Practical tips on incorporating learners into virtual clinical care

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Abstract

Background: With the COVID-19 pandemic, clinical care provision has shifted from in-person to virtual care.

Aim: We provide tips on incorporating learners into virtual clinical care safely and effectively.

Methods: Tips were based on our experiences and literature review.

Results: Tips include: (1) Review the virtues of virtual clinical care, (2) Be open to teaching while providing virtual care; you can do this!, (3) One size does not fit all. Virtual visits are not always appropriate, (4) Reconnecting... when there are technical difficulties, (5) Respect and teach about patient confidentiality in the virtual setting, (6) Defining digital boundaries, (7) Create an educational contract and orient your learners to the virtual clinical care setting, (8) Virtual care is a great opportunity for feedback and modeling "website" manner (9) Integrate learner documentation from the virtual visit into the medical record, (10) Interruptions are learning opportunities in the virtual setting, (11) Interruptions are learning opportunities in the virtual setting, and (12) Harness the virtual momentum!

Conclusions: These tips are practical recommendations to facilitate learner involvement in virtual care.

Keywords: educational environment; workplace based teaching; roles of the medical teacher; virtual care; teaching with technology

Introduction

As physicians, our goal is to provide optimal care to our patients. As physician educators, it is equally important that we provide our learners educational opportunities in a safe, effective and organised way. The COVID-19 pandemic has significantly altered how we provide care and educate our learners. We have rapidly shifted from face-to-face encounters between physicians, learners and patients to remote care with various technologies (Canadian Medical Association, 2020).
Many medical learners are already familiar with virtual learning. Medical school teaching often involves technological methods of instruction such as online simulations, virtual classrooms, and learning through social media platforms (Moran, Briscoe and Peglow, 2018). With the internet being readily available and devices easily portable, there has been a positive impact on continuity of education among medical trainees (Moran, Briscoe and Peglow, 2018). Virtual learning has also emerged as an excellent approach for teaching residents (Jayakumar et al., 2015; Wilkening et al., 2017). Lessons learned from the virtual learning arena, such as creating a positive learning environment can be transferred to the learning environment in clinical care (Chick et al., 2020).

To improve the quality of virtual clinical care experiences for learners, innovative efforts between physician educators, learners, and patients are essential to fully understand the positive impact that technology may have on education and care delivery (Consorti et al., 2012). We present 12 practical tips on incorporating learners into virtual clinical care. The tips we have presented are based on our clinical and educational experiences and the existing literature.

**Practical Tips**

**Review the virtues of virtual clinical care.**

Virtual care refers to any remote clinical interaction between patients and healthcare providers. These interactions may include the use of live video, telephone, instant messaging and/or social media with the ultimate aim of maximizing the effectiveness and quality of patient care (Shaw, Jamieson and Agarwal, 2018). In recent years, there has been increasing demand for incorporating digital health strategies within the healthcare system. This interest in virtual clinical care has been sparked by persistent challenges of receiving timely care, increasing convenience and patient demand (Canadian Medical Association, 2020). In unprecedented situations such as COVID-19, the rapid adoption of virtual care provision has allowed health professionals as well as learners to provide care for their patients while preserving personal protective equipment (Bauchner, Fontanarosa and Livingston, 2020) and practicing physical distancing measures (Canadian Medical Association, 2020).

**Be open to teaching while providing virtual care; you can do this!**

As clinicians, we face competing demands for our time and adding the supervision of learners into virtual clinical experiences may seem overwhelming. It is important to recognize that you already have the skills to supervise a clinical learner and the modifications required in a virtual care environment are minimal but do require some consideration. We should deliberately reflect on how these experiences are provided and ensure that we work to continually improve our clinical teaching methods for changing learning processes (Bahner et al., 2012). While many learners are technology savvy and skillful, there are many physicians who are not comfortable with using virtual care technologies and teaching in these settings. However, it is the convenient and efficient nature of technology that allows educators to become more open minded towards its use, once they advance (Johnson, 2017). Practicing clinicians should not be intimidated by how to deliver care virtually but rather should focus on their known clinical abilities and be open to exploring the conveniences and efficiencies virtual care may offer, utilizing the help they can get from information technology (IT) support for virtual care. Functions like breakout rooms in video platforms can be used just like the rooms where you might review patients in a physical clinical setting. We also encourage physician educators to be open-minded and seek mentorship from learners who may be more familiar with virtual technologies and the virtual care learning environment. There are many benefits to having a learner as a mentor while involved in virtual care. Firstly, it allows educators to be more confident. Secondly, it enables a collaborative interaction between the learner, instructor and patients, which is an important element of virtual medicine. Lastly, it gives the learner a sense of self-appreciation and autonomy.
One size does not fit all. Virtual visits are not always appropriate.

It can be even more challenging to create an educational experience for learners in virtual clinics if an in-person visit was the more appropriate choice for that patient. Virtual care can make our healthcare systems more accessible, individualized and efficient (Consorti et al., 2012). However, it cannot always replace in-person care and it is up to the physician to determine if delivering medical services to a specific patient for a specific issue is appropriate, and whether appropriate assessments, monitoring and follow up can occur (Canadian Medical Protective Association, 2020). A virtual visit may be the wrong choice if patients are unable to access remote communication, whether it be a telephone or internet-accessible device (Canadian Radio-television and Telecommunications Commission, 2018). A virtual visit may be challenging to arrange or conduct if there are language proficiency issues (Flores, 2005) (although using technologies for language interpretation may facilitate understanding in the virtual setting more readily than traditional clinic appointments). Exclusive use of virtual care may lead to decreased social interactions and loss of human contact, depriving learners of ‘real life’ clinical experiences, patient interactions, and physical examination skills. Additionally, there are certain nuances of compassion, courtesy, storytelling and relationship building that are inherently important for care provision which cannot be fully assessed through remote technology (Consorti et al., 2012). Therefore, we recommend physicians and learners adopt a blended approach where virtual care is combined with in-person care when feasible; this also allows for discussion about which patients and patient presentations would benefit most from virtual care with your learner, adding to their triaging competencies in their future independent practice.

Reconnecting... when there are technical difficulties.

In preparing for virtual care encounters ensure the patient, the learner, and you have reliable and available technology and internet. It is important to note that even if these are in place, accidents happen! Learners may have experienced telephone Objective Structured Clinical Examination (OSCE) stations where they have been coached to ask for the best call-back number, and to provide the same information to their standardized patient over the phone in the case the connection is lost (Haldipur, 2014). The same principles apply to clinical encounters via virtual care. Some centers have developed centralized virtual care call centers with support offered during live patient visits (Wosik, Fudim and Cameron, 2020). Regardless of the scope, we recommend you have a plan in place for your patients and your learners with instructions if they get disconnected.

Respect and teach about patient confidentiality in the virtual setting.

Similar to in person visits, privacy of medical information and patient confidentiality is vital, and physicians should rely on "secure software and communication infrastructure during patient–physician exchanges; storage of information and prevention of unauthorized access by third parties" (Canadian Medical Association, 2020, P. 16). If using unregulated virtual care technologies, as may be required in some circumstances, confirm the patient identity, and explain that personal health information confidentiality cannot be guaranteed, and obtain their express consent to continue (Canadian Medical Protective Association, 2020). This should happen at the beginning of the encounter and be clearly outlined as an expectation for learners if they are initiating the clinical encounter with the patient. We recommend not starting to discuss patient details until given permission by your patient, ensuring they are in a comfortable environment to do so. Just because you’re in a safe space with four walls and a closed door doesn’t mean they are.

Define your digital boundaries.

Using technology to exchange clinical information can result in the blurring of professional boundaries between health professionals and learners (Boswell and Olson-Buchanan, 2007). With learners having access to our personal contact information, and more time potentially out of office doing virtual care from alternate or home environments,
it becomes easy for us to remain "on" and reachable to the potential detriment of our wellbeing. With over a third of practicing pediatricians reporting symptoms of burnout (Cull, Frintner and Starmer, 2019), this number is only likely to increase with initial adaptation to new technology and clinical demands. Spillage of work to after hours, obscured boundaries, and erosion of personal time affect our wellbeing (Webber et al., 2020) and no matter how meaningful the work being performed, you should not be accessible nor working at all times. Take no shame in establishing personal-professional boundaries and turning off your phone or email when no longer on call and the day is done.

**Create an educational contract and orient your learners to the virtual clinical care setting.**

With a shift to virtual care, a clinical teaching strategy first defined over thirty years ago remains important: the educational contract (Pratt and Magill, 1983). How your day will flow and how clinical encounters with your learner will run should be discussed, negotiated and agreed upon ahead of seeing patients. This flow will depend upon the needs of each unique learner. In this way you collectively develop a "best fit" match of the learner's knowledge, skills and learning style with your teaching methods, goals and clinical context. This is also the time to discuss logistics of the clinical flow, how to communicate with one another when not on a call or videoconference simultaneously, and provide tips that may facilitate physical examination; your learner may have some tips to teach or share with you (see tip 2). Clear expectations will help to maximize the impact of teaching and learning while developing your own virtual care rhythm. Determine the who, the what, the where (a unique aspect of virtual care - the location of your patient and your learner), and the how before you start.

**Virtual care is a great opportunity for feedback and modeling "webside" manner.**

Opportunities to observe remotely, either by video or by auditing on the telephone allow for direct feedback. With video-based encounters, it is easy to leverage the technology, hide your video stream and thus audit and minimize any visual distractions you, as the staff physician, may cause with learner-patient interactions. Rea and colleagues (2020) found through semi-structured focus groups of internal medicine residents and faculty that unscheduled direct observation, via in-room camera, provided a more authentic clinical encounter with less perceived behavioural modification by the learner than when the encounter was known ahead of time to be remotely observed. With proper priming of your learner (Kogan et al., 2017), unscheduled direct remote observations may result in a more authentic "webside" manner in remote clinical encounters. There are many interpersonal communication skills, including the ability to provide patient reassurance, allay anxieties, and display empathy that may be assessed during virtual care encounters (McConnochie, 2019; King and Hoppe, 2013). The increased opportunity for direct observation aside, the principles of good quality feedback remain regardless of the type of clinical encounter. Be patient and mindful of the potential for quick judgements when directly observing; give the learner and yourself time to adapt as you all learn the virtual clinical care ropes.

**Integrate learner documentation from the virtual visit into the medical record.**

The documentation process should follow the same standard as conventional visits with the addition of a statement about virtual consent. "[The storage] and maintenance of a proper virtual care record and its availability for patients, caregivers, and medical auditing" (Canadian Medical Association, 2020, P. 16) are essential elements of virtual care. These expectations should be shared with your learner ahead of time with your preferred phrasing: sharing these with your learners will reduce your workload afterward in making edits. Learners often receive minimal or variable faculty feedback on their documentation, so make your expectations clear (Olvet et al., 2020). Regardless of the method of documentation (written or electronic) orient your learner to your preferred narrative elements (history and physical) and data elements or use their documentation as a tool for teaching and assessing clinical reasoning skills (Stephens, Gimbel and Pangaro, 2011). Highlighting the consent documentation and your local standards for record-keeping can help decrease learner anxiety, preceptor frustrations and optimize patient care.
Interruptions are learning opportunities in the virtual setting.

When multiple competing interests make the virtual clinical learning environment challenging, use the extra outside phone calls or asynchronous patient care demands (like e-consults, patient portal messaging, lab reviews) as an invitation for your learner to share these opportunities virtually. Learners transitioning from medical school to residency receiving simulated pages to prepare them for on-call experiences reported significantly higher self-assessed clinical confidence and better insight into clinical responsibilities (Schwind et al., 2011). Learners transitioning to practice, or contemplating their career direction earlier in their training, can benefit and learn from your role modeling and handling of outside calls, and "hallway consults." whether in-person or in the virtual setting. You can provide guided feedback on task-related information and prioritization of next steps, or even just place an outside call from another physician (with their permission) on speaker phone so your learner can be a more engaged listener as part of the encounter; these are great learning opportunities not to be overlooked.

Billing logistics for virtual care are an advocacy opportunity.

Compensation for virtual visits may be a barrier, where parity with in-person visits does not exist (Lacktman, Acosta and Levine, 2019). During the pandemic, some jurisdictions have created billing codes for virtual visits that are on par with in-person visits. However, after the pandemic, it is not clear if these will continue. While some North American jurisdictions have moved to compensate for non-traditional care delivery, such as Canadian alternative relationship plans replacing fee for service structures, and American bundled payment plans and accountable care organizations rewarding non-traditional care delivery (Duffy and Lee, 2018) this is not the norm. This gives physicians the opportunity to advocate not only for alternate ways to deliver care, but also for a payment system that places a greater emphasis on the value of both the physician and patient's time, and rewards based on outcomes and solving problems as opposed to documenting activity. As Duffy and Lee (2018) state, this would deepen partnerships with patients. "Patients who find their needs being addressed simply, quickly, and efficiently will know that if the system requires an in-person visit, it's doing so because of clinical necessity. It sounds radical, but it just represents a deeper commitment to patient centred care"(P. 105-106).

Harness the virtual momentum!

Many predict the persistence of expanded virtual health care after the pandemic (Taylor, 2020; Webster, 2020) and incidental and sporadic learner involvement in virtual care will no longer be acceptable. It is important to consider how we can take our lessons learned and improve learner and patient experiences moving forward. Virtual care will be a necessary competency for independent practice. It is a good tool for completing triage for clinics by obtaining detailed histories and medical background information prior to an in-person visit, if at all required. This may improve efficiency for subsequent visits. The opportunity to provide virtual care to children during school hours from secure, private areas within their own school may reduce no-shows for appointments and minimize disruption to regular schedules (Halterman et al., 2018). Partnerships with public libraries that could provide secure, safe, remote connections and hardware could increase accessibility and decrease barriers for marginalized populations.

Learners and physicians are seeing many opportunities for the rapid adoption of these tools to revolutionize healthcare delivery (Martineau, 2020).

Conclusions

We have witnessed a great shift in how care has been provided throughout the COVID-19 pandemic. Health care systems all across the globe have adopted virtual care and learners are becoming a big part of care delivery. Meaningful clinical encounters with patients are essential formative experiences for learners. We present 12 tips to consider when providing virtual care and striving to maximize teaching and learning impact.
Virtual clinical care has been rapidly transforming healthcare; how we include our learners and provide meaningful learning opportunities while prioritizing patient safety and care may seem daunting. Our resilience and innovation have shown us it is possible.

Take Home Messages

- Virtual care is here to stay; how we incorporate our learners needn’t overwhelm us
- Many aspects of "webside" manner can be observed and coached through virtual care
- Patient and learner experiences can significantly inform how virtual care can improve clinical teaching and clinical care moving forward

Notes On Contributors

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Appendices

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Declarations

The author has declared that there are no conflicts of interest.

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Ethics Statement

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