Developing Skills in Intra-Workplace Rehabilitation Education: Paper III

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Abstract

Rehabilitation is a medical discipline which is needed wherever people have lost full functionality, and it is needed increasingly in noncommunicable diseases, such as neurological problems, but also, and perhaps more importantly, in middle- and high-income countries, where populations are growing more aged. The burden is borne by the health care systems, especially where family cannot take the full load of care. Rehabilitation is also a discipline which is carried out most effectively in multi- or interdisciplinary teams, which carry their own weight of learning and group tensions. They are also bound to consider best practice guidelines. Furthermore, there is also a wide gap between learning in college or university and practice in the ward which leads to a loss of confidence in newly trained medical and paramedical personnel such as doctors, nurses, physiatrists, occupational therapists and physiotherapists. There is a genuine need for expert rehabilitation specialists who can mediate within teams as well as between groups and patients and their families. This paper lays out the range of considerations such a rehabilitation therapist must have under their belt. A model is presented. There are also two sets of parameters when using the model in practice. The first is the levels at which it works: hospital, departmental and individual. Then there are the specific challenges. Curriculum practice guidelines work at the hospital and departmental and professional levels; teamwork with its intrinsic challenges is of paramount importance; finally, the individuals will learn how to represent their insights in writing, most specifically represented in full-blown case reports. If the levels and roles coordinate, rehabilitation medicine should develop favourably.

1. Introduction

1.1. The Role of Rehabilitation in Medical Care

"In a health care context," rehabilitation is defined as a "multimodal, person-centered, collaborative process" (**Intervention-general**), including interventions targeting a person's "capacity (by addressing body structures, functions, and activities/participation) and/or contextual factors related to performance" (**Intervention-specific**) with the goal of "optimizing" the "functioning" (**Outcome**) of "persons with health conditions currently experiencing disability or likely to experience disability, or persons with disability" (**Population**) (Negrini, Selb, Kiekens *et al.*, 2022 [1]).

This somewhat tortuous definition represents a genuine attempt to reflect on a growing field. Rehabilitation plays an indispensable and growing role in modern healthcare, contributing to the physical, psychological, and social well-being of individuals with various non-communicable medical conditions and disabilities. It is an essential aspect of healthcare that aims to restore, maintain, or enhance a patient's functional abilities and quality of life. The role of rehabilitation in medical care cannot be overstated, as it addresses a wide range of conditions and improves the overall health and independence of patients [2] [3] [4]. Below, I shall explore the significance of rehabilitation in medical care, its various applications, and its impact on patients' lives in non-theoretical terms.

1.2. The Scope of Rehabilitation

Rehabilitation constitutes a broad range of medical services and interventions designed to speak the needs of individuals facing a diversity of health challenges. These challenges may arise from congenital disabilities, accidents, surgery, chronic illnesses, or very importantly the aging process: in middle- and high-income countries, there is an increasing proportion of aging people [5] [6]. The population of Japan in 2023 is approximately 123,300,000; Japan has to cater to an aging population approaching 37 million people [7] [8]. There are literally dozens of countries in the world with a total population of less than 37 million people; so, providing for this many needy people is an extremely daunting task.

Some of the areas where rehabilitation is commonly applied include the following:

Physical rehabilitation focuses on improving an individual's physical function and mobility. It is essential for patients recovering from injuries, surgeries, or conditions such as stroke, spinal cord injuries, or orthopedic disorders. Physical therapy and exercise regimens are essential components of physical rehabilitation. For example, Edgerton *et al.* (2019) report on physical therapists working with exercise to relieve pain, rather than the use of pain killers [9]. *The current paper has a focus on physical function.*

Occupational therapy aims to help patients regain the skills and abilities required to perform daily activities (ADL) and return to work. In general, Go-

vender and Kalra (2007) note: "Occupational therapy is a client-centered profession that uses meaningful activities across the spectrum of physical and mental domains to reduce limitations after stroke" [10]. It is particularly vital for individuals with disabilities or those recovering from conditions like traumatic brain injuries or musculoskeletal disorders [11] [12] [13]. The current paper is *in this area* but I assert that physiotherapists, medical social workers and speech and language therapists can work in this domain too.

Children with developmental disabilities, congenital disorders, or injuries benefit from pediatric rehabilitation. It helps them reach their full potential by addressing physical, cognitive, and emotional challenges. As Spohn and Crowly (2015) point out the focus has moved from addressing the nature and site of the child's brain dysfunction to the determination of effective remediation services [14]. Farmer *et al.* (2010) point out that since the aim is to get children back to school, the educator has questions for the pediatric neuropsychologist [15].

At the other extreme, as the elderly population continues to grow, geriatric rehabilitation has become increasingly important. It helps older people maintain their independence, manage age-related conditions, and improves their overall well-being [16]. Rehabilitation assists patients in regaining lost or impaired physical and cognitive functions, eventually helping them lead more fulfilling lives. As Wilson (2010) points out cognitive, emotional, and psychosocial consequences of brain injury are increasingly recognized, and people regain their own level of functionality [17]. It may involve recovering the ability to walk, perform daily tasks (ADL), or communicate effectively.

Many rehabilitation programmes incorporate pain management strategies, helping patients alleviate discomfort and improve their overall comfort and quality of life. This is a specialty all of its own, with opioids, NSAIDs and even complementary remedies on the table [18].

By addressing the root causes of disability or medical conditions, rehabilitation can help prevent secondary complications and hospital readmissions [19], reducing the overall burden on healthcare systems.

The psychological impact of rehabilitation may be significant. Patients often experience increased self-confidence, reduced anxiety and depression, and an improved sense of purpose as they regain their independence. This includes social reintegration programmes that help patients reintegrate into their communities, perhaps rejoin the workforce, or participate in social activities, reducing isolation and improving overall well-being: but Flanigan, Everhart and Wisman (2015) point how important the psychological capacity to cope with pain is as a predictor for the effectiveness of rehabilitation after orthopedic surgery [20].

It is almost impossible to find any research on the individual role of professionals in rehabilitation; rather people write about the role of individual professionals in the team. For example, Long *et al.* (2002) point out six roles for the nurse: assessment, co-ordination and communication, technical and physical care, therapy integration and therapy carry-on, emotional support, and involv-

ing the family. (Naturally not all nurses can fill all these roles all the time.) But they go on to add that an imperative is the creation of a supportive environment for rehabilitation to occur [21].

An important focus of this paper is on the holistic nature of rehabilitation medicine. Winstein *et al.* (2016) put it strongly about stroke sufferers [22]:

> Stroke rehabilitation requires a sustained and coordinated effort from a large team, including the patient and his or her goals, family and friends, other caregivers (e.g. personal care attendants), physicians, nurses, physical and occupational therapists, speech-language pathologists, recreation therapists, psychologists, nutritionists, social workers, and others. Communication and coordination among these team members are paramount in maximizing the effectiveness and efficiency of rehabilitation and underlie this entire guideline. Without communication and coordination, isolated efforts to rehabilitate the stroke survivor are unlikely to achieve their full potential.

Teamwork is a major focus of this paper. It is not simply a simple mantra: Long, Kneafsey and Ryan (2003) point out while it may bring benefits to the patient, it may also provoke professional rivalries and tensions [23]. Teamwork carries its own challenges, but there is also a growing expectation that good universities, hospitals and clinics will operate with Clinical Practice Guidelines in mind.

Clinical Practice Guidelines (CPGs) are evidence-based recommendations that assist healthcare professionals in making informed decisions about patient care. These may be developed through systematic reviews of the latest research and should ideally provide standardized procedures for diagnosis and management of various medical conditions. They are intended to enhance the quality and consistency of healthcare provision, promoting best practices and improved patient outcomes. CPG are supposed to be regularly updated to ensure reliable alignment with recent research developments. Kredo *et al.* (2016), while concurring with the above definition, provide evidence that actually studying CPGs as objects in their own right is now a legitimate enterprise [24]. Lee *et al.* (2019) conducted a review of 13 CPGs for traumatic brain injury (TBI) and decided independently that four were of value. In conclusion, they point out that although rehabilitation is an integral component in TBI management, many published CPGs do not include rehabilitation: but multidisciplinary care was recommended [25].

Last but not least, medical personnel all write notes according to their own disciplines and subdisciplines when dealing with patients. The rehabilitation specialist may make the most comprehensive notes, drawing in their own and others' insights, but during the course of workplace training there is likely to be opportunities for writing full-blown case-reports [26], similar in many ways to those written by social scientists and even hard scientists.

1.3. Conclusion

The place of rehabilitation in medical care is paramount, as it encompasses a wide range of services that address the diverse needs of patients facing various medical conditions and disabilities. It promotes functionality, independence, and improved quality of life, contributing to the holistic care of patients. As healthcare continues to evolve, *the integration of rehabilitation into medical care* [27] remains an essential component, ensuring that individuals can achieve their fullest potential in the face of sometimes very serious health challenges. It is a great concern from a wider range of medical specialties than previously, partly from a greater number and range of people needing rehabilitation. The patient is embedded in a ward with a nurse who is part of a multidisciplinary team who are trying to coordinate their specialties for their best interest; a team which is furthermore trying to keep up with the latest methods, but which is part of a department and clinic or hospital. A rehabilitation mentor tries to keep all the variables together, as well as documenting progress, and training the paramedic members of the team.

2. Background

This paper is the third in a trilogy about medical health care, with special reference to rehabilitation. Let us look carefully at what has been covered already; here is a brief look at what was covered in Papers 1 and 2.

2.1. From Paper 1

Japan has an advanced health system, on a par with any high-income developed country; at the same time, it is challenged by a rapidly aging population. In line with other countries, medical and paramedical training differs from college or university to when the graduates start working in the hospital wards; it seems like a new career to initiates. Martin and Wilson (2011) point out that nurses experience the shock of learning to become a professional nurse at a nursing college for three or four years, but not at all prepared after joining a clinic or hospital [28].

Rehabilitation draws together the most varied professional teams treating patients from a range of specialists, and the physical therapists generally receive very little intra-workplace skills training.

The aim of the first paper was to develop the first of a two-part educational model that is useful for the professional development of therapists who work in rehabilitation medicine, by incorporating Shared Decision-Making and Narrative-Based Medicine.

Medical staff set rehabilitation goals based on the clinical features and patient functional impairment features. These are discussed with the patient and the patient's family in the context of the psychological aspects and environmental aspects; this will lead to therapists and patients developing an understanding of rehabilitation content and training and exercise issues, resulting in appropriate

intervention. In this way the Shared Decision-Making (SDM) model is used in rehabilitation goal setting [29]. It is the patient's right to be involved in making choices about their care. To decide, they need to know their options and what might happen if they even do not want any treatment or care. Shared decision-making occurs when health professionals and patients work together: it puts the patient at the centre of decisions about their own treatment and care. Benefits include improved patient satisfaction, better adherence to treatment plans and better long-term health outcomes. [30] Busy professionals need to be trained to use this method but it is easier to implement than Narrative-Based Medicine.

Narrative-Based Medicine (NBM) models may be developed that use a holistic approach incorporating the physical, mental, psychological, and social aspects of a patient's various challenges. NBM is consciously named in opposition to Evidence-Based Medicine (an empiricist approach that leaves out the person and their story). It is a holistic approach that draws together the story told by the doctor, the patient, the test results and medical history [31].

It is not something that can be learned quickly and easily but through practice, with others, and by reflecting on cases. Kleinman (1988) calls it a stance of "empathetic witnessing" and all-encompassing attention [32]. Evidence-Based Medicine prides itself on being scientific, but NBM includes it, but takes the notion of evidence to be much broader. It probably takes rather more time it implement than orthodox medicine.

I also pointed out that the most productive systems of analysis are Bloom's psychomotor taxonomy and the Japanese DIKW system. Bloom *et al.* (1956) is most well-known for his system of learning objectives, which were put together nearly 70 years ago and updated about 20 years ago. [33] Originally, his team also made a system of psychomotor objectives, but these were not published as it was felt that there was not much call for them. However, they definitely have a place in rehabilitation medicine. We posit that the rehabilitation educational model prototyped in Paper II matches the seven categories of psychomotor performance [34] (See Figure 1).

The Western DIKW model of "*chishin*," which is based on Data, Information, Knowledge, and Wisdom, is similar to the professional attitude and rehabilitative mindset in Japan's unique healthcare system, the convalescent rehabilitation wards. The individual, departmental, and hospital levels could all benefit from aspects of these systems.

The Data-Information-Knowledge-Wisdom (DIKW) system, of uncertain source [35], held in high regard in Knowledge Management circles, has been represented as yet another pyramid, partly because purveyors hold that there is far more data than knowledge in contemporary life. DIKW applies to *systems* and was included because of its close affinity to the Japanese model of rehabilitation (See Figure 2).

Rehabilitative medicine in Japan terms is a holistic medical care that heals the

body and mind and restores dignity, such as personality and self-confidence, and it is also a place where unique Japanese cultural concepts such as "*Ikigai*" (reason to live) and "*Omotenashi*" (hospitality) may be nurtured as professional awareness [36].

2.2. From Paper 2

The purpose of the second study was to develop an educational model that integrates three elements: knowledge, skills, and attitudes—developing the educational model proposed in the previous Paper I—and to widely investigate and characterize previous learning-related models [36].
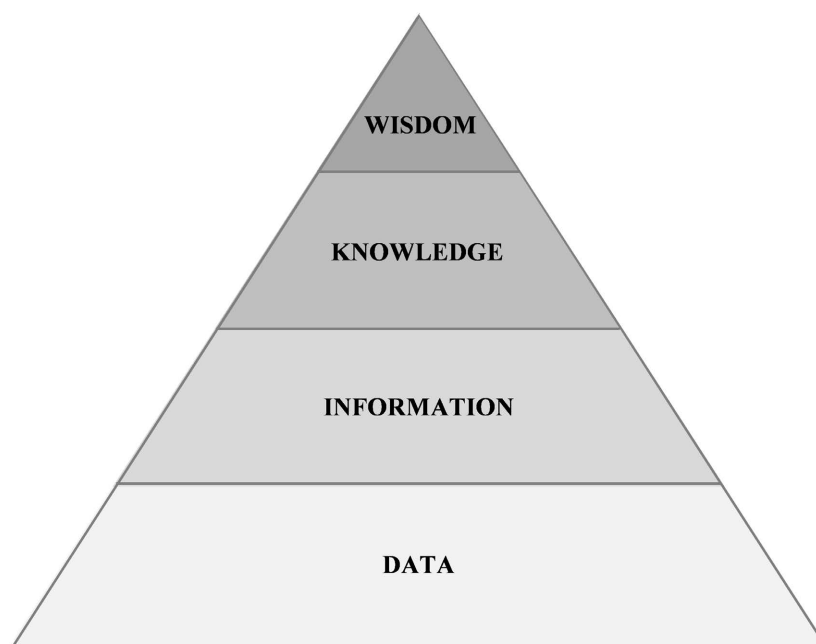
The basic educational model proposed there is my seven-step process model of rehabilitation practice which is carried through this third paper as well. *Knowledge* consists of four aspects: 1) clinical, 2) psychological, 3) environmental, and 4) disability; *skills* consist of two steps: 5) identifying intervention points and 6) setting feasible goals; and *attitudes* 7) of communicating and sharing policies and paths with patients, families, and other professionals. This constitutes the process of rehabilitation practice, and a framework that integrates the three elements was developed there.

The focus of the second study was to integrate knowledge, skills, and attitudes into what Bloom described as "the integration of instruction and assessment" so that learners and instructors can reconcile them. [33] Therefore, a typology that explains each other for advancing and deepening individual skills was adopted. In Bloom's original taxonomy of educational objectives, the cognitive domain has five layers in the pyramid of knowledge [33]; Simpson's/Bloom's psychomotor domain has seven layers [37] as we have seen in **Figure 1**, and Bloom's affective domain is represented by five in another pyramid (See **Figure 3**) [38].

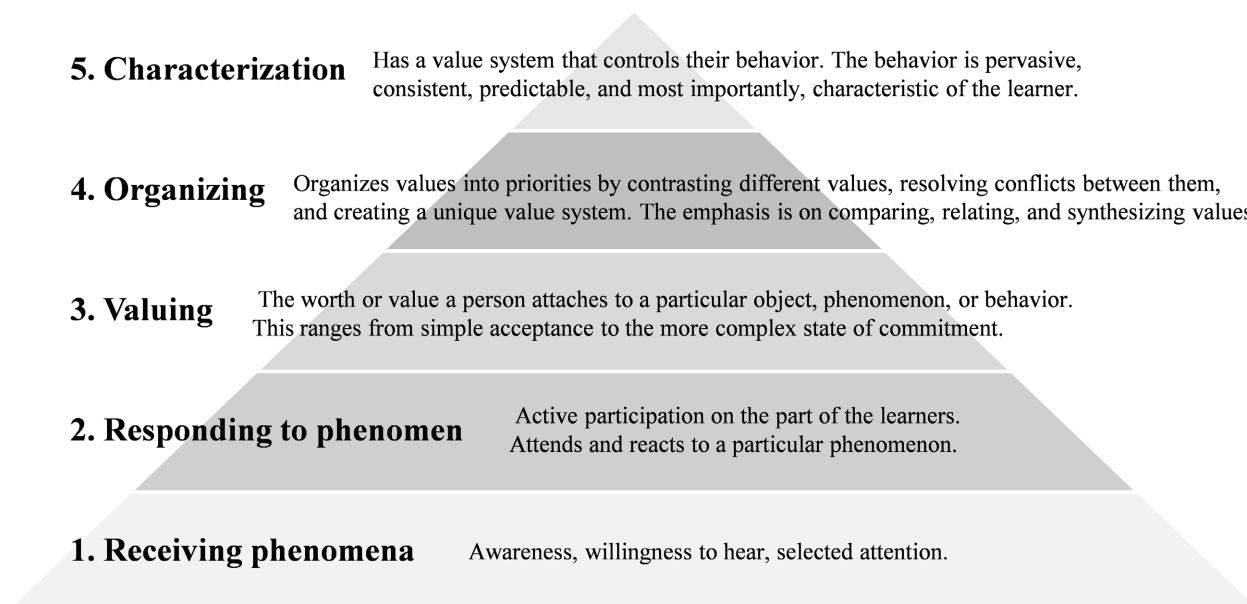In addition, the above seven layers of my process model (above) and the seven layers of the skill level of the Dreyfus & Dreyfus model were brought together, viz. Student, Novice, Advanced Beginner, Competent, Proficient, Expert, Master [39]. The integration of the above five typologies becomes a useful educational evaluation model when the relationships are clarified.
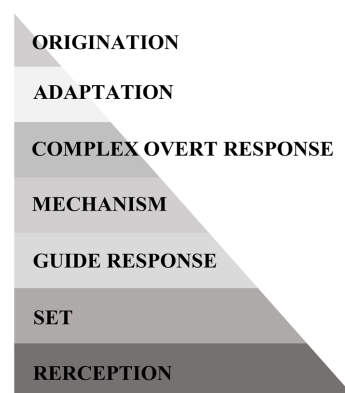
Figure 1. Bloom's psychomotor taxonomy (Wikipedia).

Figure 2. The data-information-knowledge-wisdom system, represented as a pyramid. (Google image).

5. Characterization — Has a value system that controls their behavior. The behavior is pervasive, consistent, predictable, and most importantly, characteristic of the learner.

4. Organizing — Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating a unique value system. The emphasis is on comparing, relating, and synthesizing values.

3. Valuing — The worth or value a person attaches to a particular object, phenomenon, or behavior. This ranges from simple acceptance to the more complex state of commitment.

2. Responding to phenomen — Active participation on the part of the learners. Attends and reacts to a particular phenomenon.

1. Receiving phenomena — Awareness, willingness to hear, selected attention.

Figure 3. Bloom's affective domain.

2.3. In Paper 3

This is the third of three papers on clinical reasoning on the practice of rehabilitation. It attempts to look at the nature of medical teaching and learning, the nature of clinical learning and practice, and clinical practice with individual patients.

Over the last fifty years, the paradigm of Bloom and Simpson's competence and performance has been developed and tightened as well as methods such as

Narrative and Shared Decision Making taken on board, validating patients' perspectives, something which is also relatively new, although it demands much more of professionals than their practice did before.

In order for each profession to work with the three principles as the basic principles in rehabilitation practice, it is necessary to unify the way of thinking, proceeding, and relating to each other. In practice, however, each profession is responsible for a highly differentiated area of expertise, which tends to lead to stove-piped work. On the other hand, the patient's situation is complex and varied, with problems that change on an individual basis. In this context, the three basic principles are rarely understood and emphasized in post-graduate training and work, let alone in pre-graduate education. Even when it comes to rehabilitation education in the workplace, there is no way to devote sufficient working time to educate newcomers. For at least the last 60 years researchers have been complaining about the pressure of learning more and more new facts and techniques (Miller *et al.*, 1961 [40]). What can be done to ensure that the two education models introduced do not end up simply being a set of ideals?

Consequently, practice use needs to be functionally meshed in terms of three levels: individual, departmental and hospital, as well as be effective, efficient and appealing. First, the creation of a Clinical Practice Guideline system at the hospital and effective level, then the team structure at the departmental and efficient level, and then the preparation of case reports at the individual and engaging level. My research has found that if these three layers mesh functionally, it may be expected that the basic principles of rehabilitation can be carried out, which will be presented in detail below.

3. Clinical Practice Guidelines

3.1. History and Principles

This section discusses the historical perspective and principles of Clinical Practice Guidelines (CPGs), which are systematically developed statements which Field and Lohr (1992) see as assisting practitioners and patients in making appropriate healthcare decisions for specific clinical circumstances: in our situation we may also call them *intervention points*. [41] CPGs refer to the best treatment of diseases and do not refer to particular individuals. It is left up to groups of practitioners in specific sites to apply them to their patients as they see fit. Here's a summary of the key points.

Until the 1970s, medical practices were often based on where and how doctors were trained as undergraduates. However, as Field and Lohr (1990) point out there was a growing realization that more rigorous standards were needed. Clinical practice guidelines were developed, primarily based on the work of expert panels [42].

There is a need for clinical practice guidelines (CPGs) due to the limited percentage of medical treatment decisions based on strong research evidence. Murad (2017) gives a careful history of the development of CPGs and says they aim

to provide concise instructions for optimum healthcare services, reduce inappropriate variations in practice and improve the quality and outcomes of patient care [41] [43].

According to Thomas (1999) there are four principles for CPGs for the attributes of practice guidelines: clarity and compatibility with professional usage, clear justifications for attribute selection, and sensitivity to practical issues. These principles help ensure that guidelines are clear, relevant, and effective [44].

CPGs should be based both on the best available research and also the professional judgments regarding the effectiveness and appropriateness of healthcare services and procedures. The quality of evidence is a key consideration when developing guidelines [41] [43]. On the other hand, guidelines should be flexible and consider the patients' values and preferences, as well as the characteristics of the clinical setting. Recommendations may be labelled as "strong" or "weak", reflecting the experts' confidence in their effectiveness [44].

Guidelines should consider cost-effectiveness in healthcare. They may recommend alternative courses of treatment depending on patient preferences and the specific clinical conditions. There is no point in advocating points of intervention which are too expensive to implement [45], while the best, most affordable points of intervention are the way to go. Grimshaw *et al.* (1995) also point out that there is cost effectiveness in treatment in different situations, but we also need to consider cost effectiveness in establishing the guidelines themselves [46].

There are eleven *characteristics* that guidelines should have, including these seven: validity, cost-effectiveness, reproducibility, reliability, clinical applicability, clarity, and scheduled review (e.g., every five years) [22].

1) *Validity* means that if a guideline is followed it should lead to the health gains and costs predicted. This requires that the guideline be rigorously developed and consistent with available scientific evidence.

2) *Cost-effectiveness* means that the improvements in health care should have acceptable costs weighed against benefits. If guidelines ignore costs and concentrate only on benefits, in practice—later—benefits might be limited.

3) *Reproducibility* implies that given the same data, another equivalent group should be likely to produce similar recommendations.

4) In a similar way, *reliability* entails that given the same clinical circumstances, another health professional would apply the recommendations in a similar style; both concepts are more likely to occur if the guideline is developed in a methodical and serious manner. Guideline development should be undertaken by a group with representation from all key disciplines and interests, including patients where possible.

5) For a guideline to be *clinically applicable*, the target population should be defined in line with clinical standards; but guidelines should also be flexible by including exceptions and how patient preferences should ideally be considered

in the process.

6) Guidelines should be *clear*, using precise definitions and user-friendly formats. Painstaking documentation of the guideline development process should include details of who took part, and which assumptions which were made. Recommendations should be linked to the best available evidence, which should be graded according to whether it was more to less rigorous.

7) Guidelines should also have *review periods* built into them in which they are modified to incorporate new knowledge, for example recommended every five years.

There is important to have active dissemination and innovative implementation strategies for CPGs. Dissemination and implementation strategies should be tailored to the target audience to promote adherence to the guidelines [46] [47]. Merely placing guidelines passively on the internet is highly unlikely to have them implemented. Sending them to practitioners is more effective, but active events involving practitioners is the most effective course of action.

Seeking feedback on final guidelines from local practitioners, stakeholders, and organizational policymakers helps identify potential difficulties and ensures successful implementation [45] [48] [49].

Guidelines should be periodically reviewed and revised to incorporate new knowledge and maintain their relevance (Grol and Grimshaw, 2003 [47]) Reviews should take place at least every five years. CPG recommendations are advisory rather than compulsory. They facilitate shared decision-making and identify knowledge gaps [46].

There are barriers to changing physician practices in response to guidelines, such as structural and attitudinal factors. Some healthcare professionals may be distrustful of guidelines due to the perception of conflicting and cumbersome guidelines [45]. There are a very large number of potential barriers including awareness, familiarity, agreement, self-efficacy, outcome expectancy, inability to overcome the inertia of previous practice [45].

It is important that well-developed clinical practice guidelines that are based on strong evidence, are adaptable to different clinical circumstances, and are actively implemented to improve patient outcomes and the quality of healthcare services. There is also a need for a balance between evidence-based recommendations and patients' values and preferences.

3.2. Clinical Practice: Order of Events

Let us briefly examine the process of developing new guidelines. Transforming evidence into a decision requires consideration of the quality of evidence, balance of benefits and harms, patients' values, available resources, feasibility of the intervention, acceptability by stakeholders, and effect on health equity. Empirical evidence shows that adherence to guidelines improves patient outcomes; however, adherence to guidelines is variable. Therefore, guidelines require active dissemination and innovative implementation strategies. A model for the process is

shown below (see **Figure 4**). This model described is for a fully developed system: its application to our clinical setting is provided.

Let us say that there is a clinical area which is identified as needing redevelopment; in our situation an interdisciplinary group is established which establishes a guidelines appraisal process. The group searches for and retrieves guidelines from a review of the literature and from experts, and then assesses these guidelines in terms of their quality and recency. These guidelines may be adopted or adapted to local conditions; but these guidelines should be sent out for external review, to make sure they are balanced and appropriate. They are then finalized, but must obtain official endorsement, also for local use. Then there must be plans put in place for the cycle to be repeated in good time (e.g., in a number of years). This may be exemplified in the work of the Japanese Stroke Society which has developed and redeveloped guidelines in 2009, 2015, 2021 and 2023.

This may sound very grand for our purposes, but it may be dialed down to a hospital level where and when a team decides it needs a new form of intervention. It may use another, successful, hospital or clinic as a benchmark.
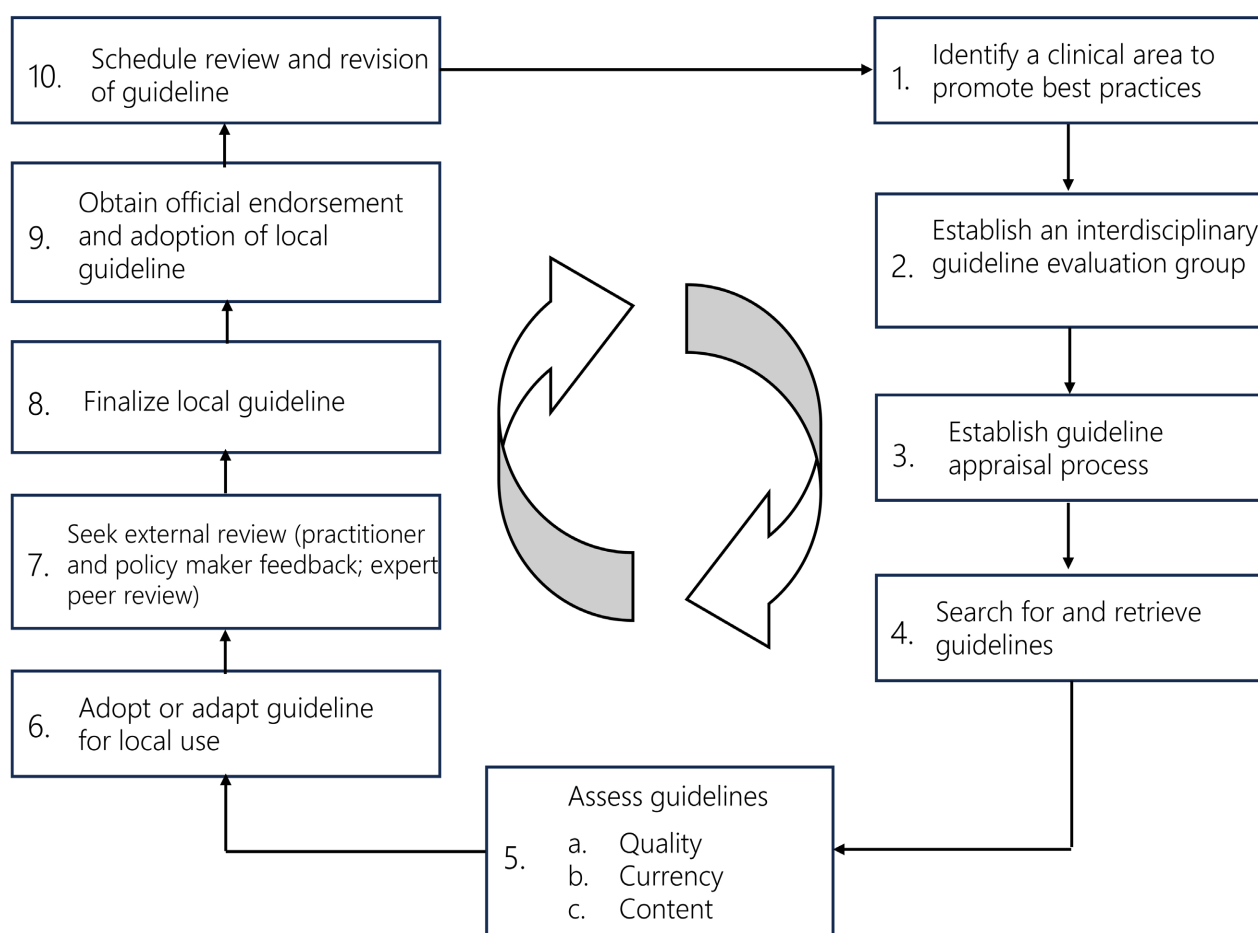
Figure 4. The process of developing CPGs; Clinical practice guidelines we can trust by institute of medicine, board on health care services, committee on standards for developing trustworthy clinical practice guidelines.

4. Working in Teams [50] [51] [52]

4.1. Interdisciplinary versus Multidisciplinary Possibilities

Rehabilitation work is inevitably interdisciplinary or multidisciplinary. There are "multidisciplinary teams" and "interdisciplinary teams", with the following differences: multidisciplinary teams have an organized division of labor, do not step into each other's shoes, and have shared accountability. Interdisciplinary teams, on the other hand, are described as a team working towards a common goal, where goal setting and decision making is done collaboratively, with the patient also involved, and accepting responsibility for the outcome.

Interdisciplinary teamwork is becoming increasingly common, bringing care closer to the patient and challenging traditional professional boundaries, but this varies across countries, but more prevalent in the United Kingdom and Australia [53]. The notion of rehabilitation professionals has been increasingly developed and practiced.

Fifty years ago, when ill, one would visit one's general practitioner, rarely a medical specialist, and almost never a team. But practices have changed. First, the healthcare systems of many countries actively encourage multi-disciplinary teamwork. Second, the increasingly aging population in Western countries and Japan is associated with more frail, older people, with more complex treatment needs. Third, there is an increasing complexity of skills and knowledge required to provide comprehensive care to patients. This leads to the related fourth point, that even within specific health professions, there is increasing specialization, and fragmentation of disciplinary knowledge.

Assuming that policy requires professionals to work together, how easy would it be for us to build teams? The more democratic the team, the easier it is. If each member could vote for or censure any other member, tensions may not ensue. But the medical and paramedical professions have built-in structures. Multi-disciplinary health teams are more different even than uni-disciplinary health teams and face challenges of planning and decision making in complex contexts [47].

From a series of analyses Nancarrow *et al.* [54] came up with ten themes of a good interdisciplinary team. A few of these are worth special mention. There should be a clear team leader with a clear direction and management, democracy, sharing power, joint working, and autonomy when looking at shared leadership and management. There should be a team culture of trust, nurturing consensus, and a need to create an interprofessional atmosphere. There should be a uniform and consistent external image.

Combining the three models of NBM, SDM, and multidisciplinary teamwork should result in a usable and flexible rehabilitation approach. It may lead to learning methods: first, a patient-focused and family participatory approach; second, a goal-oriented and issue-oriented approach; and third, an approach focused on rehabilitation with team medical care and multidisciplinary professional cooperation. The question arises whether or to what extent each, let alone

all, of these is possible in practice, but they are worthwhile targets.

Professionals caring for rehabilitation patients have all the procedures they are learning, or can already do, clear in their professional minds. Most may constantly undergo formative evaluation. Learning to work with other professionals, either lower or higher in rank (or both) and being open and non-defensive means a great deal is going on—even without interacting with the patients, performance levels are revealed, and self-learning occurs. Through careful on-site listening and observation, valuable information for intervention points can be realized, and awareness changes. Reconstructing data and information into knowledge on-site may be said to be rehabilitation assessment learning [55].

Teams of people are concerned with the treatment and treatment program of people needing rehabilitation. To work together amiably and productively, certain concepts must be in place. Trust, the resolution of conflict, commitment to common objectives, meeting deadlines and developing key deliverables, and the motivation to achieve results must be in place. Unfortunately, the opposite of these values may hold, as can be seen in Figure 5. How can we overcome these dysfunctions?

4.2. The Functions of a Team

4.2.1. Trust: Harnessing the Positive Characteristics of Rehabilitation Team Members

There are at least six domains needing to be integrated. Attending physician/nurses; clinical aspects are the domain of medical social workers/nurses; psychological aspects are the domain of the medical social worker; the environmental aspects are the domain of the physical therapist, occupational therapist, speech and language therapists; there are also the impairment aspects. There has to be an in-depth understanding of the patient as a human being, based on holistic, characteristics (specificity) which changes over time.
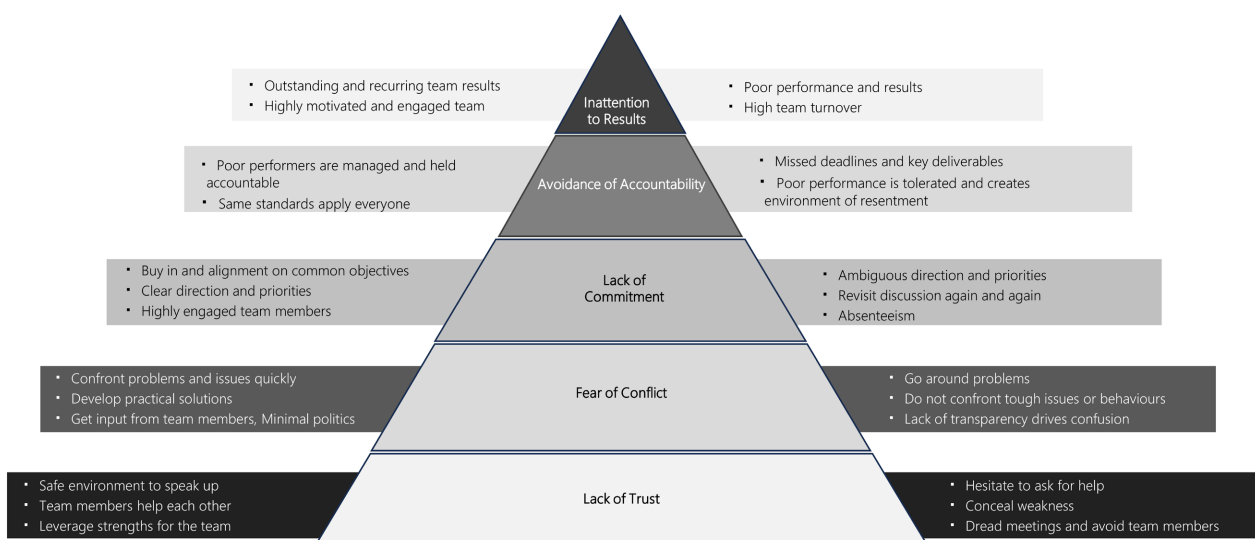
Figure 5. [40] Source: The five dysfunctions of a team, a leadership table, Patrick Lencioni.

Trust allows members to better understand and empathize with each other in their personalities and professional roles. [56] In addition to knowledge-based trust, based on knowing the other, Javenpaa and Shaw (1998) also talk about swift trust, based on an assumption that the other may be trusted and transferred trust, based on where the other comes from [55].

Lencioni (2020) defines trust as the confidence among team members that their peers' intentions are good, and that there is no reason to be protective or careful working with the group. [56] Absence of trust can lead to individuals doing their own things; distrust can result from fear of being vulnerable with other team members.

The patient's situation is always complex and diverse but what we need to ask is what strengths they have in this context? There should be 360-degree feedback, not only from the attending physician and the therapist in charge, but also from other professionals and from the participation of the patient's family.

4.2.2. Coping with Conflict: Rehabilitation Practice Is Field-Based and Created in the Field

Members use face to face contact to leverage *zakbaran* opinions (straightforward and honest thoughts) and perspectives.

There should be the confidence to experience trial and error together on what to do in the field in the present moment.

What can they do to help ourselves? What clues emerge? What are possible breakthroughs? The team needs to realize the need for ongoing conflict resolution. Todorova, Brake, and Weingart (2020) found that idea sharing improved group outcomes over and above the effects of task conflict [57].

4.2.3. Commitment to the Process: Consensus and Certainty

Fewster-Thuente & Velsor-Friedrich (2008) report that research has shown that the lack of communication and collaboration may be responsible for as much as 70% of the adverse events currently reported [58]. The team should work with intervention points: this is a one-phrase statement of what needs to be done, here and now. They should try to put into practice clear action, policy intervention points, in a common, non-technical language, even when there is no assurance that the decision is absolutely the correct one at a particular point. *Intervention points* are devised and agreed upon when other professionals (including family members) are present on site. *Intervention points* are time-constrained, mostly lasting for two weeks, monitored in an ongoing way to ensure that targets are being met.

4.2.4. Accountability: Respect, Expectations, and Responsibility for Performance

Two generations ago general practitioners told their patients what to do and their patients listened and obeyed (personal reflection); nowadays patients are much more demanding—they go off and seek second opinions, for a start. This translates to more accountability on the part of the medical profession. Fleet *et*

al. (2008) point out that "the trend is now towards 'socially accountable' health care, meaning that the broader context of CPD [continuing professional development] must also include the personal, social, and political aspects of health care and as such, involve a widening of accountability to patients, the community, managers and policymakers." [59] In our specific context of local rehabilitation, there should be a publication of goals and action guidelines; this provides a roadmap and process chart to reach the goals weekly. This provides clarity on what the team needs to do, individual responsibilities, and how everyone must act to achieve their goals.

Simple and regular progress reviews; members come to know what must be said and recorded and there will be preparation of reports. There may be a need to teach professionals to write reports. [60] (We cover this in the last section of this paper.)

4.2.5. Attention to Results: Brief Reporting on Effects of Goals and Policies

There is an emphasis on the process and the publishing of the results; the team members visualize change and improvement with the different evaluations and videos. Risser *et al.* (1999) report on the essential nature of this in emergency care: team members coordinate directly and repeatedly with each other to ensure proper and timely clinical task execution and to assist overloaded teammates [52]. Each team member works to maintain a common situation awareness of the care status and care plan for each patient and the ongoing commitment of each team member. It is of course an imperative in emergency, as patients may die, but in rehabilitation, patients may fail to thrive without due attention to progress.

Examples of leadership practice for all three combined are shown in the tables of Cases 1 - 3, presented below.

The mentor, instructors and learners learn together experientially through the example of use.

5. Case-Based Learning as a Rehabilitation Professional

5.1. Case Study Framework

The elements that make up the framework of the rehabilitation practice process have been (1) to (7) in Paper II.

Therefore, first of all, examples of actual applications will be presented (Tables 1-3). Afterwards, we would like to elaborate on the new framework of this paper.

The main point is that, following the definition of clinical competence described below (5.4), the previous steps (5) can be divided into three parts. They are 1) issue identification, 2) response on the day (intervention points) and 3) review three days later (best practice). The reason for this is also based on reflection (5.5), which is discussed below.

Table 1. Case of skills to increase vitality.

Case 1: 90-year-old female.		Overall picture at 4 weeks after onset of right cerebral infarction (M1) Problems and responses in the second week after admission to a convalescent rehabilitation ward
① Clinical features		Hypertension for a long time, 1 month ago, paramedic noticed left palsy, transported to extra-cerebral, left hemiplegia with right M1 obstruction, aspiration pneumonia and urinary tract infection 3 weeks ago, explained that he was scheduled for treatment when discharged, 2 weeks ago, entered a rehabilitation ward, neurological JCS (Japan Coma Scale) 1-digit, left hemiplegia, oxygen and intranasal tubes.
② Psychological aspects		Housewife; hobbies include niwabushi recitation and watching sports (she was a gymnast in her youth); opens her eyes at the sound of a voice and immediately closes them.
③ Environmental aspects		Lives with eldest son's family and grandchildren; needs nursing care I (walks alone indoors, uses cane outdoors, bathes 3 times a week at day care); family members wish for her independence in using the toilet.
④ Functional impairment issues		Left hemiplegia (hypertonic with occasional voluntary movements), shows understanding of long sentences from word level, nodding to smiling, but tilts backwards in sitting position, no self-extraction of nasal tubes.
⑤ Issue identification	Awareness of the issues	How to intervene in a 90-year-old woman one month after onset of mild arousal disorder?
	Response on the day Intervention points	No fever in the last 3 days, no oxygen, increased speech, now is the time to increase activity. • AMs with low arousal hold a sitting position with cervical and trunk forward tilt and forearm support. • PMs with good arousal hold standing with contact support on the non-paralyzed side. • Today I brushed my own hair and walked five meters on the parallel bars. "Thanks to all of you."
	Three-day reflection Best practice	What is competency as a rehabilitator: through the case of a patient who was unaided and dementia-free before the illness and will be treated for a mild wakefulness disorder one month later. • The ability to find challenges on one's own: questioning the treatment plan at the time of acute discharge and prematurely - Expectations based on brain imaging and present illness at the time of admission to the gyration rehabilitation unit (also considers loss of motivation due to damage to the caudate nucleus head) - No oxygen and fever for 3 days, now is the perfect time. • PT-OT-ST integrated practical skills: reading facial expressions and encouraging conversation; stabilizing the sitting position and encouraging upper limb activities; shifting the centre of gravity in the standing position and encouraging walking.
⑥ Goal setting		• Chair sit-to-stand weaning at half day after 1-week, indirect swallowing after 2 weeks, reduced transfer assistance after 3 weeks, and reduced assisted walking after 4 weeks.
⑦ Communication		The competencies of the rehabilitation profession are clinical practice skills, including knowledge, skills, attitudes, and values (Lessons learned).

Table 2. Case of skills to foresee recovery.

Case 2: 76-year-old male.		Overall picture at 5 weeks after onset of left-sided cerebral infarction (LSA) Problems and responses in the second week after admission to a convalescent rehabilitation ward.
① Clinical features		History only of hypertension noted 17 years ago, difficulty removing spectacles 6 weeks ago, left hemiplegia 5 weeks ago, admitted on the same day as an emergency, no difference in limb movements between right and left, heart failure lightened after admission, motor paralysis worsened immediately after admission, right LSA infarction diagnosed 3 days after admission, admitted to ileal rehabilitation ward 2 weeks ago, neurological left hemiplegia, higher functional impairment?
② Psychological aspects		Assembled cars until age 60; hobbies include carp and planting; independent in ADL and driving a car; ate without teeth for 10 years; accurate memory since onset of illness; driving difficult.
③ Environmental aspects		He lives with his wife and he says that she cannot take care of him and that if he does not get better, he intends to go into an institution, but he would prefer to stay at home.
④ Functional impairment issues		BRS (Brunnstrom Stage) upper limb-fingers-lower limb III, able to grip, elbow extension, standing, grip strength right 30/0 kg, pain sensation upper limb 3/10, lower limb 5/10, HDS-R (Hasegawa's Dementia Scale-Revised) 23/30 points, BIT (Behavioral inattention test) 140/146 points, assisted except for eating activities, transfer with fingertip assistance, standing.
⑤ Issue identification	Awareness of the issues	What is the standard intervention for left hemiplegia?
	Response on the day Intervention points	Standard intervention methods for rehab professionals; for cases with moderate motor and sensory paralysis and no cognitive or higher brain dysfunction problems. • The post-onset period is divided into 3 - 6 weeks and 6 - 8 weeks, with the early period being transfer independence and wheelchair self-walking, and the latter period being gait acquisition. • In the early period, the patient was able to leave the bed all day, grasp the handrail with both hands, and stand up, knee flexion and extension, and foot stomping, which also encouraged a sense of weight on the lower limbs. • In the latter period, the patient was able to walk with a forearm-supported walker, weaned from a wheelchair and had a short leg brace made, enabling her to walk with a cane independently from looking after her.
	Three-day reflection Best practice	• Tips for standard left hemiplegia interventions. Muscle tone in the lower limb is flexion-dominant when standing up, you can feel the grip - you can also feel the soles of the feet. • 3 - 5 weeks after onset of illness - Pre-walking preparation with a combination of three evidence level A (formerly 2009 edition) More standing and seated exercise - lower limb muscle strengthening and aerobic exercise - repetitive exercise of both upper limbs. • 6 - 8 weeks after onset, two good prognostic predictors combined to gain independent walking. Lower limb BRS III can walk with orthotics and cane - walking independence is possible with comprehension and learning ability.
⑥ Goal setting		• Full-day weaning after 1 week, independent transfer and wheelchair self-walking after 2 weeks, supervised toilet transfer after 3 weeks, supervised walking after 4 weeks.
⑦ Communication		Functional prognosis of patients recovering from stroke with reference to high evidence of healing (Lessons learned).

Table 3. Case of skills to support functioning.

Case 3: 49-year-old female	General view four months after onset of right capsular hemorrhage. Problems and responses in the first 16 weeks after admission to a convalescent rehabilitation ward.
① Clinical features	Hypertension noted 1 year ago but no medication, sudden left hemiplegia 4 months ago, right capsular hemorrhage (18 ml), preserved, entered ileal rehabilitation ward 16 weeks ago, neurologically mainly left hemiplegia/sensory palsy, mild higher functional impairment, balloon removal 2 months after onset.
② Psychological aspects	Medical clerk at a clinic until 2 months before onset, hobbies include travelling and eating (162 cm/127kg), 3 weeks after onset, wanted to go to her child's sports day in a wheelchair, wanted to return home early and drive a car, easily fatigued due to back pain, no independent training.
③ Environmental aspects	Lives with husband and two children in 5th and 3rd grade; husband works at shipbuilding, 1.5 hours away every day; he is a bystander and hopes that she can move around by herself and take care of the house; home is one-storey and barrier-free; she required long-term care 4 a month ago; considering disability certificate and disability pension when the time comes; home visit 2 weeks ago, discharge scheduled 2 weeks later; contacted care manager; scheduled 3 visits a week for rehabilitation; 4-position cane purchased at her own expense; care rental includes ultra-low bed, wheelchair, touch-up, bath board, etc. Four-position cane purchased at own expense; nursing care rental includes ultra-low bed, wheelchair, touch-up bath board, etc.
④ Functional impairment issues	BRS upper limb III - fingers I-II, lower limb III, grip strength right 32/0Kg, HDS-R 26/30, at risk of falling due to attention disorder and low awareness of illness, looked after for 30 m with a four-position cane, "I get tired and my legs get heavy at once"
⑤ Issue identification — Awareness of the issues	Opinion on pre-discharge coordination and future rehabilitation Reconsider?
Response on the day Intervention points	Shared goal setting using the ICF (International Classification of Functioning, Disability and Health) in day-care rehabilitation, linking pre-discharge and post-discharge. To link, the principle of self-determination and visualization of step-by-step procedures are necessary. • Functions: the focus is on upper limb hand function and care is shifted from a disused hand to an assisted hand. • Activity: from watching over the four-position cane to independent walking with a walker and out of a wheelchair. • Participation: role activities as a wife to her husband and mother to her children.
Three-day reflection Best practice	Rehab professionals make appropriate adjustments to the person's involvement on admission and before discharge. • Physical fitness problems with a limit of 10 minutes of standing retention are increased to 20 minutes or more before housework activities. • To walk safely without supervision, try a forearm-supported walker (for taller people). • Self-stretching of the paralyzed upper limb with the wrist and elbow in extension and the shoulder in external rotation for load bearing. • To lose weight, repeat the habit of grasping the handrail with both hands, standing up and sitting down, and sweating a little.

Continued

⑥ Goal setting	• Distal monitoring of walker walking after 1 week, wheelchair withdrawal and independent in-hospital walker walking after 2 weeks, semi-daily activities in day rehabilitation after 3 weeks, self-care of paralyzed upper limb and 100 standing and sitting exercises after 4 weeks.
⑦ Communication	Rehab professionals adjust how and when to proceed with rehabilitation at the appropriate time (Lessons learned).

In this way, it was thought that the instructor's understanding of the patient and how to deal with him or her could be more specifically articulated to the learners. From the above perspective, there are three points that we would like to focus on regarding the three case studies:

1) The rehabilitation practice process is a 1 - 7 step process, but the five steps are divided into three stages, showing reflection, reflection-in-action, and reflection-on-action.

2) Along with the content of each of the seven steps, (1) age, (2) duration after onset and (3) duration after admission to the rehabilitation ward are also important information to consider; in two cases early after admission and one case before discharge.

3) Learners can write a case report if they organize seven steps per case over two or three instructional sessions.

5.2. Role of Case Studies

Next, there are three points from the examples in Tables 1-3 that learners should feel and be aware of, as follows:

1) The main thing is that if you read the case scenario, you will come to know the learning objectives of the instructor. You can also guess what will be taught. In other words, "teaching and assessment are one." There is the integration of teaching and assessment. Learners and leaders learn together, walking the same path and guiding each other in a mutually considered direction.

2) The team explores appropriate ways of thinking, proceeding, and interacting with patients at appropriate times in their changing circumstances.

3) Physical Therapist-Occupational Therapist-Speech and Language Therapists work is not formally divided, and the rehabilitation profession is aware of this and encourages growth of these into the rehabilitation profession.

Read the situation in the context of (1) - (7) about these things. For example, 1) Can I do this? 2) Do I need this for my current or future job? and 3) Is there an opportunity to learn this? Please self-check the following.

The above is also important to value practice over theory, one practice over a hundred theories. It may be a way of learning in the midst of busy clinical work.

5.3. The Circumstances under Which Cases 1 - 3 Were Prepared

In this section, the following steps (1) to (7) show how the Rehabilitation Practice Process Model is actually used in clinical practice.

Step 1. Pre-intervention information sharing: (1) Clinical features, (2) Psychological aspects, (3) Environmental aspects and (4) Functional impairment issues are presented.

Step 2. Pre-intervention presentation: (4), (5)-1 Awareness of the issues.

Step 3. On-site observation and intervention: coordination of (4) and (5)-1, (5)-2 Response on the day.

Intervention points

Step 4. Post-intervention reflection: coordination and finalization of (5)-2.

Step 5. Recording the intervention policy: clarification of (4), (5)-1 and (5)-2.

Step6. Report back after 3 days of reflection: (5)-3 Three-day reflection best practice, (6) Goal setting, (7) Communication (e.g. lessons learned).

Step 7. Post-intervention follow-up: check and coordinate (6) and (7).

5.4. The Nature of Case Studies

The concept of competencies has taken centre stage in the discussion of making post-graduate and pre-graduate education consistent and seamless. According to the World Federation of Physical Therapists, the development of an educational framework clearly states that development and evaluation should be based on the concept of competencies.

Therefore, the competencies in this study are based on Matsushita, Ono and Saito's [61] definition. Competency for rehabilitation professionals is defined as "the ability to act and reflect on demands and challenges while integrating knowledge, skills, and attitudes, and while interacting with the target world, others, and oneself". In the process model of Paper II, the following steps are used: 1) clinical picture, 2) psychological aspect, 3) environmental aspect, 4) disorder picture, 5) problem identification, 6) goal setting, and 7) writing as communication. The definition includes the ability to "act and reflect" as a new element, while (1)-(4) are knowledge, (5) and (6) are skills, and (7) is an attitude.

This reflective practice translates experience and learning into action and becomes an important skill that changes the way individuals think. For this reason, we will incorporate Schön's [62] [63] terms "reflection in action" and "reflection on action" into skills (4) and attitudes (5). Learning for therapists requires two types of reflection: awareness and adjustment in action, and reflection after action to develop best practices. This positioning is a way for the learner and the instructor to reconcile their thinking, how to proceed, how to relate to each other, and how to communicate. How to communicate rehabilitation needs and issues to patients, families, and other professionals leads to the attitude described in (7). We believe that learners and instructors working together to develop case scenarios is an effective and efficient way to develop skills for in-office rehabilitation education.

5.5. Case Study Challenges

The specific enumeration of "reflection in action," which became the "decisive

factor" as empirical evidence for the instructor, is unknown knowledge to the learner, and is expected to resonate with the learner's sensitivity and become "awareness". The list of such "awareness" has been difficult to visualize as a skill, and there have been no reports of practices in which such "awareness" was even considered important. It should be noted that Schön's work was developed on trained teachers and architects, well-established disciplines [63]. Rehabilitation may not yet be established as a well-established discipline, so the reflection concepts may not yet be applicable, and more conscious learning "what to do" and "how to do" may be more apt to members other than the mentor.

However, since the practice of rehabilitation is about building relationships between people, the exceptional skill to intervene by touching the patient's body and observing his or her reactions should not be neglected.

For example, Nara author of the Japanese textbook *Introduction to Physical Therapy*, states, "A person who does not develop awareness and insight of self cannot show awareness and understanding of others" (p. 9). He validates the attitude of a reflective practitioner who does not only focus on the skills of providing rehabilitation to patients and their families, but also reflects on his own actions and adjusts them for the better [64].

Furthermore, rather than targeting the injury or disability itself, it is necessary to provide physical therapy for people with these problems, and as a result for the target patient to be rehabilitated, it is necessary to go beyond just local treatment. First, it is necessary to view the person holistically (whole person).

Put another way, physiotherapy and occupational therapy treat disability as a means to an end, while the goal is rehabilitation. As the goal of rehabilitation is to return to one's former life. In order to realize this goal, achievability must be demonstrated. In other words, what should be done here and now? Intervention points are decisive for the achievement of the goal. Intervention points are explicitly designed for the individual patient (unlike CPGs which are general guidelines). They are revised as the patient starts to get better at fortnightly intervals.

However, some of these hidden skills have never been expressed in writing, but rather spoken in "words" as facts, without being disguised with childish expressions. Although there are many instruction manuals on how to write case reports, few of them seem to emphasize in depth *the intervention points* that were the decisive factors of the case study. It is no exaggeration to say that a report that lacks this point is useless for skills development, as it does not lead to skills that can be used and conveyed in practice.

5.6. Case Study Principles

For learners, the task worth learning is perceived as an "authentic task." The first principle of Merrill (2013), one of the theories of Instructional Design, proposes the following five common principles to ensure authenticity [65].

1) Challenge real problems: Present real (authentic) problems with a sense of reality.

2) Mobilize knowledge you already know: Have learners work with all the knowledge they have gained from previous experience.

3) There are examples (Show me, not Tell me): explanations with examples rather than parading arguments.

4) Have a chance to apply (Let me): Give learners a chance to try for themselves.

5) There is a chance to use and look back on the field: Leveraging the results of the training not only during the training but after it is finished will help students acquire skills that can be used by having them reflect.

6. Writing up Case Reports

6.1. Rationale

When a medical or paramedical has treated a person and they have been discharged, there is always paperwork to follow. Ideally, every member of the interdisciplinary team should either know or be taught how to write a case report. Below is the basic structure, based on SWIHM. The mentor may have to teach the junior members of the team. The case report is filed and will have to be taken out again if the patient is re-admitted for some reason.

It is now necessary to briefly mention the difference between case studies and the case reports discussed next.

Of the practice process models (1) to (7) in this paper, (4) and (5), especially (5)-1 to 3, have a clinical research approach. For example, Alpi *et al.* (2019) state that the depth and richness of case study description helps readers understand the case and whether findings might be applicable beyond that setting. They also describe it as a micro-level case describes a clear problem of interest [66]. Reporting is very brief and about specific points. The lack of complexity in the case description makes obvious the "lesson" that is inherent in the case; although no definitive "solution" is necessarily forthcoming, making the case useful for discussion. A micro-case write-up can be distinguished from a case report by its focus on briefly reporting specific features of a case or cases to analyze or learn from those features. For case reports on the other hand, they state these are familiar ways of sharing events or efforts of intervening with single patients with previously unreported features, and also say case reports often provide a first exploration of a phenomenon or an opportunity for a first publication by a trainee in the health professions. In health care, case reports are familiar ways of sharing events or efforts of intervening with single patients with previously unreported features. Furthermore, Tomio and Sato (2020) report that case reports are considered to represent "medical care" or "activity other than research" in Japan, US, and the UK, according to legislation/guidelines, and were not regarded as research but however also say the application status of the rules varied depending on the purpose of the case report (whether or not it was for research purposes) and the policy of the facility [67]. In all countries patient personal information is protected, the process of de-identification and patient consent is stipulated by laws

and relevant guidelines. For delivering a first exploration and sharing events with single events members of the team will need teaching and coaching.

6.2. The Structure of the Case Report [66] [68] [69]

Title. Include the words "case report" in the title. Describe the phenomenon of greatest interest. This could be the presentation of the patient, the diagnosis, a test result, the intervention, or the outcome.

Abstract. In about 200 words summarize the following information if relevant: 1) Rationale for this case report, 2) Presenting concerns of the patient (such as chief complaints or symptoms, diagnoses), 3) Interventions (such as diagnostic, preventive, prognostic, therapeutic exchange), 4) Outcomes, and 5) Main lesson(s) to learn from this case report.

Key Words. Provide 2 to 5 key words that will help potential readers search for and find this case report.

Informed Consent. Ensure that the patient provided their informed consent for the writing and dissemination of this case report.

Patient perspective. Whenever appropriate, the patient should share their experience of their care in a narrative published within this case report or accompanying this case report.

General Considerations. Please ensure that all patient data has been de-identified and that you obtained the necessary approval, if necessary, from an ethics commission or an institutional review board.

Introduction. Briefly summarize the background and context of this case report.

Presenting Concerns. Describe the patient characteristics (such as the relevant demographics—age, gender, ethnicity, occupation) and their presenting concerns with relevant details of related past interventions.

Therapeutic Focus and Assessment. Describe the: 1) types of interventions (such as pharmacologic, surgical, preventive, lifestyle, self-care) and 2) administration and intensity of the intervention (including dosage, strength, duration, frequency).

Diagnostic Focus and Assessment. Provide an assessment of the 1) diagnostic methods (including laboratory testing, imaging results, questionnaires, referral diagnostic information); 2) diagnostic challenges (such as limited ability to complete an evaluation, patient availability, cultural); 3) diagnostic reasoning including other diagnoses considered; and 4) prognostic characteristics (such as staging in oncology) where applicable.

Clinical Findings. Describe the 1) medical, family, and psychosocial history including lifestyle and genetic information; 2) other pertinent co-morbidities and interventions (other therapies including self-care); and 3) the physical examination (PE) focused on the important findings.

Timeline. Create a timeline that includes specific dates and times in a table, figure, or graphic.

Follow-up and **Outcomes**. Please describe the clinical course of this case in-

cluding all follow-up visits as well as: 1) intervention modification, interruption, or discontinuation, and the reasons; 2) adherence to the intervention and how this was assessed; and 3) adverse effects or unanticipated events. Please describe: 1) patient-reported outcomes, 2) clinician assessed and reported outcomes, and 3) important positive and negative test results.

Discussion. Please describe the strengths and limitations of this case report including case management, and the scientific and medical literature related to this case report. Discuss the rationale for your conclusions such as potential causation and the ways this case might be generalized to a larger population. Finally, what are the main findings of this case report and what are the 'take-away' messages?

This is the structure of a formal case report, and certainly the structure of an empirical study. It may be less or more comprehensive depending on whether it is for instruction, for practice, or for publication.

6.3. Case Reports (SWIHM) versus Practice Process Model of Rehabilitation

SWIHM is a formal case report structure and an empirical research structure. It may be more or less comprehensive, depending on whether it is for teaching or for publication.

The SWIHM consists of 14 components. Four of these items (title, abstract, key words, and informed consent) are not included in the rehabilitation practice process model. The content of each of the remaining 10 items is generally encompassed in the definition of the 10 steps (step 5 has been divided into 3, so 10 steps in total) outlined in the above section. [69] (Step 5 has been divided into 3, which makes 10 steps in total.)

The general case report and the practice process model and its relationship with the practice process model have the following differences in terms of subject matter, significance, and issues. First, the former is for rare diseases, whereas the latter is for all patients. Second, novelty and clinical significance are questioned, whereas the clinical decision-making process is clarified. Furthermore, the rehabilitation and up-skilling of education in the workplace, as opposed to clinical research and academic skills.

Case reports are then relevant to improving the clinical and research competence of individuals and the quality of healthcare, while practice process models are relevant to facilitating team care and improving the efficiency of rehabilitation work.

This study hopes to help rehabilitation clinical practice by advancing the documentation of discharge summaries in daily clinical work to case reports and case studies, in the wish that this will improve the quality of rehabilitation care and develop human resources with knowledge, skills and attitudes.

7. Conclusions

Conceptual frameworks [in medical education] represent ways of thinking about

a problem or a study, or ways of representing how complex things work. They can come from theories, models or best practices. Conceptual frameworks illuminate and magnify one's work. Different frameworks will emphasize different variables and outcomes, and their interrelatedness (p. 312) [4].

The educational model proposed in Papers I and II is based on the CPG, team and case report frameworks introduced in this paper. It is essential to back the proposed model up so that it operates effectively at a hospital-wide level: in other words, as part of the creation of a system for rehabilitation education in workplaces, it is essential to clarify the decision-making process through CPGs as points of intervention in order to propose best practice to individual patients from the very beginning of their admission. Very little is known of rehabilitation teams and CPG, and the context of this paper is really about how rehabilitation works at the clinic and hospital level. How often the CPGs of specific conditions are consulted is not known, but it would probably be the responsibility of the rehabilitation specialist to comb the literature on neurological care CPGs for example. It is labour intensive, so would be an "add-on" to the core daily work.

Following this, at departmental level, it is necessary to facilitate teams and share the evaluation-policy-goals to improve the efficiency of rehabilitation work through the team pyramid. To this end, learning to identify the nature of the problem and create intervention points for all patients will be absorbing for therapists at the individual level. The nature of group intervention is stressful for team members, from nurses, who carry a great deal of responsibility, but who are not valued by higher status members such as specialist physicians to other members. Smaller groups are easier to manage and participate in and therefore probably more effective, but in the field of rehabilitation teams are not small by the nature of their work: specialist doctors, occupational therapists, speech and language therapists, nurses, and rehabilitation mentors would be core members. How such rehabilitation teams function is an imperative for future research.

Effective, efficient engagement, for hospitals, departments and individuals, and the integration of knowledge, skills, and attitudes, as well as teaching and evaluation, and the integration of these into clinical practice and making them a habit and a culture, is what rehabilitation education in the workplace should be about.

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Conflicts of Interest

The author declares no conflicts of interest.

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