VIRTUAL CARE CENTERS AND THE EVOLVING ROLE OF NURSES

DOI
https://doi.org/10.18690/um.fov.4.2025.24

ISBN
978-961-286-998-4

HENK SONNEVELD,[1] APPHIA TAN,[2] JOBBE P.L. LEENEN,[3,4] THIJS VAN HOUWELINGEN[1]

[1] University of Applied Sciences Utrecht, Research Group Technology for Healthcare Innovations, Research Centre for Healthy and Sustainable Living, Utrecht, the Netherlands
henk.sonneveld@hu.nl, thijs.vanhouwelingen@hu.nl
[2] National Cancer Centre Singapore, Division of Supportive and Palliative Care, Singapore, Singapore
apphia.tan.jq@nccs.com.sg
[3] Connected Care Center, Isala, Zwolle, the Netherlands
j.p.l.leenen@isala.nl
[4] Windesheim University of Applied Sciences, Research Group IT Innovations in Healthcare, Zwolle, the Netherlands
j.p.l.leenen@isala.nl

New Virtual Care Centers (VCCs) within hospitals utilize information technology to remotely monitor and support patients with chronic diseases living at home. Nurses play a crucial role by providing remote coaching and guidance to help patients manage their conditions. Currently, there is a growing understanding regarding the evolving roles and responsibilities of nurses in VCCs, however studies have yet to establish connections with educational frameworks, which poses a challenge for nursing education programs to prepare students for this emerging professional role effectively. Our study aimed to provide insights into the evolving roles, tasks, and responsibilities of nurses providing remote care as per the CanMEDS framework. We conducted a qualitative content analysis of 15 interviews. Nursing work within VCCs is represented by the seven CanMEDS roles. Most tasks align with the roles of Leader and Collaborator, while Quality Promotor has the fewest. Our study maps the responsibilities and tasks of VCCs' care delivery to the core roles of nurses.

Keywords:
telemonitoring,
nursing roles,
tasks,
digital health,
virtual care unit

University of Maribor Press

1 Introduction

As the global population ages and chronic diseases become more prevalent (UN, 2017), the demand for healthcare services increases, placing a significant strain on current healthcare systems (Hilderink & Verschuuren, 2018). In recent years, innovative care models for care delivery, such as Virtual Care Centers (VCCs), have emerged (Liljamo et al., 2021; Leenen et al., 2024). VCCs are novel hospital services, which, by use of information technology, enable remote patient monitoring, e.g., telemonitoring patients with chronic diseases living in their homes. This is supported by remote nurse-led coaching and guidance to help patients manage their conditions.

Telemonitoring is a complex, nurse-led intervention. It involves digital data collection by the healthcare professional and or by patients' self-measurements from a distance, adequate interpretation by the healthcare professional, and feedback phone calls, video calls, emails, and or texts (Thomas et al., 2021; HRSA, 2022). Telemonitoring is effective in enhancing the self-management of chronic diseases and reducing the impact on their need for care (Sanchez-Ramirez et al., 2022; Andersen et al., 2023). Key factors for safe and successful telemonitoring include: a practice-ready nursing workforce, patients with adequate self-management skills and sufficient technology literacy, nurses' competence in interpreting data, and awareness of the evolving role of nurses as care shifts from in-person to remote delivery (Eze et al., 2023).

VCCs focus on remote care for chronic diseases such as heart failure and chronic lung diseases. VCCs can also be harnessed for other types of care delivery, such as consultations for in- and outpatients. Although VCCs are emerging in the Netherlands with national guidelines for telemonitoring of patients at home (Ministerie van Volksgezondheid Welzijn en Sport, 2021), there may be variation in organization and execution of care between the hospitals involved. Nurses in VCCs are pivotal in providing care remotely in multidisciplinary teams, thus, they should remain actively engaged with emerging technologies for care delivery services.

Currently, there is a growing understanding regarding the evolving roles and responsibilities of nurses in providing care through new VCCs in the Netherlands (Leenen et al., 2024). However, existing studies have yet to establish connections with relevant educational frameworks, limiting the ability of modern nursing

programs to prepare students for their future roles and responsibilities in virtual care. There is an urgent need to define the roles and responsibilities of nurses in virtual care to enhance practice-readiness for safe and effective care delivery. Without role clarity, nursing education and clinical preparation may risk falling behind the expansion of virtual care, posing a risk to patient safety and care quality.

In the Dutch Bachelor of Nursing programs, the framework Canadian Medical Education for Specialists (CanMEDS) is used to outline roles and skills that nursing students need to develop during their training (see Figure 1) (Bouwes et al., 2023). The CanMEDS framework comprises the following key roles for nurses: 1. Nurse expert, 2. Communicator, 3. Collaborator, 4. Reflective Evidence Based Practice Professional, 5. Health Promoter, 6. Leader and 7. Quality Promoter. The first role focuses on high-quality patient-centered care provided by the nurse. The second role focuses on effectively communicating with patients, family, and other (healthcare) professionals. In the third role, the nurse collaborates with other healthcare team members for care delivery. Within the fourth role, nurses are expected to engage in continuous learning and apply evidence-based practice. The fifth role comprises health promotion amongst patients. The sixth role describes nurse leadership to improve healthcare (systems) and patient outcomes. Lastly, the seventh role involves the nurse ensuring the quality and safety of health care services (Bouwes et al., 2023). Nurses are expected to encompass these seven roles in their work, regardless of the healthcare setting.

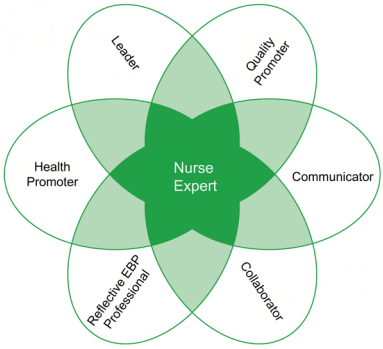

Figure 1: Core roles for nurses with a Bachelor's degree in the Netherlands
Source: (derived from Bouwes et al., 2023)

Our study aims to provide practice insights into the evolving roles, tasks, and responsibilities of nurses delivering care remotely from VCCs, mapped to the nursing roles within the CanMEDS framework. Through this qualitative study, we articulate the roles and responsibilities of nurses, which inform future development of competencies and guide the design of training programs in virtual care nursing.

2 Methods

2.1 Design

We adopted a qualitative content analysis, which allows the interpretation of meaning from textual data (Graneheim & Lundman, 2004). In our study, we conducted content analysis on interview data with nurses, which were collected as part of another larger study. Our study was conducted from November 2024 to January 2025. The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was utilized to guide and enhance the quality of our study. Our content analysis is a preliminary step in preparation for a Delphi study, in which we aim to further develop and validate the tasks, responsibilities, and roles of nurses in VCCs.

2.2 Setting

We conducted interviews with nurses who were working across three types* of hospitals providing telemonitoring: nurses from a general hospital, nurses from a top-clinical hospital, and nurses working in an academic hospital. Recruiting from multiple hospitals provided a more comprehensive understanding of various aspects of telemonitoring from VCCs, such as use of technology, diversity of chronic diseases involved in telemonitoring, and clinical expertise of the hospital (Faber et al., 2017).

Nurses were eligible to participate if they met the following criteria: 1) had a minimum of six months' experience in providing telemonitoring, ensuring adequate familiarity with the associated role and tasks, 2) held a registered nursing degree at European Qualification Framework level 4-6. Nursing students without a registered degree were excluded due to a possible lack of experience and scope of work.

A general hospital provides a range of basic medical services, including surgery and medical care. A top-clinical hospital offers general medical care as well as more complex and specialized treatments, e.g., advanced cardiovascular care. An academic hospital delivers comprehensive medical services, including specialized and complex medical care, and also focuses on education, research, and training of professionals.

2.3 Data collection

The (interview) data was collected between November 2023 and March 2024. An interview guide was developed and piloted, incorporating the following topics: motivation for working with telemonitoring, aspects concerning the training process, tasks and experiences with performing telemonitoring, patient-related aspects, and barriers and facilitators experienced. Face-to-face interviews were conducted by the first author on location in the hospitals. Written and verbal consent was obtained before commencing the interviews. The audio-recorded interviews (duration between 45-60 minutes) were then transcribed into textual data and subsequently uploaded to ATLAS.ti (*Scientific Software Development, Berlin, Germany*) as preparation for our qualitative content analysis.

2.4 Data analysis

Interviews were transcribed verbatim and content analyzed by two researchers (first author and colleague) to identify the evolving role and tasks of nurses providing care remotely for patients at home. The following steps were taken: preparation by selecting the unit of analysis (= fifteen written interview transcripts of nurses providing care within VVCs), and familiarization of interview data through multiple readings. Then the text data was organized by use of line-by-line, open coding, creating and assigning categories, and abstraction (Graneheim & Lundman, 2004). The researchers conducted their work independently; preliminary results were discussed collectively, and consensus was reached on the categories. This inductive approach enabled the exploration and identification of nursing tasks in the VCCs. Subsequently, a deductive approach was applied to map the identified tasks and roles to the seven CanMEDS core nursing roles. Nursing tasks were matched with corresponding nurses' responsibilities. These responsibilities were then aligned with the role descriptions in the CanMEDS framework. Finally, findings were presented to experts (nurse researchers) for validation and feedback.

2.5 Ethics

This study was approved by the Ethics Review Committee of the University of Applied Sciences Utrecht (HU) for a non-WMO application. The data was treated confidentially and processed anonymously, according to the European Union General Data Protection Regulation (EU GDPR).

3 Results

3.1 Participant characteristics

All fifteen participating nurses were female, and their age ranged from category [18-25 years] to category [56-65 years]. Three nurses worked at a general hospital, seven nurses in a top-clinical setting, and five in an academic hospital setting. Working experience as a graduate nurse ranged from 1.5 years to 40 years, and experiences with telemonitoring ranged from 1 year to a maximum of 3.5 years.

3.2 Nursing Tasks and Responsibilities Within Virtual Care Centers

Forty-six distinct nursing tasks were identified in the inductive analysis, which were subsequently categorized into key nurses' responsibilities for nurses providing care through VCCs. Their responsibilities varied from 'Remote care delivery', which includes tasks such as 'analyzing trends of e.g. vital signs from patients' self-administered measurements', to the responsibility of 'Collaboration and coordination' with tasks such as 'collaborating with other disciplines such as a nurse specialist and medical specialist', and 'collaborating with other type of professionals e.g. ICT professionals'. Most virtual care nursing tasks fell under the 'Remote care delivery' category. A summary of the responsibilities and related tasks is listed in Table 1.

3.3 Virtual Care by Nurses mapped to CanMEDS Nursing Roles

In the second part of the analysis, we mapped the identified nursing tasks and responsibilities to the seven core roles based on the CanMEDS framework. Table 1 displays the nurses' responsibilities, related tasks, and role(s).

Table 1: Nurses' Responsibilities and Tasks in Virtual Care Centers and Connection with Core Nursing Roles

Nurses' responsibility	Related task(s)	Roles[1]
Remote care delivery	– Collecting patients' self-administered measurements remotely – Analyzing and understanding data / trends without seeing patients live – Decision making and follow-up by use of nurse intervention(s) remotely – Evaluation of care with patients remotely – Reporting details in electronic patient files	Nurse Expert & Health Promotor
»An important task is to analyze incoming data and follow up. We aim to complete those tasks as quickly as possible...«		
Collaboration and coordination	– Working closely together with patients and healthcare professionals within and outside the hospital, such as a nurse specialist, medical specialist (e.g, GP). – Working closely together with types of professionals, e.g., in projects with ICT professionals, or when software crashes. – Coordinating patients' care remotely	Communicator & Collaborator
»We work together with medical specialists like a cardiologist... We also work nicely together with the ICT department...« *»You are working with a whole team, people from ehealth (ICT), medical specialists, and other people...«*		
Training and coaching	– Developing and providing (new) training programs, e.g., telemonitoring new disease groups – Coaching new colleagues on the job and supervising colleagues with specific telemonitoring-only tasks	Collaborator & Reflective EBP professional & Leader
»...currently we are developing a new introduction program for new colleagues for new diseases...« *»As a nurse, I train and supervise my colleagues who perform monitoring...«*		
Education	– (Remotely) educating and instructing: e.g., patients and partner/family on how to use technology and how to perform self-measurements using technology;	Nurse Expert
»... most of our patients are old... When they are included for monitoring, we have to help them install the monitoring application. Step by step, what button to click...« *«In the beginning, patients may find it difficult to use, but after a few times, even the older patients succeed...«.*		
Development	– Initiate or participate in (new) or ongoing projects, e.g., new care pathways, new care protocols, new questionnaires in software/apps. E.g., conducting research, updating protocols, and evaluating new programs.	Reflective EBP Professional & Leader & Quality Promotor
«As a nurse, we have a double role. We work as a project leader to develop new programs (monitoring new diseases)... *»We evaluate protocols with our colleagues.... We also ask patients about their experiences with monitoring... »*		
Promotion	– Promotion of the VCCs and the care services provided (telemonitoring) within and outside of the hospital, e.g., fairs or congresses.	Nurse Expert & Leader
»...some medical specialists within our hospital have no clue what we are doing here (in VCC). So we sometimes provide tours in our VCC.«		

[1] Based on existing CanMEDS nursing roles, displayed in Figure 1

All seven nursing roles are represented within the nursing practice in VCCs. Upon examining the 46 different tasks identified, the majority can be linked to the roles of Leader (9 responsibilities) and Collaborator (9 responsibilities). The fewest responsibilities (4) could be linked to the role of Quality Promoter.

4 Discussion

4.1 Key findings

We identified 46 distinct tasks for nurses working in VCCs, which could be categorized into six nurses' responsibilities. All seven Dutch nursing core roles are addressed in providing care services for patients through a VCC. Some of the responsibilities and tasks identified, are comparable to those of nurses providing care to patients in regular (hospital) wards. These include care delivery, in collaboration with patients and other disciplines, and coordination of care. However, a key distinction is that care within VCCs is provided remotely. No physical examination can be performed by nurses, and they rely solely on data for clinical interpretation.

Furthermore, within the responsibility of 'Promotion', several new nursing tasks were identified, such as advocating for the new VCCs, and promoting the new innovative care delivery services available. Promotion of VCCs by nurses is essential, as it improves healthcare accessibility by expanding remote care services for (new) patients at home. Thereby freeing up hospital beds for those patients requiring in-person treatment.

Additionally, the number and type of tasks associated with the various nurses' roles (Table 1) may indicate differing priorities. For example, the Nurse Expert role encompasses more tasks compared to the Health Promotor role. Whether this indicates a deliberate prioritization or a lesser focus on health promotion tasks is unclear.

4.2 Comparison with prior research

Our study findings align with the results described by Leenen et al. (2024) on nurses working in VCCs, particularly the evolving role of nurses in providing remote care. For instance, nurses in VCCs are increasingly involved in the development of new

care pathways and new protocols, and they play a more significant role in acquiring and promoting the new care services of the VCCs (nurse responsibility 'Promotion'). Herein, the roles of Nurse Expert, Reflective EBP Professional, Leader, and Quality Promoter are more prominent among nurses in VCCs, suggesting that their focus extends beyond direct patient care provision. Compared to nurses in regular wards, they take on Leadership and Quality Promotion roles more often, which contributes to continuous improvement of (remote) health care services. This potentially supports optimization of patient outcomes, in line with evidence-based practices.

The theme 'Cooperation with Other Healthcare Professionals' (Leenen et al., 2024) aligns with our responsibility 'Collaboration and coordination', emphasizing the importance of working with a multidisciplinary care team. In our study, nurses highlighted the necessity of collaborating with various experts, including those from non-care and non-medical fields, such as (ICT) technicians. Leenen et al. (2024) also mentioned that the patient-professional relationship changed when providing care remotely. In our study, we did not explore that aspect in depth.

Furthermore, in our study, we found key responsibilities, including several tasks of nurses providing care remotely. Our findings differ somewhat from the six professional nursing activities as described in Tan et al. (2024), where entrustable professional activities for nurses were developed for teleconsultations for nursing home residents. Their study focuses on tasks that are required of nurses to facilitate teleconsultations with a remote physician, whilst ours focuses on nurses who remotely provide care to patients in their homes. Nevertheless, both studies can be used to develop virtual care curricula in nursing.

Additionally, van Houwelingen et al.'s (2016) study in home care, identified fourteen professional nursing activities and 52 aspects of required knowledge, skills, and attitudes. Although the study was conducted in the home care context, our findings are somewhat comparable. For instance, 'Triaging incoming calls and alarms', 'Analyzing and interpreting incoming data', and 'Monitoring body functions and lifestyle' align well with our nurses' responsibility, 'Remote care delivery'. This alignment underscores the relevance of these activities for nurses.

Finally, Jacob et al. (2025) outline a curriculum framework for higher education in telehealth for multidisciplinary healthcare providers. It consists of twelve domains, including 'assessment, diagnosis, and treatment', similar to our responsibility of 'Remote care delivery'. In comparison, our findings offer more detailed insights, including the specific tasks of nurses providing remote care, while the domains in Jacob et al. (2025) offer a theoretical framework for curricula development. Together, these findings seem valuable for the development of virtual care nursing education programs.

4.3 Implications for Practice and Education

Within VCCs, there is an emphasis on responsibilities such as Remote care delivery, Development, and Promotion. Nurses who are new to VCCs are required to develop specialized knowledge and skills, such as using technology independently, guiding patients effectively through telehealth modalities, engaging in innovative projects, and also promoting VCCs. These types of knowledge and skills are not typically acquired through common care delivery services in a hospital setting.

Our results serve as a foundation for developing novel nursing education programs for both nursing students and graduate nurses working in settings outside VCCs. Responsibilities and tasks specific to virtual care, such as delivering care without physical contact, interpreting data trends, and collaborating with non-medical staff such as technicians, are not yet part of basic nursing training. With the implementation of new innovative care models such as VCCs, both nursing students and practicing nurses need to be equipped with additional knowledge and skills to meet emerging demands in virtual care.

Finally, the roles linked to the tasks and responsibilities identified in this study might not align with the expectations of both future nursing students and graduated nurses. It is well-documented that (digital) technology in healthcare influences nurses' professional identity (Knop et al., 2024). Without adequate focus on the professional identity, there is a risk that nursing students may face increased absenteeism or attrition during education and or later in nursing care practice (Rasmussen et al., 2021). It is crucial to provide future nursing students with opportunities to explore and determine if the evolving roles of nurses align with their expectations. We believe it is important for future nurses to be exposed to virtual nursing,

demonstrating that nurses in VCCs can still maintain close contact with patients and build strong professional relationships.

4.4 Future Research Into the Evolving Role of Nurses

Future research on the evolving role of nurses providing care through VCCs is appropriate. Currently, we are conduction a study focused on the broader experiences of nurses providing remote care through VCCs. Secondly, in a future study, we want to (further) develop and validate VCC nurses' roles, responsibilities, and tasks by using the framework of Entrustable Professional Activities (EPAs). EPAs are essential in nursing education, as they define key tasks or activities that nurses must be able to perform independently (Tan et al., 2024), e.g., the tasks and activities healthcare supervisors (experienced nurses) entrust their trainees (nursing students) with once they achieve adequate levels of competency (ten Cate et al., 2016).

Furthermore, it is important to investigate how our findings impact the professional identity of nurses. Innovations such as VCCs and the evolving role and tasks of nurses affect their professional identity in terms of self-perception, role, and context (Rasmussen et al., 2021). Without attention to professional identity, there is a risk of increased absenteeism or attrition, a potentially avoidable outcome given the current pressures on the healthcare system and increased demand for care.

4.5 Conclusion

Our study shows how the responsibilities and tasks of nurses providing care through VCCs are mapped to the core roles of nurses as outlined in the CanMEDS framework. Some responsibilities and related tasks differ from traditional ward-based care, which reflects the evolving nature of the nursing role. By highlighting emerging nursing practice in VCCs, our study offers a foundation to build future virtual care nursing education programs, which reflect the demand for modern healthcare.

References

Allmér, H. (2018). Servicescape for digital wellness services for the young elderly. Åbo Akademi University Press, Turku, Finland

Andersen, F.D., Trolle, C., Pedersen, A.R., Køpfli, M.L., Børgesen, S., Jensen, M.S., Hyldgaard, C. Effect of telemonitoring on readmissions for acute exacerbation of chronic obstructive pulmonary disease: A randomized clinical trial. J Telemed Telecare. 2023 Jan 23: 1357633X221150279. DOI: 10.1177/1357633X221150279

Attig, C., Franke, T. (2020). Abandonment of personal quantification: a review and empirical study investigating reasons for wearable activity tracking attrition. Computers in Human Behavior, 102, 223-237 https://doi.org/10.1016/j.chb.2019.08.025

Bouwes, A., Broekman, H., Dobber, J., Eisenberg, I., Hertog den, R., Rugers, A. (2023). Opleidingsprofiel Bachelor of Nursing 2030. Landelijk Overleg Opleidingen Verpleegkunde, oktober 2023

Eze, C.E., Dorsch, M.P., Coe, A.B., Lester, C.A., Buis, L.R., Farris, K.B. (2023). Facilitators and barriers to blood pressure telemonitoring: A mixed-methods study. Digit Health. 2023 Jul 25;9:20552076231187585. doi: 10.1177/20552076231187585. PMID: 37529536; PMCID: PMC10387707

Faber, S., van Geenhuizen, M., de Reuver, M. (2017). eHealth adoption factors in medical hospitals: A focus on the Netherlands. Int J Med Inform. 2017 Apr;100:77-89. DOI: 10.1016/j.ijmedinf.2017.01.009

Graneheim, U.H., Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness, Nurse Education Today, Volume 24, Issue 2, 2004, Pages 105-112, ISSN 0260-6917, https://doi.org/10.1016/j.nedt.2003.10.001.

Hilderink, H.B.M., Verschuuren, M. (2018). Public Health Foresight Report 2018 – A healthy prospect. Rapport#2018–0030. Rijksinstituut voor Volksgezondheid en Milieu. Bilthoven: 2018

HRSA: Health Resources and Services Administration. (2022). Understanding telehealth. Telehealth.hhs.gov. https://telehealth.hhs.gov/patients/understanding-telehealth

Jacob, M.F.A., Fandim, J.V., Reis, F.J.J., Hartvigsen, J. Ferreira, P.H., Saragiotto, B.T. (2025). Defining core competencies for telehealth in healthcare higher education: A Delphi study. Musculoskeletal Science and Practice, Volume 75, 2025, 103244, ISSN 2468-7812, https://doi.org/10.1016/j.msksp.2024.103244

Knop, M., Mueller, M., Kaiser, S., Rester, C. (2024). The impact of digital technology use on nurses' professional identity and relations of power: a literature review. J Adv Nurs. 2024 Nov;80(11):4346-4360. doi: 10.1111/jan.16178. Epub 2024 Apr 1. PMID: 38558440

Leenen, J.P.L., Jordens, Y.J., Wegman, A., Heesink, L., Lenferink, A. (2024). Experiences of nurses working in novel virtual care centres in the Netherlands: a qualitative study. BMC Digit Health 2, 70 (2024). https://doi.org/10.1186/s44247-024-00127-3

Liljamo, P., Wahlberg, J., Mikkonen, H., Reponen, J. (2021). A Digital Care Pathway to Access Healthcare Without Time and Place Restrictions. Stud Health Technol Inform. 2021;284:163–5. DOI: 10.3233/SHTI210690

Ministerie van Volksgezondheid Welzijn en Sport. Inspectie Gezondheidszorg en Jeugd. (2021). Toetsingskader: Telemonitoring volwassenen thuis. Den Haag

Rasmussen, P., Henderson, A., McCallum, J., Andrew, N. (2021). Professional identity in nursing: A mixed method research study, Nurse Education in Practice, Volume 52, 2021, 103039, ISSN 1471-5953, https://doi.org/10.1016/j.nepr.2021.103039

Sanchez-Ramirez, D.C., Pol, M., Loewen, H., Choukou, M.A. (2022). Effect of telemonitoring and telerehabilitation on physical activity, exercise capacity, health-related quality of life and healthcare use in patients with chronic lung diseases or COVID-19: A scoping review. J Telemed Telecare. 2022 Aug 31:1357633X221122124 https://doi.org/10.1177/1357633X221122124

Tan, A.J.Q., McKenna, L., Bramley, A., van Houwelingen, T., Tan, L.L.C., Lim, Y.J., Lau, S.T., Liaw, S.Y. (2024). Telemedicine entrustable professional activities for nurses in long-term care: A modified Delphi study, Nurse Education Today, Volume 140, 2024, 106264, ISSN 0260-6917,
https://doi.org/10.1016/j.nedt.2024.106264

Thomas, E.E., Taylor, M.L., Banbury, A., Snoswell, C.L., Haydon, H.M., Gallegos Rejas, V.M., Smith, A.C., Caffery, L.J. (2021). Factors influencing the effectiveness of remote patient monitoring interventions: a realist review. BMJ Open. 2021 Aug 25;11(8):e051844. doi: 10.1136/bmjopen-2021-051844. PMID: 34433611; PMCID: PMC8388293. https://doi.org/10.1136/bmjopen-2021-051844

Ten Cate, O., Hart, D., Ankel, F., Busari, J., Englander, R., Glasgow, N., … Snell, L. S. (2016). Entrustment decision making in clinical training. Academic Medicine, 91(2), 191–198 https://doi.org/10.1097/acm.0000000000001044

United Nations. (2017). World Population Prospects: The 2017 Revision, Key Findings and Advance Tables. Working Paper No. ESA/P/WP/248. Department of Economic and Social Affairs. Population Division. Geneve: 2017

Van Houwelingen, C.T.M., Moerman, A.H., Ettema, R.G.A., Kort, H.S.M., ten Cate, O. (2016). Competencies required for nursing telehealth activities: A Delphi-study, Nurse Education Today, Volume 39, 2016, Pages 50-62, ISSN 0260-6917, https://doi.org/10.1016/j.nedt.2015.12.025