






# Nursing – a core element of rehabilitation

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## Abstract:

**Aim:** 2020 was been acknowledged by the World Health Organization as the International Year of the Nurse and the Midwife. On this occasion, the Global Rehabilitation Alliance and the International Council of Nurse would like to conceptually reflect the role of nurses in rehabilitation.

**Background:** Rehabilitation and nursing are strictly ingrained. Rehabilitation aims at improving, reaching and maintaining optimal functioning of persons with disability and persons with health conditions experiencing disability. Nursing is defined as use of clinical judgement in the provision of care to enable people to improve, maintain, or recover health, to cope with health problems, and to achieve the best possible quality of life. Nursing has a crucial role in all phases of rehabilitation care (acute, post-acute and long-term rehabilitation). Nurses deliver rehabilitation in many settings, in nursing homes and community-based rehabilitation. The main principle is not to deliver care for the patient but deliver care with the patient. This includes explaining, demonstrating and practising with the goal to help the patient to (re-)gain independence.

**Discussion:** Nurses play an important role in delivering rehabilitation and are involved in all aspects of the multidimensional rehabilitation process. One of the important points is that in most settings, nurses are the professionals with a prolonged relationship with patients and families, and may have the best insight into the patients' personal and contextual factors with regard to the rehabilitation process.

**Conclusion and implications for Nursing and/or Health Policy:** Strengthening nursing in rehabilitation is a vital factor to deliver high-quality rehabilitation and to achieve optimum outcomes. For this reason, we urge all relevant stakeholders at governmental and rehabilitation service provider levels to work towards these goals.

**Keywords:** rehabilitation, nursing, multidisciplinary integration, teamwork, interprofessional collaboration

## Preface

Can you imagine performing an acute rehabilitation program without nurses? Can you imagine running a post-acute rehabilitation centre without any nurses? No!

Activation and empowerment are core elements of rehabilitation care, can you imagine not involving nursing in these care concepts? Can you imagine to be successful in

performing rehabilitation programs without specific nurses trained in rehabilitation and not to have them in your rehabilitation team? No!

As the answer to these questions are an obvious no, a new question occurs: why nurses often are not mentioned when discussing core rehabilitation professions, and why in many countries there is no special training for nurses working in specific rehabilitation setting?

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Obviously, there is a gap between imminent relevance and evaluation of the role of nursing in rehabilitation. On the occasion of the 2020 International Year of the Nurse and the Midwife, the Global Rehabilitation Alliance (GRA) and the International Council of Nurses (ICN) would like to describe and highlight the specific role of nursing in different types of health-related rehabilitation and derive some recommendations for further improvement of rehabilitation with regard to rehabilitation nursing.

## Introduction

Rehabilitation is one of the elements of Universal Health Coverage (UHC), which means that rehabilitation services must be available for every person in need worldwide (WHO 2019). Rehabilitation aims at improving and maintaining functioning of persons with (chronic) health conditions experiencing disability as well as persons with disabilities (Meyer et al. 2011; Stucki et al. 2018; WHO & The World Bank 2011). For example, a young man with spinal cord injury is paraplegic, unable to walk, suffers from pain, has bowel and bladder dysfunction and problems with respiration. Rehabilitation aims at supporting this person by training transfers and mobility (with wheelchair) and helps with bladder and bowel control including incontinence management. Rehabilitation services additionally provide respiration therapy and supports independent living and return-to-work. It is known that if quality rehabilitation is provided persons with severe impairment can participate in life and experience a better quality of life (Nithiatthawanon et al. 2020).

This example demonstrates that rehabilitation can be seen as a health strategy, along with health promotion, prevention, curation, support and palliative care (Meyer et al. 2011; Stucki et al. 2018). It is a strategy that supports people with health conditions who experience problems in the interaction with their environment (defined as disability) and empower them to achieve full participation in society. To achieve that, rehabilitation provides a set of interventions addressing the individual needs. Such interventions are suitable to improve body functions and facilitate activities and participation. In many cases, functional problems are multifaceted and complex and being aware that life situations are diverse foster rehabilitation interventions that, in mostly of the cases, are multidimensional and require a multi-professional rehabilitation team (Neumann et al. 2010).

This description, of course, is not restricted to persons with disability following injury (e.g. spinal cord injury, traumatic brain injury and multiple trauma); it is also a core part of effective care for everyone with a health condition, acute, chronic, impairment or injury that limits functioning.

Rehabilitation can be necessitated by people across the life course.

Another critically crucial point is to understand that rehabilitation is not just an aftercare treatment that will be provided in special units or centres. Rehabilitation must be available in almost all healthcare settings and in all phases of care (acute, post-acute long-term) (Gutenbrunner et al. 2018; WHO, 2017a). In acute care coordinated rehabilitation interventions can contribute to speeding recovery and to achieve better long-term outcomes for a number of diseases (Marti et al. 2020; Rethnam et al. 2020). It also supports intensive care and may shorten duration of intensive care. Better known, but not available in many countries, are post-acute rehabilitation programs. This is because acute situations are often professionally managed but functional deficits remain and need further continuum of care by well-trained teams. In many conditions, interrupting active treatment and rehabilitation result in long-term impairments. In the post-acute phase, rehabilitation concentrates on the (further) improvement of functions and activities. Rehabilitation also aims at achieving independent living including some initial measures to support return-to-work. In the long-term phase, rehabilitation may be needed for various purposes, including maintaining and improving body functions, for activities of daily living and maintaining fitness to work. Rehabilitation is also needed for persons with long-term impairments and with chronic health conditions or after cancer who need to maintain functioning and quality of life. How rehabilitation is achieved may differ among countries and situations and can range from in-patient rehabilitation measures to outpatient rehabilitation units to community-based rehabilitation services. Last but not the least, many studies have demonstrated that functioning intervention before hospital interventions (prehabilitation) may lead to better outcomes of care (Fulop et al. 2020; Granicher et al. 2020; Kaye et al. 2020).

The World Report on Disability (WHO & The World Bank 2011) has shown that worldwide huge gaps exist when comparing needs for rehabilitation and rehabilitation service provisions (Kamenov et al. 2018). This is the case in low- and middle-income settings. However, some health systems in higher income countries also show deficits when looking at service delivery from the point of view of the persons who need rehabilitation.

Rehabilitation also contributes to the United Nations Sustainable Development Goals (SDGs) 2030, as rehabilitation is part of SDGs, particularly SDG 3: good health and well-being. Furthermore, rehabilitation also contributes to other SDGs goals, such as SDG 1 (no poverty), SDG 4 (quality education), SDG 5 (gender equality), SDG 8 (decent work and

economic growth), SGD 10 (reduced inequalities) and SDG 11 (sustainable cities and communities) (GRA & HI 2019). The World Health Organization (WHO) has also highlighted the importance of rehabilitation and strongly advocates to strengthen rehabilitation service provisions in health systems (GRA & HI 2019; WHO 2014; WHO, 2017a; WHO, 2017b).

But what are important factors to make rehabilitation successful?

Rehabilitation, in complex cases, can only work if all relevant aspects of functioning (defined as body functions, activities and participation) are addressed and if all team members together with the patients pursue the same goals. As rehabilitation aims at empowering to perform activities (e.g. activities of daily living) and to actively participate in society, nursing is a key driver to implement such strategies.

### **Nursing: from delivered care to an active co-intervention**

'Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people' (ICN 2020).

In this logic, nurses are the main actors to fulfil the basic and always more complex and ever-changing needs of patients. However, the traditional functions of care delivery are currently shifting towards a more proactive approach for the persons assisted. In this framework, self-care as a strategy was originally developed by Dorothea Orem, a famous nurse theorist, and is composed by the Self-Care Deficit Theory that is focused on the persons' capacities to accomplish actions linked to the management of their health conditions (Orem 2001). Orem (2001: p. 43) defined self-care 'As the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health, and well-being'. The theory was furtherly expanded as a middle-range theory (Riegel & Dickson 2008; Riegel et al. 2019; Riegel et al. 2012). In nursing, the concept of self-care is currently widely adopted to promote a better management of the assistance by part of the recipient of care (Riegel et al. 2019). Self-care is influenced by experience, confidence, skill, function, motivation, culture, support from others, cognition, habits, and access to care (Riegel et al. 2019). In this logic, self-care is the key driver to prompt co-interventions between the recipients of care and the health professionals and between nursing and rehabilitation sciences as integrated and ingrained disciplines. In fact, since the 70s, rehabilitation nursing has become a special sector of the nursing spectrum and according to the Association of Rehabilitation Nurses (ARN 2014), rehabilitation nursing

is exactly the response to functional impairments and deterioration of individuals.

Spasser & Weismantel, (2006) characterized the goals of rehabilitation nursing with the keywords: potential, quality of life, cultural-competent care, ability, family-centred care, learning, wellness and community integration. This is already very close to the International Classification of Functioning, Disability and Health (ICF)-based definition of rehabilitation goals, which is 'to achieve and maintain optimal functioning in interaction with the environment' (Gutenbrunner et al. 2011; Meyer et al. 2011).

Based on the ARN definition, Havrilla (2017) identified 'four main domains of rehabilitation nursing in acute care. These are nurse-led interventions (e.g. assist patients in utilizing supportive technology), promotion of health and successful living (e.g. fostering self-management), leadership (e.g. disseminating rehabilitation nursing knowledge), and inter-professional care (e.g. implementing interprofessional and holistic care plan)'.

In 2012, Koc described the role of nursing in rehabilitation more in detail and listed a number of specific problems where rehabilitation nursing plays a crucial role (Koc 2012). Among others, these are skincare (management of pressure ulcers), hygiene (bathing, toileting), eating, mobilizing, and percutaneous endoscopic gastrostomy (PEG) management. For stroke rehabilitation, even more specific concepts have been developed (O'Connor 2000; Wright et al. 1999). These also highlight the role of rehabilitation nursing in association with mental health problems.

A competency model of professional rehabilitation nursing has been developed by Vaughn et al. (2016). It consists of 'four domains: nurse-led interventions, promotion of health and successful living, leadership, and interprofessional care' (Vaughn et al 2016). Vaughn's model includes, for instance, the use of supportive technology client and caregiver education, fostering self-management, and fostering effective inter-professional collaboration. These aspects relate to the core of rehabilitation as a whole. Burks (1999) highlighted a nursing practice model for persons with chronic health conditions that defined crucial relevant outcomes of nursing interventions in rehabilitation as 'effective self-management skills and subsequently improved health status and quality of life'.

In order to achieve a consensus on principles of rehabilitation nursing, Suter-Riederer et al (2018) performed a Delphi study based on literature-based statements. The results of this study showed that patient and family centredness have the highest priority. Additionally, the considerations of patient preferences as well as an evidence-based approach were crucial and highly appreciated.

## The role of nursing in rehabilitation

As described above, the traditional model of nursing consisted of supporting patients with basic needs but in the last 40 years different models of taking care of more complex needs of people emerged and also different functions of nursing (prevention, education, rehabilitation, etc.). The different models have been developed to better meet the essence of nursing holistic care, especially person-centredness care models (McCance et al., 2011) or integrated care systems (Duncan, 2019) or synergistic models (Hardin and Kaplow 2017) are now part of the knowledge embedded in nursing science. For various reasons, sometimes patients are passive care recipients of the nursing interventions, and therefore, they do not fully take advantage in terms of self-care awareness, education and independent living. Modern concepts of nursing significantly changed these old constructs and favoured the support of patients to perform self-care independently and actively. Thus, the patient is actively involved, and the intervention is not only focused on delivering care but tends to educate and train the patients on how to accomplish it. Of course, both concepts are necessary and overlap. However, it must be stressed that the approach of activating nursing care represents the core principle of rehabilitation (McPherson 2006).

One concept for rehabilitation of patients with neurological conditions stresses that rehabilitation care must be done 24 h per day and underlines that this has to be accomplished in collaboration between health professionals, the person requiring care and their family (Aries 2014).

As far as the principle of teamwork in rehabilitation is concerned, it is of major importance to describe the core competencies and roles of professionals with different training backgrounds and define the role of each profession within the rehabilitation scope of practice. Besides, to describe or define the principal roles in a specific care unit, it is also crucial to discuss and agree on the roles of each team member in a single patient's care situation. The main reason for this is that there are overlaps of competencies among different professionals. Furthermore, it is essential to establish a mechanism of multi-professional teamwork that has been shown to be pivotal for successful rehabilitation.

In this line of reasoning, the specific role of nurses in rehabilitation programs in different stages of life and care can be seen at a wider perspective. In fact, this holistic care can be appreciated under different lenses (Le Danseur et al., 2019; O'Connor et al., 2020) that include, for example, the emergent use of alternative and complementary medicine (Hall et al., 2018) or rehabilitation nursing for people living with

HIV+ (Perazzo et al., 2018). It can be also highlighted different stages of nursing rehabilitation:

- In *acute rehabilitation*, nursing contributes to support basic body functions such as respiration, cardiovascular functions, skin functions and neuromuscular functions. Nurses take care of adequate nutrition (including supporting dysphagia management). Nursing also includes early mobilization and training of (active) self-care functions. This should be accomplished in collaboration with physicians, physical and rehabilitation professionals, physiotherapists, occupational therapists, speech and language therapists and including relatives of the patient if appropriate.
- In *post-acute rehabilitation*, nursing has a key role in ensuring mobility and self-care. Here, it is increasingly pivotal to include advice to the patients and caregivers. Nurses are also supporting specific interventions such as bladder and bowel management, stoma and tracheal canula management, and the use of assistive and technological devices. Cognitive behavioural treatments that follow 24-hour treatment principles need to be backed up and continued by nurses too (Aries & Hunter, 2014). Of course, according to the specific situation, the individual needs of the patients will have to be included. In this phase, close collaboration with a multi-professional rehabilitation team is essential.
- In *nursing homes and geriatric care*, nurses are in first line to be responsible for long-term care. This includes the analysis of functional performance of the patients and the capacity to coordinate the various interventions by other rehabilitation professionals. Nursing care itself includes positioning and mobilization, training of self-care functions (including independent washing, toileting, eating), nutrition and many others. Psychosocial intervention and patient empowerment constitute also critical strategies in nursing homes and geriatric care.
- *Long-term rehabilitation* with special focuses on persons with disabilities and often performed in the person's home combines the above strategies and interventions. Dependent on the individual needs of a patient and the care setting, nurses (if possible) deliver rehabilitation care. Supporting and training of body functions such as respiration (including mechanical ventilation), bladder and bowel functions, stoma management, and other interventions have to be carried out successfully. Important goals are independent living, participation in social and cultural activities and scaling up the dignity of the patients (Thompson et al. 2016).

Other forms of long-term rehabilitation are intermittent inpatient or day clinic rehabilitation measures. This kind of rehabilitation often is delivered to persons with chronic health

conditions and in working age. Dependent on the concept of such rehabilitation units, nurses are involved in basic management of the units, medical care and may be included in cognitive behavioural approaches.

- In so-called *Community-based rehabilitation services (CBR)*, nurses may be the only persons who deliver rehabilitation. In many cases, primary care physicians, rehabilitation professionals and lay persons (so-called CBR workers) are involved in such programs. In this environment, basic rehabilitation interventions are delivered, and patients and their families need to be instructed and trained in managing disability. This includes supporting activities of daily living and community integration, delivery, and training with assistive devices, managing transfer to specific rehabilitation units, and many other actions.

These examples show that active (or proactive rehabilitative) nursing has a significant role in all phases of rehabilitation. Together with the other members of the rehabilitation team, these elements are key drivers for good rehabilitation outcomes.

### The way forward

It exists a broad consensus that rehabilitation has to target many components of functioning, including activities and participation, as well as individual and contextual factors. This requires an individual rehabilitation integrated plan and – in most cases – a multidimensional approach that foster a multi-professional teamwork. As mentioned above, nursing plays a crucial role in such an approach and it requires good training of nurses including understanding of the rehabilitation processes and skills to empower recipients of care to achieve optimal independence. However, in some settings such as in Community-Based Rehabilitation, nurses may work mono-professionally; however, in most rehabilitation centres, nursing has to be fully integrated in the rehabilitation teamwork aiming at mutual goal setting, interprofessional teamwork and common language.

Sometimes, the real world has demonstrated that the role of nursing in rehabilitation often remains invisible and is underappreciated (Kearney 2010; Larsen 2020). This may be due to some misconceptions or a lack of awareness of the many fields of the nursing science; these misjudgements are often connected to old models of education in health care. These and other misinterpretations have been transposed to rehabilitation services without fundamental rethinking. This may be due to some misconceptions or a lack of awareness of the many fields of the nursing science but also to the fact that in different countries worldwide, also in economically advanced countries, the education of nurses is still vocational

and their holistic role is still underdeveloped. In other countries, the entry level and the education offered is of outstanding level but sometimes nurses cannot work at their full scope of practice for various macro- and meso-social contextualized variables (Benton et al. 2017). For this purpose, it is critical to argue for a role of nurses in the rehabilitation team as key members of the team and involved in all aspects of the multidimensional rehabilitation process. Some important points towards such understandings are as follows:

- to comprehend that nurses do not primarily deliver care for the patient but mainly deliver care with the patient and prompt the person to take care of himself/herself according to his/her capacities and skills. This includes explaining, demonstrating and practising with the goal to help the patient to (re-)gaining stepwise independence (Kearney 2010).
- to be aware that nurses in most settings are the professionals with a prolonged relationship with the patients and in particular their families and other meaningful persons for them. Thus, they may have best insights in the patients' personal and contextual factors regarding the rehabilitation process.
- to be cognizant that daily activities are critical for the transfer of learning processes in rehabilitation. This cannot be successful without an active integrated role for nurses and other health professionals.
- to recognize that nurses are highly specialized rehabilitation professionals that in most countries have academic training, postgraduate training courses and an evidence-based approach to rehabilitation interventions.

In the occasion of the International Year of the Nurse and the Midwife 2020, the International Council of Nurses (ICN) and the Global Rehabilitation Alliance (GRA) would like to explicitly acknowledge the work accomplished by nurses in rehabilitation. We are aware that many aspects need to be fully expanded to strengthen the role of nursing in rehabilitation with the goal of increasing good rehabilitation outcomes. Some of these aspects include that:

- Nurses must be fully integrated in the rehabilitation teamwork and considered as team members at eye level. Also, appropriate recognition has to be provided for nurses.
- The education of nurses has to include an in-depth understanding of the role of rehabilitation in improving functioning as well as nursing interventions leading to this goal.
- Academic training must be made available worldwide and more scientific studies must be funded to enable evidence-based nursing in rehabilitation.
- Specific postgraduate training for rehabilitation nursing has to be established globally.



- Resources for better technical equipment must be available worldwide.
- Strengthening nursing in rehabilitation is a vital factor to deliver high-quality care and to ensure that rehabilitation can meet the needs of persons experiencing disability and achieve optimum health outcomes. For this motive, we urge all relevant stakeholders at governmental level and at rehabilitation service provider level to work towards these goals.

### Implications for nursing and health policy

In 2020, we propose that countries need to develop strategies and actions on the development of nursing's role in rehabilitation. The following outlines key components that would underpin these strategies:

**a. Education and Continuing professional development:** Transformational approach for the delivery of appropriate health care by providing education and training for health professional (ICN, 2019)

**b. A multidisciplinary approach to care:** Team-based approach to treat patients based on multidisciplinary relationships between health professionals. It should start from treatment plan, monitoring and jointly agreeing on adjusting/changes of treatment plans (ICN, 2019).

**c. Nursing leadership and involvement in high-level decision making:** Nursing leadership in policy and decision making should be strengthened. Investment in nursing leadership will be required. Additionally, investment in nursing research related to rehabilitation, such as cost effectiveness and efficacy of interventions and knowledge translation into evidence-based practice (ICN, 2019).

**d. Investment in Rehabilitation:** Build up quality rehabilitation facilities and services in acute, post-acute and long-term settings including community-based rehabilitation.

**e. Building the Nursing rehabilitation workforce:** Building up the numbers and skills of nurses specialized in rehabilitation to improve access to quality, cost effective and sustainable treatments (ICN, 2019).

In conclusion, the International Year of the Nurse and the Midwife should become a momentum to strengthening nursing in rehabilitation, as it is a vital factor to deliver high-quality rehabilitation and to achieve optimum outcomes. For this reason, we urge all relevant stakeholders at governmental and rehabilitation service provider levels to work towards these goals.

### Author contributions

Study design: CG, AS, BN.

Data collection: CG, AS, BN.

Data Analysis: CG, AS.

Study Supervision: CG, HC.

Manuscript writing: CG, AS, BN, DS, HC.

Critical revisions for important intellectual content: CG, AS, BN, DS, HC.

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