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Telepsychotherapy with Youth at Clinical High Risk for Psychosis: Clinical Issues and Best Practices during the COVID-19 Pandemic

Joseph S. DeLuca, M.A.,
University of Maryland School of Medicine, Department of Psychiatry, Division of Child and Adolescent Psychiatry, Baltimore, MD

University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Nicole D. Andorko, M.A.,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Doha Chibani, LCSW-C,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Samantha Y. Jay, B.S.,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Pamela J. Rakhshan Rouhakhtar, M.A.,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Emily Petti, B.A.,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Mallory J. Klaunig, Ph.D.,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Elizabeth C. Thompson, Ph.D.,
Alpert Medical School of Brown University, Department of Psychiatry and Human Behavior, Providence, RI

Zachary B. Millman,
McLean Hospital, Belmont, MA

Harvard Medical School, Boston, MA

Kathleen M. Connors, LCSW-C,
University of Maryland School of Medicine, Department of Psychiatry, Division of Child and Adolescent Psychiatry, Baltimore, MD

LeeAnn Akouri-Shan, MSW,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

John Fitzgerald, B.A.,

[*]Correspondence concerning this article should be addressed to Jason Schiffman, Department of Psychology, University of Maryland, Baltimore County, 1000 Hilltop Circle, Baltimore MD, 21250. schiffma@umbc.edu; phone: 410 455-1535; fax: 410-455-1055.

University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Samantha L. Redman, M.A.,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Caroline Roemer, M.S.,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Miranda A. Bridgwater, B.S.,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Jordan E. DeVylder, Ph.D.,
Fordham University Graduate School of Social Service, New York, NY

Cheryl A. King, Ph.D.,
University of Michigan, Departments of Psychiatry and Psychology, Ann Arbor, MI

Steven C. Pitts, Ph.D.,
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Shauna P. Reinblatt, M.D.,
University of Maryland School of Medicine, Department of Psychiatry, Division of Child and Adolescent Psychiatry, Baltimore, MD

Heidi J. Wehring, Pharm.D.,
Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, MD

Kristin L. Bussell, Ph.D., CRNP-PMH,
University of Maryland School of Nursing, Baltimore, MD

Natalee Solomon, M.A.,
Maryland Department of Health, Behavioral Health Administration, Transition-Aged Youth and Young Adult Services, Baltimore, MD

Sarah M. Edwards, D.O.,
University of Maryland School of Medicine, Department of Psychiatry, Division of Child and Adolescent Psychiatry, Baltimore, MD

Gloria M. Reeves, M.D.,
University of Maryland School of Medicine, Department of Psychiatry, Division of Child and Adolescent Psychiatry, Baltimore, MD

Robert W. Buchanan, M.D.,
Maryland Psychiatric Research Center, University of Maryland School of Medicine, Baltimore, MD

Jason Schiffman, Ph.D.[*]
University of Maryland, Baltimore County, Department of Psychology, Baltimore, MD

Abstract

Early detection and prevention of psychosis has become an international priority. Much of this work has focused on youth presenting with attenuated symptoms of psychosis—those at Clinical High Risk for psychosis (CHR)—given their elevated probability of developing the full disorder in subsequent years. Individuals at CHR may be prone to exacerbated psychological distress during

the COVID-19 pandemic and its subsequent physical isolation measures, due to heightened stress sensitivity and comorbid mental health problems. Telepsychotherapy holds promise for reaching this population, especially during the current COVID-19 outbreak. However, there are limited evidence-based guidelines or interventions for use of telepsychotherapy with this population. In this paper, we review common clinical issues for individuals at CHR and how they might be exacerbated by the COVID-19 pandemic; best practices for treatment and adaptations for telepsychotherapy for individuals at CHR; and highlight real clinical issues that we are currently experiencing in a United States-based specialized CHR clinic as we conduct telepsychotherapy via videoconferencing. We conclude with questions for those in the field to contemplate, as well as potential challenges and benefits in using telepsychotherapy with individuals at CHR and their families.

Keywords

Clinical high risk; psychosis; prodrome; telepsychotherapy; COVID-19

Individuals at Clinical High Risk for psychosis (CHR) are a particularly vulnerable group during periods of crisis and social change. Defined by the presence of emerging attenuated symptoms of psychosis (e.g., subthreshold delusions and hallucinations), individuals at CHR also experience functional decline and impairment associated with these symptoms. The negative psychological effects of quarantine (i.e., restricting the movement of people after personal exposure or because of preventative region-wide containment measures) are well-documented (e.g., post-traumatic stress symptoms, confusion, anger; Brooks et al., 2020) and data on the specific mental health impact of COVID-19 are emerging (e.g., decreased life satisfaction, increased psychological distress, and worsened physical health conditions; Zhang et al., 2020). Given the well-known stress vulnerabilities among individuals at CHR (e.g., Cornblatt et al., 2003; DeVylder, Ben-David, et al., 2013) and role of social isolation in risk for psychosis (e.g., Hoffman, 2007; Reininghaus et al., 2008; Lim et al., 2018), it is likely that clinical issues associated with CHR status may also be exacerbated by the stress of the COVID-19 pandemic and the resulting physical distancing. Moreover, some researchers have suggested that exposure to COVID-19 is likely to increase the rates of psychotic disorders (see Cowan, in press), highlighting the importance of early identification and intervention during this time period. Many mental health providers, including those in a growing number of United States (US)-based government funded specialty clinics for young people at CHR, have responded to the pandemic by offering telepsychotherapy services. Following, we provide an overview of CHR and evidence-based psychotherapy practices, including emerging best practices for using telepsychotherapy to meet the needs of this group. We then discuss issues our clinic is currently facing regarding clinical care and outreach, followed by recommendations and next steps for the field.

Best Practices for Treatment of Individuals at CHR

Individuals at CHR are help-seeking adolescents and young adults who experience symptoms that fall on the psychosis continuum (e.g., delusions, hallucinations), albeit in a manner that is less impairing, formed, and/or frequent, and with less conviction than seen in

full threshold psychosis (Miller et al., 2003). Approximately 100,000 adolescents and young adults develop a first episode of psychosis each year in the US (Heinssen et al., 2014), and at least 50% of people who later develop schizophrenia and other psychotic disorders retrospectively report a notable prodromal phase prior to their first episode (Häfner et al., 1992; Gross, 1997; Jackson, McGorry, & Dudgeon, 1995; Norman & Malla, 1995; Perkins, 2004; Yung & McGorry, 1996). A substantial minority (22%) of individuals determined to be at CHR develop a psychotic disorder within three years, with varying trajectories for the remaining 78% (Fusar-Poli et al., 2020). Individuals at CHR represent a heterogenous group (Fusar-Poli et al., 2016; Millman & Schiffman, 2018) and often have comorbid psychological and behavioral challenges such as depression, anxiety, impaired social and role functioning, and a history of trauma (Addington et al., 2017; Fusar-Poli et al., 2013; Fusar-Poli et al., 2020; Huang et al., 2019; McAusland et al., 2017; Thompson, Kline, et al., 2015). Thus, conversion to psychosis frequently is not the only important treatment target and outcome for this group. To this end, research has found that the majority of individuals at CHR who do not develop a psychotic disorder continue to experience attenuated psychosis symptoms and significant functional impairment over 2–14 years (Addington et al., 2011; Lin et al., 2015; Schlosser et al., 2012). Similarly, Beck and colleagues (2020) recently found that although 85% of clients at CHR who do not transition to psychosis will eventually remit from their high-risk status in the following decade, only 28% achieve full clinical and functional recovery at a long-term follow-up ($M^{follow\text{-}up}$ = 8 years).

The emerging treatment literature in this field suggests that initiating early intervention mental health services for individuals at CHR can lead to positive outcomes, including symptom improvement and potentially delayed transition to, or prevention of, a first episode of psychosis (Addington, Devoe, & Santesteban-Echarri, 2019; Fusar-Poli et al., 2019; Fusar-Poli et al., 2020; Okuzawa et al., 2014; van der Gaag et al., 2013). To support the development of specialized CHR treatment and research programs in the US, the Substance Abuse and Mental Health Services Administration (Substance Abuse and Mental Health Services Administration [SAMHSA], 2018) recently provided funding to over 20 treatment programs.

As one of those treatment programs, our team has developed a transdiagnostic, empirically based, and flexible modularized approach to early intervention for individuals at CHR (Thompson, Millman, et al., 2015). This approach is in line with CHR “clinical staging” models (Addington, Liu, et al., 2019; McGorry et al., 2013) and was designed to meet the heterogeneous needs of individuals at CHR in an individualized, yet standardized, fashion. This modular approach is comprised of various clinical elements from the CHR treatment literature (McGorry & Nelson, 2016; Nieman & McGorry, 2015; i.e., engagement, assessment, safety concerns, individual clinical formulation, psychoeducation, mental and physical health comorbidity, social skills, family involvement, educational/occupational support, and integration with other services). The model also emphasizes treatment components specific to Cognitive Behavioral Therapy (CBT) for CHR (CBT-CHR), such as evaluating and testing metacognitive and core beliefs, generating and evaluating alternative explanations, and addressing and modifying safety behaviors.

Preliminary research on providing transdiagnostic CBT treatments similar to Thompson, Millman, and colleagues' model (2015) has demonstrated feasibility, acceptability, and initial efficacy in one recent study with adolescents at CHR (Weintraub et al., 2019). However, treatment approaches like these were conceptualized for and implemented in in-person therapy; the COVID-19 pandemic has pushed us to translate these approaches to telepsychotherapy.

Telepsychotherapy with Individuals at CHR

No studies have been conducted with individuals at CHR regarding telepsychotherapy (e.g., via videoconferencing, telephone). The only telepsychotherapy study to date for people in the early stages of psychosis (first episode of psychosis, which comes after the CHR phase of illness for some individuals) found positive attitudes toward the potential use of such services (Lal et al., 2020). Lal and colleagues (2020) reported that 82% of participants indicated interest in a future clinic appointment via videoconferencing, and 75% believed it would be a good tool for unexpected or emergency situations, or when in-person meetings were impossible. Further, 78% of participants in this study reported obstacles to attending in-person sessions and would thus potentially benefit from a virtual option. In terms of telepsychotherapy challenges, participants highlighted the potential loss of in-person contact and confidentiality concerns. Other studies have found high levels of feasibility and acceptability for telepsychotherapy for individuals on the psychosis-spectrum (Santesteban-Echarri et al., 2020). Although no studies to date have specifically reported on telepsychotherapy interventions (e.g., by videoconference or phone) for individuals at CHR, Reilly et al. (2019) and Camacho et al. (2019) have reported on the promise of online assessment, online prediction, and online treatment for individuals at CHR, which may complement and overlap with telepsychotherapy. In these reviews, the authors noted that online social therapies, avatar therapies, and smartphone apps show particular promise and are recommended future areas of research and clinical implementation for individuals with CHR (Camacho et al., 2019; Reilly et al., 2019).

CHR Clinical Issues and Treatment Approaches in the Context of COVID-19

The inaccessibility of social support structures (e.g., schools, workplaces, places of worship, etc.; Jung & Jun, 2020) and the overall negative effects of quarantine (e.g., post-traumatic stress symptoms, confusion, fear, anger, boredom, financial loss, etc.) during the COVID-19 pandemic will likely require a coordinated, and potentially long-term, mental health response (Onyeaka et al., 2020) that includes telepsychotherapy (Zhou et al., 2020). The psychological impact of a stressor like COVID-19 can depend on many elements, including underlying risk or mental health conditions, thinking styles, and family, financial, and social factors (Thurackal et al., 2020). Notably, when compared to general help-seeking individuals who are not experiencing psychosis-like symptoms, individuals at CHR experience a broad range of psychopathology that is typically more severe and pervasive (Thompson, Kline, et al., 2015). Thus, individuals at CHR may be at a heightened risk to have a negative psychological response to the COVID-19 pandemic. An overview of relevant CHR clinical issues and treatment approaches to be used during the COVID-19 pandemic can be found in

Table 1. These issues and approaches are described in further detail in the following sections.

Stress Sensitivity

The diathesis-stress model of psychosis posits that stress—in combination with underlying vulnerability factors—can exacerbate or cause psychosis symptoms (Nuechterlein & Dawson, 1984; Pruessner et al., 2017). In addition to the high rate of comorbid anxiety concerns among individuals at CHR (McAusland et al., 2017; Thompson, Kline, et al., 2015), research has demonstrated that one vulnerability factor, impaired stress tolerance (e.g., feeling more tired or stressed than the average person at the end of a usual day; feeling thrown off by unexpected things that happen during the day), is more severe and frequent in individuals at CHR (compared to non-psychiatric controls) *and* is associated with psychosis-like symptoms, depression, anxiety, and poor functioning over time (DeVylder, Ben-David, et al., 2013). Reduced stress tolerance also predicted transition to psychosis in one large study of individuals at CHR (Trotman et al., 2014). Other studies have documented similar findings relevant to the international pandemic, including 1) higher sensitivity to everyday stressors for individuals at CHR compared to non-psychiatric controls and individuals experiencing full psychosis (Palmier-Claus et al., 2012), 2) a stronger association between activity-related stress and psychosis-like symptoms for individuals at CHR compared to both non-psychiatric controls and individuals experiencing full psychosis (van der Steen et al., 2017), 3) a lower perception of an internal locus of control among individuals at CHR compared to help-seeking controls which is related to social stress (Millman et al., 2017), and 4) affective disturbances mediating stress and psychosis-like experiences (Klippel et al., 2017). It is worth highlighting that some of these studies find that individuals at CHR experience more stress sensitivity compared to both non-psychiatric controls *and* individuals experiencing full psychosis. Despite the fact that clarity is limited regarding the specific cause of this stress vulnerability (e.g., CHR symptoms or broader psychopathology), it is still important to focus on this phenomenon in individuals at CHR since the majority of these individuals have comorbid concerns and thus represent an at-risk population during elevated times of stress.

A recent study confirmed some of these findings and also found that, compared to non-psychiatric controls, individuals at CHR reported more recent life event stressors (Ristanovic et al., 2020). Notably, Ristanovic and colleagues (2020) found a trend-level interaction effect whereby degree of exposure to stressful events was predictive of attenuated positive symptoms only in the context of impaired day-to-day stress tolerance. Particular aspects of stress (i.e., engaging in tasks beyond one's skill or control) have also been found to precede anhedonia in individuals at CHR (Gerritsen et al., 2019). Additionally, acculturative stress (i.e., tension associated with entering and assimilating into a new culture) has also been found to predict psychosis-like experiences among Latino and Asian immigrants (DeVylder, Oh, et al., 2013), and neighborhood crime is related to increased suspiciousness in individuals at CHR (but not non-psychiatric controls; Vargas et al., 2020; Wilson et al., 2016). These studies highlight the importance of considering multiple sources of stress and the impact of stressors on various symptom domains, which speak to a potentially heightened vulnerability to pandemics and their accompanying public response. Following

are specific treatment targets to improve stress tolerance and reduce stress reactions for individuals at CHR.

Affective Disturbances—The COVID-19 pandemic is an environmental stressor that can invoke changes in affect, including anxiety related to disruptions in daily life and loss of control over one's typical routine, in addition to general stress related to social isolation and disconnection via physical distancing and other public health measures (e.g., cancellation of mass gatherings, recommended self-isolation, school/work closures). Telepsychotherapy is helpful in overcoming the barriers to treatment due to the pandemic (e.g., clinic closures, physical distancing) by providing a mechanism to deliver clinical interventions, which in normal circumstances may also allow for broader accessibility of services. Telepsychotherapy can address these issues through existing CHR treatment components (e.g., psychoeducation) that aim to validate and normalize clients' experiences while teaching coping skills (Thompson, Millman, et al., 2015). Affective disturbances during a pandemic can further be targeted through increasing digital social contact (discussed further below) and having clients engage in mood tracking. During this increased period of stress and isolation, clinicians may wish to harness the value of digital technologies for additional therapeutic assessment and support. Mood tracking, such as through smartphone apps, may be particularly helpful for clients at CHR to understand triggers of their affective experiences and behaviors (Camacho et al., 2019; Palmier-Claus et al., 2013; Reilly et al., 2019). Since these affective experiences and behaviors may be exacerbated during the pandemic, smartphone apps may be indicated for use as an adjunct to weekly telepsychotherapy. Specific interventions and use of coping skills (e.g., relaxation; mindfulness; assertive communication) can then be delivered through a telepsychotherapy format and tailored to individual clients. Some mood tracking apps (e.g., *eMoods*; Yottaram Software and Technologies, 2020) allow clients to email a PDF of their mood tracking to their clinician, and most telepsychotherapy platforms allow clinicians and clients to easily share their screens to then review this tracking in an interactive way. Lastly, from an interpersonal perspective during telepsychotherapy encounters, it may help to assure clients that their therapist is healthy and taking appropriate precautions to stay safe, particularly if the therapist is in a high-risk group (e.g., above age 60).

Cognitive Biases and Unhelpful Thoughts—Telepsychotherapy approaches can also incorporate creative CBT approaches to target vulnerability factors more common in individuals at CHR, including cognitive biases such as the "jumping to conclusion" (JTC) bias. The JTC bias refers to making quick judgments without full information and has been found to be elevated among individuals at CHR compared to non-psychiatric controls (Broome et al., 2007). For individuals at CHR, the JTC bias is associated with more severe positive symptoms, intolerance of uncertainty, and impaired working memory (Broome et al., 2007; Winton-Brown et al., 2015). Clinicians working with individuals at CHR during the COVID-19 pandemic should be aware of this potential cognitive process and its correlates, particularly as it relates to coming to conclusions about the nature of COVID-19, the personal and family risk of developing COVID-19, and other information from the media and local, state, national, and international responses to the pandemic. To this end, treatment can also focus on reducing over-exposure to media and/or less reliable news sources. Other

cognitive biases to be aware of when working with individuals at CHR may include covariation (overestimation of causality), emotional reasoning, confirmation bias, and dogmatism (van der Gaag et al., 2013). These biases may similarly become more severe in the context of uncertainty and social isolation during COVID-19 and might co-occur with paranoid ideation and related symptoms.

In regard to targeting cognitive biases throughout telepsychotherapy, clients can be assigned treatment handouts (e.g., ABC worksheets, worksheets to brainstorm alternative explanations and build flexibility into thinking) through email or text, in addition to audio and/or video content (which can be expanded on through virtual “whiteboards” while videoconferencing), to reinforce routine, maintain treatment progress, and stay active in therapy (see Andersson, 2009). These approaches can be complemented by more frequent, but briefer sessions/check-ins (~15–20 minutes) throughout the week via videoconference, email, and/or phone or text, which may align better with the use of tracking and be more developmentally appropriate for the CHR population. Online CBT approaches for general help-seeking populations that incorporate these components have been found to have equivalent treatment effects as typical face-to-face CBT (Carlbring et al., 2018).

To address potential issues related to paranoia and virtual treatment, a detailed informed consent process should be followed in which therapists openly discuss the pros/cons and risks/benefits of telepsychotherapy (including potential safety breaches and precautions taken) and dispel myths about telepsychotherapy (e.g., that sessions are not recorded). Particularly since these aspects might come up in the news (e.g., security breaches on tele platforms), therapists can periodically review the security of the platform and check-in about these issues as needed with individual clients.

Family Functioning—The increased prevalence of stay-at-home orders during the pandemic has the potential to exacerbate the already contentious relationships between individuals at CHR and their families. Most adolescents and young adults at CHR live with family members and research has found that individuals at CHR have poorer relationships with their families compared to help-seeking youth without CHR symptoms (Robustelli et al., 2017; Thompson, Kline, et al., 2015). Perceived family support for individuals at CHR is associated with lower perceived stress, and this effect is stronger for individuals at CHR than help-seeking controls (Bentley et al., 2016). Further, stronger perceived family functioning for individuals at CHR has been found to buffer the impact of psychosis-like symptoms on social and role functioning (Thompson et al., 2019). Although the stress and isolation related to COVID-19 can exacerbate the effects of family stress, the increased frequency of contact between family members may offer positive treatment opportunities. Family-focused therapies have been successfully employed through videoconferencing for individuals experiencing psychosis (Santesteban-Echarri et al., 2020), and family programs offer opportunities for continued work on engagement, psychoeducation, communication skills, CBT skills, and collaborative problem-solving skills (Dausch et al., 2009; Landa et al., 2016). Families can also explore shared decision-making strategies to improve communication and support their youth’s developmental progress. Given the increased amount of time families will be spending together at home, clinicians can also encourage and help families plan positive activities together. Recently developed tools, such as the

Epidemic-Pandemic Impacts Inventory (Grasso et al., 2020) and the *COVID-19 Family Stress Screener* (Huth-Bocks., 2020), can further be used to assess and treat family and individual stressors during this time.

Suicide and Safety

Individuals at CHR are at an elevated risk for suicidal ideation and behavior that may be exacerbated by the social isolation and loneliness experienced during the COVID-19 pandemic. One recent meta-analysis reported that the prevalence of suicidal ideation and suicide attempts in this population was 66% and 18%, respectively (Taylor et al., 2015). For reference, the estimated lifetime rates of suicidal ideation and attempts among a national sample of adolescents in the US are 12%, and 4%, respectively (Nock et al., 2013). Risk factors of suicidal ideation and behavior in the CHR population include: depression, trauma, obsessive-compulsive symptoms, hopelessness, stigma, social impairment, and social isolation (DeVylder et al., 2012; Grivel et al., 2018; Hutton et al., 2011; Lindgren et al., 2017; Pelizza et al., 2018; Pelizza et al., 2019; Xu et al., 2016). One of the strongest proximal risk factors of suicide is loneliness, with social isolation and loneliness heightened in the CHR population (and further worsened during the COVID-19 pandemic because of stay at home orders and physical distancing; discussed further below). During the early stages of schizophrenia, lack of social support and social impairment have been associated with suicide risk (Ventriglio et al., 2016). There is also evidence that social isolation may mediate the relation between positive symptoms and suicidality in people with psychosis (Bornheimer et al., 2019). Further, Xu and colleagues (2016) found that social isolation may also mediate the relation between stigma and suicidal ideation in individuals at CHR. Together, these findings provide evidence that increased social isolation during current COVID-19 physical distancing efforts may indirectly put individuals at CHR, who already experience increased social isolation, at an elevated risk for suicide.

Despite extensive evidence that individuals at CHR have an increased risk for suicide, there are currently no studies on the treatment of suicidal ideation and behavior for people at CHR. Interventions targeting social support may be of great value during this pandemic and may mitigate the effects of social isolation. The Youth-Nominated Support Team (YST) intervention was designed to support adolescents being discharged from psychiatric hospitalization and involves youth nominating (caregiver approved) adult support persons who learn about the youth's mental health problems and treatment plan, and then maintain consistent supportive contact for several months (King et al., 2009). YST has been associated with a more rapid reduction in suicidal ideation (King et al., 2009) and lower early mortality (King et al., 2019) in other populations, and may be a useful supplemental intervention for adolescents at CHR with suicidal ideation. For individuals at CHR who use YST, adult support persons could be provided with additional psychoeducation about CHR and related risks in a telepsychotherapy context. A smartphone app designed for crisis situations, *MY3 – Support Network* (Vibrant Emotional Health, 2020), may additionally be used to keep clients connected to their social networks.

In terms of best practices to address safety during telepsychotherapy, McGinn and colleagues (2019) and the Center for Practice Innovations (2020) recommend using

evidence-based treatment (that in many ways parallels in-person practices) to target risk factors and enhance treatment engagement and protective factors. These authors suggest including family members in treatment, reducing access to lethal means, and including informed consent that treatment may be discontinued if deemed unsafe (e.g., and the client transferred to a more intensive setting that addresses safety). Clinicians should also assess for suicide risk frequently (e.g., obtaining information from multiple sources including: online assessment, self-report questionnaires, consulting with others in the client's social support network when possible, and documenting these efforts), including asking about the specific emotional impact of the COVID-19 pandemic on suicide risk (Center for Practice Innovations, 2020). Clinicians should also obtain and confirm the address and location of the client at the beginning of each session, obtain at least one emergency contact from the client, review updated safety procedures with the client (to establish empowered collaboration with the client), and create an updated safety plan with the client. It may also be helpful for the clinician to create a relationship with local crisis hotlines and/or emergency resources in the community to allow for a warm transfer if needed. Clinicians should also provide the client with accessibility to emergency resources and phone numbers (e.g., crisis hotlines and textlines). In the event of an emergency, therapists should remain connected with the client through videoconferencing if possible while emergency services are called, and efforts should be made to include other people in the home (McGinn et al., 2019).

Health and Wellness

Exercise and other healthy lifestyle habits, such as good sleep hygiene, can help with stress management and overall mental health (Klaperski, 2018; Toker & Melamed, 2017). This is especially salient for individuals along the subthreshold psychosis spectrum who typically demonstrate lower levels of wellness-promoting behaviors including living a more sedentary lifestyle (Stubbs et al., 2016) and experiencing poor sleep (Poe et al., 2017). Sleep disturbances in particular have been linked to psychotic experiences across a number of studies (e.g., Andorko et al., 2017; Andorko et al., 2018; Davies et al., 2017). Wellness behaviors appear to serve as protective factors against exacerbation of psychotic symptoms; thus, when disruption occurs, individuals at CHR are at a heightened vulnerability of potential distress and impairment (Afonso et al., 2011; Dauwan et al., 2015; Firth et al., 2015; Waters et al., 2011). Health focused behaviors, sleep, daily schedules, and routines may be disrupted during times of unrest, such as the COVID-19 pandemic and resulting public health measures designed to contain the virus. Clinicians working with individuals at CHR should be sure to talk about the importance of maintaining healthy sleep behavior and physical activity with their clients. Recent research further indicates the promotion of daily mindfulness practice can assist individuals in coping with news of the COVID-19 outbreak to maintain healthy sleep habits (Zheng et al., 2020).

Interventions targeting health behavior and wellness can be adapted to telepsychotherapy approaches (Finkelstein & Cady, 2017; Oosterveen et al.,2017). A recent systematic review noted positive overall treatment effects for telepsychotherapy interventions focusing on sleep concerns in youth (McLay et al., 2020), and highlighted the success of approaches that included caregiver external support and structure. McLay and colleagues (2020) further found evidence for the effectiveness of telepsychotherapy cognitive-behavioral strategies,

such as CBT for insomnia (CBT-I), which focuses on providing psychoeducation relating to healthy sleep practices (sleep hygiene), sleep restriction, stimulus control, restructuring of maladaptive sleep-related cognitions, and relaxation/mindfulness. CBT-I is an evidence-based intervention which has been administered successfully with individuals at CHR (Waite et al., 2019), and demonstrated success not only in alleviating concerns related to sleep, but also in reducing psychosis symptoms (Myers et al., 2013). During the COVID-19 pandemic and resultant schedule changes, individuals at CHR and their families may also have more time to "experiment" with their sleep time and make changes, and can take advantage of this time with their therapists to try new coping techniques as described above. Clients and families should also consult with their primary care physician or psychiatrist regarding diet, vitamins, and other supplements, as needed.

Similarly, telehealth interventions focused on promotion of physical activity within help-seeking groups have shown success (Moran et al., 2018), including particular promise for those studies using web-delivered CBT programs in lieu of traditional psychotherapy (Glozier et al., 2013). Though there appears to be a dearth of studies focusing specifically on increasing physical activity for individuals experiencing psychotic symptoms using telepsychotherapy methodology, success has been found with a similar population to individuals at CHR (i.e., young adults; Oosterveen et al., 2017). In light of this group's predisposition to mild disorganization, the daily accessibility and routine available within such programs would likely be beneficial to individuals at CHR. Clinicians are encouraged to continue discussions about the benefit of physical activity within telepsychotherapy sessions, and to promote use of mobile programs when appropriate.

Isolation and Social Functioning

A review of 42 meta-analyses on CHR outcomes showed significant impairments in quality of life and social functioning for individuals at CHR compared to controls (Fusar-Poli et al., 2020). Specifically, compared to non-psychiatric controls, individuals at CHR report fewer social relationships (in-person *and* digital; Grossman et al., 2020), poorer relationship quality with friends and family, and more loneliness, which are all subsequently related to greater symptom severity and lower overall functioning (Robustelli et al., 2017). Further, individuals at CHR perceive less social support compared to non-psychiatric controls (Huang et al., 2019), which is associated with positive symptom severity (Millman et al., 2018). Thompson, Kline, et al. (2015) have also found that youth at CHR have poorer social functioning when compared to youth help-seeking controls, highlighting the enhanced vulnerability of this group.

The current context of isolation and social disconnection from others during the COVID-19 pandemic likely magnifies these issues for individuals at CHR, and the use of typical behavioral activation strategies is likely to be affected by physical distancing and other public health recommendations during the COVID-19 pandemic. Nonetheless, clinicians can support clients to remain connected to friends and family through virtual and digital means, and also help clients to develop plans to become more socially connected online (e.g., virtual support groups, online chatrooms or forum boards of interest, team-based or interactive video games). Moderated online social therapies for individuals at CHR (Alvarez-Jimenez et

al., 2018) have shown promise and more studies are underway to improve social functioning with online methods in this group (Reilly et al., 2019). In terms of in-person contact, simple steps can also be created with clients to gradually engage in in-person contact while practicing physical distancing (e.g., having a conversation with a neighbor from afar, greeting an essential employee). Given that social anxiety is the most commonly diagnosed anxiety disorder for individuals at CHR (McAusland et al., 2017), fear hierarchies can be developed for these virtual and in-person social encounters. Additionally, social skills telepsychotherapy interventions (individual and/or group format) can be used as necessary to supplement treatment approaches for individuals at CHR (Cadenhead et al., 2018; Thompson, Millman, et al., 2015), but more research is needed in this area (Devoe et al., 2019).

Substance Use

Compared to typically functioning control groups, individuals at CHR are significantly more likely to smoke tobacco and use cannabis (Fusar-Poli et al., 2020). Tobacco use is one of several cardiometabolic risk factors faced by individuals at CHR (Carney et al., 2016), and cannabis use has been associated with higher levels of positive psychosis-like symptoms for individuals at CHR (Carney et al., 2017; Corcoran et al., 2008). Motivational interviewing (MI) and CBT-based approaches have shown promise for reducing problematic substance use for individuals at CHR, but only one treatment study has been conducted in this area (Bucci et al., 2010).

During an outbreak such as COVID-19, individuals may turn to substances to cope with stress or increased symptoms (Wong et al., 2005) and individuals at CHR may be particularly prone to using this coping mechanism given their higher baseline rates of substance use compared to peers not at CHR. Through telepsychotherapy, clinicians should consider using evidence-based assessment (e.g., DelRosario et al., 2017) to monitor and generate discussions about clients' substance use, in addition to using treatment components that blend MI, CBT, and family work. Clinicians should also probe for polysubstance use and the potential confounding effects of other substances (e.g., alcohol) on mental health symptoms for individuals at CHR (e.g., Auther et al., 2015). Further, given a) the high comorbidity of mental health problems among this group (Thompson, Millman, et al., 2015) and b) the additive interaction of substance use and trauma on psychosis symptom severity (Harley et al., 2010), it is likely that other psychosocial interventions may curb substance use (e.g., by targeting stress sensitivity and anxiety, depression, wellness and sleep, trauma, etc.).

Trauma

Individuals at CHR experience disproportionate trauma and victimization compared to non-psychiatric controls (physical, emotional, and sexual abuse; neglect; maltreatment; bullying and other interpersonal traumas) that can exacerbate or cause psychosis-like symptoms (Loewy et al., 2019; Kline et al., 2016; Kraan et al., 2015; Mayo et al., 2017; Redman et al., 2017). To date, no clinical trials have been conducted to specifically target trauma-associated symptoms for individuals at CHR. Recently, however, a protocol for Trauma-Integrated Cognitive Behavioral Therapy for Psychosis (TI-CBTp) was developed to treat individuals at

CHR or in the early stages of a psychotic disorder and demonstrated initial positive results (Folk et al., 2019). During the COVID-19 outbreak, there should be a particular focus on establishing safety as it relates to having fundamental needs met (e.g., shelter, safe environment, food, access to other basic resources). Therapy approaches will not be as effective if the client is concerned and triggered due to environmental safety issues.

Acute stress during the COVID-19 pandemic may further exacerbate past or current trauma experiences for individuals at CHR. As noted, individuals at CHR have higher stress sensitivity and a more dysregulated stress response that may more easily provoke a trauma reaction. Past studies have found that exposure to acute stressors leads to more severe symptom responses for individuals who have a history of trauma (Meyers et al., 2015). Given public health recommendations to physically distance and stay at home, it is also possible that an individual at CHR may now be spending more time at home with an abusive individual.

Providers may employ skills from Dialectical Behavioral Therapy (DBT) and other trauma-based treatments to enhance distress tolerance, crisis coping skills, and psychoeducation (Folk et al., 2019; Ford, 2015). Studies on trauma-based telepsychotherapy with adults have shown promising findings in regard to feasibility, acceptability, and reducing posttraumatic stress symptoms (Turgoose et al., 2018). Studies on smartphone apps to complement trauma treatment with a clinician have also demonstrated success with adults (e.g., *PTSD Coach*; Possemato et al., 2016; US Department of Veterans Affairs, 2020), and such apps may be used with individuals at CHR during the pandemic to increase treatment engagement, monitor triggers, and provide individualized coping skills.

Attention/Educational and/or Occupational Support

The onset of psychosis symptoms often occurs at a developmental stage when academic and vocational paths are forming. Individuals at CHR experience higher rates of long-term unemployment and often require vocational support to mitigate overall negative outcomes (Fusar-Poli et al., 2010; Cotter et al., 2017). There is also evidence that youth at CHR are at higher risk of falling behind academically and would benefit from educational support services to achieve their goals (Thompson, Millman, et al., 2015). Evidence-based programs for individuals in the early stages of psychosis have demonstrated improved outcomes by incorporating supported employment and education services as part of coordinated specialty care (Dixon et al. 2015; Rakhshan Rouhakhtar & Schiffman, 2020; Schiffman et al., 2018).

The COVID-19 pandemic has forced many schools and universities across the US to transition into fully online campuses. Forty-five US states (as of 04/20/2020) have issued “shelter in place” or “stay at home” orders (Mervosh, Lu, & Swales, 2020), forcing jobs to transition to telework or shut down. Individuals have found themselves having to adapt to the added stress of changing academic or job demands, often with new technologies that institutions were not adequately prepared to deploy. Job cuts have created an added financial burden on families and individuals may struggle to find new employment at this time. As the transition to telepsychotherapy occurs, incorporating a collaborative goal setting approach may be most likely to facilitate the adjustment (Thompson, Millman, et al., 2015). Initially adapting education support services to help the client navigate the new educational

environment is key to mitigating stress (e.g., accessing accommodation services, adjusting course load selection). Clinicians can then use the telepsychotherapy sessions to help clients focus on improving academic performance (study skills, time management, use of resources). Practical strategies, such as having the client share their screen to facilitate the organization of assignments may also be a part of this practice. Strategies can also be employed to manage the transition to telework, including problem-solving and assertive communication.

CHR Symptom Monitoring

CHR symptom monitoring should be regularly used to build engagement, individualize treatment, and detect symptom worsening or transition to psychosis (Kline et al., 2015). Commonly used CHR symptom monitoring tools in the US include the Prime Screen-Revised, Prodromal Questionnaire-Brief, Behavior Assessment System for Children *Atypicality Scale*, and the Youth Psychosis At-Risk Questionnaire (Kline & Schiffman, 2014). Our team has been using the 12-item Prime Screen-Revised (Miller et al., 2004) for treatment monitoring, which assesses positive symptoms of psychosis. We offer this tool online for clients to complete (www.sfwmaryland.com) through a HIPAA-compliant portal, which generates a PDF and interpretation of results for clients and clinicians to review during a telepsychotherapy session (using screen sharing). Positively endorsed items are further discussed and processed with clients and families. Use of the more in-depth Structured Interview of Psychosis-Risk Syndromes (SIPS; McGlashan et al., 2001) may also be warranted in certain situations, with the SIPS authors suggesting that confidential videoconferencing is a valid clinical format. Ecological momentary assessment may also be a relevant CHR symptom monitoring approach (Andorko et al., 2019), particularly during times of heightened stress such as the COVID-19 pandemic.

Community Engagement

A cornerstone of many early psychosis intervention programs is community engagement and outreach. Many people in the early stages of psychosis are not identified, and the duration of untreated psychosis for individuals who develop a psychotic disorder is typically more than one year in the US (Median DUP = 74 weeks, Mean DUP = 194 weeks; Addington et al., 2015). During the COVID-19 pandemic, we have revamped our website (www.MarylandEIP.com) to include more virtual resources and guides for consumers, families, friends, providers, and other community members. We have also received requests from the community to offer our outreach presentations through live, virtual platforms (e.g., Zoom, Webex) and will begin to offer this service soon. Since the pandemic started, states in the US and professional organizations have started to relax some of their restrictions regarding obtaining continuing education credits through online means (Association of State and Provincial Psychology Boards, 2020). Our team also continues to post daily on social media regarding COVID-19, mental health, and early psychosis resources (e.g., links to our partner website, www.MDBehavioralHealth.com, which has 24 free training modules on early psychosis; and free webinars and trainings through the Substance Abuse and Mental Health Services Association and the Psychosis-Risk and Early Psychosis Program Network).

Prior to the pandemic, our team conducted a randomized trial to train Maryland social workers in early psychosis identification and referral through an online platform, and we have received approximately 15% of our referral calls through recipients of this training (Andorko et al., 2020). Telehealth can also offer providers on our team safer options for tele-consultation and telepsychotherapy on hospital psychiatric or medical units, which have started to restrict access during the COVID-19 pandemic. Overall, we hope to continue to build on this work and disseminate early psychosis information and provide assessment virtually and remotely.

Client Examples and Challenges

As described, individuals at CHR face many unique clinical challenges that may be exacerbated during the COVID-19 outbreak. In Table 2, we provide hypothetical composites[1] based loosely on several de-identified clients at CHR who we have seen through videoconferencing during the outbreak, along with the clinical concerns they have presented to us, example solutions/interventions designed by our therapists, and relevant treatment modules (Thompson, Millman, et al., 2015) that we are re-conceptualizing during this pandemic. Common themes in our work with these clients have included continued engagement, clinical issues that have worsened during the COVID-19 outbreak, and the use of creative and developmentally-appropriate interventions to complement treatment during the COVID-19 pandemic (e.g., using smartphone apps as an adjunct to individual therapy, and adapting to family and school transitions). Throughout, we have also used best practices for telepsychotherapy related to engagement (e.g., using screen sharing) and safety (e.g., revising safety plans). So far (for the past six weeks), we have found telepsychotherapy (via videoconferencing) to be a feasible and acceptable approach for individuals at CHR and their families.

Conclusion

Clinical issues associated with CHR status may be exacerbated by the stress of the current COVID-19 pandemic and measures taken to control the spread of the virus, given high stress sensitivity and other vulnerability factors present in this group (e.g., Cowan, in press). Consistent with prior research, clients in our clinic present with a variety of comorbid concerns and have experienced an exacerbation of some symptoms during the current COVID-19 pandemic. To this end, telepsychotherapy allows therapists to remain connected to their clients at CHR and continue using evidence-based therapeutic practices, particularly those based on a transdiagnostic model (Thompson, Millman, et al., 2015; Weintraub et al., 2019).

Based on the existing research on telepsychotherapy and digital approaches for individuals in the early stages of psychosis (Camacho et al., 2019; Lal et al., 2020; Reilly et al., 2019; Santesteban-Echarri et al., 2020) and our early clinical experiences during the COVID-19 outbreak, it appears that telepsychotherapy is a feasible and acceptable way to deliver

[1]Identifying demographic information has been removed, and some presenting information has been altered or merged to create a composite

therapy. No studies to date, however, have been conducted on videoconferencing interventions for individuals at CHR (Santesteban-Echarri et al., 2020) and there is a need for research in this area. Open questions related to telepsychotherapy include the long-term effectiveness of such approaches for this group on key outcomes (e.g., psychosis-like symptoms, functioning), and feasibility and acceptability for families, therapists, and organizations. Group therapy via videoconferencing is also an underexplored area for individuals on the psychosis-spectrum.

Other potential challenges moving forward include: 1) the sustainability of telepsychotherapy to maintain engagement between therapists and clients/families over time without in-person provider contact, 2) client/family access to tele/videoconferencing (including proper equipment, WiFi, etc.), 3) how the cultural background of clients influences their comfort with technology and relates to their interpersonal communication (Shore et al., 2006), 4) how psychosis-like symptoms (e.g., paranoia, delusions) might interfere with tele or digital technology approaches, 5) the ability to conduct risk assessments and effectively triage (Gilmore & Ward-Ciesielski, 2019; Kasckow et al., 2014), and 6) how to effectively manage clients who develop psychosis and may require face-to-face treatment and monitoring (e.g., for long-acting injectable medication and physical health check-ups). Concrete challenges for providers to adjust to include reviewing the pros/cons of telepsychotherapy, ensuring confidentiality with clients, and adapting to technology glitches which might include poor audio and/or visuals. Digital divides and potential disparities between groups with respect to access to technology as well as private space also loom as potential issues to be addressed in the equitable roll out of telehealth options.

Despite these yet answered considerations, telepsychotherapy offers many potential benefits, including time-efficiency and possible advantages for attendance, and youth at CHR who have grown up with technology may be particularly interested in digital and telepsychotherapy approaches. Telepsychotherapy approaches also appear to be underutilized by early psychosis programs and may work best moving forward as a “hybrid” option whereby virtual services are an option to complement in-person services (Lal et al., 2020, p. 6). Overall, although it is possible that individuals at CHR may be experiencing more distress than others during the COVID-19 outbreak, it appears that treatment can be used to effectively support these individuals and families.

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Table 1.

Clinical High Risk for Psychosis (CHR) Clinical Issues and Treatment Approaches in the Context of COVID-19

Target Area	COVID-19 Considerations	Best Practices During the COVID-19 Pandemic	Cognitive-Behavioral Therapy for CHR Components	Telepsychotherapy Considerations
Stress Sensitivity	Youth at CHR are prone to higher levels of impaired stress tolerance, and this is associated with psychopathology and impaired functioning. The COVID-19 pandemic and subsequent public health responses are environmental stressors that can cause disruptions in daily life, fears of contracting the virus, etc.	• Practice core coping skills (e.g., relaxation, mindfulness, assertive communication). • Promote family communication and activities. Increase digital social contact.	• Provide psychoeducation and normalization regarding stress and symptoms. • Assess / treat common cognitive biases among youth at CHR that may become exacerbated during the COVID-19 pandemic (e.g., *"jumping to conclusions"* about virus etiology, risk, institutional responses, etc.).	• Digital interventions can complement treatment (e.g., smartphone apps to practice coping skills and/or track mood, such as *eMoods*). • Use screen-sharing and/or "whiteboards" on videoconferencing platforms to share and discuss CBT worksheets and homework. • Schedule more frequent, but briefer sessions/check-ins (~15–20 minutes) to ensure engagement and meet the needs of youth and families.
Suicide and Safety	Individuals at CHR are at an elevated risk for suicidal ideation and behavior that may be exacerbated by the social isolation and loneliness experienced during the COVID-19 pandemic.	• Continue to reinforce coping skills and safety planning. – Adjust safety plan to include more local resources and discuss how the therapist and client will handle safety issues during telepsychotherapy sessions. • Conduct ongoing assessment and monitoring of suicide thoughts, intent, or actions. • Assess for and address any new protective and risk factors. • Include family members and other supportive individuals in treatment and safety planning.	• Maintain engagement and identify core beliefs related to suicide and safety.	• Obtain current location of client at the start of each session (and confirm emergency contact person on file). • Share COVID-19 coping guides and collaborate on how to manage emergencies during telepsychotherapy sessions (e.g., therapist remaining connected with the client through videoconferencing if possible while the client seeks emergency services). • Conduct a clinical interview to better understand the specific emotional impact of the COVID-19 pandemic. • For clients with suicidal ideation, encourage them to nominate (caregiver approved) adults with whom they can share their mental health problems and treatment plan, and turn to for support through digital means (e.g., text, video, phone).
Health and Wellness	Wellness behaviors (physical activity, sleep, etc.) serve as protective factors against exacerbation of psychotic	• Encourage clients to seek external support from caregivers and family members (e.g., morning wake-ups).	• Engage in goal-setting and activity scheduling.	• Web-delivered CBT programs targeting health and wellness, commonly found on smartphone applications, have shown success. Discuss such programs with clients

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	symptoms. Disruptions during the COVID-19 pandemic impact these behaviors and place individuals at CHR at a heightened vulnerability of potential distress and impairment.	• Implement routines (e.g., physical activity outdoors and/or indoors), as this maintains health and a sense of normalcy. • Encourage good sleep hygiene (e.g., giving education about sleep-cycle reversal, how to avoid time in bed while not sleeping, and how to use relaxation strategies at night). • Encourage healthy eating and hydration.	• Assess / treat potentially exacerbated CHR symptoms, such as misinterpretation of perception disturbances as COVID-19 or other illness symptoms.	and encourage use of applications when appropriate as an adjunct to telepsychotherapy treatment. • Apps to track sleep and exercise may also be helpful adjuncts to treatment.
Isolation and Social Functioning	Individuals at CHR generally have fewer social relationships and perceive less social support, experience more loneliness, and have poorer social functioning. This is related to greater symptom severity and lower overall functioning. The current context of isolation and social disconnection from others during the COVID-19 pandemic likely magnifies these issues for individuals at CHR.	• Assess changes in functioning and the specific impact of COVID-19 on isolation. • Given high rates of anxiety among individuals at CHR, consider developing fear hierarchies for virtual and brief in-person social encounters if necessary.	• Address and modify safety behaviors. • Generate and evaluate alternative explanations. • Engage in activity scheduling. • Assess / treat potentially exacerbated CHR symptoms, such as emerging suspiciousness and disorganized communication.	• Help clients develop plans to become more socially connected online as an adjunct to individual therapy (e.g., virtual support groups, online chatrooms or forum boards of interest, team-based or interactive video games). • Use social skills telepsychotherapy interventions (individual and/or group format) as necessary to supplement individual treatment approaches for individuals at CHR.
Substance Use	Individuals at CHR are more likely to smoke tobacco and use cannabis. Cannabis in particular has been associated with higher levels of positive psychosis-like symptoms. During an outbreak such as COVID-19, individuals may turn to substances to cope with stress or increased symptoms.	• If your client is at risk for substance use, consider using evidence-based assessment and screening to monitor. Such questionnaires can promote discussions and more open responses from clients. • Motivational interviewing and cognitive behavioral-based approaches have shown promise for reducing problematic substance use for individuals at CHR, and family strategies may also be helpful.	• Focus on engagement and goal-setting.	• Substance use screening tools and assessments are possible to implement through screen-share options in the majority of telepsychotherapy software. • Encourage telepsychotherapy family sessions if substance use is determined to be a concern. Family partnership is crucial during COVID-19 as most families are spending large amounts of time together inside.
Trauma	Individuals at CHR disproportionately experience trauma and victimization. Acute stress during the COVID-19 pandemic may exacerbate past or current trauma experiences for individuals at CHR.	• Assess for current trauma symptoms and safety (e.g., if living with an abusive individual). – First establish safety as it relates to having fundamental needs met (e.g., shelter, safe environment, food, access to other basic resources).	• Evaluate and test metacognitive beliefs. • Address and modify safety behaviors. • Generate and evaluate alternative explanations.	• Continue to engage in active symptom monitoring and safety planning through telepsychotherapy sessions and use of evidence-based smartphone apps (e.g., *PTSD Coach*). Such apps may be used as an adjunct with individuals at CHR during the pandemic to increase treatment

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		• Draw from evidence-based trauma approaches, such as *Trauma-Integrated Cognitive Behavioral Therapy for Psychosis*, which integrates strategies from Trauma-Focused Cognitive Behavioral Therapy, Prolonged Exposure, and Cognitive Processing Therapy.	• Engage in exposure (in combination with trauma-specific approaches).	engagement, monitor triggers, and provide individualized coping skills. • Encourage telepsychotherapy sessions with family and/or other supportive individuals to bolster safety planning, support, and use of coping skills.
Attention/ Educational and/or Occupational Support	Youth at CHR are at higher risk of falling behind academically. They experience higher rates of long-term unemployment. The transition to online education and telework during the COVID-19 pandemic may affect attention, educational and vocational performance.	• Incorporate a collaborative goal setting approach to facilitate the adjustment. • Adapt education support services to help navigate the new educational environment and mitigate stress (e.g., accessing accommodation services, adjusting course load selection). • Employ problem solving strategies and assertive communication skills to manage transition to telework.	• Focus on engagement and goal-setting.	• Use telepsychotherapy to help clients focus on improving academic performance (study skills, time management, use of resources). • Use screen sharing in telepsychotherapy to assist in practical strategies (e.g., facilitate the organization of assignments and/or tasks).
CHR Symptom Monitoring	CHR symptom monitoring can be regularly used to promote engagement, individualize treatment, and detect symptom worsening or transition to psychosis during the COVID-19 pandemic.	• Clinicians can utilize commonly used tools, such as the Prime Screen-Revised and the Prodromal Questionnaire-Brief. Use of the more in-depth Structured Interview of Psychosis-Risk Syndromes (SIPS) may also be warranted in certain situations via videoconferencing.	• Provide psychoeducation and maintain engagement.	• These tools can be used during telepsychotherapy sessions or given before sessions. For example, our team offers the Prime Screen online for clients to complete (www.sfwmaryland.com) through a HIPAA-compliant portal, which generates a PDF and interpretation of results for clients and clinicians to review during a telepsychotherapy session (using screen-sharing). More in-depth conversation and interviewing can take place during telepsychotherapy.
Community Engagement	A cornerstone of many early psychosis intervention programs is community engagement and outreach to identify people in the early stages of psychosis. Outreach events and trainings typically take place in-person, but this approach is not feasible during physical distancing mandates due to the COVID-19 pandemic.	• Use tele platforms to provide live and/or recorded trainings, as well as consultation to providers (e.g., on inpatient units). • Update relevant clinic/organization websites and post daily on social media regarding COVID-19, mental health, and early psychosis resources (e.g., links to free webinars and trainings through the Substance Abuse and Mental Health Services Association and the Psychosis-Risk and Early Psychosis Program Network). • Maintain and facilitate partnerships with local organizations (e.g., National Alliance on Mental Illness) and other	• Provide psychoeducation.	• Share live and/or recorded trainings for continuing education credits, and provide consultation. • Connect community organizations, referral sources, clients, families, and other supports to these online resources as appropriate.

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		early psychosis programs in order to promote community engagement		

Table 2.

Client Examples and Interventions

Client A	Client A presented with long-standing negative symptoms related to CHR (anhedonia, avolition), in addition to comorbid social anxiety and mild autism spectrum disorder. Client is living with their grandparents and siblings. Client and their family were seeking treatment to increase comfort with social interactions, stabilize mood, and create independence from grandparents. Prior to the COVID-19 outbreak, treatment was focusing on behavioral activation (especially encouraging time out of the home), exposure to face-to-face social interaction, and cognitive restructuring of maladaptive thought patterns related to social engagement.	
	Clinical concern	**Example solution/intervention [relevant module(s)]** *
	Adjusting to a telepsychotherapy session when client experiences negative symptoms that impact social interactions (flat affect, delayed response time), and may potentially disrupt rapport or therapeutic engagement	• Adapt therapy session length and frequency to optimize engagement and minimize client discomfort by scheduling shorter, but more frequent sessions (moving from one 50-minute session a week, to two 20-minute sessions) [Module: Engagement] • Use screen sharing function on telehealth platforms to allow a mutual focus on a document/activity in order to increase comfort by minimizing spotlight on face-to-face conversation [Modules: Coping; Engagement] • Brainstorm preferred methods of "checking-in" during session to ensure the Client is present and focused on discussion [Modules: Engagement; Problem Solving] • Use the non-optimal communication conditions as an opportunity for in-vivo exposure to potentially challenging social interaction [Module: CBT-CHR - Exposure]
	Maintaining behavioral activation exercises during a "stay-at-home" order	• Transition focus of behavioral activation exercises to highlight those preferred by the Client, but still accessible within the home (i.e., rearranging furniture within bedroom, writing in a journal, completing a puzzle, online interaction). [Modules: Collaborative Goal Setting; Problem Solving] • Encourage safe, physically isolated outdoor activities (e.g., short walk while listening to music) [Modules: Coping; CBT-CHR – Activity Scheduling] • Check in throughout the week (text message, quick call) to encourage completion of activities [Module: Engagement]
	Transition in family dynamics that may occur when regular schedules are disrupted, and all family members are home due to a "stay-at-home" order	• Establish routines for learning, work, meals and family time [Modules: Family Therapy; Problem Solving] • Collaborate around a family plan for use of technology [Modules: Family Therapy; Problem Solving]
	Experiencing increased mood lability and the recurrence of urges to engage in nonsuicidal self-injury	• Incorporate more Dialectical-Behavioral Therapy (DBT) strategies and skills (e.g., chain analysis; distress tolerance skills) [Module: Comorbid Treatment] • Use videoconference screen sharing to jointly review DBT worksheets [Modules: Coping; Engagement] • Plan pleasant activities and physical activities that can be completed from home (e.g., joining an online fitness class) [Modules: Coping; CBT-CHR – Activity Scheduling] • Revise safety plan with client and family to add more virtual resources and other potential adult supports. Continue to reinforce protective factors [Module: Safety Planning]
Client B	Client B initiated treatment for positive symptoms related to CHR (hallucinations, delusions) that persisted over one year after a substance-induced attenuated psychosis experience. Client also presented with residual posttraumatic stress symptoms from childhood trauma (but did not meet full criteria for PTSD). Client is a college student who was living on campus up until the COVID-19 outbreak when they had to move back home with parents and siblings. Treatment focused on helping client to better understand the impact of their childhood trauma on current relationships and substance use, including psychoeducation about trauma and CHR, and coping strategies from Trauma Focused-CBT (TF-CBT) and Cognitive Processing Therapy (CPT). Distress tolerance skills were also used in conjunction with CBT-CHR strategies.	
	Clinical concern	**Example solution/intervention [relevant module(s)]** *

	Relapse of cannabis use	• Provide psychoeducation on cannabis use and associated risk of psychotic symptoms [Modules: Psychoeducation; Substance Use] • Use a decisional balance exercise [Module: Substance Use] • Complete functional analysis of cannabis use in the specific context of current physical isolation (i.e. is the cannabis use a way to cope with boredom, stress, sleep difficulties, etc.?) [Module: Substance Use]
	Adjusting to online courses	• Clarify class schedule, shifting expectations, availability of professors and TA virtual office hours [Modules: Coping; School/Occupation Support; Problem Solving] • Role-play methods of asking for support from faculty and visualizing the process. [Modules: Social Skills; Problem Solving]
	Adapting to "stay-at-home" order while keeping connected and active	• Brainstorm activities of interest [Module: Problem Solving] • Schedule work-out time with siblings at home [Modules: Coping; Family Therapy] • Revive mountain bike hobby (ordering parts, rebuilding, and going for a ride in neighborhood) [Module: Problem Solving] • Schedule video-chatting with friends [Module: Coping]
	Coping with exacerbation of posttraumatic stress and CHR symptoms	• Provide psychoeducation on exacerbation of trauma and CHR responses during times of acute stress, and continue TF-CBT and CPT work [Modules: Psychoeducation; Comorbid Treatment] • Assign self-guided therapy work on the *PTSD Coach* app (US Department of Veterans Affairs, 2020; e.g., trauma symptom tracking; mindfulness and relaxation skills) with clinician support [Modules: Coping; Comorbid Treatment] • Use videoconference screen sharing to review the posttraumatic stress symptom assessment PDF from the *PTSD Coach* app [Module: Assessment] • Use CBT-CHR skills to evaluate beliefs and generate alternative explanations [Module: CBT-CHR] • Provide more frequent, brief check-ins [Module: Engagement]
Client C	Client C sought treatment for depression and positive symptoms related to CHR (hallucinations, paranoia), specifically suspiciousness of others at work. Client also met criteria for obsessive-compulsive disorder. Mutual goals for treatment were to address suspiciousness and work difficulties, become more socially active, return to previous levels of effective functioning (e.g., increasing hope, connection with others, and sleep hygiene), and better manage distressing intrusive thoughts and images of physically harming friends and family. Prior to the COVID-19 outbreak, treatment focused on CHR and OCD psychoeducation, Exposure and Response Prevention (ERP), CBT-CHR, and behavioral activation, and building social connections.	
	Clinical concern	**Example solution/intervention [relevant module(s)]** *
	Feeling suspicious of others, including fears that their boss is plotting against them	• Build engagement and rapport, and identify thoughts, feelings, and behaviors [Module: CBT-CHR] • Generate and evaluate alternative explanations [Module: CBT-CHR]
	Minimizing violent intrusive thoughts and associated distress	• Recognize the connection between heightened stress and increased symptoms [Module: Psychoeducation; Comorbid Treatment] • Use of *NOCD: Effective Care for OCD app* (NOCD Inc, 2020) as an adjunct to treatment for psychoeducation, mindfulness, and ERP [Modules: Assessment; Coping] • Continue CBT-CHR work to target other safety behaviors and unhelpful thoughts [Module: CBT-CHR]
	Prioritizing healthy sleep behavior in the absence of a clear schedule or routine	• Create sleep goals (agreed upon sleep schedule, routine), and use external supports (e.g. caregiver assisted morning wake-ups, internet shutdown after certain time, blue light filters for electronic screens, alarm reminders for both wake up and bedtime) as needed [Modules: Problem Solving; Wellness]

		• Incorporate client's choice of YouTube videos for meditation and supporting sleep hygiene [Modules: Coping; Engagement]
	Maintaining clinical gains in regard to social activity and self-esteem during physical distancing due to COVID-19	• Establish adjusted social goals during the pandemic [Module: Collaborative Goal Setting] • Continue social engagement through alternative means (e.g., video-chatting with family and friends; joining an online gaming group; joining a writing group) [Module: Problem Solving]

Note.

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See modules in Thompson, Millman, et al., 2015