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Conceptual framework for telehealth strategies to increase family involvement in treatment and recovery for youth opioid use disorder

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Abstract

With opioid use at crisis levels, it is imperative to support youth ages with opioid use disorders (OUD) in taking medication and accessing behavioral services over long periods. This article presents a conceptual framework for telehealth strategies that can be adopted to increase family involvement across a four-stage continuum of youth OUD treatment and recovery: Treatment Preparation, Treatment Initiation, Treatment Stabilization, OUD Recovery. It first identifies provider-delivered tele-interventions that can enhance OUD services in each of the four stages, including family outreach, family engagement, family-focused intervention, and family-focused recovery maintenance. It then introduces several types of direct-to-family tele-supports that can be used to supplement provider-delivered interventions. These include both *synchronous* tele-supports (remote interactions that occur in real time) such as helplines, peer-to-peer coaching, and online support groups; and *asynchronous* tele-supports (communications that occur without participants being simultaneously present) such as automated text messaging, self-directed internet-based courses, and digital web support.

Keywords

family; opioid; telehealth; tele-intervention; tele-support; youth

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INTRODUCTION

Reliance on tele-intervention has skyrocketed since the outbreak of COVID-19 (US Department of Health and Human Services, 2020). Tele-interventions represent a particularly important and relatively untapped strategy to increase family involvement in treatment and recovery services for youth with opioid use disorders (OUD). Comprehensive reviews and meta-analyses consistently show that family-focused interventions are effective at improving substance use treatment engagement and outcomes across the lifespan (Ariss & Fairbairn, 2020). Yet, substance use services for youth rarely incorporate family members and concerned significant others (CSOs) in systematic fashion (Ventura & Bagley, 2017). The article presents a conceptual framework for leveraging provider-delivered tele-interventions and direct-to-family tele-supports to promote greater family involvement in routine OUD services for youth. The article first describes the urgent health problem of high prevalence of youth OUD coupled with poor youth engagement in OUD services. It then suggests telehealth strategies that can be used by practitioners representing multiple disciplines that routinely deliver services for OUD—including marriage and family therapists, other behavioral health specialists, physicians, and peer recovery counselors—to enhance family involvement across the continuum of treatment and recovery.

The proposed framework has two anchoring definitions. First, the term “youth” references the age span from middle adolescence through young adulthood—roughly, ages 16–25 years. Most studies of substance use treatment examine either adolescent samples or adult samples, not both. This article focuses on the bridging span of transition-age youth for several reasons. There is consensus in developmental neuroscience that cognitive and emotional maturation processes that directly shape risk-taking behaviors are dynamically active throughout this age span (Steinberg, 2014). Substance use problems that initiate during this span are especially pernicious to overall well-being and show comparatively poor response to intervention efforts (Fishman, Wenzel, Scodes, et al., 2020; National Center on Addiction and Substance Abuse, 2011). Also, family members and CSOs are highly salient influences on both substance use behavior and general well-being for this entire period (Hornberger & Smith, 2011; Steinberg, 2014).

Second, the term “telehealth” describes a broad set of behavioral health interventions and supports that are delivered remotely (i.e., not in-person) via widely used technology devices (e.g., smartphones, internet-enabled computers and tablets). Behavioral health providers currently use various technology platforms to deliver behavioral interventions—aka *tele-intervention*—particularly phone and video conferencing (Lin et al., 2019). In addition, a host of telehealth resources are available for self-managed client access in direct-to-consumer formats requiring little or no provider involvement—aka *tele-support*—including computerized protocols, web- and app-based programs, social media content, and automated text messaging and wearable devices (Sugarman et al., 2017).

Urgent national health problem: Youth OUD prevalence and poor service engagement

Opioid use and its sequelae constitute a national health emergency, with 1.6 million Americans meeting criteria for OUD (Substance Abuse and Mental Health Services Administration [SAMHSA], 2020). Although much attention has been paid to reducing

the impact of OUD in mature adults, less guidance is available specifically for youth ages 16–25. This age cohort is experiencing unprecedented levels of opioid-related consequences, with over 300,000 youth under the age of 26 meeting criteria for OUD in 2019 (SAMHSA, 2020). Nearly 1800 youth initiate heroin or pain reliever misuse each day (SAMHSA, 2020), and 8%–12% of those who engage in risky opioid use develop OUD (Vowles et al., 2015). Most alarmingly, the rate of lethal overdoses attributable to opioids in youth increased almost 60% from 2006 to 2015, from 3.4 deaths to 5.3 deaths per 100,000 (Ali et al., 2019). Data on the effect of the COVID-19 pandemic on opioid use and overdose in youth are still emerging, but initial estimates offer a dire picture: As of August 2020, over 40 states had reported increases in opioid-related mortality (American Medical Association, 2020).

Medication for opioid use disorder (MOUD), consisting of opioid agonist or antagonist medication combined with medication-supportive behavioral counseling, is the only evidence-based intervention for youth OUD (Volkow et al., 2019) and is recommended by national pediatric policy (American Academy of Pediatrics, 2016). OUD is commonly a chronic, relapsing-remitting disorder (Hser et al., 2015). Initiation onto one of three FDA-approved MOUDs (buprenorphine, naltrexone, methadone) typically occurs during acute episodes of care (e.g., treatment of withdrawal or “detoxification”), after which enduring MOUD over time (“maintenance”) is required to prevent recurrence of opioid use problems (“relapse”). Relapse is unfortunately common, in part due to profound barriers to access, retention and medication adherence, especially in youth (Alinsky et al., 2020).

With opioid use among youth at crisis levels, the OUD system of care is moving at a rapid pace to increase MOUD availability in multiple sectors, including specialty substance use treatment and primary care (American Academy of Pediatrics, 2016; Saloner et al., 2017). Despite these efforts, only a fraction of youth with OUD receive any treatment and even fewer receive MOUD. One study reviewed Medicaid claims across service settings in 11 states and found that only 24% of youth with OUD received medication; half received behavioral services without MOUD (Hadland et al., 2017). Studies of OUD services report universally low enrollment rates for youth, in the area of 10%–35% (see Alinsky et al., 2020; Borodovsky et al., 2018; Liebling et al., 2016). Moreover youth who do enter treatment are less likely to be retained compared to adults (Fishman, Wenzel, Scodes, et al., 2020; Schuman-Olivier et al., 2014). It is especially difficult to support youth in accessing OUD services across the long periods (from many months to several years) of acute and continuing care needed to accrue treatment benefits. One-quarter of youth who initiate MOUD leave treatment after the first week, and most studies place one-year MOUD adherence rates between 9% and 17% (see Chang et al., 2018; Matson et al., 2014).

Proposing a telehealth framework for family involvement in youth OUD services

This article presents telehealth strategies as emerging opportunities for increasing family/CSO involvement in youth OUD services—which we define to be inclusive of MOUD and related services—in order to boost currently abysmal rates of service engagement and enhance overall outcomes. Figure 1 depicts a conceptual framework designed to facilitate a shift for youth OUD services toward emphasizing family-focused telehealth strategies. Behavioral services for youth with substance use problems can be

conceptualized as a continuum—sometimes called a services cascade—consisting of the routine sequence of activities experienced by any given youth as they progress through the substance use services system (Belenko et al., 2017; Knight et al., 2016). For heuristic purposes specific to OUD, Figure 1 depicts this continuum as a client flow chart anchored by four overlapping stages (see also Hogue et al., 2021). Note that youth who enter the OUD services system typically experience episodic increases and decreases in opioid use—that is, a chronic course-of-disorder marked by regular use, remission, and recurrence—over a given time span (Buckheit et al., 2018; Fishman, Wenzel, Scodes, et al., 2020). For this reason movement along the continuum is often not linear, in that many youth transition both forward and backward (i.e., re-entering at an earlier juncture following a recurrence of problems) across stages.

As summarized in Figure 1, during *Treatment Preparation* (Stage 1) families can be integrated in OUD services using family outreach strategies implemented at multiple provider levels, and various roles that family members can play in facilitating service delivery can be introduced. During *Treatment Initiation* (Stage 2), families can be engaged in treatment activities via family alliance-building and family-centered goal-setting interventions. In addition, family members themselves can be linked to direct-to-family resources aimed at motivating their involvement in OUD services and optimizing interactions within their family; these supports can then be maintained throughout the treatment process. During *Treatment Stabilization* (Stage 3), family-oriented OUD education, family skills training, and systemic family therapy can help knit family members into the complex weave of medication and behavioral interventions for OUD. During *OUD Recovery* (Stage 4), family-based relapse prevention strategies can promote recovery maintenance by helping retain youth and family members/CSOs in both continuing provider-delivered care and direct-to-family supports for the duration of OUD recovery.

PUTTING TELEHEALTH TO WORK: PROVIDER-DELIVERED AND DIRECT-TO-FAMILY SERVICES

The remainder of this article identifies opportunities for using telehealth-based strategies to increase family involvement in OUD treatment and recovery activities. Several research-supported strategies that can enhance existing clinical practices for youth OUD—inclusive of primary, specialty, and residential care settings—are highlighted. It is well beyond the scope of this article to detail each identified strategy or provide implementation guidance. The article instead seeks to encourage provider initiative in pursuing additional information on appealing strategies, adopting those that address practice needs, and using adopted strategies individually or in combination (as consistent with a core elements approach to delivering evidence-based practices; Chorpita & Daleiden, 2009). In this way, the proposed conceptual framework can serve as both strategic guide and resource compendium.

Family-based tele-intervention for youth OUD: Provider-delivered services

Given the near-ubiquity of smartphones (Smith & Page, 2015) and widespread use of the internet among adolescents and adults (Pew Research Center, 2020) in the United States, OUD services providers have unprecedented opportunities to employ a comprehensive

range of tele-interventions for youth and their families. Notably, extant research indicates that substance use interventions delivered via videoconference produce client retention, satisfaction, and outcomes comparable to or even surpassing those of in-person care (Lin et al., 2019). This appears true also for tele-interventions aimed at couples and families (Wrape & McGinn, 2019), whereby providers can take advantage of communicating with clients in their natural ecologies (Gros et al., 2013). As depicted in Figure 1 and illustrated below, tele-intervention strategies create exciting possibilities for developing new practices, and adapting existing ones, to productively involve families in multiple treatment and recovery processes for youth OUD.

Stage 1: Family outreach—Successful family outreach, especially for traditionally underserved and difficult-to-enroll families, requires provider commitment at all levels (e.g., administrative, billing, clinical services) to involving family members and CSOs in services. Assertive family outreach at the start of service contact, including messaging about the essential role of medication, can greatly facilitate OUD treatment preparation (Fishman et al., 2020). Well-established principles of assertive family outreach include accessibility promotion; planning for and directly addressing common barriers to treatment, both logistical (e.g., insufficient time, lack of resources, agency wait list) and attitudinal (e.g., perceived costs and benefits of treatment, prior unhelpful treatment experiences); and family empowerment (see Becker et al., 2018; Ozechowski & Waldron, 2010). During this stage provider staff can preview the supportive roles that family members can play at various stages of treatment and recovery, including the enormous value of maintaining a home environment that fosters treatment goals and strategies. One evidence-based outreach model for difficult-to-enroll families is structural-strategic systems engagement (Szapocznik et al., 1988), a sequential protocol for assessing and normalizing enrollment barriers, allying with family members to conjointly address barriers, and altering family interactions that appear to be preventing members from working together effectively to enter treatment. The premise of a wide net and persistent follow through can be applied to various telehealth modalities: text, phone, video calls, and so forth. For example, a brief but potentially powerful outreach intervention is texting a caregiver immediately after a phone call during which an initial session was scheduled, in order to thank them for their time, reinforce their willingness to enroll, and confirm the appointment.

Stage 2: Family engagement—Treatment initiation can be solidified by employing family engagement techniques known to increase treatment motivation and participation among youth and their families. Components of successful family engagement include anticipating how family resources and dynamics could impact treatment initiation, building therapeutic alliances with multiple family members, and adroitly managing family interactions during initial clinical encounters (Buckingham et al., 2016; Liddle, 1995; Lindsey et al., 2014). Centerpiece family engagement strategies for youth OUD include relational reframing of opioid use as an individual behavior problem with a family network solution (see Diamond & Siqueland, 1998; Hogue et al., 2019) and linking client decision-making about the course of MOUD to the existing lattice of family supports (Fishman, Wenzel, Vo, et al., 2020). A strong example of telehealth-enhanced engagement tailored for youth OUD is the Youth Opioid Recovery Support intervention (Fishman, Wenzel, Vo, et

al., 2020), which aims to increase MOUD adherence and prevent relapse by emphasizing tele-interventions such as group text messaging among providers, family members, and youth, as well as coordinating video sessions individually and conjointly with youth and CSOs.

Although the bulk of research on family engagement in substance use treatment has examined adolescent-aged youth, one model has demonstrated robust effects in training CSOs to assist with enrolling both youth and mature adults into treatment (Archer et al., 2020; Kirby et al., 2017): Community Reinforcement and Family Training (CRAFT; Smith & Meyers, 2004). CRAFT features treatment entry training, whereby CSOs learn to (a) recognize appropriate times and ways to motivate persons with substance use problems to enter treatment and (b) coordinate with providers for rapid entry; and also communication skills training, whereby CSOs learn to increase productive interactions while reducing conflict with substance-using loved ones (Kirby et al., 2017). Telehealth can directly facilitate treatment engagement via its flexibility in terms of breaking one session into smaller parts. For example, one half of a session could be spent with a youth alone to explore their feelings about inviting their caregiver to participate in MOUD counseling, with the second half including both the youth and caregiver for psychoeducation about how MOUD services are expected to proceed.

Stage 3: Family-focused intervention—There is strong evidence that including CSOs as active participants in treatment services for persons with substance use disorders can boost treatment effects for youth and adults alike (Ariss & Fairbairn, 2020; Hogue et al., 2018). For youth with OUD, four family-focused intervention strategies are particularly germane. First, family psychoeducation can provide structured information about OUD symptoms, disease course, impacts on multiple domains of functioning, medication options, and research-supported MOUD practices. In general, family psychoeducation has been shown to enhance medication and behavioral treatment effects (e.g., Lincoln et al., 2007), increase client adherence to medication protocols (e.g., Cummings & Fristad, 2007), and improve client functioning (e.g., Ferrin et al., 2014) for a variety of behavioral disorders. While the evidence is clear that psychoeducation is effective, providers should be sure to work within their scope of practice; prescribing medication remains in the domain of licensed medical providers only. A vital role that non-medical providers can play is supporting youth and families in connecting with medical professionals to obtain medical advice and meet medical needs. Second, families can be coached to assist and support medication adherence, much as they would for a sick loved one in need with any medical condition (e.g., diabetes; Lewin et al., 2009), especially any young person with only partially developed independent living skills and addiction-compromised judgement (see Levy et al., 2018). Third, family skills training aims to teach evidence-based coping, communication, and problem-solving skills to targeted family members. Examples include manualized models to improve relationship quality between adult partners (e.g., behavioral couple therapy; see O’Farrell et al., 2017) or among other family members (e.g., behavioral family therapy; see Donohue et al., 2014), as well as discrete protocols for teaching granular parenting skills or family interaction skills (e.g., Esposito-Smythers et al., 2011). Finally, family systems therapy addresses both intrafamilial relationship processes (e.g., roles,

attachments, cohesion, conflict) and relation-focused processes between family members and extrafamilial systems with which families interact (Hogue et al., 2017). Hallmarks of family systems therapy for youth substance use include maintaining a fundamentally egalitarian approach to treatment collaboration and pursuing changes in family relationships as the primary solution for substance use and related problems (see Hogue et al., 2019).

Stage 4: Family-focused recovery maintenance—Family-focused recovery maintenance can promote relapse prevention and recovery among youth with OUD in several ways. By leveraging family-focused interventions such as those described for Stages 2 and 3, providers can involve families in post-treatment continuing care intended to solidify treatment gains, reinforce learned coping skills, and for youth who struggle in recovery, facilitate re-entry into active treatment services (Blodgett et al., 2014). Providers and families together can formulate and monitor long-term recovery management plans for target youth, emphasizing quality-of-life interventions such as educational and vocational training, prosocial leisure engagement, case management, peer-to-peer supports, and self-help sobriety promotion (Dennis et al., 2014); CSOs themselves can become involved in numerous aspects of these activities. Not least, providers can encourage and actively link families to the manifold direct-to-family supports available for family members and CSOs affected by OUD, including those described in the next section.

Unique opportunities and challenges of family-focused tele-intervention—Meaningful family participation in services is a crucial resource in a young person's treatment and recovery from OUD (Hornberger & Smith, 2011). Research on barriers to family participation in youth behavioral services finds that providers are consistently stymied by structural and logistical challenges to engaging family/CSOs, individually-focused treatment protocols deemed rigid and time-consuming, and overall lack of services coordination (e.g., Baker-Ericzén et al., 2013). Tele-intervention creates opportunities to counter participation barriers by involving family members in youth OUD services in brief and targeted ways. For example, rather than carving out time from work and family responsibilities to attend in-person sessions, family members can join “on the spot” for all or parts of sessions. Tele-intervention also facilitates coordinated participation of family members who live apart (Wrape & McGinn, 2019). This improved access would make it possible for siblings to learn information about their loved one's OUD and course of treatment, separated or divorced parents living in different states to develop a plan to support their child's recovery, and titration of family involvement over time in a fluid and flexible way, to name a few examples.

Acknowledging that tele-intervention introduces numerous cautions regarding confidentiality, privacy, and technology user limitations, as well as prohibitive barriers to physical health exams, it also creates meaningful access to home environments (Burgoyne & Cohn, 2020). In the past two decades, home-based adaptations of family therapy emerged as a necessary innovation to increase family participation for families with limited resources who are less likely to engage in clinic-based treatment (Fowles et al., 2018). Practitioners delivering tele-interventions are, in a fashion, recreating this innovation. For example, videoconferencing enables practitioners to ask clients to exhibit their homes and show where

they store their MOUD, observe medication adherence, and express curiosity about routines for MOUD—thereby opening numerous lines of collaborative inquiry with youth and CSOs.

Providers who are adapting to the opportunities and demands of tele-intervention, while simultaneously pushing the boundaries of traditionally individual-centric OUD care by inviting family/CSO participation, may require additional support. Live peer observation and supervision have long been a central part of family therapy training (Celano et al., 2010). Preliminary research on videoconferencing suggests the value of live supervision for clients and practitioners alike (Jordan & Shearer, 2019), which can be managed easily without the need for a one-way mirror or expensive audiovisual systems. Additionally, there is increased potential for conjoint sessions with other providers involved in the youth's OUD treatment—prescribing physicians, case managers, sober living staff, and so forth—which further promotes comprehensive and integrated care. There is also increased ability to record sessions for review and supervision in contexts in which providers are already using technology.

Family-focused OUD services via telehealth may present challenges in terms of relationship building relative to in-person services. It may be important for practitioners to be more explicit with praise, worry, curiosity and other emotions during video sessions, when salient in-person cues are not available to clients. In turn, practitioners may need to be more direct when inviting family members to share internal experiences. For example, when offering psychoeducation on MOUD, they may need to pause and ask for questions, feedback, and reactions much more than if offering the same intervention in person, to offset pitfalls of screen distance, disengagement, and general screen fatigue. Also, whereas telehealth may have been viewed as a temporary necessity in March 2020, it seems certain to remain in long-term use, so that providers should initiate more regular conversation about when and how to balance in-person versus remote meetings. For example, sessions that involve medication injections require in-person meetings, whereas family therapy involving members in distant locations might proceed via telehealth exclusively. Other limitations may be introduced when working with families in which there is domestic violence (a partner may be listening covertly), worsening mental health or substance use symptoms that are harder to notice on screen/phone, persons with cognitive or social impairments who find it especially difficult to engage with others via screen/phone, or inadequate access to required technology services.

Lastly, tele-intervention strategies by themselves cannot overcome or mitigate challenges to providing culture-, race- and gender-appropriate care that exist in equal measure for standard in-person practices. Adopting a stance of “critical consciousness” (Garcia et al., 2009) can be invaluable for understanding families' lived experiences regardless of their contextual status. Whether youth and their families, including those affected by OUD (Santoro & Santoro, 2018), have experienced current and/or historical oppression based on any aspect of social identity, critical consciousness can enable practitioners to recognize oppression and privilege and to accept them as such, rather than seeking alternative explanations for family distress, which can in turn validate family members and promote a stronger collaborative relationship.

Family-based tele-support for youth OUD: Direct-to-family services

This section describes several types of direct-to-family tele-supports that can be offered to supplement provider-delivered treatment and recovery interventions during the Treatment Initiation, Treatment Stabilization, and OUD Recovery stages of youth OUD services (see Figure 1). The literature on remote education provides a useful backdrop for discussing the potential for direct-to-family tele-supports, particularly the distinction between *synchronous* formats (remote interactions that occur in real time, allowing for in-the-moment communication between participants) versus *asynchronous* formats (communication that occurs without participants being simultaneously present; Scheuller & Torous, 2020). Research suggests that synchronous formats, particularly videocasting, maximize learners' sense of participation (Moore, 1993). Yet, asynchronous formats present obvious advantages in accessibility and availability, especially for families challenged in coordinating member schedules to arrange conjoint meetings (Garrison et al., 2000). A key caveat is that research evaluating the effectiveness of direct-to-family tele-support services, including those identified below, is scarce (Scheuller & Torous, 2020).

Synchronous tele-supports—Examples of synchronous tele-supports for youth and families affected by substance use problems include helplines, peer-to-peer coaching, networking forums, and online support groups. Helpline interventions are designed for families/CSOs to access information and resources via telephone. A typical contact involves assessment, support, and validation, and developing a plan of action to address problematic substance use and related crises (Fedunina, 2011). To enhance family engagement, follow-up can be coordinated by email with online or in-person resources to support family/CSO efforts. Peer-to-peer coaching services initiate connection with “parent peers” who have experienced similar struggles themselves, for example, have a child in recovery or have lost a child due to substance use. Coaching services in which parent peers are formally trained in evidence-based counseling practices have generated positive utility and satisfaction ratings from end users (Carpenter et al., 2020). Finally, networking forums and online support groups allow family/CSOs to seek support from peers with similar lived experience via convenient platforms such as web browsers and smartphone apps (Becker et al., 2017). Some online forums and support groups are moderated by professionals or volunteers with relevant expertise in treatment or recovery counseling.

Asynchronous tele-supports—Asynchronous tele-supports include automated text messaging, self-directed internet-based courses, and digital web support, which has been given new life via social media platforms. Automated texting services can be offered to families/CSOs seeking guidance who may not be ready or prefer not to interact with providers directly. Such services incorporate supportive information and guidance, with adaptive intervention software enabling users to customize the number, timing, and content of messages received per day/week (see Muench et al., 2013). Typical content for families affected by substance use includes strategies for improved communication with youth, links to resources, and encouragement and validation.

Automated texting can be delivered as a standalone intervention or as an adjunct to self-directed internet-based courses, which enable families to select from a menu of modules

containing substance use education and demonstrating relevant behavioral strategies to reduce use. Internet-based parenting programs have been shown to be effective in improving family communication (Feil et al., 2011), reducing youth behavioral problems (Cotter et al., 2013), and preventing youth substance use (Schwinn et al., 2010). Investigations testing internet-based programs among caregivers of youth with problematic substance use are in progress (see Becker et al., 2017).

With the exception of internet-based programs, existing asynchronous supports for substance use problems predominantly target the person who is using (e.g., Hussey & Flynn, 2019). This includes social media platforms such as Facebook, Instagram, and TikTok that are increasingly used to provide and seek information and support related to recovery (e.g., D'Agostino et al., 2017). Asynchronous platforms could feasibly be extended to provide support directly to family members and CSOs, and research suggests there is a robust market for such services. In a survey of caregivers of adolescents enrolled in outpatient substance use treatment, 91% reported a desire for text-based aftercare support that included parenting-related content on improving communication, delivering consequences, and monitoring substance involvement (Ryan-Pettes et al., 2019). Social media platforms also have potential for engaging family/CSOs. A recent study that surveyed caregivers of justice-involved youth found high rates of social media use and interest in social media-based parenting support (Folk et al., 2020).

FINAL NOTES ON SHIFTING TO FAMILY-FOCUSED TELEHEALTH: POTENTIAL REWARDS AND LIMITATIONS

Promoting telehealth to increase family involvement in youth OUD treatment and recovery is a massive challenge. Family engagement is underutilized despite the evidence base, and telehealth strategies are novel for most OUD service providers. In this vein, the proposed conceptual framework challenges the national OUD service system to adopt a dual paradigm shift: Move from individual-focused to family-focused intervention, and also, from solely in-office care to combined in-office and telehealth care that is thoughtfully and intentionally utilized. Shifting the culture and practice habits of youth OUD providers to incorporate family-focused telehealth will require transformational changes in professional education within several disciplines that until recently have not regularly adopted tele-interventions in training or practice. Marriage and family therapists are especially prepared to spearhead this shift. As providers inevitably gain familiarity with online learning formats, and grow partnerships with training entities that use online learning strategies, the viability and sustainability of telehealth-based clinical practices in routine OUD care may be correspondingly boosted.

By the same token, this shift will require providers to devote more time and resources to coordinating services across settings and tele-platforms, with the onus falling on practitioners, particularly when family members are unfamiliar with telehealth and/or uncertain about their role in supporting their youth. Moreover, significant limitations that exist for digital behavioral health interventions writ large certainly pertain in full measure to family-focused telehealth. These limitations include disappointing rates of intervention

completion, concerns about privacy and security that deflate motivation to use digital interventions, and design quality and packaging features that fit uneasily with common user experiences and expectations (see Schueller & Torous, 2020). It is beyond the purpose and scale of this article to specify and address these critical issues. Instead, the conceptual framework offers rationale, encouragement, and initial direction for embracing a dual paradigm shift, addressing existing areas of need in systematic and pragmatic fashion, and ultimately enhancing OUD outcomes for affected youth and their loved ones. Looking ahead, research can inform the shift toward greater use of family-focused telehealth strategies by documenting their benefits, and inevitable disappointments, in real-world clinical practice. Some promising areas for investigation are: promoting family inclusion in telehealth-based OUD identification procedures, both professional screening methods and self-referral processes; testing whether treatment activities delivered primarily or exclusively via telehealth strategies significantly boost youth and family/CSO engagement and retention in OUD services, especially long-term MOUD adherence; and assessing whether and how telehealth-based recovery planning can successfully enhance family involvement in youth recovery supports and also encourage greater degrees of family member self-care and wellness.

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REFERENCES

- Ali B, Fisher DA, Miller TR, Lawrence BA, Spicer RS, Swedler DI, & Allison J (2019). Trends in drug poisoning deaths among adolescents and young adults in the United States, 2006–2015. *Journal of Studies on Alcohol and Drugs*, 80, 201–210. [PubMed: 31014465]
- Alinsky RH, Zima BT, Rodean J, Matson PA, Laroche MR, Adger H, Bagley SM, & Hadland SE (2020). Receipt of addiction treatment after opioid overdose among medicaid-enrolled adolescents and young adults. *JAMA Pediatrics*, 174, e195183. [PubMed: 31905233]
- American Academy of Pediatrics Committee on Substance Use and Prevention. (2016). Medication-assisted treatment of adolescents with opioid use disorders. *Pediatrics*, 138(3), e20161893. [PubMed: 27550978]
- American Medical Association. (2020). Issue brief: Reports of increases in opioid related overdose and other concerns during COVID pandemic. Advocacy Resource Center. Retrieved from <https://www.ama-assn.org/system/files/2020-08/issue-brief-increases-in-opioid-related-overdose.pdf>
- Archer M, Harwood H, Stevelink S, Rafferty L, & Greenberg N (2020). Community reinforcement and family training and rates of treatment entry: A systematic review. *Addiction*, 115, 1024–1037. [PubMed: 31770469]
- Ariss T, & Fairbairn CE (2020). The effect of significant other involvement in treatment for substance use disorders: A meta-analysis. *Journal of Consulting and Clinical Psychology*, 88, 526–540. [PubMed: 32162930]
- Baker-E riczén MJ, Jenkins MM, & Haine-Schlagel R (2013). Therapist, parent, and youth perspectives of treatment barriers to family-focused community outpatient mental health services. *Journal of Child and Family Studies*, 22, 854–868. [PubMed: 24019737]
- Becker KD, Boustani M, Gellatly R, & Chorpita BF (2018). Forty years of engagement research in children's mental health services: Multidimensional measurement and practice elements. *Journal of Clinical Child & Adolescent Psychology*, 47, 1–23. [PubMed: 28574780]

- Becker SJ, Hernandez L, Spirito A, & Conrad S (2017). Technology-assisted intervention for parents of adolescents in residential substance use treatment: protocol of an open trial and pilot randomized trial. *Addiction Science & Clinical Practice*, 12, 1. [PubMed: 28049542]
- Belenko S, Knight D, Wasserman GA, Dennis M, Wiley T, Taxman FS, Oser C, Dembo R, Robertson A, & Sales J (2017). The Juvenile Justice Behavioral Health Services Cascade: A new framework for measuring unmet substance use treatment services needs among adolescent offenders. *Journal of Substance Abuse Treatment*, 74, 80–91. [PubMed: 28132705]
- Blodgett JC, Maisel NC, Fuh IL, Wilbourne PL, & Finney JW (2014). How effective is continuing care for substance use disorders? A meta-analytic review. *Journal of Substance Abuse Treatment*, 46, 87–97. [PubMed: 24075796]
- Borodovsky JT, Levy S, Fishman M, & Marsch LA (2018). Buprenorphine treatment for adolescents and young adults with opioid use disorders: A narrative review. *Journal of Addiction Medicine*, 12, 170. [PubMed: 29432333]
- Buckheit KA, Moskal D, Spinola S, & Maisto SA (2018). Clinical course and relapse among adolescents presenting for treatment of substance use disorders: Recent findings. *Current Addiction Reports*, 5, 174–191.
- Buckingham SL, Brandt NE, Becker KD, Gordon D, & Cammack N (2016). Collaboration, empowerment, and advocacy: Consumer perspectives about treatment engagement. *Journal of Child and Family Studies*, 25, 3702–3715.
- Burgoyne N, & Cohn AS (2020). Lessons from the transition to relational teletherapy during COVID-19. *Family Process*, 59(3), 974–988. 10.1111/famp.12589 [PubMed: 32692867]
- Carpenter KM, Foote J, Hedrick T, Collins K, & Clarkin S (2020). Building on shared experiences: The evaluation of a phone-based parent-to-parent support program for helping parents with their child's substance misuse. *Addictive Behaviors*, 100, 106103. [PubMed: 31622945]
- Celano MP, Smith CO, & Kaslow NJ (2010). A competency-based approach to couple and family therapy supervision. *Psychotherapy: Theory, Research, Practice, Training*, 47, 35.
- Chang DC, Klimas J, Wood E, & Fairbairn N (2018). Medication-assisted treatment for youth with opioid use disorder: Current dilemmas and remaining questions. *The American Journal of Drug and Alcohol Abuse*, 44, 143–146. [PubMed: 29190156]
- Chorpita BF, & Daleiden EL (2009). Mapping evidence-based treatments for children and adolescents: Application of the distillation and matching model to 615 treatments from 322 randomized trials. *Journal of Consulting and Clinical Psychology*, 77, 566–579. [PubMed: 19485596]
- Cotter KL, Bacallao M, Smokowski PR, & Robertson CI (2013). Parenting interventions implementation science: How delivery format impacts the Parenting Wisely program. *Research on Social Work Practice*, 23, 639–650.
- Cummings CM, & Fristad MA (2007). Medications prescribed for children with mood disorders: Effects of a family-based psychoeducation program. *Experimental and Clinical Psychopharmacology*, 15, 555. [PubMed: 18179308]
- D'Agostino AR, Optican AR, Sowles SJ, Krauss MJ, Escobar Lee K, & Cavazos-Rehg PA (2017). Social networking online to recover from opioid use disorder: A study of community interactions. *Drug and Alcohol Dependence*, 181, 5–10. [PubMed: 29024875]
- Dennis ML, Scott CK, & Laudet A (2014). Beyond bricks and mortar: Recent research on substance use disorder recovery management. *Current Psychiatry Reports*, 16, 442. [PubMed: 24557873]
- Diamond G, & Siqueland L (1998). Emotions, attachment, and the relational reframe: The first session. *Journal of Systemic Therapies*, 17, 36–50.
- Donohue B, Azrin NH, Bradshaw K, Van Hasselt VB, Cross CL, Urgelles J, Romero V, Hill HH, & Allen DN (2014). A controlled evaluation of family behavior therapy in concurrent child neglect and drug abuse. *Journal of Consulting and Clinical Psychology*, 82, 706. [PubMed: 24841866]
- Espósito-Smythers C, Spirito A, Kahler CW, Hunt J, & Monti P (2011). Treatment of co-occurring substance abuse and suicidality among adolescents: A randomized trial. *Journal of Consulting and Clinical Psychology*, 79, 728–739. [PubMed: 22004303]
- Fedunina NY (2011). Literature review on help-lines for children and parents. *Counseling Psychology and Psychotherapy*, 19, 70–90.

- Feil EG, Gordon D, Waldron H, Jones LB, & Widdop C (2011). Development and pilot testing of an internet-based version of Parenting Wisely. *The Family Psychologist: Bulletin of the Division of Family Psychology*, 27, 22.
- Ferrin M, Moreno-Granados JM, Salcedo-Marin MD, Ruiz-Veguilla M, Perez-Ayala V, & Taylor E (2014). Evaluation of a psychoeducation programme for parents of children and adolescents with ADHD: immediate and long-term effects using a blind randomized controlled trial. *European Child & Adolescent Psychiatry*, 23, 637–647. [PubMed: 24292412]
- Fishman M, Wenzel K, Scodes J, Pavlicova M, Lee JD, Rotrosen J, & Nunes E (2020). Young adults have worse outcomes than older adults: Secondary analysis of the X:BOT trial of extended release naltrexone versus buprenorphine for opioid use disorder. *Journal of Adolescent Health*, 67, 735–736.
- Fishman M, Wenzel K, Vo H, Wildberger J, & Burgower R (2020). A pilot RCT of assertive treatment including family involvement and home delivery of medication for young adults with OUD. *Addiction*, 116(3), 548–557. [PubMed: 32621368]
- Folk JB, Harrison A, Rodriguez C, Wallace A, & Tolou-Shams M (2020). Feasibility of social media-based recruitment and perceived acceptability of digital health interventions for caregivers of justice-involved youth: Mixed methods study. *Journal of Medical Internet Research*, 22, e16370. [PubMed: 32352388]
- Fowles TR, Masse JJ, McGoron L, Beveridge RM, Williamson AA, Smith MA, & Parrish BP (2018). Home-based vs. clinic-based parent–child interaction therapy: Comparative effectiveness in the context of dissemination and implementation. *Journal of Child and Family Studies*, 27, 1115–1129.
- Garcia M, Kosutic I, McDowell T, & Anderson SA (2009). Raising critical consciousness in family therapy supervision. *Journal of Feminist Family Therapy*, 21, 18–38.
- Garrison DR, Anderson T, & Archer W (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2, 87–105. 10.1016/S1096-7516(00)00016-6
- Gros DF, Morland LA, Greene CJ, Acierno R, Strachan M, Egede LE, Tuerk PW, Myrick H, & Frueh BC (2013). Delivery of evidence-based psychotherapy via video telehealth. *Journal of Psychopathology and Behavioral Assessment*, 35, 506–521. 10.1007/s10862-013-9363-4
- Hadland SE, Wharam JF, Schuster MA, Zhang F, Samet JH, & Laroche MR (2017). Trends in receipt of buprenorphine and naltrexone for opioid use disorder among adolescents and young adults, 2001–2014. *JAMA Pediatrics*, 171, 747–755. 10.1001/jamapediatrics.2017.0745 [PubMed: 28628701]
- Hogue A, Becker SJ, Fishman M, Henderson CE, & Levy S (2021). Youth OUD treatment during and after COVID: Increasing family involvement across the services continuum. *Journal of Substance Abuse Treatment*, 120, 108159. 10.1016/j.jsat.2020.108159 [PubMed: 33298299]
- Hogue A, Bobek M, Dauber S, Henderson CE, McLeod BD, & Southam-Gerow MA (2017). Distilling the core elements of family therapy for adolescent substance use: Conceptual and empirical solutions. *Journal of Child & Adolescent Substance Abuse*, 26, 437–453. [PubMed: 30705581]
- Hogue A, Bobek M, Dauber S, Henderson CE, McLeod BD, & Southam-Gerow MA (2019). Core elements of family therapy for adolescent behavior problems: Empirical distillation of three manualized treatments. *Journal of Clinical Child and Adolescent Psychology*, 48, 29–41. [PubMed: 30657722]
- Hogue A, Henderson CE, Becker SJ, & Knight DK (2018). Evidence base on outpatient behavioral treatments for adolescent substance use, 2014–2017: Outcomes, treatment delivery, and promising horizons. *Journal of Clinical Child & Adolescent Psychology*, 47, 499–526. [PubMed: 29893607]
- Hornberger S, & Smith SL (2011). Family involvement in adolescent substance abuse treatment and recovery: What do we know? What lies ahead? *Children & Youth Services Review*, 33, S70–S76.
- Hser YI, Evans E, Grella C, Ling W, & Anglin D (2015). Long-term course of opioid addiction. *Harvard Review of Psychiatry*, 23, 76–89. [PubMed: 25747921]
- Hussey D, & Flynn KC (2019). The utility and impact of the addiction comprehensive health enhancement support system (ACHESS) on the substance abuse treatment adherence among youth in an intensive outpatient program. *Psychiatry Research*, 281, 112580. [PubMed: 31627070]

- Jordan SE, & Shearer EM (2019). An exploration of supervision delivered via clinical video telehealth (CVT). *Training and Education in Professional Psychology*, 13, 323.
- Kirby KC, Benishek LA, Kerwin ME, Dugosh KL, Carpenedo CM, Bresani E, Haugh JA, Washio Y, & Meyers RJ (2017). Analyzing components of Community Reinforcement and Family Training (CRAFT): Is treatment entry training sufficient? *Psychology of Addictive Behaviors*, 31, 818. [PubMed: 28836796]
- Knight D, Belenko S, Wiley T, Robertson A, Arrigona N, Dennis M, Bartkowski JP, McReynolds LS, Becan JE, Knudsen HK, Wasserman GA, Rose E, DiClemente R, Leukefeld C, & the JJ-TRIALS Cooperative. (2016). Study protocol: Juvenile Justice—Translational Research on Interventions for Adolescents in the Legal System (JJ-TRIALS). *Implementation Science*, 11, 57. [PubMed: 27130175]
- Levy S, Mountain-Ray S, Reynolds J, Mendes SJ, & Bromberg J (2018). A novel approach to treating adolescents with opioid use disorder in pediatric primary care. *Substance Abuse*, 39, 173–181. [PubMed: 29595410]
- Lewin AB, LaGreca AM, Geffken GR, Williams LB, Duke DC, Storch EA, & Silverstein JH (2009). Validity and reliability of an adolescent and parent rating scale of type 1 diabetes adherence behaviors: The Self-Care Inventory (SCI). *Journal of Pediatric Psychology*, 34, 999–1007. [PubMed: 19423660]
- Liddle HA (1995). Conceptual and clinical dimensions of a multidimensional, multisystems engagement strategy in family-based adolescent treatment. *Psychotherapy: Theory, Research, Practice, Training*, 32, 39–58.
- Liebling EJ, Yedinak JL, Green TC, Hadland SE, Clark MA, & Marshall BD (2016). Access to substance use treatment among young adults who use prescription opioids non-medically. *Substance Abuse Treatment, Prevention, and Policy*, 11, 38. [PubMed: 27894311]
- Lin LA, Casteel D, Shigekawa E, Weyrich MS, Roby DH, & McMenamin SB (2019). Telemedicine-delivered treatment interventions for substance use disorders: A systematic review. *Journal of Substance Abuse Treatment*, 101, 38–49. [PubMed: 31006553]
- Lincoln TM, Wilhelm K, & Nestoriuc Y (2007). Effectiveness of psychoeducation for relapse, symptoms, knowledge, adherence and functioning in psychotic disorders: A meta-analysis. *Schizophrenia Research*, 96, 232–245. [PubMed: 17826034]
- Lindsey MA, Brandt NE, Becker KD, Lee BR, Barth RP, Daleiden EL, & Chorpita BF (2014). Identifying the common elements of treatment engagement interventions in children’s mental health services. *Clinical Child and Family Psychology Review*, 17, 283–298. [PubMed: 24379129]
- Matson SC, Hobson G, Abdel-Rasoul M, & Bonny AE (2014). A retrospective study of retention of opioid-dependent adolescents and young adults in an outpatient buprenorphine/naloxone clinic. *Journal of Addiction Medicine*, 8, 176–182. [PubMed: 24695018]
- Moore MG (1993). Theory of transactional distance. In Keagan D (Ed.), *Theoretical principles of distance education* (pp. 22–29). Routledge.
- Muench F, Weiss RA, Kuerbis A, & Morgenstern J (2013). Developing a theory driven text messaging intervention for addiction care with user driven content. *Psychology of Addictive Behaviors*, 27, 315. [PubMed: 22963375]
- National Center on Addiction and Substance Abuse. (2011). Adolescent substance use: America’s #1 public health problem. The National Center on Addiction and Substance Abuse. Retrieved from <http://www.centeronaddiction.org/addiction-research/reports/adolescent-substance-use>
- O’Farrell TJ, Schumm JA, Murphy MM, & Muchowski PM (2017). A randomized clinical trial of behavioral couples therapy versus individually-based treatment for drug-abusing women. *Journal of Consulting and Clinical Psychology*, 85, 309. [PubMed: 28333533]
- Ozechowski TJ, & Waldron HB (2010). Assertive outreach strategies for narrowing the adolescent substance abuse treatment gap: Implications for research, practice, and policy. *Journal of Behavioral Health Services & Research*, 37, 40–63. [PubMed: 18690540]
- Pew Research Center. (2020). Internet/Broadband fact sheet. Retrieved from <https://www.pewresearch.org/internet/fact-sheet/internet-broadband/>
- Ryan-Pettes SR, Lange LL, & Magnuson KI (2019). Mobile phone access and preference for technology-assisted aftercare among low-income caregivers of teens enrolled in outpatient

- substance use treatment: Questionnaire study. *JMIR Mhealth and Uhealth*, 7, e12407. [PubMed: 31573920]
- Saloner B, Feder KA, & Krawczyk N (2017). Closing the medication-assisted treatment gap for youth with opioid use disorder. *JAMA Pediatrics*, 171, 729–731. [PubMed: 28628699]
- Santoro TN, & Santoro JD (2018). Racial bias in the US opioid epidemic: A review of the history of systemic bias and implications for care. *Cureus*, 10(12), e3733. 10.7759/cureus.3733 [PubMed: 30800543]
- Schueller SM, & Torous J (2020). Scaling evidence-based treatments through digital mental health. *American Psychologist*, 75, 1093–1104. [PubMed: 33252947]
- Schuman-Olivier Z, Greene MC, Bergman BG, & Kelly JF (2014). Is residential treatment effective for opioid use disorders? A longitudinal comparison of treatment outcomes among opioid dependent, opioid misusing, and non-opioid using emerging adults with substance use disorder. *Drug and Alcohol Dependence*, 144, 178–185. [PubMed: 25267606]
- Schwinn TM, Schinke SP, & Di Noia J (2010). Preventing drug abuse among adolescent girls: Outcome data from an internet-based intervention. *Prevention Science*, 11, 24–32. [PubMed: 19728091]
- Smith A, & Page D (2015). US smartphone use in 2015. Pew Research Center.
- Smith JE, & Meyers RJ (2004). Motivating substance abusers to enter treatment: Working with family members. Guilford.
- Steinberg L (2014). *Age of opportunity: Lessons from the new science of adolescence*. Houghton Mifflin Harcourt.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2020). Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health (HHS Publication No. PEP20–07-01–001, NSDUH Series H-55). Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>
- Sugarman DE, Campbell AN, Iles BR, & Greenfield SF (2017). Technology-based interventions for substance use and comorbid disorders: An examination of the emerging literature. *Harvard Review of Psychiatry*, 25, 123. [PubMed: 28475504]
- Szapocznik J, Perez-Vidal A, Brickman AL, Foote FH, Santisteban D, Hervis O, & Kurtines WM (1988). Engaging adolescent drug abusers and their families in treatment: A strategic structural systems approach. *Journal of Consulting and Clinical Psychology*, 56, 552. [PubMed: 3198813]
- U.S. Department of Health and Human Services. (2020). Telehealth: Delivering care safely during COVID-19. Retrieved from <https://www.hhs.gov/coronavirus/telehealth/index.html>
- Ventura AS, & Bagley SM (2017). To improve substance use disorder prevention, treatment and recovery: Engage the family. *Journal of Addiction Medicine*, 11, 339–341. [PubMed: 28787300]
- Volkow ND, Jones EB, Einstein EB, & Wargo EM (2019). Prevention and treatment of opioid misuse and addiction: A review. *JAMA Psychiatry*, 76, 208–216. [PubMed: 30516809]
- Vowles KE, McEntee ML, Julnes PS, Frohe T, Ney JP, & van der Goes DN (2015). Rates of opioid misuse, abuse, and addiction in chronic pain: A systematic review and data synthesis. *Pain*, 156, 569–576. [PubMed: 25785523]
- Wrape ER, & McGinn MM (2019). Clinical and ethical considerations for delivering couple and family therapy via telehealth. *Journal of Marital and Family Therapy*, 45, 296–308. [PubMed: 29361194]

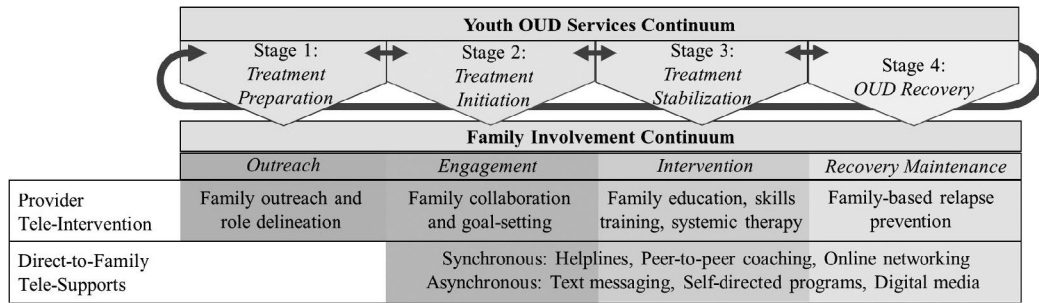


FIGURE 1.

Conceptual framework for using telehealth to increase family involvement across the youth OUD services continuum

Note: Case progression along the OUD services continuum is not necessarily linear, as many youth cycle in and out of stages and experience multiple treatment episodes.