
Nursing Practices Within Telehealth Care: Communication Skills Re-Visited Amidst COVID-19 Pandemic and Beyond

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Received: 27 June 2020

Published: 09 July 2020

Keywords: *Telehealth; Communication Skills; Verbal and Non-Verbal Communication; COVID-19 Distance in Healthcare; Nursing Profession*

Abstract

In nursing practices, effective communication is of the greatest importance to promote engagement with patients, playing a central role in enabling quality of healthcare interactions. However, problems raised by patients about their treatment are often found to be rooted in poor communication within their engagement with the healthcare system and healthcare professionals' interactions. The safety need to minimise direct patient-practitioner contact in the light of COVID-19 has seen rapid growth in the prominence of telehealth care approaches such as video conferencing and greater use of video enhanced telephone calls. Consultations based on the use of these platforms alter the range and perspectives in communication processes taking place within this 'virtual' consultation setting. This new environment affects both verbal and non-verbal communication performance for practitioners and patients who may also have family members present during the consultation. This article revises established tenets for effective patient-practitioner communication within healthcare consultations, support from the nursing profession and provides guidance on dealing with challenges in effective communication posed within the telehealth environment. In the aftermath of the COVID-19

crisis many of these newer remote working practices are likely to continue to be part of healthcare practices and policy-makers are advocating that the nursing profession plays a more prominent role in leading policy and practice in future healthcare.

Introduction

The healthcare sector has been mobilised and re-positioned to avoid exposure to COVID-19 and deal with the enormous challenges of delivering effective care and simultaneously protecting staff, patients and their families. Services are being orientated towards new strategies of healthcare delivery based on minimising the risk of spreading infection and triaging medical care to those in most urgent need. These actions are responsive and are informed by strategies, actions and lessons learned from the management of unfolding events in previous crisis situations around the world [1]. The changes are organic and responsive to the nature of the threat as it unfolds.

Reports in the US indicate that usage of telehealth has experienced a massive growth of approximately 400% in response to cancelled healthcare visits and the re-design of existing services to remote mechanisms of delivery [2]. This crisis has accelerated the levels of digitization to help reduce avoidable physical interactions.

For example, the UK healthcare system has seen years of digital evolution take place within weeks. In 2019, less than 1 percent of appointments took place via video link, the vast majority being in person. In non-urgent care it is estimated that less than 10 percent of medical consultations are now proceeding to face-to-face meetings. This shift has meant that clinicians must learn how to work effectively and safely in remote clinical practice, and the new normality is likely to retain a significant level of remote working practices [3].

The new normal comprises processes of imagination and reform and will build upon the successful innovations that have been rapidly introduced during the COVID-19 crisis in order to create new and more sustainable, patient-centred development paradigms [3]. Working practices that have been enabled with digital technologies and proven to be effective as 'virtual' services will likely continue in an evolving health care system capable of dealing with the new reality of ongoing COVID-19 preparedness. Consumers are interested in telehealth care with over 70% of people surveyed showing interest in using telehealth care in the future [4].

Telemedicine or virtual clinics that were planned for the distant future have now become something of the present, and will need to be incorporated into servicing current healthcare provision. The emergence of telemedicine and virtual clinics will change the milieu of healthcare with increasing numbers of the general public and patients interacting within 'virtual space' to manage and receive healthcare treatments. Moreover, the growing number of mobile health applications and wearable digital monitors are empowering individuals to engage in self-care health practices, which can when appropriate, interact and communicate with the other healthcare systems to provide more holistic representations of individuals' health and health practices [5].

Telehealth Consultations: Nursing and Patient Perspectives

There are a number of definitions of “telehealth”, but the official website of the Office of the National Coordinator for Health Information Technology (ONC) defines telehealth as “the use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health and health administration” [6]. Such technologies include video conferencing, the internet, the storage and making immediately available imaging data from the cloud, media streaming and various other electronic modes of communication. On the other hand, telemedicine is focussed on delivering remote clinical services but without the diversity of services provided by telehealth. Examples of telemedicine are remote consultations between expert and non-expert health professionals, procedures enabled by using AI technologies and consultations on basic health care using video and audio links.

The new environment of conversation via video and/or voice calls with platforms such as Skype or Zoom rely on effective two-way communication skills encompassing verbal and non-verbal language. Even before the impact of COVID-19 on healthcare practices, training for effective communication skills was recognised as an important part of professional practice. However, ineffective and detrimental communication between staff and patients is still identified as one of the largest factors contributing to complaints raised by patients about poor health outcome experiences [7]. The potential for other confounding factors to interfere with effective communication seems even more likely in the context of tele-communication. Furthermore, the ability to pick up on non-verbal signals, particularly if these are subtle, may be muted or lost altogether.

The general population and future patients will also benefit from being more knowledgeable about health and its determinants in order to engage effectively with new systems of care. Health literacy and the notion of the expert patient are not new concepts, but they now take on a greater importance [8]. The effects are two-fold: first where the need for interaction via technology creates a potential barrier for engagement with health services and in communication between practitioners and patients, and second, being able to use remotely self-health assessments, sample collection or monitoring devices. In order for individuals to have greater insights into their health and effectively navigate, engage and interpret these systems they must have a sufficient level of understanding of fundamental human health and illness, health protection and disease prevention strategies in addition to the basic terminology. Information addressing these needs is widely available at sources such as “Healthline” and “WebMD” among many others applications in the self-help sector for the management of chronic diseases such as diabetes, heart disease, arthritis and the like [9,10]. Although such sources provide interpretation of complex medical issues in generally understandable terms for the lay person, they still require basic knowledge of medical physiology and treatment options and goals [11,12].

Nurses have an important role to play in expanding their health promotion activities more widely to educate patients in managing health and illness and new ways of navigating health services, sources of information and assistance in the use of supportive technologies. Documentation of patient nurse interactions and assessments of consultations will continue to be a component of practice and should be adjusted and streamlined according to the capabilities of the infrastructure facilitating virtual interactions.

The management of video and audio data should be addressed as well as connectivity with the system of electronic health records. Some points for consideration in the use of digital health devices and 'virtual' communication in clinical practice are:

- System clinical governance, quality assurance, data protection, cyber security;
- Digital communication technology skills and supporting networks and websites;
- Scope of healthcare digital tools: biometrics; diagnostics; well-being assessments and monitoring; 'wearable probes' and communication with electronic medical records;
- Templates and protocols for structuring patient nurse consultations, e.g. pre-meeting information sharing; feedback and referral mechanisms;
- Health and digital literacy for users.

Patient Healthcare Feedback

Emphasis on patient-centred care has increased, as have calls for the transparency of data pertaining to patient satisfaction both of which are increasingly important components of risk management and patient safety programs [13]. One important route for patient feedback is through the patient complaints system. It provides a protected communication mechanism for patients and families to provide feedback and/or seek resolution on matters of unmet need or dissatisfaction. In the UK in 2017, National Health Services (hospital and community) received a total of 140,585 patient complaints involving healthcare professionals, with over half of these arising from a combination of general hospital in- and out-patient services [14]. Written complaints, when analysed by subject, revealed that the highest single cause of complaint concerned communication issues at 28,274 (20.1%). This was followed by patient care related to nutrition and hydration at 21,930 (15.6%) and third was 'Values and Behaviours (staff)' at 19,287 (13.7%). Therefore, in combination, approximately one third of complaints (33.8%) related to communication failures or discordant staff behaviours/values. These complaints were highest for medical staff (41.1%) and second highest for nursing staff (22.7%).

These findings were endorsed by the General Medical Council (GMC) who reported that the most commonly received complaints related to concerns with 'investigations and treatment', problems with 'communication', and a perceived 'lack of respect' for the patient [15]. Most complaints were noted to be secondary to poor communication [16]. There is increasing evidence beyond complaints themselves, that poor communication and lack of empathy are major causes of adverse events, patient dissatisfaction, and therefore, complaints [17]. Similar categories of healthcare complaints from patients are found across the developed world [18].

In a recent study examining 38 cases of negative patient feedback, a qualitative analysis of written reports identified four areas of communication shortcomings; namely for non-verbal issues: poor eye contact, discomforting facial expression, absence of active listening, lack of respect and empathy [19]. Kee *et al.* reported that issues arose within elements of verbal communication methods, inadequate quality and quantity of information, insensitive choice of words etc. Such issues are not new and continue to appear in patient complaints [19].

Effective communication is recognised as a vital attribute for healthcare professionals. This is important not only between doctors and patients, but also between doctors and other healthcare professionals. The move towards operating in a virtual clinic setting provides the opportunity to reflect on such weaknesses reported in traditional practice and to be more conscious of good communication practices, as it matters to patients and their perceptions of the quality of their care.

General Communication Goals

Effective new ways of communication in new and complex environments are likely to be one of the biggest challenges requiring the utmost attention because it is at the core of functioning healthcare and education systems. The following four sections outline components of good communication and its purpose.

Communication Point One: General Communication Principles for Good Practice

Authentic meaningful and respectful communication skills are recognised as being achieved when using guiding principles in verbal and written communications that convey truthfulness, credibility and build trust as outlined in the following points [20].

- Use clear, concise uncomplicated words.
- Focus on facts and be cautious with emotive issues.
- Be transparent and consistent with information.
- Genuine and authentic self.
- Relevant, fair and equitable across practice.
- Avoid minimising or speculating on issues.

These principles can guide the construction of clear messages that are not lost in extraneous material or misleading information. Whenever possible information should be framed in positive terms or instructions e.g. 'dos' rather than 'don'ts', and messages articulated in a steady and consistent manner.

Communication in Teleconference Consultations

Effective communication includes the ability to adapt, to be responsive, and to manage self-awareness during the process of talking and listening. Being an effective communicator in verbal and non-verbal processes is complex [21]. It includes the presence and timing of both verbal and nonverbal behaviours within the context of individual interactions with patients or families [22]. Effective communication includes the ability to adapt, to be responsive, and to manage self- and other awareness during the process of talking and active listening [23]. Additionally, effective communication is not only dependent on the observable behaviours of the practitioner, but also on the behaviours and perceptions of patients and the setting subject and context [24]. However, the essence of effective therapeutic communication should be as close to a face-to-face consultation as possible. Essential elements of effective communication in a patient-healthcare professional interaction are presented in Table 1.

Table 1: *Essential Elements of Physician–Patient Communication [25].*

Essential Element Tasks	Task delivery in practice
Establish rapport and context	<ul style="list-style-type: none"> • Encourages a partnership between physician and patient • Respects patient’s active participation in decision making
Open discussion and reassure confidentiality	<ul style="list-style-type: none"> • Allows patient to complete his/her opening statement • Elicits patient’s full set of concerns • Establishes/maintains a personal connection
Establish dialogue and collect information	<ul style="list-style-type: none"> • Uses open-ended and closed-ended questions appropriately • Structures, clarifies, and summarizes information • Actively listens using nonverbal (e.g., eye contact, body position) and verbal (words of encouragement) techniques
Seek to understand patient’s situation	<ul style="list-style-type: none"> • Explore contextual factors (e.g., family, culture, gender, age, socioeconomic status, spirituality) • Explore beliefs, perspectives concern, and expectations about health and illness • Acknowledges and responds to patient’s ideas, feelings, and values
Share information	<ul style="list-style-type: none"> • Use language patient can understand • Check for understanding; clarify key points • Encourage questions
Reach agreement on desires, goals and plans	<ul style="list-style-type: none"> • Encourage patient to participate in decisions • Identify and enlist resources and supports • Check patient’s willingness and ability to follow the plan
Provides closure	<ul style="list-style-type: none"> • Ask whether or not patient has other issues or concerns • Summarize and affirm agreement with the plan of action • Discuss follow-up (e.g., next visit, plan for unexpected outcomes)

Communication Point Two: Essential Elements in Healthcare Communication

It should be acknowledged that skills for operating the new digital video-conferencing platforms also need to be taken into account to ensure that all participants are able to operate compatible systems. Many people may need support and healthcare organisation should recognise potential training needs in digital device competencies. In the higher education sector, recent nursing undergraduate students rapidly transferred to a new virtual learning environment and reported effective engagement and were highly satisfied in the new learning environment (*Personal Communication: Dr Nahla Tayyib and Dr Hayam Asfour, Umm Al-Qura University, 2020*).

Non-Verbal Communication: Facial Expression

In the context of virtual clinics and/or teleconferences, the face is the main focus for visual communication although non-verbal signals with head movements, upper body and hands may be apparent. Recognition of

[Tayyib, N. A., et al. \(2020\). Nursing Practices Within Telehealth Care: Communication Skills Re-Visited Amidst COVID-19 Pandemic and Beyond. *CPQ Medicine*, 9\(1\), 01-14.](#)

facial expression is an essential ability for good interpersonal relations and a major subject of study in the fields of human development, psychological well-being, and social adjustment [26]. The recognition of emotion plays a pivotal role in the experience of empathy [27] in fear [28] and in the ability model of emotional intelligence [29]. Additionally, the literature demonstrates that impairments in the recognition of emotional expression are associated with several negative consequences, such as difficulties in identifying, differentiating, and describing feelings. Numerous studies have identified seven basic universally recognized emotions that can be expressed through facial expression. These are anger, disgust, fear, happiness, sadness, surprise and contempt [30]. These expressions are to a large extent under the influence of the voluntary nervous system so moderation of the expression is under the will of the individual. As such expression should be appropriate to situation in order to establish rapport and authenticity.

Non-Verbal Communication: Eye Contact

Eye contact is another major aspect of facial communication serving a variety of purposes. It can help regulate conversations for instance, turn taking, communicate involvement and show interest, manifest warmth and establish connections with others. Actual eye contact in combination with other facial expressions can be used to invite conversation. Lack of eye contact is usually perceived to be rude or inattentive [31]. However, it should be noted that there are cultural differences and norms, for example some Asian cultures can perceive direct eye contact as a way to signal competitiveness or fear [28], which in many situations may prove to be inappropriate. Others lower their eyes to signal respect, and similarly eye contact is avoided in some African countries. However, in western cultures this could be misinterpreted as lacking self-confidence [32,33]. Within a face-to-face consultation there needs to be awareness of the use of eye direction within consultation, and that a balance should be reached which is appropriate for the content and situation being discussed. Although eye contact is considered to be positive in engaging the other person, if too prolonged it can become uncomfortable. In addition, eye expression can communicate more data on mood and reactions to information being given or received, even although it may be changing at a sub-conscious level. So practitioners should try to be aware of their expressions to ensure that they are communicating what they intend and be clear on their interpretation of the expressions from those with whom they are consulting. The video analysis of emotions from facial expressions, eye movements and reactions is currently a developing field of research for the evaluation of non-verbal communication. In the future information of this type is likely to be incorporated in future healthcare records of some consultations and treatments [24,34].

Communication Point Three: Virtual Consultation

Non-verbal communication in terms of facial expression, eye contact and visible body movements have greater emphasis within a video conference setting. In combination with the components of a therapeutic consultation (Table 1), considerations for communications within a video teleconference [23] are outlined in Table 2.

Table 2: *Virtual clinic Additional Practice Points in Tele-Conference Communication*

Actions	Considerations
Purpose, medical records including medications (on another screen?)	Do not disturb precautions e.g. mobile phone or other possible interruptions
Introduction <ul style="list-style-type: none"> - Take into account patient and family health situation - Greetings 	Computer (with video); software set up <ul style="list-style-type: none"> - Internet connection - Full electric charge/connection - Recording and permissions (check organisation guidelines) - Adjust camera and position to camera for best image capture
Look at the camera (transmits eye contact); <ul style="list-style-type: none"> - ID confirmation - Summary of aims/purpose - Appreciate patient demeanour - Establish communication and steps in virtual visit 	You are in the patients (and others?) vision at all-time points- <ul style="list-style-type: none"> - You don't have same feedback to realise this as in actual clinic. - You may be viewed on a HD large screen; small movements e.g. with arms can appear exaggerated - remember you are close to camera;
Facial expression: <ul style="list-style-type: none"> - Pleasant, neutral - Receptive and reflective of other person 	Avoid temptation to multi-task <ul style="list-style-type: none"> - time away from direct screen visually distracts
Be aware of body language <ul style="list-style-type: none"> - Posture is attentive; relaxed but not overly - Active listening /re-checking - Don't change position too much Avoid excess head movement or hand gestures/fidgeting	Structure time for input of others <ul style="list-style-type: none"> - e.g. family member if this is appropriate and agreed

Voice tone calm professional <ul style="list-style-type: none"> - Clear steady rate and volume - Appropriate language, - Clear questions and responses - Be alert to early signs of distress 	Emotional support <ul style="list-style-type: none"> - You are not able to be physically close to the patient or touch them as may be appropriate if someone is upset
Cue towards completing 'visit' <ul style="list-style-type: none"> - Summarise and feedback - Completion of meeting record and action plan 	Questions? <ul style="list-style-type: none"> - Follow-up instructions

As mentioned previously, communication is a two-way process and the patient is usually less practised in the art of communication than the health care practitioner. Moreover, unfamiliarity with the engagement with technology on both the patient and healthcare professional could hamper effective communication or foster misinterpretations. Some guidance has been suggested that can assist patients to effectively participate in health care consultations are presented below.

Strategies to Help Patients Engage in Health Care Consultation

Patients are often not clear on what questions to ask or how to focus their concerns, particularly after much information searching which may have contributed to additional confusion before interacting with a healthcare professional. Designed by health literacy experts, an initiative called 'Ask Me 3' has been designed with the intention of helping patients become more participatory when consulting with a healthcare professional. The authors suggest that their simple guidelines provide a critical platform to improve communications between patients, families and health care professionals.

Communication Point Four: Facilitation of Patient Engagement

Ask Me 3[®] is an educational program that encourages patients and families to ask three specific questions of their providers to better understand their health conditions and what they need to do to stay healthy.

- What is my main problem?
- What do I need to do?
- Why is it important for me to do this?

By creating an environment in which questions are encouraged from patients, it is more likely for them to become active participants in their health care. Such engagement has been linked to making less mistakes when caring for themselves, positive outcomes and increased patient satisfaction [35]. More information on assisting patients to understand healthcare processes, medical terminology and engagement with services

can be provided and an accessible source for further explanation is available at URL https://wiki2.org/en/Health_literacy.

Nurses can help facilitate communication within their consultations with patients through the adoption of practices associated with effective communication as just outlined within a structured framework that includes the four areas of communication considerations outlined in previous sections [36]. The completion process for a meeting is important to allow for any overlooked issues to be raised, future plans confirmed and create a sense of courtesy for the time spent [37]. The usual subtle social cues like closing a notebook or standing up may be missed on screen or appear too abrupt. Becoming more common in larger meeting settings is the use of a hand wave to signal closure in virtual consultations by way of 'softening' an awkwardness or abruptness in the closure point [38], and in 'moderate form' viewed as a positive body language signal for closure [39].

Nursing Engagement in Emerging Healthcare

Mastery in communication is recognised as a defining quality in the nursing profession [40,41] and consists of dynamic skills sets that allows nurses to successfully enact traditional patient-focused communication processes (e.g., education, empathy, counselling) while acquiring new communicative skills (e.g., technology, conflict resolution, change management) when interacting both with colleagues and patients [42]. Effective communications skills have long been valued and will continue to be central to professional nursing practice as healthcare evolves in the post COVID-19 era. In recent times, nurses, midwives and advanced practice nurses have rapidly expanded their practice to lead in COVID-19 response in a wide variety of roles: first responders, teachers and researchers, community and intensive care experts, healthcare coordinators, managers, and mobilizers of resources. Occurring across acute care and community-based healthcare settings and higher education digital technologies to fulfil safe 'distancing' guidelines were frequently employed. It has been suggested that there is a need to build on these current new services to develop further, innovative services that maximize the contribution made by nurses and midwives within healthcare and to enable them to work at the 'top of their license' [20]. The authors conclude that by leveraging the skills of the global nursing workforce, gaps in public healthcare policy can be addressed and future humanitarian crises predicted and managed in the most effective manner [20]. Therefore, a priority for politicians and global health care leaders is to raise the profile and status of nursing and midwifery and ensure expanded scope of practice in clinical practice, education, research and policy decision-making remain priority target areas [43-45].

Operating within a developing digitally-enhanced health care system will continue to present new learning and practice challenges where refined and relevant communication skills will be of the utmost importance. Effective communication remains a central component of clinical practice using video conferencing as the environment to provide care for patients. The COVID-19 crisis has raised the visibility of nurses' contributions to the global public [2]. It is hoped that in the aftermath of COVID-19 healthcare nursing will continue to develop its professional scope to meet the emerging health needs of the population and embrace new technologies as a means of providing safety and effectiveness for staff, patients and the general population at large.

Conclusion

A central challenge in delivering safe and effective care to patients amid the COVID-19 crisis necessitated minimising direct patient-practitioner contact. Where possible non-urgent healthcare was deferred and when appropriate consultative care (in some cases diagnostic) was delivered remotely by telephone and video conferencing for non-emergency health care management. In addition to IT proficiency, core skills in communication were fundamental to the effective conduct of these 'virtual' healthcare interactions. Key tenets of good communication have been summarised with emphasis on specific challenges when care is being delivered within the context of an electronic digital video platform. Practice delivery should continue to provide recognised patient-professional communication standards and adapt care delivery in the new context.

Bibliography

1. Reeves, M., Lang, N. & Carlsson-Szlezak, P. (2020). Lead Your Business Through the Corona Virus Crisis. *Crisis Management, Harvard Business Review* Feb 2020.
2. Telehealth: A-quarter-trillion-dollar post-COVID-19 reality.
3. Virtual health: A look at the next frontier of care delivery.
4. Virtual Visits with Medical Specialists Draw Strong Consumer Demand, Survey Show.
5. Dias, D. & Paulo Silva Cunha, J. (2018). Wearable Health Devices-Vital Sign Monitoring, Systems and Technologies. *Sensors (Basel, Switzerland)*, 18(8), 2414.
6. Telehealth is different from telemedicine.
7. Charlton, C. R., Dearin, K. S., Berry, J. A. & Johnson, M. J. (2008). Nurse practitioners' communication styles and their impact on patient outcomes: An integrated literature review. *Journal of the American Academy of Nurse Practitioners*, 20(7), 382-388.
8. Miller, T. A. (2016). Health literacy and adherence to medical treatment in acute and chronic illness: A meta-analysis. *Patient Education and Counseling*, 99(7), 1079-1086.
9. Healthline.
10. WebMD. COVID-19 Cases Continue to Surge: See Numbers in Your Area.
11. Pleasant, A. & McKinney, J. (2011). Coming to consensus on health literacy measurement: An online discussion and consensus-gauging process. *Nursing Outlook*, 59(2), 95-106.
12. Sørensen, K., Van den Broucke, S., Fullam, J., *et al.* (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, 12(80), 1-13.

13. Agency for Healthcare Research and Quality (AHRQ). Service recovery programs.
14. Workforce and Facilities, NHS Digital Data on Written Complaints in the NHS 2016-17. Health and Social Care Information Centre
15. General Medical Council (GMC).
16. Abdelrahman, W. & Abdelmageed, A. (2017). Understanding patient complaints. *BMJ*, 356, j452.
17. Woodward-Kron, R., Fitzgerald, A., Shahbal, I., Tumney, J. & Phillips, J. (2014). Final report for Postgraduate Medical Council Victoria: reducing complaints about communication in the emergency department.
18. Kayla Matthews Health Care's communication Problem. Healthcare in America.
19. Kee, J. W. Y., Khoo, H. S., Lim, I. & Koh, M. Y. H. (2018). Communication Skills in Patient-Doctor Interactions: Learning from Patient Complaints. *Health Professions Education*, 4(2), 97-106.
20. Crisp, N., Brownie, S. & Refsum, C. (2018). Nursing and midwifery: The key to the rapid and cost-effective expansion of high-quality universal health coverage: A report of the WISH Nursing and UHC Forum 2018. Doha, Qatar: World Innovation Summit for Health.
21. Schmitt, M., Ringeval, F. & Schuller, B. W. (2016). At the Border of Acoustics and Linguistics: Bag-of-Audio-Words for the Recognition of Emotions in Speech. *In Interspeech*, 495-499.
22. Candib, L. (1999). When the doctor takes off her clothes: reflections on being seen by patients in the exercise setting. *Families, Systems, and Health*, 17, 349-363.
23. Jagosh, J., Boudreau, J. D., Steinert, Y., MacDonald, M. E. & Ingram, L. (2011). The importance of physician listening from the patients' perspective: enhancing diagnosis, healing and the doctor-patient relationship. *Patient Education and Counseling*, 85(3), 369-374.
24. Epstein, R. M. (2002). Defining and assessing professional competence. *JAMA*, 287, 226-235.
25. Adapted from Bayer-Fetzer Conference (2001). Essential elements of communication in medical encounters: The Kalamazoo Consensus Statement. *Acad Med.*, 76(4), 390-393.
26. Niedenthal, P. M. & Brauer, M. (2012). Social Functionality of Human Emotion. *Annu. Rev. Psychol.*, 63, 259-285.
27. Gery, I., Miljkovitch, R., Berthoz, S. & Soussignan, R. (2009). Empathy and recognition of facial expressions of emotion in sex offenders, non-sex offenders and normal controls. *Psychiatry Res.*, 165(3), 252-262.

28. Marsh, A. A., Kozak, M. N. & Ambady, N. (2007). Accurate identification of fear facial expressions predicts prosocial behavior. *Emotion*, 7(2), 239-251.
29. Salovey, P. & Mayer, J. D. (1990). Emotional intelligence. *Imagin. Cogn. Pers.* 9(3), 185-211.
30. Ekman, P. (1992). An argument for basic emotions. *Cogn. Emot.*, 6(3-4), 169-200.
31. Rothwell, J. D. (2004). *In the Company of Others: An Introduction to Communication*. United States: McGraw-Hill.
32. Russell, J. A. & Fernandez Dols, J. M. (1997). *The psychology of facial expression* (1 ed.). Cambridge University Press.
33. Poria, S., Majumder, N., Mihalcea, R. & Hovy, E. (2019). Emotion recognition in conversation: Research challenges, datasets, and recent advances. *IEEE Access*, 7, 100943-100953.
34. Dhall, A., Goecke, R., Lucey, S. & Gedeon, T. (2012). Collecting large, richly annotated facial-expression databases from movies. *IEEE multimedia*, (3), 34-41.
35. The National Patient Safety Foundation (NPSF).
36. Dunsford, J. (2009). Structured communication: improving patient safety with SBAR. *Nursing for women's Health*, 13(5), 384-390.
37. Rosen, L. D. & Gazzaley, A. (2016). *The Distracted Mind: Ancient Brains in a High-Tech World*.
38. McCulloch Gretchen *Because Internet: Understanding the New Rules of Language*: Penguin Group USA 2019.
39. Yurieff K *CNN Business* June 23, 2020 Why we can't stop waving at the end of video calls.
40. Ohlen, J. & Segesten, K. (1998). The professional identity of the nurse: Concept analysis and development. *Journal of Advanced Nursing*, 28(4), 720-727.
41. Wade, G. H. (1999). Professional nurse autonomy: Concept analysis and application to nursing education *Journal of Advanced Nursing*, 30(2), 310-318.
42. Miller, K. I., Apker, J. (2002). On the front lines of managed care: Professional changes and communicative dilemmas of hospital nurses. *Nursing Outlook*, 50(4), 154-158.
43. All-Party Parliamentary Group on Global Health. (2016). *Triple impact: How developing nursing will improve health, promote gender equality and support economic growth*. United Kingdom.

44. World Health Organization (2020). Global strategic directions for strengthening nursing and midwifery 2016-2020. Geneva, Switzerland, 2020.
45. Martin-Misener, R, Harbman, P., Donald, F., *et al.* (2015). Cost-effectiveness of nurse practitioners in primary and specialized ambulatory care: systematic review. *BMJ Open*, 5(6), e007167.