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HANDOVER

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5 learning objectives

1. **What is handover?**
2. **Why is it important?**
3. **What should be included in a good handover?**
4. **What are some barriers to effective handover?**
5. **What are some handover tools?**

Introduction:

Chelsea: Hi everyone! Welcome to Peds Cases. My name is Chelsea, and I'm a medical student at the University of Alberta. Today I am joined by Dr. Zafira Bhaloo, a pediatrician who just finished her residency training at the U of A. Today's podcast will be discussing Handover.

Our objectives for this podcast are as follows:
By the end of this podcast, the listener will be able to:

1. Define handover
2. Describe why handover is important
3. List elements included in a good handover
4. List common barriers to effective handover
5. Describe some commonly used handover tools

Let's start with what is handover? Simply put, it's the transfer of information about and responsibility for a patient from a departing care provider to another incoming care provider, whether on the next shift, or at a different care facility (1-4). There are different types of handover, which could include between departments and care teams, to a fellow team member at the end of the shift, or at discharge to community (5). And in fact, handover is an important part of continuity of care in the medical team, but it's also an important part of interdisciplinary communication (2,6,7). Regardless of the structure and context, handover is universally used among health care providers and we should be prepared to use it with other healthcare professionals (2,6,7).

So why is handover important? Dr. Bhaloo, you just finished a quality improvement project on handover. Could you tell us a bit about it, and about why handover is so important?

Dr. Bhaloo: Thanks Chelsea. You've outlined nicely what handover is and it's clearly a critical component of patient care. No matter what specialty or health care team you are a part of, you will provide and receive handover for patients. Handover has been identified as a major preventable cause of patient harm (http://www.ihi.org/resources/Pages/default.aspx). It's also a significant area of focus for improvement because we know it can reduce safety incidents and improve patient care (Michael E and Patel C. Improving medical handover at the weekend: a quality improvement project. BMJ Quality Improvement Reports 2015).

During my residency, I had the opportunity to lead a quality improvement project on handover. Resident physicians are responsible for handover throughout their training and handover is a learned skill that you continue to develop as you progress through residency training. Handover has been recognized as a key CanMEDS competency by the Royal College (http://canmeds.royalcollege.ca/en/framework) for physicians. We also know that actively engaging physicians' and medical staff in quality improvement leads to greater patient safety (Zoutman DE, Ford BD. Quality improvement in hospitals: barriers and facilitators. Int J Health Care Qual Assur. 2017 Feb 13;30(1):16-24).

So the quality improvement project I led, focused on improving the efficiency of handover in pediatrics by engaging pediatric residents in Quality Improvement methodology to improve their own handover system and ultimately the care for our pediatric inpatients. The pediatric residents led the project by identifying the challenges of handover as it was being done at the time and proposed and implemented their own change ideas to improve it applying the quality improvement methodology they had learned about. It was a great learning experience for our entire group and I also had some amazing medical students help with data collection. Overall, it was very well received by all of the residents. Our change ideas from the project have led to sustainable changes in the handover structure for example, the creation of an established staggered and structured team handover schedule. The goal was to improve handover efficiency to ultimately improve patient safety and quality of care.

Chelsea: Thanks Dr. Bhaloo. So to recap, handover is closely tied to patient safety and quality of care. It is well documented in the literature that poor communication and handover is tied to many adverse events (8-10). Both the WHO, and the Joint Commission have issued mandates calling for better handovers and handover training. (2,10-12). In addition, the Royal College also calls for physicians to have effective handover skills, as displayed in the CanMEDS competencies, which include "Communicator" and "Collaborator," (7,13,14). The Royal College recognizes the importance of good communication skills for high quality patient care, as well as the importance of working with other healthcare professionals (7,13).

Ok, so what should be included in a good handover?

Dr. Bhaloo:
So I think many of us have experienced both giving and receiving good and bad handover and while we inherently know when a handover went well or when it could have been better, it's important to identify the basic elements needed for a good handover.

Firstly, you need to identify the patient you will be handing over and it is very helpful to identify their illness severity right away. For example, are they stable or are they a watcher, meaning there is potential for them to deteriorate and the person you are handing over to will likely need to follow up on their clinical status sooner rather than later. Or are they unstable and being assessed or planning to move to another care unit like the ICU. Then providing a summary of the patient, and this is where handover as a learned skill really comes into play. You want to provide enough relevant information so that the person who is receiving handover feels comfortable caring for the patient without overwhelming them with so much information that the relevant pieces get hidden or dissipated in the pile. The summary should include a statement on their working diagnosis, briefly stating the events that led to their admission, their hospital course thus far and the relevant assessment and plan for example, if handing over to the night team, providing them with the active problems that may need to be addressed overnight will be important but not necessarily going into details of their entire discharge plan and all their investigations in their hospital course including those planned for next week. You then want to provide an action list for the incoming care provider and make it clear who is taking ownership of those items for example, following up on blood work or imaging studies. The next element, which is appreciated by anyone receiving handover, is anticipated problems and a contingency plan in those situations. Essentially, what might happen and what should be done if that happens. For example, the patient may lose their IV and we are planning on changing them to oral antibiotics anyway so you can switch them at that time and do not need to poke them for another IV. Or if the patient has increased respiratory distress, they are already on the maximum level of the oxygen delivery system and therefore will need ICU to come and assess. Lastly, closed loop communication and the opportunity to clarify and ask questions is crucial. In an ideal handover, the receiver will summarize what they have heard and restate the action list with contingency plans.

That can sound like a lot of elements but having a systematic approach ensures nothing gets missed and patient care won't be affected. It also provides the opportunity to teach an approach to handover! There are many handover tools that exist that can help form a structured and standardized approach. And remember, it takes practice!

That covers the structural and content components of handover. There are also the external factors to consider. This includes a designated setting and time for handover that has limited interruptions and is conducive to sharing patient information. For example, a handover in the hallway on your way to see a new patient or while in line for

lunch or coffee, does not set you up for a good or safe handover. Along with the setting, the culture around handover and communication is key. It is up to us to create and maintain a safe culture of open communication where any team members should feel comfortable asking questions and voicing concerns. At the end of the day, we're all here for the same reason, to provide quality and safe patient care.

Chelsea: So to summarize, the elements of a good approach to handover are patient identification, illness severity, summary of their course, an action list, contingency planning, and closed loop communication. That sounds pretty straightforward. So why don't good handovers occur? What are some barriers to effective handovers?

Dr. Bhaloo:
I think it's important to recognize that it's not often due to a lack of trying. We all care for our patients and do our best to ensure good quality, continuity of care. I think there are systemic and personal factors that can present barriers to effective handover.

First of all, on the systemic front you may not have a designated or conducive setting for good handover. If your handover space is riddled with distractions, noise and interruptions you're not setting yourself up for success. Similarly, without designated, dedicated and adequate time for handover the quality of it will likely be affected. Also, if you haven't been provided with an approach or training around handover, it can feel like a daunting and foreign task. Medical students rarely have training or experience with handover. Even when they are present for handover, they often have a passive, observatory experience and don't usually get to try the actual role of handing over. Then as residents, they are responsible for handover and often learn by trial and error with the support of more senior colleagues. If we can incorporate both formal and informal education around handover, we can equip our health care providers with the tools necessary to succeed in delivering and receiving good handover. I think we're making some steps in the right direction where training and education is concerned but there's always room for improvement.
In terms of personal or human factors, it's just that, we're all human so handover will never be perfect. Aside from the obvious barriers such as fatigue, hunger, and a full bladder after being on shift for 12-24 hours or more there is also the element of ineffective communication skills and potentially poor interpersonal relationships. Poor communication has been identified as one of the biggest barriers to effective handover. Remember, handover is a learned skill. It requires practice so learning what information is truly relevant, then being efficient and succinct in communicating relevant information takes some time. It also requires learning how to actively listen. That's why education and learning approaches, with the help of handover tools, as soon as possible in medical training is so important. We also need to foster that safe culture I referred to earlier where you are provided with an environment where you can learn, make mistakes and get constructive feedback. As health care providers we are also really good at multitasking, but we need to learn when we need to give one thing, like handover, our full attention.

Chelsea: I find it interesting that one of the barriers is a lack of education and training in handover and communication skills (5,10,11,14). As medical students and junior residents this means that we should be seeking out opportunities to observe and practice handover in a safe and supervised environment. Even getting exposure through something like this podcast could be beneficial for patient safety down the road!

So practically speaking, let's talk more about the various handover tools out there. There's tonnes of different mnemonics, such as SBAR, IPASS, SIGNOUT, and DRAW (1). SBAR is a fairly common one, where the S stands for Situation (what is going on?), the B stands for Background (meaning background of the patient or the context of the situation), the A stands for Assessment (your assessment of the situation, any relevant test results, etc.), the R stands for Recommendation (including what is the next step), and with the option to add another R at the end for "Read Back." (1,8) DRAW is another useful one. The D stands for Diagnosis, R stands for Recent changes, A stands for Anticipated changes, and W stands for What to watch for (1).

What tool do residents at the Stollery use Dr. Bhaloo?

Dr. Bhaloo:
So at the Stollery, pediatric residents had already implemented the I-PASS curriculum prior to the handover project I described. I-PASS was originally piloted at the Boston Children's Hospital and an I-PASS handoff bundle was then developed. The I-PASS Handoff Bundle has actually been shown to significantly improve verbal and written handoffs and reduce medical error rates (http://cicsp.org/wp-content/uploads/2017/09/ipass.pdf). It is now used internationally in many centres. The tool provides a standardized approach and step by step structure for both verbal and written handover. The mnemonic itself reflects the approach. The I is for illness severity that is stable, unstable and watcher status. The P is for Patient Summary, the A is for the Action List, the S is for Situation Awareness and Contingency Planning and the last S is for Synthesis by Receiver. You might recognize the elements as those we identified as crucial for good handover!

Chelsea: I've used SBAR and IDRAW in my own practice, and both can be helpful to add structure to a handover and make it easier to follow. Another thing that I've found helpful is taking notes of what I need to pass on throughout the day before giving handover (so that I don't forget or miss anything that came up during a busy day), and also taking notes and asking questions while receiving handover. Dr. Bhaloo do you have any practical tips for giving or receiving handover?

Dr. Bhaloo:
I definitely agree with taking notes and documenting information for handover because it's likely you won't remember everything off hand as either the person providing or receiving the handover. When providing care for any patient, include in your practice thinking through the anticipated course and challenges and develop your own

contingency plans that you can then hand over. Chelsea you also mentioned seeking out opportunities and I think that's such a great approach. Whatever your role in medicine, you become better by developing your skills so start as early as you can to give yourself time to hone those skills. Handover is a component of patient care so treat it as you do other elements of patient care, avoid multitasking, give it your full attention and wait until the end of handover to sit back, relax and catch up with your colleagues.

All right, let's do an example of a good handover, and a bad handover, and see if you can tell the difference.

Chelsea: Ok, so this is as if the day team is handing over to the night team:

Option 1: The patient in 4E4 room 8 had a good day, is on just a bit of oxygen still, and a bit of IV fluids. Just watch for increased WOB again.

Handover option 2 for the same patient: (Situation and Background): Patient A.W. in room 4E4 8 bed 1 is a 9 month old term female with bronchiolitis, on day 5 of illness, otherwise healthy, no known allergies. She had some increased WOB and oxygen requirements last night up to 3L, but has stabilized since this morning on 1.5L O2 via nasal cannula. (Assessment): She still has tachypnea (resp rate in 60s), mild WOB with subcostal indrawing, scattered crackles throughout all lung fields. She's running D5NS for maintenance due to the tachypnea, and poor feeding. There are no labs or imaging results to follow up on tonight. Please reassess her hydration status and progress with feeds tonight. (Recommendation): Watch for increased WOB and increased O2 requirements overnight, and if low flow nasal cannula isn't enough, consider high flow. If she loses her PIV overnight, you can consider NG feeds instead of restarting a PIV and parents are aware of this plan. Do you have any questions?

Dr. Bhaloo:
Let's start with option 1, while surely a time-saver being so brief, if you were to receive that handover you probably wouldn't feel completely equipped to be able to take care of, or respond to changes in clinical status in that patient. The lack of detail can actually lead to miscommunication and walking away with an inaccurate clinical picture of that patient. First off, is the patient stable, unstable or a watcher? What do they mean by a good day? What is the patient admitted for? Do they have a significant medical history that will affect your management plans? How long have they been sick and in hospital (day 2 of illness vs day 5 changes your anticipated course of the illness)? What do they look like now? Are they in any respiratory distress? How much is a bit of oxygen and fluids? It's great to advise what to watch out for but it would be even more helpful to discuss what to do in those cases.

Option 2 addresses our questions. We've confirmed the identifying data including name, age, working diagnosis, day of illness as well as past medical history in just one sentence. We're also provided with details around the amount of oxygen and fluids as well her current clinical status relative to previous nights. Our action list is clear, and

we're provided with anticipated issues and easy to follow contingency plans. Lastly, we're given the opportunity to ask questions and synthesize what we've heard through our active listening skills! Employing a handover tool like SBAR or IPASS ensures you include all the information necessary for an efficient handover and ultimately for safe and quality patient care.

Chelsea: Well, that's all the time we have for today. So to summarize, you should now be able to: Define handover, describe why handover is important, identify elements of a good handover, identify common barriers to effective handover and describe some commonly used handover tools. Thank you for joining us for our podcast on handover, and a special thanks to Dr. Bhaloo for your help and expertise on this topic!

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