of anxiety specifically.

Analysis of the 2005 survey also found of providers who are "comfortable" making a behavioral health diagnosis, approximately 52% (pediatricians) and 63% (family medicine physicians) reported being comfortable prescribing antidepressant for treatment of depression/anxiety with 95.2% (pediatricians) and 98.6% (family medicine physicians) reporting actually prescribing these medications.⁵⁶ This finding is interesting because providers overwhelmingly report prescribing the medication, even though little more than half report feeling comfortable prescribing. Overall, this study does attempt to fill the gap in the literature regarding "PCPs comfort levels in diagnosing and treating psychotic disorders in children",⁵⁶ while also clearly highlighting the need for anxiety specific research.

Pediatric PCPs overwhelmingly have more confidence in screening and diagnosing and are more comfortable treating ADHD compared to both depression and anxiety disorders.^{85,113} Results of a study using structured interviews with urban pediatricians (n=47) found pediatricians report diagnosing ADHD most frequently (n=45) with less than half diagnosing depression and anxiety.² Moreover, this study found that 94% of physicians used stimulants as ADHD treatment, and only 50% treated depression and anxiety with SSRIs.² A major finding was prescription of SSRIs frequency was statistically associated with diagnostic comfort.² Prescription of stimulants is an appropriate treatment for ADHD and is formally recommend, while medication prescription of depression and anxiety may not always be the most “appropriate” treatment. Providers in this study felt properly trained to handle cases of ADHD but less so for both anxiety and depression.²

Availability of effective and safe treatment medications is a major factor in the ability of a PCP to treat anxiety (or any mental health condition). If safe and effective treatments exist, primary care providers must know about the medication and guidelines for use in adolescents, and must feel empowered, responsible and comfortable prescribing and maintaining the medication.

1.10 PRIMARY AIMS

Multiple factors involving provider-, organizational-, and policy-levels of the ecological model¹⁵³ influence the lack of appropriate screening and treatment for anxiety disorders. This dissertation focuses on identification and treatment of adolescent anxiety disorders by primary care providers. Anxiety and depression are the most common mental health disorders among youth

presenting to primary care settings.⁴⁰ Patients experiencing emotional distress due to anxiety or depression are “more likely to see a medical provider than a mental health specialist”.⁷⁷ Moreover, PCPs are often an early point of contact with the healthcare system for many adolescents, giving additional weight to those interactions. As primary care offices are used by the majority of youth and youth in these settings have anxiety disorders,⁶⁸⁻⁷⁰ these providers are in a unique position to recognize the symptoms, screen and treat this population.

Literature regarding identification and treatment of adolescent anxiety disorders in primary care is in a nascent stage. High prevalence of anxiety among youth paired with the negative costs to the individual and society constitute a public health problem and highlights the need for adequate treatment. As adolescent anxiety disorders have both acute and future negative consequences, early identification via screening and subsequent treatment may lead to a decrease in associated consequences of the disorder.^{6,35}

For a patient to receive appropriate treatment, they must be identified and diagnosed. Identification of anxiety may increase with screening and subsequently may increase treatment rates. Factors presented in the literature affecting treatment and screening rates for adolescent mental health disorders such as ADHD and depression include training/education,^{2,36,71,75} shortages of mental health providers,¹²⁶ visit time constraints,^{5,71,126} concerns about stigmatizing patients,^{2,5} and reimbursement concerns.^{75,126,136} These factors may not be the same for anxiety. As such, research is needed to explore the unique aspects specific to identification and treatment of adolescent anxiety disorders by primary care providers.

Such research may identify opportunities for intervention in primary care settings that will support earlier identification and treatment of adolescent anxiety disorders. The overarching research question for this study is: *What factors, at the provider-level, organizational-level, and*

policy-level, influence primary care providers' decisions and capacity to identify and treat adolescent anxiety? To address the research question two primary aims were explored:

Primary Aim 1: To explore primary care providers' perceptions of adolescent anxiety disorders, specifically (1) their awareness of the prevalence and symptoms; (2) their perceptions and attitudes regarding identification and treatment; and (3) their beliefs about their professional role in identification and treatment.

Primary Aim 2: To explore the perceived individual-, organizational-, and system-level barriers and facilitators to identifying and treating adolescent anxiety disorders in primary care settings.

1.11 CONCEPTUAL FRAMEWORK

1.11.1 Disease screening framework

The seminal public health report *Principles and Practice of Screening for Disease* (1968) was produced by James Wilson and Gunner Junger at the behest of the World Health Organization.¹⁵⁴

The rationale for this report stemmed from a fundamental ethical vantage point that there are real-world practice challenges relating to early disease detection and subsequent treatment of diseases.¹⁵⁴ The dilemma lies in being able to properly identify a disease and being able to provide adequate and timely treatment, as well as ensuring individuals who should not be treated remain unharmed.^{154,155}

Wilson and Junger's report provides a set of criteria to be followed to determine which diseases merit screening (see Table 4).¹⁵⁴ This assessment framework can provide guidance

regarding whether (1) screening for a disorder is necessary and (2) that screening is feasible from both the point of view of the person conducting the screening and the person screened.^{155,156} While these criteria are still currently viewed as the “gold standard” guidance for screening of diseases as well as genetic testing,^{154,157} modifications and changes have occurred over time.¹⁵⁴

Table 4. Screening Criteria Set by Wilson and Junger

1	The condition sought should be an important health problem.
2	There should be an accepted treatment for patients with recognized disease.
3	Facilities for diagnosis and treatment should be available.
4	There should be a recognizable latent or early symptomatic stage.
5	There should be a suitable test or examination.
6	The test should be acceptable to the population.
7	The natural history of the condition, including development from latent to declared disease, should be adequately understood.
8	There should be an agreed policy on whom to treat as patients.
9	The cost of case-finding (including diagnosis and treatment of patients diagnosed) should be economically balanced in relation to possible expenditure on medical care as a whole.
10	Case-finding should be a continuing process and not a “once and for all” project.

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Application of the original screening criteria in the mental health context does have a precedent. Batelaan et al., relied on Wilson and Junger’s criteria to make a case for adult anxiety screening which they used as their logic for conducting a study of the “willingness” of adults to be screened for anxiety.¹⁵⁶ This research appeared to be attempting to provide evidence for the sixth criteria in Table 4. While the Batelaan study findings shed light on an adult Swedish population (e.g., low patient participation rates in screening),¹⁵⁶ some limitations are apparent. Results do reflect patient general willingness to be screened for anxiety. However, results do not specifically reflect the patients’ willingness *to be screened by their primary care providers* for two main reasons. First, recruitment into the study and the offer to be screened was presented by a member of the study team who was in the primary care provider’s office lobby. Second, participants were not screened by their primary care

provider, but instead, screened over the phone by a member of the study team.¹⁵⁶ Research is still needed to understand patient feelings about the appropriateness of anxiety screening by their PCP.

In Wilson and Junger’s original report, they also call attention to mental illness specifically, noting that, at the time of their report, “etiological classification of mental disease” was lacking, as well as the limited presence of treatments for mental illness.¹⁵⁵ They clearly outline the burden of mental illness on populations and the state of relevant research – logic that points to the high importance of future research in this field to support the accurate identification and safe treatment of mental illness.¹⁵⁵

Further research is needed to understand if adolescent anxiety screening in primary care is appropriate, and the guidance set forth in table 4 may serve as an assessment framework for such research. Exploration of primary care providers’ views regarding these criteria compared to current evidence may lead to novel approaches specific to adolescent anxiety identification and treatment in primary care settings.

1.11.1.1 State of evidence for criteria set by Wilson and Junger

The screening criteria set by Wilson and Junger (1968) was developed to assist the medical community in understanding what factors ought to be known before the screening of a specific disease condition is conducted. These criteria can be used as a guide to determine if it is both necessary and feasible to screen for adolescent anxiety in primary care based on our understanding of the current state of evidence.

In review of the extent literature, evidence exists for several criteria set by Wilson and Junger to support the screening of anxiety in adolescents. However, there are gaps in the evidence specific to other criteria set by Wilson and Junger. Table 5 presents a summary of the state of evidence addressing each of the 10 criteria and areas for further research.

Table 5. State of Evidence for Criteria Set by Wilson and Junger

1	The condition sought should be an important health problem.	Due to the prevalence and illness burden, adolescent anxiety is an important health problem. However, based on the literature, it is unclear as to whether PCPs view adolescent anxiety as prevalent and burdensome and warranting exploratory research.
2	There should be an accepted treatment for patients with recognized disease.	Effective pharmacological and talk therapies exist for anxiety but PCP in-depth awareness of and role acceptance for delivering such therapies remains an area for future research.
3	Facilities for diagnosis and treatment should be available.	Not only do PCPs have the legal professional capability to treat anxiety, the primary care office setting is both feasible and appropriate for the screening and treatment of adolescent anxiety.
4	There should be a recognizable latent or early symptomatic stage.	While there is a strong literature on the symptoms of anxiety, including DSM-IV criteria, symptoms can often begin in childhood making it difficult to discern an early symptomatic stage in adolescents. As such, it is important to ask PCPs at what point should anxiety specific screening occur. It is also unclear if PCPs have the awareness or feel professional responsibility to recognize common presentations of anxiety symptoms in adolescents.
5	There should be a suitable test or examination.	Just as there are available treatments PCPs can access, there are also accessible and validated screening tools to identify adolescent anxiety. Some research shows the PCPs feel it is their responsibility to identify anxiety; however, rates of identification are low. Research is needed to understand this discrepancy (i.e. provider awareness regarding the tools and barriers to using tool).
6	The test should be acceptable to the population.	The physical screening of anxiety via adolescent self-report or parental report will not cause undue harm to the adolescent.
7	The natural history of the condition, including development from latent to declared disease, should be adequately understood.	Evidence does exist regarding the etiology of anxiety; with causal mechanisms including the interaction of genetics and the environment.
8	There should be an agreed policy on whom to treat as patients.	It is known that pediatric patients can experience anxiety.
9	The cost of case-finding (including diagnosis and treatment of patients diagnosed) should be economically balanced in relation to possible expenditure on medical care as a whole.	A potential barrier to PCPs treating anxiety is the cost of identification – however the monetary cost of identifying adolescents with anxiety is low and may reduce medical expenditures by lowering the frequency of costly physical diagnostic testing based on somatic symptoms.
10	Case-finding should be a continuing process and not a “once and for all” project.	Lastly, identification of anxiety does not have to be on a case-by-case basis – systematic screening or professional guidelines could aid in a universal pathway to identify adolescent anxiety in primary care settings.

Such gaps provide evidence of the need for exploratory research. This study will begin to fill some of those gaps:

Criteria 1 Gap: What are PCPs views regarding the prevalence and burden of adolescent anxiety?

Criteria 2 Gap: What level of awareness do PCPs have of treatment options and what is their perceptions of their role for delivering such therapies?

Criteria 4 Gap: What are PCPs views on professional responsibility to recognize the

common presentations of anxiety symptoms in adolescents?
Criteria 5 Gap: What level of awareness do PCPs have regarding screening tools and barriers to use?

1.11.2 Social Cognitive Theory

To understand and eventually increase the uptake of the identification and treatment of adolescent anxiety by primary care providers, we need to understand factors that hinder and facilitate these processes. A robust learning theory is needed to guide exploratory research regarding perspectives of primary care providers on identification and treatment of adolescent anxiety disorders. Social Cognitive Theory (SCT) is classic learning theory for behavior change commonly used to guide practice focused on health behaviors.¹⁵⁸ Moreover SCT is an ecological level theory, allowing for use of this theory in the exploration of factors that may influence behavior from various levels of the social ecological model.¹⁵⁹

SCT has been used to create self-efficacy scales for health care providers. For example, Kennedy et al., (2015) used SCT to develop the Nursing Competence Self-Efficacy Scale; a scale measuring nursing students efficacy in their ability to be practitioners.¹⁶⁰ The rationale for the study came from the hypothesis that nurse attrition may be in part due to a lack of confidence in the nurse's ability to practice.¹⁶⁰ The purpose of the scale was to allow educators to understand nursing students self-efficacy and if more education/skills training is necessary.¹⁶⁰ Regarding physical health issues, many interventions use SCT constructs. For example Tougas et al., (2015) conducted a systematic review of chronic health condition interventions (e.g., arthritis, asthma, chronic pain, diabetes, heart disease, and overweight/obesity) whose study foundations draw from SCT.¹⁶¹ Based on the 35 unique interventions reviewed, authors report evidence that SCT theory-based interventions can benefit individual health outcomes.¹⁶¹

Other SCT constructs have guided lifestyle interventions developed for individuals living with mental health conditions as evidenced by a 2010 systemic review of lifestyle interventions for individuals with mental illness (e.g., schizophrenia, schizoaffective disorder, major depression, bipolar disorder, alcohol dependence, and anxiety disorders).¹⁶² Each of the 23 interventions reviewed incorporated the following components: goal setting, self-monitoring, problem solving, education and skill teaching.¹⁶² Each of these components maps onto key two key constructs of SCT: self-efficacy (e.g., self-monitoring; problem solving; education and skills) and agency (e.g. goal setting; problem solving).

Lastly, there is a precedent for utilizing SCT constructs when developing interventions for health care providers. For instance of the 24 studies included in a systematic review of inventions targeting the clinical decision making of nurses, the author's report that these educational interventions were largely based on five different theories with one of the five being SCT.¹⁶³

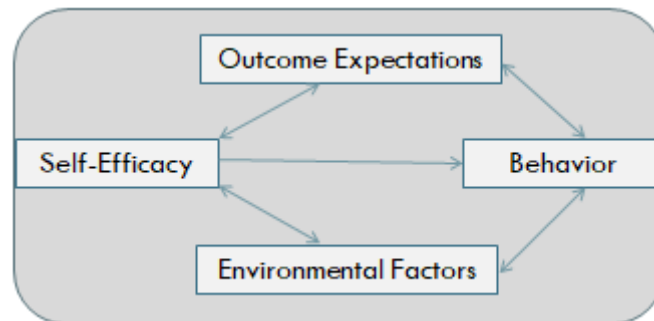
In essence, constructs of SCT¹⁶⁴ are in constant interplay with each other and this interplay occurs and influences an individual's behavior.¹⁵⁸ SCT focuses on human cognition and at the center of cognition are two key constructs, personal agency and self-efficacy. Personal agency emits from this theory as SCT posits that the environment may serve as a change mechanism for individuals and but at the same time, individuals may have agency to modify or change the environments they live in. Self-efficacy hinges on the individual's perception that they are capable of performing a task or changing their behavior and at the same time, believe they can shape their social environment.^{165,166}

Personal agency will help to develop a line of questioning to understand what identification and treatment processes providers feel they can affect directly and how the environment in which they operate interacts with those processes.¹⁶⁶ Self-efficacy will allow for the investigation as to providers perceptions of their awareness, skills, and level of comfort specific to adolescent anxiety.

1.11.2.1 Social Cognitive Theory: influence on aims and data collection tool

The central tenant of SCT is that both personal and environmental factors influence behavior and that personal factors can influence the environment (and vice versa).¹⁵⁸ This constant interplay between behavior, personal factors, and the environment heavily relies on an individual's level of personal agency.

Agency hinges on individuals' belief in their ability to change circumstances.¹⁶⁴ This belief stems from individuals' level of self-efficacy and self-confidence in their capacity to act. In this study, the concept of personal agency guided the development of both aims. The aims were intended to facilitate a better understanding of what identification and treatment processes providers believe they can impact directly and how the environment in which they operate interacts with those processes. Key constructs from SCT (self-efficacy, outcome expectations, and environmental factors) are implicit in the study aims.¹⁶⁴ Moreover, the aims address factors at multiple levels of the ecological model which is one reason SCT is an appropriate theoretical choice as it is an ecological level theory.¹⁵⁹ The key constructs utilized as part of the conceptual framework for this study are operationalized below and guided the construction of the interview guide. Figure 2 (adapted from Bandura's model) displays the pathways by which key constructs from SCT influence behavior.¹⁶⁷



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Figure 2. Key Construct Pathways Influencing Behavior

Self-efficacy¹⁶⁷ was operationalized as the providers' perception of their capability to identify and treat adolescent anxiety. Self-efficacy, as a construct, helped guide the development of interview questions focused on awareness, skills, and comfort level. It is important to note that a provider's self-efficacy in screening and treating anxiety may stem from multiple factors at multiple levels of the ecological model including organizational and policy level factors.¹⁵⁹ For instance, having low self-efficacy in the ability to adequately identify anxiety in part may stem from a lack of skill mastery.¹⁵⁹ Without the opportunity to learn and practice (i.e. medical program curriculum limitations) a provider may not feel equip to identify anxiety and/or may seek out other avenues to develop such skills. [Primary Aim 1]

Outcome Expectations¹⁶⁷ were operationalized as the providers' expectations of the outcomes associated with identification and treatment of adolescent anxiety. These expectations are influenced by the providers' level of self-efficacy. The perceived outcome of screening/treatment may be positive or negative. An example of a perceived negative outcome is that a provider may anticipate incorrectly identifying an adolescent as experiencing anxiety when in fact the adolescent is experiencing a situational event that becomes resolved. An example of a perceived positive outcome associated with treatment is that a provider may anticipate the adolescent will respond well to treatment. The positive or negative nature of the expected outcome may stem from (1) provider's confidence in their ability to perform the necessary actions (or not); (2) believed incentives or disincentives that would come from identification and treatment; and (3) a providers self-evaluative reactions; defined as "reactions to one's own behavior based on internal personal standards".¹⁵⁹ These personal standards may stem from feelings associated with personal compliance expectations to practice policies regarding screening procedures or "living up to" perceived professional role responsibilities. [Primary Aim 1 & 2]

*Environmental Factors*¹⁶⁷ were operationalized as factors in the providers' environment that both influence and are influenced by the providers' self-efficacy and outcome expectations. Environmental factors at the organizational (i.e., time constraints, training, and referral ability) and system level (i.e., specific guidelines, financial reimbursement, and lack of specialists) of the ecological framework were a focus of exploration in this study. Moreover, the barriers and opportunities construct of SCT focuses on the environment that "makes behaviors harder or easier to perform".¹⁵⁹ For example, an opportunity for performing a behavioral health screen may be an organizational practice policy on screening. However, providers might not have the self-efficacy or perceived positive outcome expectation to follow through with the policy. [Primary Aim 2]

Utilizing a disease screening criteria¹⁵⁵ created by Wilson and Junger in conjunction with SCT provided a framework for exploring how primary care providers perceptions of and attitudes towards adolescent anxiety influences their beliefs regarding identification, treatment and clinical decision processes. Public health professionals are uniquely qualified to explore factors from a provider perspective that may influence identification and treatment of adolescents experiencing anxiety disorders.

2.0 METHODS

Exploratory qualitative research was needed to better understand the totality and interplay of factors that may influence the identification and treatment of adolescent anxiety in the proposed population and setting. As the purpose of this research was to uncover new information regarding an important public health topic on which limited evidence exists, semi-structured interviews were conducted with primary care providers, who see adolescent patients, in Southwestern Pennsylvania.

As the overall goal of this research study is to collect in-depth information specific to both primary aims, the qualitative principle of saturation guided sample size. Saturation is the idea that data is collected until no new/novel content emerges. Based on the literature, approximately 12 to 20 interviews are often sufficient to attain saturation.¹⁶⁸ As such, the goal of this study was to attain approximately 20 to 25 interviews. Content analysis was used as the methodological orientation for this study.

2.1 PARTICIPANT SELECTION

A non-probabilistic sampling technique was used as this exploratory research study was not designed to offer generalizability of results as is often sought in quantitative research.¹⁶⁹ A purposeful sample was drawn, consisting of non-mutually exclusive categories of up to five rural

and urban providers, respectively, and up to five providers whose offices have embedded behavioral health provider(s), and up to five providers whose offices do not have onsite behavioral health provider(s).

All participants were recruited through Pediatric PittNet, a network of over 230 providers in 13 Southwestern PA counties, all of whom provide care to pediatric patients with either private or public insurance.¹⁷⁰ Pediatric PittNet facilitates recruitment of patients and providers into studies focusing on “pediatric behavioral and physical health concerns”.¹⁷⁰

To be eligible for this study, participants must have, 1) been a primary care provider; 2) practiced in the state of Pennsylvania; 3) practiced at least 50% of the time in a primary care setting; 4) completed their medical training, and 5) have authority to prescribe and dispense drugs¹⁷¹⁻¹⁷³ in Pennsylvania.

Pediatric PittNet sent up to five online invitations to 189 eligible providers within their network between June 19, 2018 and July 5, 2018. Interested providers (n=25) were connected, via email, to the study PI for interview scheduling. A total of 22 providers participated in the study, with three providers being unreachable for scheduling.

2.2 DATA COLLECTION

The semi-structured interview guide was designed to address the primary aims, utilizing existing literature and the conceptual framework outlined above. SCT constructs (e.g., self-efficacy, outcome expectations, and organizational and system level environmental factors) were incorporated into question construction to ensure the gathering of data specific to providers’ awareness, perceptions, attitudes, and beliefs.

The study PI engaged two stakeholders to (1) review the content of the interview guide, (2) recommend modifications or script additions, and (3) review the connotation of the questions for provider blame.¹⁷⁴ It was essential to ensure that the interview questions asked were not framed in a manner that may have been perceived as blaming the provider for not being aware of certain information (example: presentation of somatic symptoms) or for not treating adolescent anxiety. The first stakeholder engaged had similar characteristics to the population under study, a Doctor of Osteopathic Medicine who provides care to adolescents. This stakeholder also had expertise in pediatric psychiatry through an academic lens. The second stakeholder, a Doctor of Philosophy, provided a developmental psychology perspective to the interview guide.

After stakeholder input was incorporated, the interview guide was shared with Pediatric PittNet for final review and approval, and was finalized by the study PI. The study PI conducted all semi-structured interviews via telephone.¹⁷⁵ Participants were assigned an unique study identification code and verbally consented to participate in the research study. Interviews were audio recorded, with interview duration ranging between 30 and 45 minutes. Each interviewee was mailed a \$20 gift card as compensation for their time. This study was approved by the University of Pittsburgh's Institutional Review Board (PRO17100074).

2.3 DATA ANALYSIS

All audio-recordings were transcribed by a professional transcriptionist. The study PI ensured transcript reliability by conducting cross-checks. Inductive conventional content analysis was conducted to (1) understand provider awareness, role perceptions, attitudes, and beliefs about identification and treatment of anxiety disorders, and (2) explore barriers and facilitators at the

provider-, organizational- and system-levels influencing identification and treatment decisions/behaviors.

All provider transcripts were read by the PI to gain a contextual understanding of the data.¹⁷⁶ The study PI conducted open coding on six transcripts to allow for initial categorization of relevant themes/concepts. Codes were further created and defined through an iterative process of reviewing seven additional transcripts¹⁷⁷, thereby formulating the final question-specific codebook (e.g., coding frame).^{176,178} Dedoose coding software was utilized for analysis.

To test the codebook, the study PI and an experienced and independent coder applied codes to three transcripts. Both coders met to review and adjudicate inconsistencies in code application. Minor changes to code definitions occurred. Using the revised codebook, the two independent coders co-coded 12 transcripts. Based on co-coded transcripts, an unweighted Cohen's Kappa statistic was calculated for each code.¹⁷⁹ As it is impossible to discern which code application disagreements are more severe than others, a weighted Kappa statistic was not used.¹⁸⁰ For each question, an average Kappa score was also calculated. Remaining transcripts were coded by the study PI.

2.3.1 Expert interviews

Expert interviews are often used in exploratory research and can offer “practical insider knowledge”.¹⁸¹ For this study, three expert interviews were conducted to provide descriptive context to key content from provider interviews and to guide a deeper interpretation of provider interview results. “Insider knowledge” gathered provided contextual information from three perspectives.

As provider interviews were being collected and analyzed, the study PI engaged in notetaking to support preliminary theme generation. Throughout codebook development processes, along with an iterative reading of interview notes, the PI identified three perspectives for which thematic interpretation would greatly benefit from: a public health professional, a behavioral health provider, and an organizational expert. Experts were identified based on the literature, word of mouth from other experts in the field adolescent medicine, and for their knowledge of the area where the sample was drawn.

Expert interview guides were specifically tailored for each interviewee based on their prior work as well as relevant content from provider interviews. Each expert was asked a series of questions focused on their perspective of content shared by interviewees, context clarification for theme interpretation, and their expert opinions regarding identification and/or treatment of adolescent anxiety in primary care settings. These expert interviews were not intended to reach thematic saturation but rather to provide a broader contextual perspective on the factors illuminated through the PCP interviews. Perspectives and information shared during expert interviews are highlighted throughout the discussion chapter.

3.0 RESULTS

Primary care provider (PCP) participants (N=22) were primarily female (72.2%; n=16), with a mean age of 41.2 years. The majority of interviewees were Doctors of Medicine (77%; n=17), with 18% (n=4) being Nurse Practitioners, and one being a Physician Assistant. On average, providers had been practicing medicine for 11.3 years.

In terms of practice location, 36.4% (n=8) of the sample identified their practice setting as urban, 36.8% (n=8) identified their practice setting as suburban, 22.7% (n=5) identified their practice setting as rural, with one provider identifying practicing in both rural and suburban settings. Provider self-report of practice location differs from labels provided by Pediatric PittNet research network. For example, Pediatric PittNet categorizes six providers as practicing in rural settings compared to the five providers who self-reported rural locals.

The majority of providers reported having at least one part-time behavioral health provider, on-site, at their primary care practice (54.6%; n=12), with 22.7% (n=5) providers stating no on-site behavioral health provider. 22.7% (n=5) of the sample had missing self-report data for onsite behavioral health providers. According to Pediatric PittNet, 77.3% (n=17) of the study sample had an on-site behavioral health provider, with 22.7% (n=5) of the sample not having an on-site behavioral health provider (3 matching with provider self-report, and 2 providers with missing self-report data). Interestingly, Pediatric PittNet categorized 2 providers as having on-site behavioral health providers, when those two providers self-categorized the opposite. Of the providers without an embedded behavioral health provider, three were classified

as rural, one as urban, and one as suburban. See table 6 for full details of available provider characteristics.

Based on the question specific codebook (see appendix A), total kappa statistics were calculated for each question and each code. See table 7 for total kappa scores by question and appendix B for individual code kappa statistics.

Table 6. Participant Characteristics

Characteristic	N	%	Mean; Range
Age	22	100	41.2; 27-59
Under 30	3	13.6	--
30-40	9	40.9	--
41-50	4	18.2	--
51+	6	27.3	--
Sex	22	100	--
Female	16	72.7	--
Male	6	27.3	--
Provider Type	22	100	--
MD	17	77	--
NP	4	18	--
PA	1	5	--
Years in Practice	22	100	11.3; .83-30
1 Year or less	3	13.6	--
2-5 years	5	22.7	--
6-9 years	4	18.2	--
10-13 years	3	13.6	--
14-17 years	1	4.6	--
18+ years	6	27.3	--
Self-Report Geography	22	100	--
Rural	5	22.7	--
Urban	8	36.4	--
Suburban	8	36.4	--
Rural/ & Suburban	1	4.5	--
Recruitment Geography	22	100	--
Rural	6	27.3	--
Urban	3	13.6	--
Suburban	8	36.4	--
Urban & Suburban	5	22.7	--
Self-Report On-site Behavioral Health Provider	17	77	--
Yes	12	54.6	--
No	5	22.7	--

Table 6 Continued

Missing Data	5	22.7	--
Recruitment On-site Behavioral Health Provider	22	100	--
Yes	17	77.3	--
No	5	22.7	--

Table 7. Total Kappa Statistic by Question

Codes Represented	Kappa Statistic
Question 1	0.855
Question 2	0.921
Question 3	0.906
Question 4	0.736
Question 5	0.941
Question 6	0.918
Question 7	0.921
Question 8	0.961
Question 9	0.972
Question 10	1.000

Key themes that emerged from provider interviews are described below along with illustrative quotations. Indications of differences in responses by geography and having on-site (embedded) behavioral health providers are specified as appropriate.

3.1 ROUTINE MEDICAL VISITS: DETECTING BEHAVIORAL HEALTH CONCERNS

During a well child visit, providers overwhelmingly reported having 15 to 30 minutes per adolescent patient, with about half reporting less than 20 minutes. The format of a well child visit was generally described in the same manner by participants, with more or less detail being shared on certain visit aspects. Overall, layout of well child visits were discussed as such: (1)

adolescent fills out a depression and substance use questionnaire, on a tablet, in the waiting room; (2) parents and adolescents go to exam room and providers talk to both parties about health concerns they might have “*from the medicines, allergies, problem with hospitalizations, emergency room visits, anything like that (220 Rural; Yes BH)*”, paperwork to be completed, and general social questions; (3) providers conduct physical health exam, almost exclusively without parents, asking adolescents questions regarding depression and substance use questionnaire responses, sexual history, social life, and other confidential questions; and (4) after exam is completed, providers bring parents back into the room to discuss next steps. A representative quote of a well child visit is as follows,

So, in our office we have a tablet that we give the kids before they even come into the room that have the questionnaire in regard to depression and drug use. And it's private. The parents are not given that access to that information. Then when I'm able to open up a chart electronically, then all of that populates into that chart. So, I have access to their answers privately without going through any middlemen...Once the visit has started, I usually do it without the parent. Sometimes I start with the parents in the room initially to find out what concerns they have, and then ask the parents to leave. Then speaking with the patient about medical issues, emotional issues, social issues, family dynamics, etc. And then examine the patient. Once we have discussed all of that patient's concerns, and we determine what things can, and should be discussed with the parents -- then we have the parents come in and go over any information they have as long as it's okay with the adolescent (118 Urban; Yes BH).

The routine behavioral health questionnaires were discussed as a tool supporting providers in detecting behavioral health concerns. Within the context of a visit, providers had

varied responses regarding how helpful routine screening for depression and substance use were. Often, providers felt screeners were helpful in providing them with extra patient information,

So, those screens are helpful. Sometimes they allow you to kind of get a little bit of info, and then ask them more pertinent questions...if the screens kind of light up, and that's a way to kind of get into that a little bit more (119 Urban; Yes BH).

Similarly, providers discussed how responses to the questionnaires provide them with a jumping off point for behavioral health discussions,

I find it extremely helpful because what I can do is I can set the adolescent at saying, 'well, thank you for filling out this questionnaire. I really appreciate you doing that. On this questionnaire it sounds like things are x, y, or z. Based on what you've told me already about how hard it is to fall asleep, it sounds like maybe there's more going on' (101 Suburban; Yes BH).

However, providers also commented on not always being able to rely on adolescent questionnaire responses for reasons of honesty,

Their parents are near them and they're not honest on those. So, you'll see negative screens, and then when you talk to them face-to-face, one-on-one without the parent in the room their stories are different. So, we do not rely on any paperwork or tablet screenings because even though they're good, we might pick up some; we don't feel that they're replacement of face-to-face (104 Suburban; No BH).

3.1.1 Impacts of parental presence on information gathered

Parental involvement during visits was described as an asset to learning about adolescent behavioral health concerns. In general, many providers discussed that parents provided helpful information about the adolescent's behavioral health,

I think it's usually very helpful...I find that in our population a lot of the kids are open with their parents and sometimes...the child might not be aware of their own declining mental health or concerns where the parent might bring up, 'I noticed that Sally hasn't been eating as much or sleep has changed or she hasn't wanted to go out with friends as much.' And, the patient may or may not be aware and may not bring those concerns up. So, I think it's definitely helpful to touch base with parents (221 Suburban; Yes BH).

Another provider shared,

Well, it's very helpful if they have insight. If they have concerns, and sometimes the family will come in and say, 'I'm really worried about my child – they're sad, they seem worried.' If their child has shared with them or they can pick up on that, that's really helpful (116 Urban; Yes BH).

At the same time, providers discussed the importance of discussing behavioral health without the presence of the parent as a tactic to create an open space for adolescents to disclose personal concerns,

So, a lot of the times, if anxiety or depression is an issue and the parent is aware- because we will get that a lot at wellness checks or even just people come in for anxiety or depression. A lot of the times the parent is very helpful. They give some more insights, but they're not helping as much in the room when we talk to the patient because the patient won't want to disclose as much a lot of the time (108 Rural; No BH).

The majority of providers mentioned that each adolescent-parent dyad experience different levels of comfort during discussions of discussing behavioral health symptoms or concerns,

I think sometimes behavioral health with parents in the room it can kind of go both ways. Some kids will feel very comfortable talking in front of their parents. Other kids don't feel as comfortable. They want to be able to have a little bit of privacy. Whether or not it's because the parent is involved in the situation or not involved. Or, if it's social – some kids would prefer their parents to be there and so it's kind of helpful. Parents can chime in and say, "Oh, yeah, well last week, she only slept six hours (112 Rural; No BH).

During discussions about what information is collected with or without the presence of a parent, several providers spoke about the important of transparency between all parties,

I do find that adolescents, obviously, they're going to be much more truthful when their parents are not in the room with rare exceptions. But, I find that having them in the room fosters open communication at the outset. If there's a mental health concern, I like to start off with both people to get a sense of their individual dynamics that's involved and then I try and talk to each of them individually as well and then come together at the end and figure out a plan going forward. I think there's value to having a together conversation as well as an individual conversation. If anything, just to kind of see how the family interacts with each other and it gives me clues as to any problems that might be going on in the family (109 Suburban; Yes BH).

Another parent related challenge providers' face is dismissiveness of potential behavioral health concerns. While this was only mentioned by a few providers (rural, urban, and suburban),

with four of the six rural providers discussed this challenge. For example, one provider described,

I think it is sometimes challenging, despite my best attempts to explain that while some anxiety is helpful and keeps us functioning, keeps us from getting hit by cars, or by bears, or what have you -- that a lot tends to be dysfunctional. There's a line where it starts to cause us physical or emotional concerns. I think unless that is glaringly obvious, it is sometimes hard for patients or their parents to make that connection, or because it's -- I'm assuming they're uncomfortable with the stigma or because they themselves [referring to parents] have just never sought treatment and don't necessarily view it as a problem because they've made it to 30, or 40, or 50. And, so and done fine (220 Rural; Yes BH).

Another provider described how they view their role in working with dismissive parents,

I would just say that like sometimes it's a challenge with the patient, the teenager says, 'I feel down, or anxious, and feel this way, that way', and the parent just dismisses it, or downplays it, or just tells them to- usually not entirely helpful feedback. I mean they might think it's helpful from their perspective, but it's kind of like not what they're asking for. And so, our role we would be kind of like to advocate for them, and kind of say listen, 'This is what I'm hearing, and have you thought of it this way, that way?' And, sometimes it can be hard to- you just want the parents to be onboard with what you're doing, and sometimes it takes a bit of talking to win them over, whatever, to get them to see it your way (114 Urban; Yes BH).

The time it takes to support parents and adolescents with understanding and believing the provider concerning behavioral health issues was echoed by other interviewees.

Overall, providers used multiple sources to gather information about potential behavioral health concerns including routine screeners, patient history, parents and patients, lines of questioning focused on adolescent’s habits, social/scholastic life, and observing parent child interactions within the visit. Information disclosed during face-to-face adolescent and parent encounters appear to play a major role in how providers detect potential behavioral health concerns.

3.2 SIGNS AND SYMPTOMS OF ANXIETY

In order to recognize anxiety and collect the information necessary for diagnosis during well visits, providers have to be aware of certain signs and symptoms. Recognizing signs and symptoms of anxiety also may impact perceived prevalence and morbidity of the disorder. Providers discussed what signs and symptoms they believe indicate anxiety in their adolescent patient population, including physical health symptoms, mental health symptoms, and overall ability to function in day to day life. Signs and symptoms will be discussed first, followed by how providers attain additional information that may indicate an adolescent patient is experiencing anxiety.

Providers reported using both physical health and mental health symptoms to recognize adolescent anxiety. Approximately three fourths of providers discussed several physical health symptoms/somatic complaints (reported by patients or parents) as red flags for anxiety, including headaches, chest pain, stomach aches, trouble sleeping, dizziness, and constipation. As one provider stated, “*frequent headaches, frequent chest pains, frequent abdominal pain – that kind of stuff. A lot of the somatic stuff, I think, go along with anxiety, too (113 Rural; Yes BH)*”.

Several providers spoke about using physical health complaints, along with information learned about the patient's life, as clues that physical symptoms may be due to anxiety, *“so, same thing with chest pain and same thing with bellyaches. If they're associated with something that is causing anxiety or if their parents got separated and they're going through a divorce and that's giving the children a lot of anxiety, or depression (108 Rural; No BH)”*.

Only a few providers shared that reoccurring physical complaints, that yield no positive results on physical health tests, as a sign of anxiety,

I mean, I think for the family sometimes it's really hard when their child has had physical complaints for a while. I see a lot of kids with abdominal pain or chest pain and we've done work-ups and really hasn't been revealing anything. Sometimes it's hard to accept that there may be a mental health component. And, I mean, similar for me as well. Sometimes understanding really how strong that can be towards the physical as far as when kids are struggling with anxiety (221 Suburban; Yes BH).

Almost all providers described using mental symptoms as indicators of adolescent anxiety, including anxious feelings, panic attacks, worry, and stress. For example, many providers shared similar symptoms associated with adolescent anxiety, *“so, signs and symptoms that I use are children's irritability. Sometimes having actual panic attacks, feeling very anxious, not being able to fall asleep at night. Being excessively worried about things that the average person wouldn't be worried about (105 Urban; Yes BH)”*.

These types of symptoms were closely linked to lifestyle behaviors, such as poor hygiene, and social and scholastic functioning. All providers discussed asking adolescents a series of questions pertaining to daily living, such as,

'How are we doing in school? Are the headaches associated with anything specific? So, is it in four out of four in school, or only in school? Are we dealing with a certain issue in school? Are we being bullied in school? How do we feel generally about school?' (108 Rural; No BH).

As with physical health symptoms, providers discussed making connections between mental health symptoms (i.e., panic, worry, stress) and aspects of daily living. As providers gave examples of lifestyle questions, the concept of assessing patients as either high and low functioning, as an indicator of anxiety, arose. Almost half of providers described adolescents highly engaged in scholastic studies and extracurriculars, as a potential sign for being at-risk for anxiety. For instance, one provider shared,

I think it seems like- maybe this as a stereotype, like, kids who are, maybe, higher functioning coming from more intact families of the ones that we see higher expectations for excellence and achievement. I think those kids are harder on themselves. It seems like they feel more anxiety there. Parents are more anxious (116 Urban; Yes BH).

However, more than half of the providers stated the opposite; that adolescents who are performing less well in school, and are less interested in extracurriculars are at-risk for anxiety. For example,

I find the patients with anxiety tend to be little bit more closed-off and may not have the same kind of level interest – although that's not universal I can tease it out from many different clues. But I find that just like depression, kids just tend to be faltering and may not be doing quite as well in school as they could be doing (109 Suburban; Yes BH).

Another provider explained,

...it really seems like it's interfering with sleep, and relationships, or kids aren't being as engaging socially, or not as interested in activities, or kind of more isolation, or if it's really interfering with day to day activities -- then that's something that would be a concern. And, sometimes the kids recognize it and some kids sometimes -- they don't really recognize it (119 Urban; Yes BH).

Along with adolescent reported symptoms, or signs gleaned from patient-provider conversations, providers discussed obtaining information from parents as a way to recognize anxiety. Several providers stated parents often express concerns of anxiety directly, either before the visit, or during the visit. For instance,

...mostly the parents. I think most parents feel more comfortable coming to the primary care doctor first to kind of confirm their suspicions that their child has anxiety. And so, it's usually how it starts, or even by questions, and then towards the end discussion about when should they call me if they think the anxiety is getting out of hand (118 Urban; Yes BH).

Another provider shared that while parents may directly express concerns about anxiety, the time of information sharing may not be optimal,

They're hesitant to tell the schedulers...I saw someone last Friday who was on my schedule for belly pain and part way through I'm like, 'There's more nerves in your belly than there are in your head. Is there any chance that -- has there been bigger worries, or stresses, or changes? Is there any chance that either you think this could be anxiety related, or sadness, or depression related?' And, the mom's like, 'Oh, I thought she's had anxiety for six months.' But, yet it took me 25 minutes of her visit, or 20 minutes into the

visit before she volunteered that information. So, I don't know why people are so hesitant to just spit it out or get it out on the table early (220 Rural; Yes BH).

Other providers shared that while a parent may not expressly state concerns of anxiety, they might share key signs or symptoms, *“he or she is so worried, she's worried all the time. It's affecting appetite, sleep, social interactions.” So, I find most often it's them who is saying the chief complaint (106 Urban; Yes BH)”*.

Lastly, providers commented on in-visit behaviors of adolescents, as information that might contribute to learning if the patient is anxious or not. In-visit cues specific to anxiety include, affect, nervousness, being withdrawn or engaged, interactions with parents, and body language. For example, one provider discussed cues for anxiety they notice without even asking a question,

I mean, I think first is what's going on in the room. Are they engaged or are they withdrawn? What's their relationship like if the parent is in the room? Is there tension? Do they have an open relationship? So, I think you can get a lot of clues just before you even ask anything (221 Suburban; Yes BH).

Another provider described how adolescents makes themselves feel as a cue for anxiety, *“when they make me feel nervous, you know, basically that kind of tense body language...That closed off kind of tense body language. And try and – a lot of head nodding, and agreeing, and all of that (101 Suburban; Yes BH)”*. Another provider spoke about signs in the visit of some patients who might not self-recognize they have anxiety *“if they start fidgeting, they start losing eye contact – those are some of the ones that we pick up on that [they?] don't recognize it (114 Urban; Yes BH)”*.

Providers look out for many different signs and symptoms, experienced by adolescents, that may be attributed to anxiety. Symptoms can be both physical (i.e., headaches, stomachaches) and mental (i.e., worry, panic), and providers gather this information from both parents and adolescents. Moreover, providers look to how the adolescent is behaving in their day to day life, and if any of their physical or mental health symptoms connect to those behaviors (i.e., not wanting to go to school due to social dynamic stress). Several providers also draw on more subtle signs of anxiety within the context of the visit, including non-verbal cues, engagement level in the visit, and affect. Knowing what signs and symptoms to look out for, and where this information comes from is the foundation of being able to identify anxiety.

3.3 IDENTIFYING ANXIETY: PRIMARY CARE PROVIDER ROLES

All providers discussed their role in identifying anxiety. Overwhelmingly, providers believed identification of anxiety is part of their professional role, albeit the rationale for why varies. Many providers spoke to why it was specifically their role to identify anxiety, citing three major reasons, (1) high prevalence rates of anxiety; (2) symptom severity of anxiety; and (3) being the first point of contact an adolescent might have with the medical system, including potentially being the only provider whom an adolescent can talk with. However, during these discussions, several providers noted it was their role to identify behavioral health conditions in general. Providers whom felt it was their role to identify behavioral health conditions, in general, varied on if it was their role to make the diagnosis or to refer adolescents to another provider type for diagnostic identification. Below are detailed descriptions of how providers view their role in identifying anxiety, along with representative quotations.

High prevalence rates of anxiety were a key reason providers' believed identification of anxiety was an important part of their role. For instance,

I think anxiety is so common that we have to be the people to help identify it. Since we're getting an audience with adolescents, at least, through what I told you when they need something like a driver's exam, sports exam, and so forth. So, we have an opportunity and we know the questions to ask and that kind of stuff. So, we have an obligation to identify it because it affects so much of their lives (113 Rural; Yes BH).

Another provider stated, "one of the reasons why I did this survey is because I think it's so important. As I've been in practice for over 20 years and I have never seen more anxiety in children than I have now.... (118 Urban; Yes BH)". One provider felt that while anxiety was common, and therefore was part of their role, they faced challenges, stating

We have a very small office. So, it's just me and another physician at work right now. I think he's kind of in the same boat as me as far as we know that it's something very common and we need to do more -- but, finding the resources and it's something very difficult for us to kind of follow because we're not specialized (110 Suburban; Yes BH).

Symptom severity associated with anxiety was one key factor as to why a few providers felt identification of anxiety was an important part of their role as primary care physicians. For example,

So yes, I think it's an important part of what we do. Anxiety and depression are incredibly common -- as common as asthma or other things. So, I think it's an incredibly important thing for us to identify and know that long term, adults who don't have their anxiety identified in their adolescent years, can have decreased levels of function because of other persistent symptoms because it's not ever been identified. And, I think the reality

is probably more teens come and get seen by their doctor than young adults or older adults, my age. So, I think that's an important time to identify it. (220 Rural; Yes BH).

Another provider simply stated,

My thoughts are, I mean, it's extraordinarily important. I mean, it's so common and it can be certainly debilitating for certain people and life-altering, so it's important. Most of disease that we deal with as pediatricians is, I think, mental health-derived to some degree. So, it's absolutely important to confront it and realize it's there (109 Suburban; Yes BH).

The third key reason a few providers mentioned, as to why it is important to identify anxiety, is that primary care providers are often the first point of contact adolescents have with the medical system. One representative quote of this factor is as follows

Oh, I think it's super important. I mean, I feel like we can actually make a difference. And typically, we are the first point of contact for most of our patients. So, if we don't bring it up or if we miss it, we kind of miss the boat because who else are they going to see? (107 Rural; No BH).

Other providers believe that while being the first point of contact, they also might be one of the only points of contact adolescents have. For example, *"I think that it's good because a lot of times we are the first line of people. So, we're going to be the first ones that see the kid getting into pediatric psychiatry is very difficult. There's not a lot of them (108 Rural; No BH)".* One provider described while identification should be their role as frontline providers, that *"to just throw that on the plate of pediatricians is a little bit unrealistic without any actual formal training (115 Suburban; Yes BH)".*

Other providers spoke simultaneously about being the first point of contact for adolescents, as well as being an approachable provider type. For instance,

I think it's super important to do. Just because these kids may- even if it's not their primary concern -- if it is a problem, they're- obviously if it's not a primary concern, then they're not going to really be talking to anybody else about it. And, it's super common...So, I don't know. I feel like we're the first one ever seeing the kid, so we know the kids a lot of the times and hopefully they're more comfortable with us then they might be with some random person or stranger, whatever. So, hopefully we can pick up on it and then kind of go from there (103 Urban; Yes BH).

Another provider described potentially being the only person an adolescent might have to talk to about their anxiety,

I definitely do think that as a primary care provider it is our role to identify it because at times, we're the only provider that is seeing these patients and if the parents aren't addressing it with them then they don't have anybody else to talk to about it (105 Urban; Yes BH).

Similarly, providers frequently discussed the importance of building rapport, with patients and parents, during identification and treatment of anxiety. Specific to identification, providers remarked having a good relationship with families supports them seeking care. For example,

I think it's critical for us because if we have a relationship with the family, we're probably the most likely people to think about it -- because if this family shows up to the ER with a headache or a bellyache, you know, acute care facility is not necessarily thinking about it until they rule out all the stuff. So, of course, they're going to do all the

tests. So, our role is hopefully to keep them out of the emergency room, screen for it on a frequent basis, and prevent it (111 Rural; Yes BH).

Several providers who believed it was their role to identify anxiety, also believed it was their role to identify other behavioral health conditions. For instance,

I think- my role...is well, it's kind of two-fold. Like, I think about the medical standpoint. I think it's my job to rule out any physiological cause for any of the symptoms that kids may come in with. And then, at the same time, my patient's well-being as a whole is kind of important. So, I need to always have that kind of on the back burner and being able to approach the behavioral health side just kind of helps for everything as a whole (112 Rural; No BH).

Another provider described

...the difference is not in identifying. The difference is feeling willing to treat it. We're much more likely to feel comfortable beginning treatment for anxiety than we are for pediatric depression. I think depression scares us a little bit more because of the risk of suicide. But, yeah, I don't think there's any difference in how we- our willingness or ability to identify (113 Rural; Yes BH).

Other providers discussed their role in identification as identifying the adolescent is experiencing some behavioral health concerns, and referring the adolescent to a mental health professional to determine exact diagnosis. For example,

I think our role is pretty similar in all these conditions which is the identification that something might be wrong even though even though we may not be exactly sure what and be able then to guide those patients...which oftentimes is a child therapist who kind of

tease everything out. Is it anxiety? Is it depression? Is it both? Is the child bipolar? Has this child been abused? (ID: 118 Urban; Yes BH).

Another provider commented that “*the older providers don’t want to be as involved in identifying anxiety disorders. Just because I feel like they’d rather just refer just a psychiatrist if they sense anything abnormal, mentally (105 Urban; Yes BH).*” Moreover, several providers discussed their role in terms of being the front-line provider, who connects patients to specialists:

I think so. I think we identify a lot of things as, like, first line for the people. And then, get people to the right specialist and the person with the right amount of training. I think that’s how most of us would probably see our role (115 Suburban; Yes BH).

A few providers shared insights as to why other providers may view their role in identification as picking up on a potential concern, and referring patients elsewhere for specific condition identification. Specifically, one provider shared while providers who refer to obtain a diagnosis are “not really opposed” to identification, they believe “*sending them somewhere else to meet somebody new is kind of more scary than just approaching it in our office, in that setting (112 Rural; No BH)*”. Other providers expressed similar sentiments regarding outcomes of patients not diagnosed in primary care; for instance,

I think everyone thinks it’s important. I think it’s more, you know, after identifying what happens from there because I think the primary care providers are a lot more comfortable in starting talking about it and starting treatment versus someone who will just refer out. I feel like a lot of the ones who get referred out don’t always actually seek care. They kind of get lost in the system as well (107 Rural; No BH).

Interestingly, the idea that adolescents would either be more comfortable, or actually receive care in the primary care office was discussed by four of the five providers without embedded behavioral health providers, as well as six providers with embedded behavioral health providers.

Lastly, providers discussed reasons for why other providers might not feel as strongly or are less comfortable having the identification of anxiety as part of the primary care provider role.

As one provider stated,

I think it's less important to some people...I think people who are maybe farther up from training or don't have like the connections that I have don't feel as comfortable with it. And so, therefore, may not address it as much. Whether they think it's important or not -- I don't know, but I feel like it's not something that they address as regularly as perhaps I do (103 Urban; Yes BH).

Another provider stated,

It's just they're not interested in it. You know, I think it's easy if you're interested to learn more about something, but for some practitioners -- that's not a high priority. To get a history on these kids takes time and a lot of people don't have the time built into their schedule. So, it's not that they're bad doctors -- it's just they work in a system that doesn't allow it. It's unfortunate (111 Rural; Yes BH).

All providers felt they have a role in identification of behavioral health conditions, with some providers focusing specially on their role identifying anxiety, and others focusing on mental health in general, including anxiety. How providers defined identification varied between identification/diagnosis and referring for diagnosis/conditions' specific identification. Several providers also commented on why other providers may not focus on identification of anxiety, including interest levels, trainings, and time constraints.

3.4 FACILITATORS AND CHALLENGES TO IDENTIFICATION OF ANXIETY IN PRIMARY CARE

During discussions focused on identification of anxiety in primary care, providers shared both facilitators and challenges faced in identifying anxiety in primary care. Facilitators are presented first, followed by challenges.

3.4.1 Identification facilitators

Factors facilitating providers' ability to identify anxiety in primary care included parent/adolescent disclosure of concerns/symptoms, having an embedded behavioral health specialist, value within the practice on mental health, being a recipient of anxiety specific training, co-learning, and TiPS service.

3.4.1.1 Parent/adolescent disclosure

Parental and patient disclosure of symptoms or explicit disclosure of anxiety as a formal concern, facilitates providers' abilities to identify anxiety. Several providers mentioned disclosure of symptoms as a facilitator,

In the sick visits it's usually centered around what their concern is and again, while some people are savvy and come in for a sick visit for mental health concerns because they're identifying difficulty concentrating, or depression, or are usually coming in with other physical complaints that are- we figure out are related to behavioral health complaint (220 Rural; Yes BH).

Another provider vaguely stated,

So, a lot of the times, if anxiety or depression is an issue and the parent is aware because we will get that a lot at wellness checks or even just people come in for anxiety or depression. A lot of the times the parent is very helpful. They give some more insights (108 Rural; No BH)."

With regards to explicit disclosure of anxiety, one provider stated *"as far as recognizing it, in my experience, it's usually either the patient or the parent that comes to us and says, 'Hey, I think this might be going on. What do you think?' And then, we examine it and identify it appropriately (117 Suburban; Yes BH)."* Other providers specially compare the likelihood of parents and patients disclosing anxiety; *"most of the time when any concerns about anxiety come up it's kind of brought up at the very beginning by the parent, not always the patient. (102 Suburban; Yes BH)."*

3.4.1.2 Organizational-level factors

Organizational-level facilitators were also mentioned as supportive anxiety identification processes. Many providers reported having an embedded behavioral health specialist (e.g., on-site behavioral health provider), made the identification process simpler. For example, providers felt an embedded behavioral health specialist made referrals easier; *"almost all of our practices have a behavioral health person in the office, like a therapist of some type. So, it's really easy then to refer from there (103 Urban; Yes BH)".* Other providers mentioned embedded behavioral health providers also supported the identification process due to being able to engage in bi-directional communication,

The only exception to that is when I refer them to [Insert Name] in our own office which is very nice because I get to talk to her and we collaborate. So, I try to refer into our own

as much as possible just because I can have that loop closed myself (109 Suburban; Yes BH)".

A few providers spoke to how their practice culture (i.e., work-life balance, increased visit time), was supportive of identifying behavioral health concerns. For example, one provider mentioned their practice makes evaluation a priority as they have hired a therapist to work in their office and that "[they] give them an extra 15 minutes so they have a total of 30 minutes with the provider (101 Suburban; Yes BH)". This provider went on to share,

You know, we value our personal lives very highly in making sure that we have a good work life balance, and that was something that our founders' thought was really important. And therefore, I think that translates to how we care for our patients (101 Suburban; Yes BH)".

None of five providers, without on-site behavioral health, discussed practice-level facilitators.

3.4.1.3 Education and co-learning

Only a few providers described educational trainings or co-learning as factors that facilitate their ability to identify anxiety. With regards to education, one provider described participating in training, stating, "*I'm perhaps more likely than some of my other colleagues....to use the SCARED form...which was outside my comfort zone about a year ago (106 Urban; Yes BH)*".

Another provider spoke about how co-learning has increased their comfort level talking to patients during the identification process:

I have a lot of good friends who have done triple board training. So, they've done pediatrics and psychiatry together. And so, just really being friends with them -- I'm more comfortable with the topic because also when I have questions, I just talk to them about what to do about their patients (103 Urban; Yes BH).

Lastly, providers pointed to the TiPS service as an identification facilitator. For example, one provider stated

I think once- what I actually found very helpful is we have the TiPS program and we've had some lectures through them in terms of identifying anxiety and depression and a roadmap. So, I thought that has been extremely helpful for me in knowing what questions to ask (107 Rural; No BH).

Providers also shared details about how TiPS consults support the identification process,

It does help with identification. So, what we do is and what TiPS does is say we have a kid that comes in that we suspect depression or anxiety -- we can call and they will get a mental health physician that specialize on the phone and we kind of describe what happened at the visit, what they saw, and kind of what they would recommend as far as if they would prefer to see them in a quick and kind of get additional screening questions done or if they were to recommend starting a medication (110 Suburban; Yes BH).

3.4.2 Identification challenges

Many facilitators described by providers dovetailed from discussions surrounding challenges to identification of anxiety in primary care. Each of the major challenges to identifying anxiety in primary are described below, including patient/parent-provider communication, visit length, and provider comfort with what happens after they identify an adolescent has anxiety.

3.4.2.1 Patient/parent-provider communication

Several providers expressed the honesty and openness of adolescents as a challenge to identifying anxiety,

The biggest challenges are the patient being actually truthful and honest with us. So, when we're asking them questions- because sometimes you can sense there's more going on and yet, they still don't want talk to you about it or admit to the way that they're feeling (105 Urban; Yes BH).

Other providers described challenges with both the adolescent and parent disclosing a concern,

I think a lot of it has to do with the patient itself. With whether or not the child is comfortable in one, talking to us and being honest with their answers on their questionnaire and whether or not they feel, that they're willing to talk about it, I think is huge. And then, again, sometimes, too, even the parents are the opposite. The kid wants to talk about it but the parent wants to ignore it. So, that kind of makes things difficult for us, too (112 Rural; No BH).

As noted in the above quote, patient/parent reluctance to disclosing mental health is a challenge several providers mentioned. Directly related to this challenge is patient/parent reluctance to accepting anxiety as a mental health concern. For instance, one provider shared “*either one parent thinks its anxiety, the other parent doesn't, with the reluctance of the teen, himself, to think that what they're experiencing might be related to mental health (117 Suburban; Yes BH)*”. In this situation, the provider continued to share that in these instances, discussions related to “*anxiety, specifically, take a lot of time. And, many times, we don't have that much time to give either a well child visit or sometimes when it's just brought up off the cuff (117 Suburban; Yes BH)*”.

Three of the five providers without embedded behavioral health providers shared similar sentiments as described above by providers with embedded behavioral health providers. For example, one shared,

The biggest challenge I have is convincing a family potentially or a patient that that's where their symptoms are coming from. You're trying to get them that trust in you and get a second opinion if they don't believe you. It's just that denial. But, that's a small proportion. I think once we have someone who comes in currently for the same issues or multiple issues all the time, they're frequent fliers, and you know it's anxiety but they don't recognize it. It's being in denial pretty much a lot of times. That's the biggest thing on diagnosis (104 Suburban; No BH).

Another provider briefly mentioned stigma around mental health concerns, but focused mostly on how patients prioritize mental health:

Yeah, I mean there's definitely still a stigma about mental health concerns. In the patient population that I serve, everyone's got very busy lives. They're very highly scheduled, which is probably why they have anxiety. So, trying to fit in one more thing with a visit to a therapist is often the challenge for them, and not always a priority for them. So, that makes it harder. Yeah. I think that's pretty much it (101 Suburban; Yes BH).

3.4.2.2 Organizational-level barriers

Length of time allowed for primary care visits was overwhelmingly mentioned by providers as a barrier to identification of anxiety. While providers from different geographies indicated time during visits as a barrier to identification, more than half of the rural providers mentioned this barrier. Similarly, three of the five providers without embedded behavioral health providers noted time as a barrier to identification. Several providers simply stated that short visit times limits their ability to see or notice symptoms of anxiety, *“it's a relatively short appointment. I think kids are going to put on a good face, especially the anxious ones, that everything is fine. And so, sometimes we don't have insight that they may need some help (116 Urban; Yes BH)”*.

Time was also seen as a barrier to reviewing all topics within a visit *“it does just come at the expense of other things. It comes at the expense of either more discussion on diet, or exercise, or healthy choices, or friends, or future career plans, things like that. So, time is the currency of the visit (117 Suburban; Yes BH).”* Moreover, providers shared how much time identification can take,

So, the anxiety discussion like to identify it, and then talk about it may be brief if the family is not worried, and you’re not too worried about it. But, it can take a while. The SCARED itself sometimes takes kids like five to ten minutes. So, that can be time consuming. (103 Urban; Yes BH).

Overall providers spoke about how short visits, take away *“the time that it [anxiety] really deserves to have” (108 Rural; No BH).*

For a few providers, the type of visit (well child visit or sick visit) and length of visits presented challenges in terms of financial reimbursement. For instance, one provider described that for sick visits compared to well visits, they are allowed to

Bill by time or complexity, so...I can get reimbursed appropriately if my schedule gets hijacked in a plus 15-minute belly pain, 15 minute I think they had a stomach bug, and really, they’ve had a belly pain for seven months and it’s because they’re anxious...it doesn’t make my next patient have to wait less, but at least my time is being valued (220 Rural; Yes BH).

One provider, with control over visit structures, described placing priority on ensuring there is enough time in a visit to allow full coverage of the adolescents needs. The provider continued to say

Most practices can't be sustainable like that [with 30 minutes visits]. But I have a very high poverty, high ADHD, high foster child care environment and I just can't get through all those visits any faster. So, rather than have 35 kids...I see 22 or 25 kids a day and I'm able to still make a living, but have the time I need. I don't generate the revenue as everybody else does, but, you know, unfortunately or fortunately, that's not my priority (111 Rural; Yes BH).

3.4.2.3 Next step challenges

Another major barrier to identification or comfort in the identification process, is what happens after the primary care provider identifies the adolescent as having anxiety. As one provider summarizes *“I know that we’re talking about identifying, but I think, you know, if you’re uncomfortable about treating or triaging mental health problems, you’re not going to feel comfortable with identifying them depending on what you do next (107 Rural; No BH)”*. Other providers echoed this sentiment, *“the biggest challenge is it’s not knowing what to do next – that not having enough resources to refer to and roadblocks for that – just getting people to the right provider (115 Suburban; Yes BH)”*. Challenges to treatment are linked, by interviewees, to provider comfortability identifying anxiety. While providers overwhelmingly feel they have a role in identifying anxiety, concerns over what happens next (i.e., treatment) is seen as an identification barrier. Treatment challenges discussed by providers are found in section 3.7.2.

3.5 SCREENING TOOLS

Approximately one third of providers shared that they had never used a standardized screen for anxiety. Only two of the seven providers who discussed not utilizing standard anxiety screens, disclosed they were not aware of any such tools,

I honestly think it's because we have no screening tool for it and, personally, from a provider that doesn't have a lot of experience -- I think a screening tool that if we did implement it into our visit, it would help because it is a hard thing I feel like to screen for (110 Suburban; Yes BH).

The remaining providers shared other reasons for not utilizing anxiety screening tools, including (1) not having time to use an anxiety screener during visits, *“I have not really had the time to do that kind of scale with what everything we have to do within the office (118 Urban; Yes BH)”*, (2) relying on the PHQ9, and (3) relying on their own *“conversational skills (109 Suburban; Yes BH)”*.

3.5.1 SCARED screener

Of providers who have used routine anxiety screens, all used the SCARED tool, with one provider also sharing they had used the GAD-7. Providers who used the SCARED tool, described when they believed it was most appropriate to give to patients, and sometimes parents. Mainly, providers utilized the SCARED when they or the parent has concerns that the adolescent is experiencing anxiety or severe anxiety. In these instances, providers described generally finding results provide, *“a little more direction that makes...[the] visit a little more efficient (220 Rural; Yes BH)”*. Specifically, providers mentioned data from the SCARED allows for them to

better track anxiety, *“I think it’s objective data that you can follow and you can trend over time. So, I think that works well (117 Suburban; Yes BH)”*. Another provider shared how objective data can be used to overcome parent/patient denial,

I find it’s really helpful to present something objective to them especially when it’s a somatic complaint that, “Hey, your score is 30 and above 25 really might be concerning here.” So, it really, I think, brings a lot to light to the family. So, I do like using those tools. (221 Suburban; Yes BH).

Providers overwhelmingly spoke about the negative aspects of the SCARED screening tool as it relates to their ability to use it during a primary care visit. One major barrier provider shared was manual scoring, *“it’s a real pain to add up the scores on the SCARED (103 Urban; Yes BH)”* and *“I think the SCARED itself is also a barrier. Not a hard form to fill out, but really hard to score (116 Urban; Yes BH)”*. Providers mentioned that if the SCARED could be automatically calculated it would be less tedious.

From a patient and parent perspective, providers noted two major complaints adolescents and parents had specific to filling out the SCARED tool: (1) form length, and (2) the repetitious nature of the questions. Several providers also noted the irony of having an anxious youth fill out a long form,

And, the problem is, you know, you’re trying to get someone who’s anxious and worried about doing things perfectly fill out a form. You know, something like that. If they’re worried about doing something right -- they’re going to agonize over ‘Is it a one or a two?’ So, just it’s imperative in the condition that it’s going (101 Suburban; Yes BH).

3.5.2 Systematic screening for anxiety

Turning the focus away from the SCARED tool specifically, providers had mixed feelings about routinely screening for anxiety. Almost half of providers felt a routine anxiety screener would be a helpful change, including three of the five providers without embedded behavioral health specialist. One provider mentioned that if the screener “*could be included in something that’s done prior to the visit, that would be helpful (108 Rural; No BH)*”, as during the visit there is not enough time for patients to fill out forms. Another provider stated,

But, like I said, I can honestly say that most of it is for depression and we don't really screen for the anxiety aspect. So, it's something I think we need to get better at as an office, for sure I think, like I said, more education, getting maybe some kind of tool implemented just like we have for the alcohol, tobacco, and marijuana, and the same thing for depression. I think adding an anxiety screening tool would really help us to kind of get that conversation started while we're in the room (110 Suburban; Yes BH).

Other providers spoke to how a routine screen would support them in recognizing the symptoms of anxiety. For example,

I think anxiety is a little bit more subtle. You know, so I think some pointed questions can be pretty helpful with regards to that. But, would it be a good idea? Yeah, I would say that it wouldn't be a bad idea for sure. Particularly, if there was maybe four or five questions (119 Urban; Yes BH).

The sentiment of a short routine screener was echoed by other providers as well. Providers also cited prevalence of anxiety as a rationale for having an anxiety-specific screener be used routinely;

I think routine. If we're screening for depression- and I'm sure anxiety is that prevalent – why wouldn't we screen for anxiety? You could argue that that's even maybe harder to pick up. So, yeah. But, I think so. As I said, we definitely going to be, I'm sure, missing kids. (116 Urban; Yes BH).

A few providers discussed the inadequacy of the routine depression screen for picking up anxiety as a rationale for having a routine anxiety screen,

I feel like the PHQ9 is the only screening we use for mental health which I feel like, at least to me, the questions seems more geared towards depression rather than anxiety. And, I feel like anxiety is very, very prominent in this population and it's being diagnosed more often because it's being caught more. But, a lot of- the way the screen for is mostly just an in-person interview and questions. And, I think it would be beneficial if there was some kind of paper screening or something that could be added on to the inpatient screening for the providers that don't want to actually ask those questions (105 Urban; Yes BH)".

Another provider shared,

"I just feel like sometimes the depression scales – they kind of hit on the more depressive symptoms. So, the hopelessness, the crying, the feeling tired, the lack of interests – that kind of thing. I think with anxiety, it can sometimes be a complete opposite. So, even if a kid is- I don't want to say that. If a child is actually just having the anxiety part of things when they answer those questionnaires, you know, 'No, I don't really feel like I'm losing interest it's just I'm nervous about doing things,' or, 'I don't really feel tired all the time even though I'm not sleeping because I'm having nightmares'. Do you know what I

mean? Sometimes they might get a little bit confused and not really know how to answer the questions (112 Rural; No BH)”.

About half of the providers discussed reasons for why they do not think there is a need for a routine anxiety screener, including barriers to using the SCARED as a routine screening tool. Similar to when providers view it is appropriate to provide the SCARED tool, many providers noted they are not in favor of a routine anxiety screen as they would prefer to provide screens only to patients who indicate the need, *“I don't know if I'd integrate it into routine screens, but certainly for the patients that I have suspicion for would be helpful. But, I don't currently integrate it (109 Suburban; Yes BH)”.*

Providers also discussed form fatigue as a barrier to adding more routine screeners, *“...Yeah, we have so many forms people fill out (106 Urban; Yes BH)”.* Providers noted that time spent in waiting rooms before a visit is often not long, which may affect data accuracy, *“So, having extra screens may or may not be beneficial. I think kids will have a tendency to say no problem, no problem, no problem if they feel that they're rushed (118 Urban; Yes BH).”*

Specific to using SCARED as a routine screener, providers noted that the length of SCARED form would be a major barrier, *“so, I think selectively giving that to the people that you're curious about is more helpful. Because it's so long, I don't think that would be a good one to give to everybody (115 Suburban; Yes BH)”.* Another provider echoed, *“I think it's a great tool. It does take a bit of time. I wouldn't give it to everybody because the time constraints and that, yeah. Like they already have enough forms to fill out, I think (114 Urban; Yes BH)”.*

Two providers also shared they do not think the presence of a routine screener for anxiety would greatly improve the odds that a case of anxiety is not missed. One provider stated that while they have patients fill out the form whom they have *“alarm bells going off”*, they *“don't*

think we're missing kids because we're not having everybody fill it out.” (114 Urban; Yes BH).

The other provider stated,

I think that probably 90% of the time if an adolescent is anxious, we're going to identify it with, or at least suspect it, without the SCARED form. We may be missing some adolescents with anxiety, but I think the majority we're catching – SCARED might help us pick up a few more (113 Rural; Yes BH).

In general, providers are in favor of using anxiety specific screens for adolescents for whom they or a parent is concerned about. Adding a routine anxiety screen to the mix of existing routine screeners is seen as a mixed bag. Some providers believe adding the screen is important and beneficial as it could help start conversations, assist with recognizing symptoms of anxiety, and could support not missing adolescents with anxiety. Other providers do not believe adding a routine screen would be beneficial due to barriers such as time limitations, form fatigue, and the screen may not yield a higher rate of identifying anxiety.

3.6 TREATING ANXIETY: PRIMARY CARE PROVIDER ROLES

Providers overwhelmingly specified identification of anxiety as part of their professional role. In terms of treatment, role responsibilities varied, including what aspects of treatment fall under the domain of PCPs. Few providers spoke to beliefs that treating anxiety, within primary care, was a new aspect of care and a new responsibility. For instance, one provider stated, *“well, I think there seems to be a push to have pediatricians be willing to do that in the office. The process – I think that it's a totally new knowledgebase that you would need to acquire to be able to do a good job at that (115 Suburban; Yes BH).”* Another interviewee provided a rationale for why

treatment is a new addition of care, stating, *“I think there are not enough child psychiatrists. I think we have too (116 Urban; Yes BH)”*. Other providers expressed while they did not prefer treatment was a part of their role, it was; *“so, I prefer it wasn’t -- but it is and because there’s lots of people (220 Rural; Yes BH)”*.

Insights providers shared as to their role in treatment of anxiety fell into four domains: initiation of treatment, referral to behavioral health providers, medication approaches and therapeutic approaches. Each domain is exemplified below.

3.6.1 Initiation of treatment

Many providers discussed that it was both their role to identify anxiety and their responsibility to initiate treatment. However, providers defined “initiation of treatment” differently. For some providers, initiation of treatment meant starting treatment, and referring out to a behavioral health provider as needed.

I think I play an important role in picking the kids up, starting treatment. If we’re not able to manage it, then we can get help from psychiatrists. Any of that’s like – they are doing well sometimes psychiatrists have their input and blessing on what we’re doing, but yeah, I think we are able to manage it. I think it...falls in our purview and we should be doing it (114 Urban; Yes BH).

Another provider shared that it is important for providers to feel comfortable initiating medication treatment, due to wait times for behavioral health providers,

I think it’s very helpful for primary care providers to be comfortable at least starting meds and titrating up. But, you know, I fear- I don’t know. I only know that people aren’t super comfortable with it always, but I think it’s easy to start meds. I think it’s easier to

go up slowly while they wait to get in with a psychiatrist if you're not comfortable managing long-term (103 Urban; Yes BH).

This sentiment was shared by other providers, for example,

I think it's definitely necessary. And, because we can at least start decisions on treatment – whether we can manage it on the long run – that's a different story. But I know it does take a long time to get these patients into seeing psychiatrists and people who have been educated specifically on pediatric health issues. So, if we can at least start treatment while they are waiting for their referral and to be able to make an appointment with someone, with a specialist – I think that's the best thing we can do (105 Urban; Yes BH).

For others, initiation of treatment means waiting for a behavioral health provider to ask the PCP to initiate medication treatment. For instance,

Sometimes I am asked by the outside therapist to initiate medication which I usually feel comfortable with a few medications, but not others. In other words, as we start treatment -- if it looks like certain medications aren't working we try another medication. It's not working, I feel that they should probably see a psychiatrist (118 Urban; Yes BH).

3.6.2 Referral to behavioral health providers

Other providers believe their role in treatment is to refer patients to behavioral health specialists once identified. For example, one provider stated,

Yeah, I think our role ideally is to identify the person that has anxiety – come up with a high-level, 30,000-foot treatment plan, which would include, 'Okay, I would like you to see this therapist, and I would like you to see this provider'. And, get them to the most

appropriate providers who can either provide cognitive behavioral therapy or pharmacotherapy. I think that's the ideal role of a pediatrician. (117 Suburban; Yes BH)

This was echoed by a few providers, including one who stated

As far as our role, I think it is our role to identify it and not necessarily treat it. But I think it is our role to identify it and identify when they need additional help or assistance.

So, I believe that's my primary role. That's what I take from it (110 Suburban; Yes BH).

However, more often, providers described while they prefer to refer adolescents to behavioral health providers first, they are willing and able to treat with medication,

Well, I think we try to first refer them to therapy. I don't medicate first. Very seldom have I medicated...before they started therapy because they've invested- difficult that you can't even get them to therapy. It kind of takes the edge off, if you will. But, that's a very, very minority of people that do that that I've ever done that to (104 Suburban; No BH).

Another provider stated,

I usually refer them to-- we have three in our office. We have three offices. So, one of them spends most of her time at one of our offices and the other two kind of split time. And so, I do have the names of the different therapists, and I say, 'I'd like you to see them'. And, I also talk about medication if it's someone that I feel is really, really kind of in a bad way -- but I usually kind of say, 'Let's start with therapy and see how it goes'. And, then if we want to consider medication...(101 Suburban; Yes BH).

3.6.3 Medication treatment approaches

The majority of providers stated having prescribed medications for anxiety, including providers without embedded behavioral health providers. Providers feel comfortable with certain

medications, including “Zoloft [SSRI], Lexapro [SSRI], Celexa [SSRI], and Prozac [SSRI]. Those are the main ones that I feel comfortable with. The other ones -- I don't have as much experience with and I am very upfront about parents about that (118 Urban; Yes BH)”. One provider, who does not have a license from the Drug Enforcement Agency, shared

I typically, with my kids that have anxiety, I like to stick to low dose things like SSRIs. I have tried even Atarax is something that has been used previously for anxiety that tends to work. If it's just very minor stuff, I think, it's just enough to kind of calm them down. And then, I also, in my practice, at least, I feel comfortable doing- using Melatonin and things that are natural and essential oils and adding that into practice also. So, I think those are the kind of the things I usually start to play with first before doing any of the heavy antipsychotics or heavy antidepressants or I don't feel they need to take anything like that (112 Rural; No BH).

Some providers spoke about side effects as a reason for prescribing or not prescribing certain classes of medication. For instance, one provider stated,

I usually use like the SSRIs or SNRIs [serotonin and norepinephrine reuptake inhibitors]. So, Zoloft [SSRI], Prozac [SSRI], Celexa [SSRI], Lexapro [SSRI]. Trying to think what else. I don't think I ever started Effexor [SNRI], but I think I've had a patient or two who might be on it came to me on it or was hospitalized and put on it, and it worked well. So, I continued it. I'm not a big fan of any of the Benzodiazepines just because of the risk of tolerance, addiction, and all of that. So, usually, if they were in as-needed medication, I'll give them something like Hydroxyzine [antihistamine] to kind of just make them more sleepy and calm them a little bit. I have done like short-acting Propranolol [beta blocker] like before public speaking, or things like that. (222 Urban; No BH)”.

Other providers shared that they did not prescribe benzodiazepines as well as having less familiarity with medications outside of the SSRI family.

Providers also discussed long term, complex, treatment of adolescents with anxiety. While many providers expressed comfort prescribing medications, many commented that if the patient was complex or did not respond to treatment, they would have their patient see a behavioral health provider,

I'm very comfortable starting a treatment. Typically, I'll do an anti-depressant like an SSRI such as Zoloft or Lexapro, the SSRI's. I mean, that's generally how we start off. I usually start off with Zoloft [SSRI] or Lexapro [SSRI], but I'm becoming a little bit more comfortable and maybe these other nuances to it. And then, if they're not doing better, if they're anxiety is severe or significant, they're not doing well with my initial prescription, I'll try to get them into seeing a psychiatrist. with a psychiatrist any time to get a little bit more guidance (109 Suburban; Yes BH).

A similar sentiment was shared by another provider regarding SSRI comfort level,

I would start an SSRI. That's pretty much my comfort level. SSRIs or Vistaril [hydroxyzine] are generally what we do at our office. So, we generally, I think, we try one or two SSRIs and moving on to the second SSRI. At that point, we usually try to get them plugged in with a pediatric psychiatrist because we're saying they probably need a little bit more help than what we're able to do (108 Rural; No BH).

Several providers spoke about how other providers, in their office, are not comfortable prescribing medications. One provider's statement summarizes this point,

I mean, there's definitely very black and white line. There's no grey in our group. I would say half of us do prescribe SSRIs ... But, the other half of my group definitely does not

have that comfort level and only will refer to a psychiatrist for meds (106 Urban; Yes BH).

One provider compared comfort in treating physical health conditions to comfort in treating behavioral health conditions, and how that should impact a provider's treatment decision,

Like I feel really confident with taking care of sports injuries, but my partner does not because they have not had a lot of training or experience and haven't seen a lot of those patients. So, if they don't feel comfortable treating that, then they shouldn't. They should be referring that person to me or to an orthopedist. So, I see it very similarly. Medicine unfortunately is not like a perfectly evenly taught throughout every single provider. Everyone has their own interests and everyone has their own experiences. And so, if you don't have a lot of experiences or interests in an area -- I don't think you should be made to focus on that area. You have to be able to refer and tell someone where to go or how to get help, but I don't know that you're necessarily obligated to treat that (101 Suburban; Yes BH).

Providers similarly gave examples of how other providers might behave in certain clinical situations. For example, one provider shared

Four of us of the eight are definitely comfortable starting meds, titrating meds, maybe three, maybe four of us are comfortable following on meds long-term like as long as the kid is doing well...And, we're comfortable with it and then there are three other providers. Two are very like old school and one is nurse practitioner who just hasn't really had training in it. So, they're not at all comfortable. They won't even -- I don't know if they'll do this, but I don't think so. Like if a kid ran out of the Prozac [SSRI] or

something, and couldn't reach their psychiatrist -- they might provide a refill for a month for a stable dose. But, they might not. And, they just don't know enough about treating with meds to be comfortable with this stuff. (103 Urban; Yes BH).

Another provider shared a detailed scenario of when their comfort level with treatment clashed with another provider in the office:

Well, I had a patient that I was seeing for a well child check for one of my colleagues. And, I went over all the screening and the PHQ9 score was 15. So, it was a little bit elevated. And, they have already been working with the in-office therapist. And, she had told me in the past she had asked the doctor about starting him on medication and the provider had said no and didn't want to do it... I didn't personally feel comfortable starting them on medication because that provider did not want to do it. But, I did have to refer them out to a psychiatrist because I do feel like they needed those services. Then I did have to talk to the provider after that and explain myself to them and tell them I wasn't trying to go behind their back...They weren't very happy...But, I think they appreciated that I was honest with them and I didn't just take it upon myself to do the treatment because I know in that case they would've been very angry (105 Urban; Yes BH).

The provider continued to share the reason for treatment resistance,

The only thing that I can think of is they just feel like they're somewhat responsible if something does happen to go wrong especially because of the black box. I think that's what most providers are afraid of when starting on medications...So, if they do happen to, unfortunately, commit suicide or try to harm themselves. But they find out that

responsibility also falls upon them because they were that person's primary care provider (105 Urban; Yes BH).

3.6.4 Therapeutic treatment approaches

Lastly, providers discussed how they viewed talk therapy as part of their role in treating adolescent anxiety. For the majority of providers, while an important form of treatment, cognitive behavioral therapy was outside of their purview. For example, one provider plainly stated “*So, I think I'm comfortable with screening. I'm not comfortable with doing cog therapy (104 Suburban; No BH)*”. Providers spoke about the importance of talk therapy and who would be best to provide that type of treatment,

I think, you know, my big message -- because I mean, I'm there for 15 minutes and I'm not going to- I will see them back for med management and anxiety, but I'm not necessarily a therapist per say. I mean I can start them off with some ideas about managing stress, and anxiety, and relaxation techniques, and kind of, you know, talk with them a little bit about that, and giving them some ideas about that. But really, I think stressing the importance with the patients and families that, you know, this is something that you can really work on. But, you know, seeing someone, and dedicating a certain amount of time, seeing a therapist, and kind of developing these strategies, you know, would be helpful for you to kind of empower yourself to kind of manage this (119 Urban; Yes BH).

Many providers felt as if they were able to give adolescents some form of advice or coping strategies within the context of a visit. For instance, one provider stated

Well, I think positive reinforcement for things that you've seen that they're working on or encouragement. I think that we can talk with them about breathing techniques and other relaxation techniques they used. If they have a positive activity or they like to do like outlet and just encouraging that, and getting exercise to help with their stress levels. We can address those things (221 Suburban; Yes BH).

Another provider generally stated that while they can do “*basic counseling*” and would refer out for cognitive behavioral therapy because they cannot see a patient “*for an hour each week*”, that “*sometimes people who are resistant to even counseling or addressing their issues since you're able to give them some medicine to take the edge off that they can deal with whatever underlying issues (222 Urban; No BH)*”. A few providers spoke to the importance of learning non-medication treatment options,

I don't personally feel well prepared to offer a therapeutic approaches myself. I'm trying to get better at that with some concrete training on my end to do some basic relaxation techniques and mindfulness techniques, and how to explain that to kids and teens...that's a definitely an area of weakness on my end, but something I'd like to get better at because it's hard to convince. You know, not everybody needs medicines. And, even everybody who does need a medicine -- it's sometimes hard to convince them that they could benefit from it. So, like to have other techniques (220 Rural; Yes BH).

3.7 FACILITATORS AND CHALLENGES TO TREATMENT OF ANXIETY IN PRIMARY CARE

During discussions focused on treatment of anxiety in primary care, providers shared both facilitators and challenges they face treating adolescents with anxiety. Facilitators will be presented first, followed by challenges.

3.7.1 Treatment facilitators

Factors facilitating providers ability to treat anxiety in primary care include having an embedded behavioral health provider, co-learning, and the TiPS service.

3.7.1.1 Embedded behavioral health provider

For the majority of providers, having an on-site behavioral health provider was a major asset in the treatment process for adolescents experiencing anxiety for several reasons, including ease of treatment access, bi-directional communication, and learning. In terms of ease of access to treatment one quote summarizes several provider perspectives,

Well, I think we're really lucky because we have an embedded model with therapists in our office. So, I feel like that presents a really great opportunity for families to get rapid treatment and it's convenient for them as well. So, I feel like we have a lot of access for them (221 Suburban; Yes BH).

Providers with embedded behavioral health providers often made comparisons between on-site therapists compared to off-site therapists. One common comparison had to do with access,

Yeah, I think before we had our own, we were just giving people a list of phone numbers and letting them call and see who they could make an appointment with. Many people had what they felt like was a more urgent concern, and couldn't be seen for four months or six months, and for someone with a behavioral health concern, that's a really, really long time because a lot can happen in that. So, basically, we just increase accessibility – someone who is qualified to do counseling for kids who are not very severe. And then, the kids that were more severe we could refer out. We still have trouble, I think, with long waits with psychiatry right now, but we do our best to get the most urgent kids in. (115 Suburban; Yes BH).

Another provider shared reasons for why access to psychiatry is challenging and how an embedded behavioral health provider can support overcoming these challenges,

...There's only a handful of them [psychiatrists] in certain locations, and sometimes they live far away, or it conflicts with their schedule. And, what's helped with that is having like therapists at our office. It's a huge help to just say look, "We have a therapist here," as you go there for counseling because obviously they can make an appointment to see me, they can make it to see the therapist and that. And then, they [embedded behavioral health provider] are also helpful in kind of navigating the whole mental health treatment. So, those things have helped with that barrier (114 Urban; Yes BH).

Bi-directional communication and ease of information shared was another major asset providers' with embedded behavioral health providers discussed,

Oh, it's so easy. She's in our office. She's in one of our- four days a week -- the other one day a week. So, I see her usually at least three days a week. And so, I'll often tell her about every kid I refer to her just to give her a heads-up, and what my worries are, what

we think needs to be addressed. And then, after she sees the kid -- she'll send me the note. And also, next time she sees me -- we'll touch base about what she thought, how things went. So, it is super helpful. I love when patients see her versus outside therapists because I don't know what's going on there (103 Urban; Yes BH).

Another provider shared,

The communication is much better when there is a therapist, or psychiatrist in the office mainly due to the fact that they're in the office. So, if they think that there's a child who is really high-level anxiety, or high-level depression they're able to communicate that to us so that we can then be a part of that relationship and help the family out if necessary (118 Urban; Yes BH).

3.7.1.2 Co-learning

Others commented on being able to get advice from their on-site therapist as an advantage,

Oh, definitely. Because, I mean, our therapist is right in the office, and I can tell her, 'Hey, these are my concerns'. And then, she'll see the kid and she might stop in my office and be like, 'Hey, I'm worried about this' or 'this kid is too complicated for me. I'm going to refer them to WPIC, or whatever'. But, there's a lot of feedback (106 Urban; Yes BH).

The concept of co-learning was brought up by providers as a technique used to become more confident in creating treatment plans and or following through with treatment options. For example, one provider described putting a treatment plan into action,

I have several patients where I did my homework, I had the dose, I was ready. I talked to my favorite child psychiatrist, I was all set. And, it's only a few cases, but the patients were not ready to start medication. They did not want to start meds (116 Urban; Yes BH).

Another shared how a fellow provider provided them information that increased their confidence in medication prescribing, *“One of the doctors that I work with gave me this algorithm on how to follow-up properly as far as SSRIs and when to keep it at that same dose versus increasing and when would be the appropriate time to continue (105 Urban; Yes BH).*

Others spoke about shifts in their own or other providers willingness to treat anxiety, *I think my shift was probably just I was seeing these kids and they couldn't get in for a while so I'd think I just talk to my friends and said, 'What should I do in the meantime?' So, I think that's what started me and then -- there was kind of a [organization] wide initiative or push to get us to do these things and that's really kind of what spurred at least two of the others. (103 Urban; Yes BH).*

Another example, showcasing the effectiveness of co-learning, is

I don't know about medication-wise. I think, again, diagnosis is easy. I have one doctor in our practice who is very afraid of putting them on medication. She herself has anxiety and that's what we said to her. This is anxiety, this is why you can't do this. Then she would refer them to one of us who was comfortable. And then, because we have two offices, now, she's getting more comfortable and she'll call me, or she'll call one of us and say, 'Look, I have a kid that needs to go on it', and okay. She just needs that confirmation (104 Suburban; No BH).

3.7.1.3 Telephonic Psychiatric Consultation Service Program (TiPS)

Similar to co-learning, many providers spoke about a resource called TiPS. Generally, providers viewed the TiPS line as helpful when working with complex cases, *“we also use I think it's called the TiPS line where we can call and speak to a psychiatrist for a complicated issue where we don't know what to do and they'll give us advice I think they actually do work pretty well*

(105 Urban; Yes BH)”. Another provider shared that they use the TiPS line to discuss “*complex cases with a psychiatrist*” citing a specific example, “*actually I have a call today that I may have to discuss a patient who has anxiety and not doing well on the current medication I prescribed* (109 Suburban; Yes BH)”.

Some providers spoke about how the TiPS line supports them with initiating treatment, “*...they can kind of talk us through that process of implementing some kind of medication...it's very nice, especially for me, who's not quite there yet on prescribing those kinds of medications. So, that's super-beneficial to me* (110 Suburban; Yes BH)”. Another provider shared that TiPS helps not only with medication decisions but also referrals and care coordination,

Let me tell you I have them on speed dial...they'll take the information and you get a call back from a child psychiatrist within 30 minutes. So, it's everything from 'Oh my God, we need to send this kid'... 'Can I start this kid meds? Which meds?' And, they have a dedicated care coordinator who'll do all the follow-up with the family, and the family agrees and gets them into services. They will arrange a one-time in-person psychiatric evaluation and a behavioral intake (116 Urban; Yes BH).

Providers also spoke to how the TiPS line has supported them in becoming more comfortable with treatment,

I think it made me a lot more comfortable. The fact that like there's a TiPS Program now which I like. So, that if I have a question, 'Hey, I'm doing this, this, and this, and I'm not really getting to where I should be. I tried changing some meds.' I can reach out and get in touch with the psychiatrist and bounce some things off of them. I feel like it's been very helpful and made me more comfortable too (222 Urban; No BH).

Other providers shared a similar sentiment regarding TiPS being a safety net when there are questions,

And, I use the TiPS line a lot. I don't know if you know what that is – where you consult with the psychiatrist...I love the TiPS line even for ADHD meds or whatever. If I'm feeling like I don't know where to go I'll just call them and they have always been unbelievably helpful...I think just that I feel more comfortable that I have a safety net because we do have the TiPS line I can always call (106 Urban; Yes BH).

Several providers spoke to how TiPS supports them in working on complicated cases, “we also use I think it's called the TiPS Line where we can call and speak to a psychiatrist for a complicated issue where we don't know what to do and they'll give us advice. (105 Urban; Yes BH)” Another provider discussed how the TiPS line supported their ability to prescribe a medication that benefited two different adolescent patients,

I mean, I think I already touched on the fact that I think that the creation of the TiPS phone number was a massive step forward and for me personally as a provider eliminating a lot of barriers. Like it's not a horrible time to call them back to not only consult them, but also to give them the feedback of I just saw, you know, two teenage girls back to back who are doing so much better because they're on their Zoloft. Their Zoloft is really helping them. You know, they've got their appointment set up. They've been on medication two months and thanks you guys. I couldn't have done it without your help (102 Suburban; Yes BH).

3.7.2 Treatment challenges

Challenges to treatment of anxiety were discussed included patient/parent level barriers, provider confidence in treatment techniques, medication side effects, limited behavioral health providers, practice level barriers, and insurance.

3.7.2.1 Parent and patient barriers

Several providers discussed patient and parent level barriers, negatively impacted their ability to treat patients. Parental acceptance of diagnosis was a major treatment barrier,

I think the other major barrier is parental. I don't want to say compliance, but, you know, some parents just don't want to admit to the diagnosis or deal with the diagnosis. So then, getting them to buy into the treatment plans, "Hey, listen, this is what we've got to do," and they'll come up with the excuse, 'I don't have transportation', or 'I don't have time', or they, themselves, have mental health so they can't follow through completely. So, that's a huge barrier for these kids (111 Rural; Yes BH).

Other providers spoke about patients not accepting treatment plans as a barrier,

...self-medication patients are smoking marihuana, drinking, or doing other things that aren't healthy to treat their anxiety and they're okay with that. And, don't want to accept other treatments and that's a barrier that I don't feel well-equipped to convince them otherwise (220 Rural; Yes BH).

Other providers shared that getting adolescents to go to therapy or to continue going to therapy was a challenge. For instance,

Sometimes you'll have resistance. People don't really want to go to counseling. And, try to tell parents that these would be things that make the kids anxious for the rest of their

lives. If we could get them some, you know, help them in counseling, get them some coping skills so that when those things occur – they don't just fall to pieces again (222 Urban; No BH).

Another provider shared that *“I mean, I guess it's just getting kids to continue seeing a therapist. A lot of kids don't want to (106 Urban; Yes BH)”*.

Providers also commented that patients exhibiting anxiety are often highly scheduled with activities. Highly active schedules for patients was seen as a barrier to care;

By the way, all the patients I deal with typically are in activities all year round or they swim four hours a day and they're like, "Well, yeah, this is important, but our practice is more important." So, getting them to prioritize it and potentially make sacrifices to their schedules, which are already jam-packed. Those are usually the patients that need the most help is because they are stretched so thin and have so much on their plate that they're really struggling with it (109 Suburban; Yes BH).

Getting the adolescent to come to follow-up visits was also a barrier to treatment. This sentiment was shared by five rural providers, as well as providers from urban and suburban locals. For example, one provider shared,

Well, I think big challenges are, as far as compliance, you know, when you can get to see the kid back. It's kind of hard because sometimes parents think, “Well, you're going to see a medical doctor or medical provider,” for something that's behavioral health and a lot of times they'll make the follow-up appointment but then they don't come in. So, I think compliance is a major issue (112 Rural; No BH).

Providers with embedded behavioral health providers believe no-show rates were higher when adolescents sought care outside of the primary care office,

Some families don't want to come an hour to our office every week to see someone. But if they have a community mental health center that's closer to where they live -- they may prefer to just for gas money and time may prefer to do that. So, I think our office has better- we've informally done studies showing that follow-through was much better when we're referring people to a staff in our office than to people in like community (220 Rural; Yes BH).

Rural providers uniquely cited transportation issues are reasons for non-compliance.

3.7.2.2 Provider barriers

Providers discussed confidence treating anxiety as a barrier; a sentiment that was not shared by providers without an embedded behavioral health provider. Lack of confidence was often related to a lack of education,

Well, I think it's mostly not knowing the medications, and not having used them, not know the major side effects of these medications. So, more PCP education would need to be done before I think a lot of us would feel comfortable doing prescriptions of anti-anxiety medications (118 Urban; Yes BH).

One representative quote explains different aspects of treatment that the provider speaking, and other providers interviewed felt untrained in,

And then, a lot of us – myself included – I don't have specific training on the treatment of anxiety. So, eight years out of residency – and when I was in residency, we really didn't do this. And so, I haven't had any training on what is the best SSRI to pick or how do you titrate them, or how do you wean them, or what to counsel families on and just not that much experience with that. And then, certainly the more if SSRIs aren't working, the more exotic medicines, we're dealing with the kids with comorbidity or with anxiety,

maybe ADHD – what’s the best way to navigate that? I don’t, and many of my colleagues just don’t have the specific training. So, we’re treating anxiety, it’s usually with an SSRI, and we’re shooting from the hip. We’re kind of doing our best because we’re willing, but as far as being the most knowledgeable, best person to treat a teen with anxiety, I think we’re far from that (117 Suburban; Yes BH)

Lack of confidence was also related to not having experience in treating anxiety. For instance, one provider stated one reason other providers might have low comfort in medication prescription is due to *“perhaps, just lack of exposure, lack of comfort with prescribing those medications (222 Urban; No BH).”* Other providers spoke about lack of confidence and lack of education simultaneously, with one provider sharing [about other providers], *“I think probably never having the experience of prescribing or really the education or kind of given the roadmap (107 Rural; No BH)”*. Even with continuing education, one provider who has yet to prescribe an SSRI shared,

I will say, it feels like a big leap...it still feels rather complex to me. The ADHD was easy, it’s Ritalin. It gives them all these versions of Ritalin. And, this is four different meds, and keep in mind the different side effects and you have to go off slowly and come down slowly. I think they’re talking about the black box...I think once I start doing it, I’ll feel more comfortable, but it’s hard because it’s a brand-new aspect of care (116 Urban; Yes BH).

A few providers spoke about concerns related to medication safety. For example, a couple of providers mentioned worry about the addictive nature of benzodiazepines, *“I guess where I get a little bit shaky is people want benzodiazepine for anxious, and I think that I get a little bit nervous about writing scripts for those things for like, you know, abuse potential of that*

(114 Urban; Yes BH)". Other providers commented on why other providers in their office might be uneasy prescribing certain medications due to outcome responsibility,

...they just feel like they're somewhat responsible if something does happen to go wrong especially because of the black box. I think that's what most providers are afraid of when starting on medications. So, if they do happen to, unfortunately, commit suicide or try to hang themselves. But, they find out that responsibility also falls upon them because they were that person's primary care provider (105 Urban; Yes BH).

Another provider shared that while they did not have a high level of comfort prescribing medications to treat anxiety, they felt it was important to be able to do it, citing "so, you know, I feel like I'm probably only going to get better at this by practice, but my fear is that I'm going to damage somebody in the process. You know what I mean? (101 Suburban; Yes BH)."

3.7.2.3 Limited behavioral health providers

Several providers spoke about limited amount of behavioral health providers accessible to their adolescent patients. For instance, waiting times to see a behavioral health provider (off-site) were seen as a barrier to care, "Many people had what they felt like was a more urgent concern, and couldn't be seen for four months or six months, and for someone with a behavioral health concern, that's a really, really long time because a lot can happen in that (115 Suburban; Yes BH)".

Other providers spoke about limited age-appropriate behavioral health providers in their area. For example, one provider stated, "we don't have- I mean, I've had some parents with concerns that are not very teen or pediatric-focused. So, parents have not wanted to take their kids to the locations where they said they treat addicts (107 Rural; No BH)". Another provider shared a similar concern,

I think the biggest barrier or challenge we have is finding people comfortable dealing teenagers. You know, there's no doubt in my mind that there's a paucity of qualified mental health professionals, that I'm aware of. I'm sure they're out there, but I just don't know where they are. I don't know how to get into contact with them. Nobody wants to go down there. That place is full with schizophrenic adults and depressed adults and it's not an environment conducive to a teenager who's already anxious (111 Rural; Yes BH).

Another provider shared both wait time and communication were barriers, “*getting people in with therapists in a timely manner, communication between therapists if it's not within our practice, and, you know, that would be, I would say, those would be the biggest barriers (119 Urban; Yes BH).*” Communication with outside therapists was seen as a major barrier to treatment,

The Psychological Association in Pennsylvania. We met for over a year trying to figure out how to improve at least a psychologist's interaction with primary care, pediatricians and we didn't get very far. I don't know what the barrier is, but there are definitely barriers on communication [between provider types]. You know, there's, just like with everything, there's some people that are very good at it, but I'm saying a majority aren't very good at sharing. And, I don't know if it's because of the patients won't sign for the psychologists to share or the licensed social worker, I don't know. But I would say that it's definitely the minority of patients where we get- share information from the CBT sessions or whatever (113 Rural; Yes BH).

Another provider shared their experiences with calling outside therapist to shed light on why they felt communication was lacking,

I will get a letter when one of my kids or families have been seen at an outside provider. I don't think I've ever gotten a call, but I have called a few when there has been a concern or something I was worried about. And, the ones I've called and talked to seemed very surprised that their primary care was even calling. They said that. I don't think that happens very often, so. (221 Suburban; Yes BH)

3.7.2.4 Organizational- and policy-level barriers

Only three providers discussed practice-level policies (outside of visit time) as barriers to treatment. One provider stated that,

Part of my preferring it not to be our practice covers [a specific medical unit] and backs up [another specific medical unit] ...And, so there are days when we're called in and out of the office several times to run over to [larger site] to deal with things. So, if I've got someone with a more complex problem like that on my schedule -- it's not easy for my colleagues to step in and take over where if they're there for strep throat. You know, that's a pretty easy thing for someone else to work into their schedule (220 Rural; Yes BH).

Another provider shared that

We need embedded mental health in a lot of pediatric practices. You have it at [organization]. Unfortunately, I don't, so I have to refer my families down to [location] and, quite honestly, they don't want to go. I'm at a real disadvantage because I don't have somebody yet (111 Rural; Yes BH).

Lastly, one provider spoke adamantly about the limitations of the primary care office hours,

We're not helping them. We're causing them more anxiety because they have to make excuses on why they're leaving again. "Why do you have to go to the doctor every week? What's wrong with you?" I think that's absurd that we do not offer evenings in the behavioral health model as a PCP. Now, there are a lot of community therapists who do, and I think that is the trend of behavioral health. You have to be accessible to make their life as normal as possible. And, I feel like that's a big, big issue...and we're doing a poor job as PCPs at it, and we're supposed to be leaders of it (104 Suburban; No BH).

Time and insurance were two barriers to treatment that a few providers discussed. For instance, time was seen often as a barrier to education, for example, *"Time, not having enough education about the medications (118 Urban; Yes BH)."* Several providers cited insurance and cost challenges for families whose child needs treatment. Providers spoke about insurance challenges in terms of therapy coverage, *"there's insurances don't cover a lot of therapy, or a lot of therapists, and finding a child therapist, for instances, is very difficult. (118 Urban; Yes BH)"* and costs associated with follow-up care, *"the follow-ups are pretty expensive. We do follow these patients pretty closely just because of their risks associated with having any mental disorder (111 Rural; Yes BH)".*

3.7.2.5 Telephonic Psychiatric Consultation Service Program (TiPS)

Several challenges to using TiPS were discussed by providers. Overwhelmingly, providers viewed the TiPS program as extremely beneficial for identification and treatment processes. Four providers expressed challenges faced using TiPS. Related to time limitations, one provider described why they have not yet utilized the TiPS line, while acknowledging how it might be a useful resource, *"it's just that we are so busy in our day to day activities that it's very hard to*

have that as part of our practice care (118 Urban; Yes BH)". Another provider commented on the hours of operation for the TiPS line,

They're trying to increase their accessibility to us through a program called TiPS. I don't know if you will put that on there or not, but it just works okay. They're available until 4:00 or 4:30, so sometimes we call and it's too late in the day (115 Suburban; Yes BH).

This same provider also discussed a process barrier to support from TiPS,

And sometimes, we have trouble getting our patients in to see their psychiatrist because they'd also like them to also see one of their therapists... And so, sometimes we use this phone number to ask for help and then can't really get it because our patients aren't seeing the right therapist. So, I think there's still some roadblocks (115 Suburban; Yes BH).

Lastly, one provider stated that limited ability to support patients with varying insurances was a barrier to using the TiPS line,

The barrier there is they only see limited insurances, you know, which is sort of frustrating and I hate to say that is a cop-out -- but that always gets in the way. When you have a nice resource, a nice service and, oh, you can't use them for this person. It's kind of the price you pay for doing medicine. But, that's a huge one (111 Rural; Yes BH).

3.8 ANXIETY SPECIFIC EDUCATION AND TRAINING

Providers discussed types of mental health training they received throughout their formal training years (i.e., residency and fellowships). Only a few providers recalled having specific training on pediatric anxiety. For example,

...I think anxiety was part of it because as you can see a lot of that manifests as physical symptoms – so, headaches, or bellyaches, etc. My psychiatric rotation, because we only did inpatient, it was more major depressive disorder like these kiddos were, you know, suicidal...had other more significant bipolar too or things like that (108 Rural; No BH).

For the majority of providers, formal training for pediatric anxiety in residency and through fellowships was limited to non-existent. For instance, one provider shared that while they had some specific training, there should be more of an emphasis on anxiety due to prevalence,

Very little. This is something and it's sad because it's something that was not focused on. I guess, it was maybe a class or two. I'm a nurse practitioner, so my pediatric rotation was very short and brief. So, I had it for a semester along with general pediatrics and I had a semester of a rotation in pediatrics. So, maybe one or two classes was focused on depression and anxiety, but besides that -- I'd say my education as far as formal education on it is very little as far as schooling goes. That's another aspect. I think needs to change as well. I don't think there's a lot of focus on this but it's much more common, I feel like than it has been before. So, I think more focus needs to be placed on it (110 Suburban; Yes BH).

Other providers mentioned training they received for anxiety was not specific medical management, “*...I mean, I'm sure we had some education on ADHD and kind of the medical management with that. But, really not a lot of training necessarily with medical management anxiety for sure. Identifying the symptoms of anxiety maybe (119 Urban; Yes BH)*”.

Providers who did not receive formal education on adolescent anxiety stated,

(1) *I know with NP, pediatrics in general was- I don't think that we hit on adolescent mental health at all. I mean, aside from ADHD and oppositional defiance, that kind of thing...and then, mental health classes were all adult-based mental health (112 Rural; No BH); and,*

(2) *Well, I'm old so I can tell you no. That was in the 80s, I can tell you there was- I don't remember having- I think behavioral health, I think we got maybe a two to three-month block but 90% was ADHD and that's pretty much all we got (113 Rural; Yes BH).*

In terms of education after residency and fellowships, only two providers stated that they had not received any anxiety specific continuing education. Several providers expressed that they have received anxiety specific training after residency and fellowship. For example, one provider shared, *"I would say a decent amount through some workshops either namely through [organizations], some ADHD workshops, and then specifically managing depression, and anxiety, and diagnosis and management (119 Urban; Yes BH)"*.

Another provider notes multiple avenues of continuing education they received, similar to what other providers mentioned,

I mean, through [organization], we've had a two-hour lecture back in the fall on like SSRI roadmap, the doctor's luncheons. And then, I've gone to the TiPS conference and called them quite a few times. And, they give us a specific roadmap started this dose and then a week or two later increase. So, that has been super helpful for me. And, I don't think everyone in my office or other primary care providers have had that experience. (107 Rural; No BH)

A few providers spoke about education and support received from their on-site behavioral health provider. For example, one provider stated, *"I'm lucky that I have a child psychiatrist in*

my office. So, if I am uncomfortable with a situation where I have to guide medication therapy -- sometimes I will discuss it with them. (118 Urban; Yes BH)” Another provider spoke to the support benefits of having embedded mental health in primary care,

I mean there's a role out of having psychiatry and therapists within the practice. There's been a lot of education. And, just within the last year, you know, there was a big medical meeting which really the focus of that was -- "Look how far we've come.." And, I think that's kind of where I've felt, you know, a little bit more power because a lot of that discussion in that meeting was about taking over. Or, knowing that you have psychiatry back up within the office -- but taking a more active role in diagnosis...and prescribing, and managing medically (119 Urban; Yes BH).

Lastly, one provider mentioned how their practice is trying to leverage their embedded behavioral health specialist to provide on-going education for staff,

We also, in our own office, are trying to get [Provider], our counselor to give us her own- just hearing little talks, education talks to the staff and us about what her role from a counseling standpoint on these specific mental health issues. So, it's kind of an ongoing focus we're trying to augment. But, that's kind of where we're at now with that (109 Suburban; Yes BH).

Almost half of the providers discussed what types of education they would like to have in the future specific to adolescent anxiety. Only one provider stated the opposite,

I think we're flooded with it now, to be honest with you. I mean, it's a hot topic and over the last ten years, there have been ample opportunities to be trained on how to manage this, at least, in... So, I think- I don't think we need any more (113 Rural; Yes BH).

For providers who discussed wanting more education, topics focused on screening, therapeutic treatment techniques and medication management. Providers focused on non-medication related topics wanted to learn more about “... *like the initial counseling piece. We certainly don't have the time to be doing all that the therapist can do, but maybe if there were other pieces from a non-medication standpoint, that would be helpful. (221 Suburban; Yes BH)*”. Other providers spoke about “*talking about ways to identify it, talking about the SCARED or other potential screens (103 Urban; Yes BH)*”. In a representative quote, one provider spoke to how certain educational topics could support overcoming identification barriers,

I think certainly, as I alluded to time and reimbursement are our biggest barriers -- so, I think if someone can make me more efficient at how to diagnose, explain, and sell the idea probably most importantly sell the idea that someone is anxious to a family and then efficiently have the ability to explain treatments -- I would appreciate that and certainly these complimentary treatments like mindfulness, and relaxation techniques, and other things. (220 Rural; Yes BH)

For provider who discussed wanting to learn more about medication management, topics focused mostly on the basics, as one provider stated, “*Me, specifically, it would be on treatment. It would be on the basics of which medicine is the best for which kind of kid, and which side effects, monitoring parameters and weaning parameters (117 Suburban; Yes BH)*”. Another provider shared more details on what educational basics are needed,

I think the most important – most of us I believe can identify anxiety that is concerning enough to require therapy...But also more about the medications that are out there. When we would specifically use them, how we would increase their dosage, how we would wean them off. What labs might be needed prior to giving that certain medication

and would there be labs that needed to be done during medication? Things of that nature I think would help us be more apt to prescribe medication if necessary. (118 Urban; Yes BH)

Providers also discussed how they would like to receive education. Modalities included modules, case studies, online PowerPoints, recordings, and lunch and learns. One provider stated that it might be helpful to have a lunch and learn focused on cases,

...treatment, medicine-wise what would be not so much like an algorithm but kind of like if you try this and this doesn't work then move on to this if this doesn't work. Or, different medications to affect different symptoms. So, if a child is having anxiety and nightmares, what can we use for that versus a child that's having anxiety and doesn't want to eat or-for example. (112 Rural; No BH)

In contrast to short training options, one provider stated, “*So, education as far as medication goes, but I don't think short tiny lectures. I think it would be a longer process to get really good at what you are doing. (115 Suburban; Yes BH)*”. Another provider shared that while they went to half day sessions on anxiety and or depression put on by the American Academy of Pediatrics, the content was not specific to primary care, and therefore the provider found them “*a little less useful (220 Rural; Yes BH)*”.

Overall, a majority of providers could not recall in-depth formal training on the identification and treatment of pediatric anxiety. Many providers discussed reviewing continuing education in the form of lectures, lunch and learns, and conferences that has specific educational sections regarding pediatric anxiety. Several providers shared what information they would like to learn more about with regards to screening, therapeutic treatment techniques and medication management.

4.0 DISCUSSION

Understanding how different factors influence primary care provider's capacity to both identify and treat adolescent anxiety is vital to understanding how future research and policy efforts can support improved identification and management of adolescent anxiety and support appropriate treatment guidelines. Specific to adolescent anxiety, this chapter discusses perceived capacity and responsibility primary care providers have regarding both identification (starting with ability to recognize signs and symptoms) and treatment. Barriers and facilitators to provider capacity are presented, along with recommendations based on available data. Moreover, perspectives and knowledge of three experts (a public health professional; a behavioral health provider; and an organizational expert) are presented throughout this chapter to aid in the interpretation of results and/or to provide a larger frame of context to the problem.

4.1 IDENTIFICATION OF ANXIETY

4.1.1 Signs and symptoms

A major factor in identifying anxiety is understanding common signs and symptoms of adolescent anxiety. Primary care providers overwhelmingly endorsed familiarity with signs and symptoms of anxiety that align with literature. Approximately three fourths of providers

discussed somatic physical health complaints²⁴ and all providers noted specific mental health complaints^{24,26} as flags that may indicate anxiety. It is an encouraging finding that a majority of providers discussed somatic symptoms as such symptoms are often a key reason anxiety is underdiagnosed.^{64,90} It is also important for primary care providers to understand physical manifestations of anxiety disorders as somatic symptoms are often the chief complaint sending a youth to the primary care office,^{5,9} and driving needless medical testing.^{5,38,41}

Providers also discussed adolescent social and scholastic habits/impairments as anxiety warning signs. Half of providers stated poor scholastic achievement or decreased participation in extracurricular activities as signs of anxiety. Such impairments are clearly presented in anxiety literature including decreased scholastic performance,^{1,5} increased missed days at school,^{5,9} and negative impairments with familial and peer relationships.^{1,28,29}

Interestingly, half of providers also described high-functioning adolescents (those highly engaged in studies or extracurriculars) as being at risk for anxiety. Often, providers linked aspects of daily living, including social and scholastic functioning, to physical health symptoms (example: headaches to bullying/issues in school) or to mental health symptoms (example: worry to high personal/familial expectations for performance excellence). Since a hallmark characterization of anxiety includes fears^{24,25} (e.g., daily life routines²⁵; social situations^{24,25}), and worry/negative thoughts,^{24,26} they may be identifying a connection between high-functioning youth, high-expectations, and increased worry.

4.1.2 Sources of identification information

Providers noted several sources of information they rely on to learn about key signs and symptoms of anxiety, namely patient-provider conversations, parental report, in-visit cues (e.g.,

affect, nervousness, being withdrawn or engaged, interactions with parents, and body language), and a couple of providers mentioned using results of systematic screeners validated for depression identification. It is encouraging providers utilize multiple sources to identify anxiety concerns within the time constraints of a visit, however sole reliance on patient/parent report of anxiety as the chief complaint is cautioned as adolescent/parent may not know which feelings to share with providers, and less than half of parents will discuss mental health conditions with primary care providers.⁶⁶ Furthermore, the behavioral health expert shared that youth with anxiety are different from those with ADHD or depression in that their symptoms are often “silent” and cannot always be seen on the outside; especially in time-constrained visit.

4.1.3 Systematic screening

Providers were all familiar with systematic screening for behavioral health conditions as all practices in this sample have patients’ complete substance use and depression screens prior to all well-child visits. None of the providers interviewed had used anxiety screens in a systematic way, with seven providers disclosing never using an anxiety screener. For the seven providers with no experience utilizing an anxiety screening tool, multiple reasons were cited including not knowing such screens exist, length of time it takes to complete and score, and/or a focus on acquiring knowledge through other sources of information.

Providers who had used an anxiety screen (i.e., SCARED tool) reported using the tool only after they had an indication anxiety may be a concern. Providers used SCARED results mainly to support conversations with parents/patients in condition denial and/or to specify type/severity of anxiety. Utilizing screening results to discuss behavioral health conditions with patients/families may be even further supported if the screening is universal, as a non-anxiety

specific study by Hacker et al found providers felt the universality of screening tools supported the normalization of behavioral health discussions.¹¹³

As the SCARED is more diagnostic in nature (assessing type/severity as opposed to general presence of an impairing condition) it seems appropriate providers use the tool to specify type/severity of anxiety instead of utilizing it as a mechanism to initially identify anxiety as a concern. However, the diagnostic nature of the SCARED may be one reason providers are wary of using it in the first place. The public health professional expert shared PCPs are likely to be less comfortable with diagnostic screens compared to more general identification screens.

Specifically, the organizational expert corroborated the sentiment of moving away from diagnostic tools in primary care for anxiety. This expert discussed how TiPs is focusing PCP education away from identifying types of anxiety to identifying when anxiety (of any kind) is causing impairments requiring intervention. If this is the case, a non-diagnostic screen would be more useful for primary care providers when trying to identify adolescent anxiety.

Half of the sample believed a routine anxiety screen would be helpful, with some providers discussing (1) the importance of a routine anxiety screen because the routine depression screen does not adequately pick up on anxiety, and/or (2) anxiety is just as prevalent as depression and therefore should be screened for in a similar manner. To the second point made by providers, according to the literature, anxiety is more prevalent compared to depression.⁴ The addition of a short, routine anxiety screen was seen to be beneficial, as it would support PCPs in recognizing symptoms. Providers who were not in favor of a routine anxiety screen preferred to use anxiety screens with patients who indicated need. Again, it appears providers are focusing on existing anxiety screens as diagnostic tools rather than tools (or future tools) that can be used to identify anxiety in the first place.

Confusion over the purpose of a routine anxiety screen was evident. Two experts interviewed on this topic had slightly differing opinions regarding routine screens for anxiety. From the public health professional perspective, a generic, non-diagnostic behavioral health screen may best support mental health identification in primary care, as there could be a multiplicity of behavioral health concerns for any patient, including anxiety. This idea could support decreasing the number of behavioral health routine screens patients have to fill out and providers have to score. From a behavioral health provider perspective, primary care providers are likely to adjust to a one-page easy to score routine screen for anxiety prior to well-child visits.

While there is no evidence in the literature about how systematic screening for anxiety may increase good clinical outcomes, the American Academy of Pediatrics Task Force on Mental health did find using validated mental health screeners for depression and other non-anxiety conditions was useful.³⁴ Even though providers know symptoms of anxiety and use multiple sources of information to support the identification process, anxiety (and depression) are underdiagnosed 20 to 30% percent of the time.²⁸ It may be likely a short, systematic general anxiety screener would support increased identification of anxiety and reduce provider reliance on connecting known or unknown patient risk factors¹¹² to anxiety.

4.1.4 Role perceptions

A primary goal of this study was to understand provider perceptions regarding their role and responsibility for identifying anxiety in primary care. Overwhelming, providers perceived they did have a role in identification of anxiety, along with other mental health conditions. This finding supports data from the 59th Periodic Survey conducted by the American Academy of

Pediatrics, showing 80 to 90% of providers felt they had a responsibility to identify anxiety, depression, substance abuse, behavioral issues, and 90% felt responsible for identifying ADHD and eating disorders.⁶² Main reasons providers gave as to why it is part of their professional role to identify anxiety included high prevalence rates, symptom severity, being the first point of contact with the medical system for patients, and being a trustworthy provider. The organizational expert also perceived identification of anxiety as part of a primary care providers role as this condition has a physical health component to it.

Several providers shared that some PCPs viewed their role in mental health identification as being the first line provider who can identify a mental health concern in order to refer the patient out to a behavioral health provider who can provide an exact diagnosis. Interest levels, limited training, and visit time constraints were three reasons several providers shared as to why other providers may not be as comfortable identifying anxiety or may not address it as regularly as they themselves do.

Several providers commented that referring adolescent patients to outside behavioral health specialists may not be the best route of care as adolescents may be uncomfortable with a new setting and or will get lost in the system. Almost half of the sample, including four of the five providers without embedded behavioral health providers, expressed the idea that adolescents were more likely to be comfortable continuing care for their condition in primary care and/or would actually receive the care necessary compared to if the patient was referred to an outside specialist. The notion of follow-up after identification was presented as a barrier to treatment by providers and the public health professional expert. This expert expressed similar concerns; referrals to outside community behavioral health providers may limit the PCPs ability to know if the appointment was conducted and/or receive information about ongoing treatment plans

through bi-directional communication. The literature highlights low communication between primary care and mental health providers,¹⁸² although promising models to facilitate increased communication are being designed and implemented.¹⁸³

4.1.5 Identification facilitators

Providers discussed several facilitators to identifying adolescent anxiety in primary care. At the individual-level, providers discussed how disclosure of anxiety symptoms (or explicit disclosure of anxiety) from either patients or parents was helpful. A few providers also discussed the concept of co-learning; the idea that learning from peers with subspecialty expertise increases their own level of identification comfort. This interpersonal learning factor could be fostered as part of a practices' "culture"; for both practices with embedded behavioral health providers and those without.

At an organizational-level, providers shared three major identification facilitators. The presence of an embedded behavioral health provider was seen as a facilitator as PCPs reported increased ease of patient referral and ease of bi-directional communication compared to working with outside behavioral health providers. Several providers also spoke about the culture within their practice as being a model valuing mental health staff and how that translated into increased value of mental health concerns for the patient population. Providers also offered having embedded behavioral health providers as proof their organization values mental health care in primary care settings. Lastly, a few providers specifically discussed how different continuing education trainings (formal and non-formal) have allowed them to feel more equipped to recognize anxiety and utilize the SCARED screen.

Several providers commented on one policy-level factor, the TiPs program, as supporting their capacity to identify anxiety as well as other behavioral health concerns. The TiPs program supports any primary care provider in the state of Pennsylvania caring/providing services for patients with medical assistance. Providers shared TiPs supports the identification of anxiety by providing them with case-based recommendations for additional screening questions to ask as well as recommendations for next steps.

4.1.6 Identification barriers

Regarding barriers to identification, providers discussed organizational-level and individual-level barriers. At the organizational level, providers noted how time constraints within a visit was a barrier to identification as it impacted their ability to identify anxiety and also limited their ability to give anxiety the time it “deserves” due to competing health priorities.

Providers discussed challenges with both patients and parents at times not being open and honest about behavioral health concerns/symptoms. Specific to anxiety, providers shared patients/parents sometimes have difficulty accepting anxiety and/or anxiety symptoms as a mental health condition. Even though primary care offices are perceived as being less stigmatizing compared to traditional mental health settings for receiving treatment,^{2,56,75,76} this data supports that on an individual-level, there is still stigma associated with having anxiety resulting in the form of patient/parent denial or non-acceptance (the adolescents feeling are typical).

Parents/patients may perceive the adolescent’s symptoms as “typical” because, as our organizational expert shared, the adolescent may have some resiliency factor allowing them to function at a heightened level, while still suffering from anxiety. Increased training on how to

support communication between PCPs and patients/parents when introducing an anxiety diagnosis, or attributing somatic symptoms to anxiety is recommended. As mentioned previously, the presence of a universal anxiety screen may support both PCPs in identifying anxiety as a concern, and also support de-stigmatization of the condition when first bringing it up to the family/patient.

Providers also discussed that a major barrier to the identification process was what happens after the adolescent is identified as having anxiety. Providers shared challenges to treating anxiety may negatively impact a PCPs comfort level of identifying anxiety. The idea of not knowing what to do after identification and or feelings of being uncomfortable with treatment options was also discussed by the behavioral health expert who shared primary care providers may not want to “open up a can of worms” during a twenty-minute visit if they are unclear on how to handle the next step. This expert believed this may be especially true for providers without an embedded mental health provider as they are not able to do a warm hand off at the moment anxiety is identified.

Neither lack of clinical guidelines nor lack of efficient screening tools were mentioned explicitly as barriers to identification. The inclusion of clinical guidelines for identification of adolescent anxiety and the treatment of anxiety may support the use of validated screening tools as well as support providers in knowing what to recommend as next steps after anxiety is identified. Recommendations regarding clinical guidelines are discussed in the conclusion chapter as guidelines are needed for both identification and treatment of anxiety.

Discussion around capacity for identification was relatively concise likely because providers overwhelming reported similar feelings of role responsibility with limited concerns regarding their capacity. Secondly, providers often focused on barriers to treatment after

identification of anxiety had occurred. Challenges thinking about next steps in the process were corroborated by the public health professional sharing, if a provider screens and finds something, they have to do something about it. Factors related to provider capacity to treat adolescent anxiety are presented below.

4.2 TREATMENT OF ANXIETY

4.2.1 Role perceptions

While providers were inclined to view anxiety identification (and identification of other mental health conditions) as part of their professional role, feelings of role responsibility and comfort levels for the treatment of anxiety varied greatly. Providers overwhelmingly perceived talk therapy (i.e., cognitive behavioral therapy) as outside their purview as mental health providers have specific training to properly utilize such treatment techniques and have dedicated time in appointments to do so. This sentiment was not surprising as cognitive behavioral therapy is not commonly used in primary care settings.¹¹⁷ However, basic counseling, such as advice or small coping techniques were discussed by a few providers as something they felt they were able to provide to their adolescent patients.

The majority of providers disclosed having prescribed medications for anxiety treatment in the past, namely SSRIs. Several providers also discussed not prescribing benzodiazepines due to negative associated risk factors and/or being less familiar with that medication class. Prescription uptake of SSRIs is an important exploratory finding as past studies often combine both anxiety and depression into the same category when reporting treatment types used. For

example, a study by Ford et al., found that 50% of a sample of urban pediatricians treated depression and anxiety with SSRIs.⁷⁵ Separating treatment decisions and comfort prescribing SSRIs between depression and anxiety is recommended for future studies as FDA regulations and side effect warnings may play different roles in PCP prescription decision making.

As providers discussed medication treatment for anxiety, differences in role perceptions were highlighted. Several providers viewed their role in medication treatment as purely “initiative”. For example, some providers felt a responsibility to start medication treatment while patients wait to get an appointment with a behavioral health provider. This viewpoint may be critical for decreasing treatment delays as certain areas in Pennsylvania face limited availability of age-appropriate mental health providers,¹²⁶ long wait times for mental health appointments,^{71,85,56,75} and/or may not have an embedded behavioral health provider onsite.

A couple of providers preferred patients to first seek talk therapy (via PCP referral to a behavioral health provider), and if medication treatment was indicated by the other provider, that consultation would likely fall into the PCP purview. On the other hand, more than half of providers viewed their role as both starting and managing medication treatment. For providers with this viewpoint, many discussed if the adolescent was not responding to medication treatments or was a complex case, they would refer the adolescent to a behavioral health specialist for long-term management. The organizational expert shared that while there is not a national expectation that primary care providers manage anxiety treatments, focusing on increased education around medication prescription was a beneficial endeavor; one that is already occurring for many provider groups represented in this sample.

Lastly, providers spoke about other providers whom might not be as comfortable with treating anxiety as they, themselves are. While insights about other providers are subjective, they

shed light on a population of providers who are likely different from those who agreed to participate in this study. Providers placed great emphasis on how low levels of confidence with medication treatment and or limited experience with anxiety play a major role in low comfort levels with treating adolescent anxiety. One provider shared a sentiment that medicine is not taught “perfectly evenly”, and that they believe if a provider does not have a lot of experience or interest in certain areas of medicine, they should not be obligated to treat that condition, be it physical health or mental health related.

4.2.2 Treatment facilitators

Providers noted several factors supporting their capacity to treat anxiety in primary care settings. At an individual/interpersonal-level, providers discussed co-learning as a technique to increase their confidence creating and implementing treatment plans. At the organizational-level, providers viewed having an embedded behavioral health provider within their practice as a tremendous asset in terms of access to therapy, bi-directional communication, and even co-learning. From a policy-level, providers overwhelmingly discussed the benefits of TiPs in supporting them with medication initiation and management, as well as providing them with a “safety net” when they have case specific questions that surpass their training or comfort level. All facilitators for treatment were mentioned by providers as facilitators for identification; having similar capacity building factors may be important as centralized processes and resources may decrease provider burden when looking for support.

4.2.3 Treatment barriers

Multiple barriers to treatment were presented by providers. At the individual-level, two main barriers were discussed. First, parental/patient acceptance of treatment, willingness to attend therapy, and ability to attend treatment appointments were presented as barriers. Willingness to accept treatment was tied to acceptance of an anxiety diagnosis. As discussed previously, supporting providers in introducing an anxiety diagnosis is critical to increasing their capacity to treat the condition. Secondly, transportation to and from appointments (primary care or behavioral health care) was cited a barrier to treatment compliance by rural providers. This barrier is present in the literature for healthcare in general in rural locales.¹³²

Three factors at the organizational-level were discussed and are limiting factors associated with treatment capacity. Providers discussed how not having an embedded behavioral health provider is or would be a barrier to providing treatment. For example, providers shared that no-show rates for appointments with community behavioral health providers may be higher compared to appointments with embedded behavioral health providers. Secondly, time was viewed as a barrier as providers spoke about how the length of the office visit was inadequate to properly educate patients/parents about treatment medications. A small number of providers also discussed limitations with their practice's office hours, sharing that typical primary care office hours do not align with adolescent patient schedules. A couple of providers mentioned cost challenges families may face when it comes to treatment; specifically, in terms of coverage for therapy, or being able to come back for another visit.

While only one provider discussed reimbursement for time spent on mental health as a barrier to care, other providers did mention limited time in well visits for discussions of mental health as a barrier. Moreover, this one provider discussed how they could add a "modifier" to a

well visit if a mental health condition was uncovered, but that code incurs the family an extra charge, and therefore they do not add that code onto visit. As health care systems transition to value-based models (instead of fee-for-service models) efforts are being made to reduce traditional reimbursement barriers for “behavioral health specialist consultation, care coordination, or physical and mental health services provided on the same day.”¹⁸⁴ Other efforts are also trying to better accommodate integration of behavioral health into primary care including the Mental Health Parity and Addiction Equity Act, Medicaid expansion, and the implementation of patient-centered medical homes.¹⁸⁴ Further, multiple recommendations have been put forth in a joint paper by The American Academy of Pediatrics (AAP) and the American Academy of Child and Adolescent Psychiatry (AACAP) that would breakdown billing barriers for primary care physicians.³⁵

From a policy-level, providers discussed two major barriers to treatment. The first being lack of accessible and age-appropriate mental health providers in their area. This barrier was shared by the behavioral health expert as well, specially focusing on how this barrier is a major concern for rural primary care providers, especially those without embedded behavioral health providers. Shortages of behavioral health providers in Pennsylvania have been reported by both the Health Resources and Services Administration and the American Academy of Child and Adolescent Psychiatry.^{79,86} Moreover, even when connected to an outside mental health provider, providers discussed communication regarding on-going treatment as limited to non-existent. Residency programs and organizational policy makers should focus on ways to increase the number of mental health professionals in this region and focus on multiple-pronged approaches to support the incorporation of embedded behavioral health providers in primary care practices.

One method of connecting PCPs to behavioral health providers is the Pennsylvania Department of Human Services TiPs program.⁸⁷ The TiPs program has been overwhelmingly seen as an asset to the expansion of primary care providers capacity to treat adolescent anxiety. Only four providers discussed specific challenges associated with TiPs. With regards to time-based limitations, both the hours of the TiPs operation and the limited time in PCPs schedules to call TiPs were seen as barriers. One provider expressed frustration with the policy that patients had to see the TiPs therapist in order to be scheduled with a psychiatrist; creating a roadblock for patients already seeing a non-TiPs therapist. Another provider shared concerns with not being able to utilize TiPs resources for all their patients due to insurance limitations associated with TiPs. As the program can be only utilized for patients with Medical Assistance (Medicaid; PA HealthChoices),⁸⁷ expansion of insurance coverage would support the capacity of PCPs in treating anxiety for their entire patient population.

A few providers commented on the safety implications of medications used to treat anxiety as a barrier. One provider shared that PCPs who are uncomfortable with medication treatment may be concerned with being responsible if an adolescent harmed themselves (e.g., suicide) and this specifically was referring to concerns over the FDA black box warning for SSRIs. The fragility of prescribing processes was further highlighted by the public health professional who shared that it only takes one patient with a negative reaction to an SSRI to make a provider feel uncomfortable with prescribing. Concerns over patient safety in relation to medication prescription for anxiety may be negatively impacting providers' capacity to deliver medication treatment in primary care. Interestingly, a study found that over an 14-month (approximately) period post the 2004 black box warning, that patterns for new prescriptions for antidepressants (including SSRIs) for youth did not change for primary care providers.¹⁸⁵

Obtaining FDA approval for medications that can be used to treat anxiety (not including OCD) is recommended, as appropriate guidance may support increased prescribing confidence. Based on the provider interviews and discussions with both the public health professional expert and organizational expert, it can be surmised that providers may feel more comfortable prescribing SSRIs for anxiety if they have proper training in residency, treatment guidelines to follow, and feel comfortable and empowered to manage the condition. Moreover, guidelines for treatment may be further necessary to provide a certain level of expectation regarding symptoms improvement as medication treatment efficacy increases over time, with data showing increased response rates at 36 weeks (82%) compared to response rates at 12 weeks (55%).¹⁸⁶

4.3 PROVIDER EDUCATION

Training and knowledge were two factors affecting primary care providers' capacity to identify and treat anxiety. For the majority of providers interviewed, anxiety specific training/education was limited during formal residencies and fellowships. During their practice years all but two providers said they had received anxiety specific training through various forms of continuing education. Providers with embedded behavioral health providers also commented on how these embedded providers supported their growing level of knowledge as they are able to discuss uncomfortable treatment cases with them.

While the majority of providers are in a resource rich environment, including having the presence of embedded behavioral health providers and access to the TiPs line, almost half of the providers shared interest in learning more about adolescent anxiety. Topics of interest specific to anxiety included screening, how to converse with patients/parents regarding diagnosis and

treatment, therapeutic treatment techniques and medication management. Specific to medication management, providers asked for increased education on which medications to use, when to use/switch medications, medication side effects, and monitoring parameters.

Providers also discussed the formats in which they would like the education presented including lectures, lunch and learns, and conferences. It appears that while lectures are used frequently as an educational format for continuing medical education,¹⁸⁷ it is not as effective as interactive/skill practicing educational formats when modifying provider practice.¹⁸⁸ However, results from a systematic review found that effectiveness is greater when educational formats are combined (interactive and didactic formats).¹⁸⁹ Different and frequent education formats are recommended to increase provider capacity for identify and treating adolescent anxiety.

4.4 LIMITATIONS

While results have limited generalizability due to the non-representative sample, we did achieve our aim of finding what factors influence primary care providers' capacity to identify and treat adolescent anxiety. Self-selection bias must also be considered. Approximately 13% of eligible providers expressed interest in the study, with 11.6% completing the interview. It is likely that providers who expressed interest in the interview were somehow different from providers who did not (i.e., increased interest in the topic; interested in research; timing was appropriate). However, interviewees commented on their peers and therefore widened the perspective to include information about providers who did not participate. In order to obtain the largest sample possible, recruitment occurred through a provider-trusted research network that has routine contact with providers regarding various research endeavors. Anecdotally, staff conducting the

recruitment believed the number of participants who responded to the invitations was higher than anticipated.

As with any research study collecting self-report data, this study was subject to social desirability bias.¹⁹⁰ As a trained interviewer, the PI sought to reduce this bias by utilizing rapport building techniques while also remaining professional; allowing for the facilitation of an open and non-judgmental environment.¹⁹¹ Providers were very open and honest about their beliefs regarding identification and treatment responsibilities. For example, some providers shared information regarding personal comfort levels, lack of screening tool use, and beliefs that not all youth with anxiety are being picked up on. Finally this study was subject to another limitation typically present in qualitative research, researcher bias.¹⁹² Using the qualitative principle of reflexivity, the PI noted their attitudes and beliefs throughout the research process.¹⁹²

5.0 CONCLUSION

Limited research has been conducted specifically on adolescent anxiety in primary care settings despite clear evidence of the disorders’ prevalence, acute and long-term negative health effects, and primary care being an apt setting for both identification and treatment. This exploratory study adds to the existing body of mental health research in primary care by providing insight into primary care providers’ capacity to identify and treat adolescent anxiety. Moreover, results from this study begin to fill-in four evidence gaps specific to the “gold standard” criteria for disease screening put forth by Wilson and Junger.¹⁵⁴⁻¹⁵⁷ The overall purpose of the disease screening framework was to identify conditions that merit screening. Four criteria gaps for the screening of adolescent anxiety were identified prior to the study. Table 8 summarizes how study results expand the evidence base for each of the four criteria.

Table 8. Results in Relation to Wilson and Jungers Disease Screening Framework

1	The condition sought should be an important health problem.	Results from this study support the notion primary care providers do view adolescent anxiety as an important health condition . Specifically, providers understand the relative prevalence of anxiety as well as the negative health effects associated with the condition. It is unclear if providers view the negative consequences of anxiety as severe as those associated with depression , as providers in this study and the experts interviewed placed great importance on prioritizing self-harm (associated with depression). Negative impairments associated with untreated anxiety should be discussed with primary care providers as this information may provide supporting evidence to increase prioritization of anxiety.
2	There should be an accepted treatment for patients with recognized disease.	While effective pharmacological and talk therapies exist for anxiety, primary care providers vary regarding their role in treating anxiety and their capacity to provide appropriate treatment . Even though the majority of providers in this sample have prescribed an SSRI, they believe other providers see their role in treatment as identifying the concern and referring the patient

Table 8 Continued

		to a specialist. Moreover, not all providers in this sample who had prescribed SSRIs believe that was their responsibility to provide medication treatment for anxiety. Key challenges to having medication treatment be part of the primary care provider role included, time, limited experience/education, concern over medication side effects, and interest levels.
4	There should be a recognizable latent or early symptomatic stage.	Providers in this study were aware of and had a professional responsibility to recognize common presentations of anxiety. Providers utilized multiple sources of information to support the identification process. However, impairment from anxiety may not be disclosed by the patient/parent and or may not be noticeable during a primary visit. As such, it is likely providers are not identifying all youth with anxiety. It is also important to note that the longitudinal aspect the PCP-patient relationship may allow these providers to have more context into the patient’s history (missing school, stomach aches, ect) thereby affording them the opportunity to witness early signs of anxiety.
5	There should be a suitable test or examination.	The majority of providers had knowledge of specific tools available for screening anxiety, namely the SCARED. Providers discussed many barriers to utilizing the SCARED including time, form fatigue, and scoring difficulties. Moreover, this tool is diagnostic in nature, and was often used after a provider already had an indication the patient is experiencing anxiety. Research is needed to understand what type of screen would be most beneficial to primary care providers in identifying anxiety such as the GAD-7 or the SCARED-5.

Results of this study also showcase the connection between primary care providers’ capacity to identify and treat adolescent anxiety. While providers overwhelmingly believe it is their role to identify anxiety, many were concerned with what happens after identification occurs. Specifically, providers in this sample had a range of perspectives as to what their professional role was in treating anxiety (referrals vs medication management) and their comfort level with various treatment options (talk therapy vs medication prescriptions). Providers expressed multiple barriers when referring patients to behavioral health providers, and also when providing medication treatment to patients. Treatment hesitancy/comfort may be linked to the finding that primary care providers are split when it comes to the idea of systemic screening; if systematic screening is instituted, providers would have the responsibility to determine a treatment plan for patients screening positive for anxiety. While the makeup of the treatment

plan would likely vary (referring and connecting to a specialist, providing medication treatment/management, or a combination of the two treatment approaches) the need for such a plan would be necessary.

5.1 FUTURE RESEARCH

Supporting providers in understanding their roles in anxiety treatment and best practices for identifying and treating anxiety is necessary given the prevalence of anxiety, the associated morbidity, and a clear lack of age-appropriate mental health specialists. Clinical guidelines standardizing both adolescent anxiety identification and treatment processes in primary care is needed to support primary care providers in feeling equipped to handle the condition and support consistency among providers regarding professional responsibility boundaries. As such, a larger evidence base is needed regarding outcomes associated with systematic screening and treatment best practices including FDA approval of medications for anxiety treatment. Research is also needed to understand how treatment for anxiety and depression differ, including when the two co-occur and how billing can impact treatment decisions. Lastly, a state-wide quantitative survey utilizing factors specifically associated with providers' capacity to identify and treat anxiety should be created and deployed to expand upon the results of this study.

APPENDIX A CODEBOOK

Provider Assessment of Mood (PAM): Provider describes the way they assess for behavioral health/mood during a visit including patient history. Includes use of SCARED or other screeners that are not computerized. Includes mention of not screening for anxiety or co-screening with depression.

PAM – Tablet Screeners: Provider states that their office uses a tablet screener for depression and substance use. Includes discussions of transitions from paper to electronic form.

PAM – Use of Tablet Screeners: Provider discusses how they use the tablet screen results during the visit. This can include discussions of how and why they do not rely on the screen results.

Information Collected Without Parent (ICWP): Provider describes certain questions/topics that they ask/discuss with the adolescent when the parent is not present in the exam room (or would prefer to talk about when the parent is not present). Includes mention of limiting conversation topics if parent is present.

Parent Involvement (PI): Provider mentions how the parent is involved in the adolescent's health care.

PI – Negative: Provider discusses how parental involvement is not helpful or takes away the adolescent's voice.

PI – Information: Parents provide verbal information about the adolescent to the provider. Can include mention of contrasting information provided by the parent and adolescent. This includes information and or concerns made during the visit or outside of the visit (before, after, phone call)

PI – Parent-Child Interaction: Provider uses the parent-child interaction to give them clues about the child’s health and wellbeing

PI – Buy-in: Provider discusses getting parents to accept or acknowledge a MH condition. This includes reasons why parents may not be open to discussions related to MH conditions. Includes discussions about parents being resistant to medications for BH treatment.

Provider Trust (PT): Provider discusses that trust in the provider from the parent is an important aspect of how parents respond to BH concerns or talk about BH concerns. Includes instances where parent will not agree to leave the visit when all other parties ask them too.

Adolescent Openness (AO): Provider describes situations where the adolescent may or may not be more honest or open to talking about concerns/symptoms.

Question 2

Specific Patient Example (SPE): Provider tells a story about a specific patient and how they identified the mental health concern.

SPE – Mental Health Reason: Provider says the reason for the visit was because the patient/parent had a concern about mental health specifically.

Tipping Factors (TF): Provider discusses information sources that lead them to find out an adolescent had a MH concern.

TF – Screeners: Provider discusses how answers to the screening questions tip them off about mental health conditions.

TF – Lifestyle Questions: Provider mentions they ask patient about their school, peer and home life; answers which can tip them off about mental health conditions.

TF – Parent Provided Information: Provider mentions information shared by the parent as something that could tip them off about a mental health condition.

TF – Physical Health Symptoms: Provider discusses physical health complaints (including mention of somatic symptoms or chronic complaint) such as headaches, chest pain, sleep issues, fatigue, appetite, heart rate, weight loss etc.

TF – Behavioral Symptoms: Provider discusses behavioral symptoms such as trouble at school, flat affect, worry, nervous, pulling hair, ect.

Prevalence (P): Provider discusses the prevalence of a mental health condition or the prevalence of one over another. Includes reasons for why they think the condition is prevalent.

Co-Occurrence (CO): Provider talks about how depression and anxiety can co-occur or be the cause of one another.

Coping Techniques (CT): Provider talks about recommendations they make to the patient with regards to the patient's mental condition such as sleep hygiene and therapy recommendations.

Visit Time Constraints (VTC): Provider talks about the length of a visit as a barrier to uncovering mental health concerns and or that it can sometime take multiple visit to figure out a mental health concern.

Conflation of MH and PH (C): Provider describes patient and or parent confusing mental health symptoms and physical health symptoms.

Question 3

Example of a Patient with Anxiety (EXPA): Provider gives an example of a patient with anxiety or states they have/have had patients with anxiety.

In-Visit Cues (IC): Provider discusses an adolescent attitude during the visit as a sign to check-in about anxiety specific to fear, agreeableness/wanting to please. Provider discusses the adolescents body language in the visit as a sign to check-in about anxiety (examples: fidgeting, eye contact).

Physical Health Symptoms (PHS): Provider discusses physical health symptoms (headaches, stomach aches, chest pains, trouble breathing, heart rate) as factors used to recognize adolescent anxiety.

Typical Symptoms (TS): Provider mentions that when an adolescent is worried, trouble sleeping, having out of body experiences, is fearful, is anxious and or has panic attacks, these are factors used to recognize adolescent anxiety.

Functioning (F): Provider discusses adolescents who are highly engaged in activities and school as sign to check in about anxiety (examples: perfectionists, straight As, highly engaged with peers/social situations). Provider discusses adolescents who are not highly engaged in activities and school, or with peers as factors used to recognize adolescent anxiety. (Examples: school failure, shyness, selective mutism, absences from school, not interested in activities, social isolation)

Patient History (PH): Provider mentions they use information from the patient's history as a way to recognize anxiety. Includes discussions about past ways of self-medication/coping strategies used by the adolescent (ex: smoking marijuana)

Parent Information (PI): Provider talks about information the parent shares as a way they can recognize anxiety. Includes parent saying they think the child has anxiety or is the reason the visit was set-up.

Screening Use (SU): Provider mentions situations in which they use the SCARED or GAD-7 screener. Includes when provider mentions that they use a depression screener to pick up anxiety and or the signs they use for depression and anxiety are the same/similar.

Normalizing Conversations (NC): Provider provides examples of how they talk to patients and or parents about anxiety.

Referral (R): Provider mentions they refer adolescents to other providers. Includes mention of treatment options.

Acceptance of Anxiety (AA): Provider mentions that patients and or parents not accepting or recognizing anxiety as a barrier.

AA – Acceptability of Behaviors: Parents view behaviors of their child as normal and acceptable; includes provider mentions of parents downplaying adolescent habits/symptoms.

AA – Honesty: Adolescents not being honest about their symptoms/feelings.

AA – Physical Condition: Parents not understanding that their physical health complaint is from anxiety, not a physical health issue.

AA – Negative Perceptions: Provider mentions that patients and or parents not wanting to talk about mental health due to beliefs/conceptions of what it means to have mental health, negative views of the system and or treatment, view it as being abnormal, and concern/distrust in treatment.

Time (T): Provider mentions that time constraints during a visit as a challenge to recognizing anxiety. Includes when the concern is brought up during a visit and not before/during scheduling. Includes concerns about how to bill for a visit that includes mental health.

Teasing Conditions Out (TCO): Provider discusses the difficulty determining if the complaint is physical, anxiety and or depression.

TCO – Normal Anxiety: Provider mentions it can be challenging to determine if anxiety level is normal or diagnosable.

Experience/Education (EE): Provider talks about the providers experience or education regarding anxiety as a barrier to recognizing the signs and symptoms of anxiety.

Question 4

Explanation of ID Importance (EI): Provider explains why it is important for them to ID anxiety.

EI – First Line Provider: Provider described PCPs as being the first person the child will see.

EI – Comfort: Provider describes that children see them frequently and that can build up patient history and or comfort between PCP-child.

EI – Prevalence: Provider talks about how anxiety is common and or has increased over time.

EI – Severity: Provider talks about the negative impacts' anxiety can have on adolescents as a reason for why it is important to ID.

EI – Past Experiences: Providers talk about the importance of having someone recognize anxiety (ex: provider as a child with no parental or PCP support).

Role in ID Anxiety (RID): Provider explains what their role is in the identification process of anxiety.

RID – Anxiety: Provider talks about how it is their role to ID anxiety.

RID – General: Provide role to ID all conditions but it is the role of the child therapist to tease out what MH condition it is.

RID – MH Provider Shortage: Providers mention that the role of ID (or to initiate treatment) falls to them due to the shortage of MH providers.

RID – Referrals: Provider discusses their role after identification as referring patient to the MH system. Includes provider mention that it should not be the PCP role to manage/treat anxiety and that MH system should.

RID – Treatment: Provider discusses their role after identification as providing coping skills or and initiating treatment.

ID Facilitators (IDF): Provider talks about factors that facilitate them being able to identify anxiety.

IDF – Visit Time: Provider mentions that their practice adds time to adolescent visits.

IDF – On-site BH: Provider discusses having a therapist in the office.

IDF – Practice Culture: Having a practice culture that supports MH in staff and patients.

IDF – Trainings: Provider talks about having specific MH training and or recent training.

ID Barriers (IDB): Provider talks about barriers to being able to identify anxiety.

IDB – Reimbursement: Provider discusses finance reimbursement, billing and patient-costs as barriers to ID mental health in primary care.

IDB – Navigation of MH system: Provider mentions navigating the MH system as challenging for ID and or treatment for anxiety. Includes getting patient into treatment.

IDB – Treatment Comfort: Providers discuss lack of comfort with management/treatment of anxiety as a barrier to identification. Includes comments about education.

IDB – Referrals to PCP: Other providers referring patients to talk to their PCP about physical health symptoms when another provider knows it may be MH related.

IDB – Time: Provider discusses time as a barrier to ID anxiety.

Question 5

Follow-Up (FU): Providers discuss getting patients into their office for a follow-up visit as a challenge to ID anxiety in primary care.

Visit Length (VL): Providers discuss reasons why the length of time allotted for visits is a challenge to ID anxiety in primary care. Includes discussions about how long assessment activities take.

Lack of Training (LT): Provider mention lack of specific MH/anxiety training in residency or ever. Includes mention of lack of training for ID, treatment, and taking MH family history.

No Screening (NS): Provider mentions not having a specific anxiety screener as a challenge to ID anxiety in primary care.

Subtle Symptoms (SS): Providers mention anxiety symptoms are more subtle then other conditions therefore are comparatively more challenging to ID in primary care.

Reimbursement (R): Providers mention financial reimbursement as a challenge to ID anxiety in primary care.

Mental Health Stigma (MHS): Providers talk about how stigma around mental health as a challenge to ID anxiety in primary care.

MHS – Understanding: Parents not understanding physical symptoms are a symptom of anxiety.

MHS – Disclosure: Parent/patient denial/disclosure regarding anxiety.

Process After ID (PID): Providers talk about lack of knowing what to do after ID occurs or being uncomfortable with the process as a challenge to ID anxiety in primary care.

PID – Prescribing: Providers talk about not being comfortable or trained to prescribe medications for anxiety as a barrier.

Care Coordination: Providers talk about coordinating care with MH providers as a barrier.

Patient Schedules: Providers discuss patient schedules as being a barrier to seeing a MH provider.

Referrals: Providers discuss being able to find an appropriate MH provider to refer patients as barrier. This includes MH provider shortages, gender, location, and insurance.

Continuing Education: Providers discuss training/education after residency that facilitates ID of anxiety in primary care.

Visit Layout: Provider discusses being able to prioritize anxiety during a visit with competing priorities as a factor that facilitates ID of anxiety in primary care.

On-site BH: Providers mention having a therapist on-site as a factor that facilitates ID of anxiety in primary care.

Question 6

SCARED (S): Provider discusses their use of the SCARED screener.

S – Useful: Provider explains why using the SCARED is helpful to them. Includes aspects of the form that are helpful or good (cohesive ect).

S – Barriers to use: Provider explains challenges with using the SCARED including length of form, time to fill out the form, scoring issues, repetitive questions, ect.

S – Length of Form: Provider talks about how the form is long, and takes a long time to be filled out by the patient/parent.

S – Routine Use: Provider states that the SCARED tool would be useful to add to the routine iPad screeners.

S – Automatic Scoring: Provider mentions that if the SCARED could be automatically scored, that would be helpful to them.

No Anxiety Screeners (NAS): Provider states that they do not use anxiety screeners. Includes mention that it is not an office policy to use an anxiety screener.

No Anxiety Routine Screen (NARS): Provider states that the SCARED tool (or any anxiety screener) should not be used for all patients. Includes comments about only giving it to patients who need it.

Yes Anxiety Routine Screen (YARS): Provider mentions that some sort of anxiety screener may be a good idea to give to all patients in a routine manner. This does not include the SCARED (S – Routine Use code).

Validation (V): Provider talks about how screening form results can be used to show parents/patients that a MH condition is real.

Data Quality (DQ): Provider discuss concerns about the quality of data obtained from a form.

Form Barriers (FB): Providers discuss barriers to forms in general (only co-co with S code if S sub codes are not applicable.) Includes form fatigue and time concerns.

Other BH Screeners: Provider mentions other screeners they have used including the PHQ, Substance Use (SBI CRAFT), Vanderbilt, GAD-7.

OBHS – Dislike: Provider discusses how the screening tool is not useful or inadequate.

OBHS – Useful: Provider discusses why the screener is useful.

OBHS – Anxiety: Provider states that the screener can pick up anxiety.

Training (T): Provider talks about not being trained on scale use/identification and or the need for training.

Question 7

Treatment Role (TR): Provider talks about their role in the treatment of anxiety.

TR – New Role: Provider mentions that treatment of anxiety is a new addition to their role.

TR – Reluctant Role: Provider mentions that they wish it was not their role but that it is and explains why it is in their role (ex. MH shortage, immediate need of patient ect)

TR – Referral Role: Provider mentions that it is their role to refer to BH not to treat.

TR – Initiate Role: Provider mentions it is their role to initiate treatment but not long-term.

Treatment Types: Provider talks about the types of treatment they provide to patients with anxiety.

TR – Medications: Provider mentions medications as a type of treatment for anxiety they engage in. Includes mention of how they 1st initiate adolescents on medications.

TR – No Mediations: Provider mentions they or other providers do not prescribe medications.

TR – Therapeutic: Provider discusses that they or other providers are comfortable with therapeutic techniques such as CBT ect. Provider mentions that they can provide some therapeutic techniques but that does not replace a BH provider and or is not the same quality

TR – Referral First: Provider talks about how they refer to BH provider before med treatment.

TR – No Therapeutic: Provider discusses that they or other providers are not comfortable with therapeutic techniques such as CBT ect.

TR – Referral: Provider mentions that they only refer patients to BH providers, they do not treat.

Low Comfort (LC): Provider mentions that they or other providers are not comfortable with a certain type of treatment.

Comfort (C): Provider mentions that they or other providers are comfortable with a certain type of treatment. Includes mention of being uncomfortable and how they became comfortable.

Fear of Harm (FH): Provider discusses fear of harm or doing a disservice to the adolescent if they treated them for anxiety versus a BH provider.

Training (T): Provider mentions that they or other providers need more training in a certain type of treatment. Includes comments about having lack of experience in treatment as a barrier to care.

Co-learning (CL): Provider mentions that they ask for help from others in the office about treatment. This does not include referral to BH providers who are onsite. Includes TiPS line.

On-site BH (ONBH): Providers discuss having on-site BH providers. Provider shares information about the flow/type of communication that occurs between them and the embedded BH provider.

Off-site BH (OFFBH): Providers discuss working with off-site BH providers. Provider shares information about the flow/type of communication that occurs between them and the non-embedded BH provider.

Question 8

Parents (PA): Provider mentions parents as a barrier to treatment. Includes parental denial of the MH condition and or that they are unable to follow treatment plans due to personal factors or factors outside of their control (ex. Transportation issues).

Patients (PI): Provider mentions patients as a barrier to treatment. Includes self-medication and refusal to be treated.

Lack Training/Experience (LT): Provider mentions a barrier to treatment is a lack of training or experience treating adolescent anxiety. Includes things providers should be trained on regarding treatment.

Lack Comfort (LC): Provider mentions a barrier to treatment is a lack of comfort in treating adolescent anxiety.

Referral Role (RR): Provider mentions providers should be able to refer patients but should not have to treat them.

Under-Recognition (UR): Provider mentions that a under recognition of anxiety is a barrier to care.

Time (T): Provider mentions a barrier to treatment is a lack of time in the visit.

Limited BH Providers (LP): Provider mentions that there is a limited supply of BH providers that can treat adolescents (includes long wait times, accessibility, child-friendly locations)

Insurance (I): Provider mentions that insurance is a barrier to treating adolescent anxiety.

Practice Policy (PP): Providers mention that practice policy support the treatment of adolescent anxiety in primary care. This includes having an embedded BH provider at the office.

Hours of PCPs (HPCP): providers say a barrier to treatment is not being able to treat the child in a way that is not noticeable to their peers or that pulls them out of school. Include hours worked by PCPs.

Question 9

Training/Education in Anxiety (TA): Provider talks about any anxiety training they have received.

TA – Little training/Education: Provider talks about that while they did have some education, it was not a lot.

No Anxiety Training/Education (NoTA): Provider talks about not receiving any anxiety-specific training.

Other BH Education (OE): Provider talks about receiving other BH training/education (do not specifically mention anxiety)

BH Providers (BHP): Provider talks about BH providers.

Need for Education (NE): Provider talks about types of training (including formats) and content that would be useful for them to participate in/learn about. Includes resources provider would like to have.

Question 10

Yes: Provider has additional information to add to the interview.

No: Provider does not have additional information to add to the interview.

GLOBAL CODE (not co-coded)

TiPS: Providers talk about the TiPS line.

APPENDIX B KAPPAS

Question 1 Total	0.855
Provider Assessment of Mood (PAM) Total	0.834
PAM	0.849
PAM – Tablet Screeners	0.885
PAM – Use of Tablet Screeners	0.754
Information Collected Without Parent	0.845
Parent Involvement (PI) Total	0.915
PI	0.801
PI – Negative	1
PI – Information	0.741
PI – Parent-Child Interaction	0.791
PI – Buy-in	0.847
Provider Trust	0.899
Adolescent Openness	1
Question 2 Total	0.921
Specific Patient Example (SPE) Total	1
SPE	1
SPE – Mental Health Reason	1
Tipping Factors (TF) Total	0.889
TF	1
TF – Screeners	1
TF – Lifestyle Questions	0.759
TF – Parent Provided Information	0.441
TF – Physical Health Symptoms	0.894
TF – Behavioral Symptoms	0.776
Prevalence	1
Co-Occurrence	1
Coping Techniques	1
Visit Time Constraints	0.642
Conflation of MH and PH	1
Question 3 Total	0.906
In-Visit Cues	0.898

Normalizing Conversations	0.898
Physical Health Symptoms	0.909
Typical Symptoms	0.866
Functioning	1
Patient History	0.79
Parent Information	0.884
 Screener Use	0.912
Referral	1
Acceptance of Anxiety (AA) Total	8.17
AA	0.803
AA – Acceptability of Behaviors	1
AA – Honesty	0.558
AA – Physical Condition	1
AA – Negative Perceptions	0.912
Time	0.878
Teasing Conditions Out (TCO) Total	0.936
TOC	0.912
TCO – Normal Anxiety	1
Experience/Education	1
Question 4 Total	0.736
Explanation of ID Importance (EI) Total	0.888
EI – First Line Provider	0.832
EI – Comfort	1
EI – Prevalence	1
EI – Severity	0.832
EI – Past Experiences	0.646
Role in ID Anxiety (RID) Total	0.868
RID – Anxiety	0.511
RID – General	0.646
RID – MH Provider Shortage	1
RID – Referrals	1
RID – Treatment	1
ID Facilitators (IDF) Total	0.941
IDF – Visit Time	1
IDF – On-site BH	0.777
IDF – Practice Culture	1
IDF – Trainings	1
ID Barriers (IDB)	0.732
IDB – Reimbursement	1
IDB – Navigation of MH system	0
IDB – Treatment Comfort	0.617
IDB – Referrals to PCP	1
IDB – Time	0.646
Question 5 Total	0.941

Follow-Up	1
Visit Length	1
Lack Training	0.78
No Screening	0.649
Subtle Symptoms	1
Reimbursement	0.835
Mental Health Stigma (MHS) Total	0.898
MHS – Understanding	0.835
MHS – Disclosure	N/A
MHS D	1
Process After ID (PID) Total	1
PID	1
PID – Prescribing	1
Care Coordination (CC) Total	0.96
CC	1
CC - Patient Schedules	1
CC - Referrals	0.885
Continuing Education	1
Visit Layout	1
On-site BH	1
Question 6 Total	0.918
SCARED Total	0.925
SCARED	0.931
S – Useful	0.76
S – Barriers to use	1
S – Length of Form	N/A
S – Routine Use	0.322
S – Automatic Scoring	1
No Anxiety Screeners	1
No Anxiety Routine Screen	0.776
Yes Anxiety Routine Screen	0.869
Validation	1
Data Quality	0
Form Barriers	1
Other BH Screeners (OBHS) Total	0.952
OBHS	1
OBHS – Dislike	0.869
OBHS – Useful	1
OBHS – Anxiety	0.782
Training	1
Question 7 Total	0.921
Treatment Role (TR) Total	0.901
TR – New Role	1
TR – Reluctant Role	1

TR – Referral Role	1
TR – Initiate Role	0.728
Treatment Types (TT) Total	0.947
TR – Medications	0.915
TR – No Mediations	1
TR – Therapeutic	0.877
TR – Referral First	1
TR – No Therapeutic	1
TR – Referral	0.948
Low Comfort	0.911
Comfort	0.839
Fear of Harm	1
Training	0.863
Co-learning	0.657
On-site BH	0.948
Off-site BH	1
Treatment Challenges	0.85
Question 8 Total	0.961
Parents	1
Patients	1
Lack Training/Experience	1
Lack Comfort	0.708
Referral Role	1
Under-Recognition	1
Time	1
Limited BH Providers	1
Insurance	1
Practice Policy	0.9
Hours of PCPs	1
Question 9 Total	0.972
Training/Education in Anxiety (TA) Total	1
TA	1
TA – Little training/Education	1
No Anxiety Training/Education	1
Other BH Education	0.928
BH Providers	0.901
Need for Education	1
Question 10 Total	1
Yes	1
No	1

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