Interrupted Integrated Healthcare? How Primary Care Practices Adapted Core Components of Integrated Healthcare in Response to COVID-19

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I. Introduction

The COVID-19 pandemic required healthcare settings to rapidly implement changes to clinical practice to continue delivering patient care. Care delivery models such as integrated healthcare (IHC), in which team members work together in shared physical proximity to meet patients' whole-health needs, also had to adapt. The increased use of telehealth to deliver care required that workflows be transformed and de-densification of offices moved most team members offsite.[1-4] With team co-location disrupted and an increased reliance on telehealth, it was unclear how other core components of IHC were modified including communication, collaboration, and coordination of care.[5-8] This qualitative study focused on *how* IHC teams adapted their integrated workflows and core components of care and what this might mean for the future of IHC teams. Identifying adaptations of IHC are important when considering what education, payment, and clinical policies and protocols will be needed to sustain new models of care to reflect practice realities. Specific research questions included:

1. How did IHC components of care (i.e., warm handoffs; team communication) change because of COVID-19 and which components remain adapted?
2. How did the IHC team utilize telehealth to provide care during COVID-19 and how will telehealth continue to be utilized for integrated care delivery?

II. Methods

Study Method. After IRB approval was granted, in-depth interviews were conducted via Zoom with IHC team members working in primary care settings. A semi-structured guide was developed focusing on three topics: (1) General description of IHC model prior to COVID-19; (2) Modifications of specific components of IHC due to COIVD-19; and (3) Perspectives on long-term use of adapted elements of IHC and telehealth. Interviews lasted approximately 30 minutes and were recorded with participant permission.

Study Sample and Recruitment. The purposive convenience sample was comprised of twenty providers and clinicians working in primary care settings. Study participants included behavioral health (BH) clinicians (n = 15) and medical providers (e.g., family medicine physicians, nurse practitioners; n = 5) Recruitment strategies for IHC providers and clinicians included posting to a national listserv of a professional organization focused on IHC and snowball sampling asking participants to forward the recruitment email to colleagues. Participants were compensated with a $50 gift card.

Analysis. Recorded interview data were transcribed and checked for accuracy. Thematic content analysis included six iterative phases of qualitative coding.[9] Three independent reviewers developed a list of emerging codes and developed a shared codebook to capture sub-theme codes. After the codebook was refined,

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transcripts were reviewed again, discrepancies were resolved, and themes were finalized and linked to illustrative quotes.

III. Findings

Four themes emerged in how IHC teams adapted due to COVID-19: 1) Change in physical structure of teams; 2) Team communication increased reliance on technology; 3) Asynchronous team collaboration; and 4) Telehealth as the new normal (see Table 1).

Change in Physical Structure of Teams. BH clinicians reported either moving to a hybrid work arrangement or working entirely remotely. These changes to the structure of IHC teams meant new workflows and relying less on in-person team interactions. In some cases, even when clinicians were on-site, teams remained separate and relied on technology to communicate. . Because of this principal change to the physical structure of teams, all other components of IHC were impacted including adaptations to communication and collaboration amongst team members.

Team Communication Increased Reliance on Technology. IHC team communication became dependent on technology, which was primarily asynchronous. Technology platforms (i.e., Microsoft Teams, EMR chat functions) were essential in conducting core components of IHC including virtual huddles, synchronous and asynchronous warm handoffs, and the onboarding of new employees. Those who utilized electronic communications prior to the pandemic described how its use exponentiated. Two noted downsides to these new modes of communication included increased waiting times for a team member to respond via telephone or electronic message and having to manage multiple electronic systems to monitor communication.

Asynchronous Team Collaboration. IHC collaboration often continued for those with relationships that existed prior to the pandemic, but for new employees, this was more challenging. While workflow and team cohesion were initially interrupted, most clinicians reported 'workarounds' to build relationships involving virtual huddles, team chats, and using images on technology platforms that allowed team members who never engaged in-person to put a face to team members' names.

Telehealth as the New Normal. Telehealth was recognized as the primary way to increase the availability and accessibility of services, something providers recognized as a 'new normal' in how care was, and continues to be, delivered. For most, telehealth was identified as a preferred mode of care delivery because it offered flexibility both for patients and the workforce.

IV. Discussion

Three years into the pandemic, COVID-19 has continued to transform how IHC teams communicate, collaborate, and coordinate care. [5-8] This study sought to document the swift, as well as lasting ways, IHC adapted and evolved in response to COVID-19. Many IHC teams remain at least partially remote, and many of the adaptations made to accommodate COVID-19 persist. Changes to reimbursement for telehealth services, adaptations to workflows, staff onboarding, and new training models are needed to support current and emerging IHC teams.

Continual efforts will be needed to evaluate how these adaptations are sustained and what they mean for health systems, practitioners providing IHC, and patient health outcomes.

Effectiveness of Virtual Models Need Examination. The majority of team-based models were developed for in-person teams that share physical space.[10] Future research needs to evaluate how remote delivery of IHC impacts the core components of integrated care at the team (e.g., collaboration, communication) and patient levels (e.g., symptom improvement).

Supporting a Collaborative Team Environment. As many teams remain at least partially remote, health systems must find ways to maintain a collaborative healthcare environment. This now requires new administrative considerations on how best to support IHC teams in virtual healthcare systems and invest in team building and cohesion. This may involve new onboarding protocols to establish rapport and build trust among providers who may be unfamiliar with new or recently hired team members. Qualitative findings from this study are consistent with current literature that has identified remote and hybrid environments as more desirable work arrangements for many workers, including BH clinicians. [11,12] Telehealth for BH continues to be highly utilized and is a delivery mode expected to be more permanently adopted.[11,12] Therefore, health systems must determine how to support flexible work and hybrid work arrangements as an incentive for hiring and sustaining the BH workforce in IHC settings.

Training and Education. Interprofessional training and education has quickly grown in the past 10 years, yet these models were developed for in-person and co-located team care.[4] Because team collaboration is a central tenet of IHC, interprofessional training and education innovation will need to incorporate teaching integrated models that include virtual and asynchronous examples (i.e., ways of performing virtual or asynchronous warm handoffs). New techniques, skills, competencies, and practice knowledge will have to be infused into didactic and clinical learning environments, as well as continuing education initiatives across multiple health professions to align with these new practice realities.

Billing and Reimbursement. Even prior to the COVID-19 pandemic, a major barrier to IHC services was sustainable billing and reimbursement mechanisms.[13-14] As most teams have a component of remotely delivered care, reimbursement parity for telemedicine is critical to supporting these new models. Centers for Medicare and Medicaid Services (CMS) now allow telehealth including audio-only for behavioral health services but maintains a periodic in person visit requirement.[15] State Medicaid allowances for new telehealth provisions vary widely, creating a patchwork of telehealth availability and may exacerbate fragmented service delivery. Policy levers to expand billing and reimbursement are critical to broaden the availability and accessibility of BH care for those with limited resources and geographical restrictions.

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Table 1. Primary Themes of IHC Adaptations and Illustrative Quotes

Primary Theme	Illustrative Quote
Physical Structure of Team Changed	*"…[T]he clinics went to a skeletal team …Initially, [Behavioral health clinicians] were remote, with the exception of one, we kept one BHC as the clinic support person live and then everyone else was virtual."* *"When the pandemic happened…psych was moved to telehealth and it's the clinic has made the decision to keep psych on telehealth going forward because of the space issues, essentially, they can fit more primary care providers in the physical space if we are virtual."* *"I've been two days on, three days off. There have been times where we've thought about shifting to more days onsite. But then, there's been upticks in COVID and then we just don't have the space, our team has grown so much, I think over the pandemic, from what I've understood, that we just don't have the space for all of us..."*
Team Communication Increased Reliance on Technology	*"What I like to do is, I have my list in Epic of my chronic care patients and when I'm onsite I see who's coming in to see their provider. I'll message the provider that morning, and be like, 'Hey, I see [name] is coming in today let me know if I need to come talk with him about anything' or we'll mini huddle about that patient... And I'll do that even if I'm not onsite, just in case there's anything that comes up."* *"It's [Telemedicine] just made things more accessible honestly, patients are able to reach us a little easier because we're at home most of the week and we're right by our phones all day. It's easier for us to get in touch with providers. For urgent, it's more normalized now for us to send a quick text or Epic chat to provider for a question versus before."*
Asynchronous Team Collaboration	*"We were offsite for a couple of months, and when we got permission to come back in the office, we still stayed virtual. But we worked in an office for a while and that felt weird.... For the first, I don't know, how many months, we still -- all our meetings were separate…. We're still having lunch in our cars because our dining room, it's huge, but everyone can't be in the dining room at the same time, so preferably, it was asked that everyone has lunch in their cars. Our meetings, yeah, they have been virtual since the pandemic, I think, yeah, and they're still virtual, our weekly meetings."* *"Everything felt more siloed, but it wasn't even just clinical work. It was everything. We didn't have in person staff meetings, and everything felt very disconnected. I will say I did not feel any more disconnected to my medical providers, as I did everything else, and to my own team, too, because you're not having that bump-ability, you're not having any of that."*

Telehealth as the New Normal	*"It's [Telehealth] great and I don't think it's going anywhere; I hope it doesn't because it's another tool for us to connect with our patients…. We'll have patients that say hey I prefer to jump on a video visit with you because I don't have childcare or I live an hour away so let's do a virtual today, maybe we'll do it in person next time, so it's a nice tool to pivot with access to care..."* *"[F]or me it was less of a scramble because I don't need to put a stethoscope on someone. I can have a conversation with them and do a pretty darn good assessment and get them treated without actually seeing them in person."* *"It's nice to have the flexibility to work from…and we have figured out how to do it, ...I mean confidentiality, and HIPAA laws, and all that type of stuff. Before COVID, the patient either had to wait or we send them to the ED if it was an emergency or if we had any thoughts of this patient might hurt themselves. Before COVID, you either had to get them in the clinic, do an assessment, do a treatment plan, and all of that stuff over the phone or get them into the clinic the same day or send them to the ED."*