





Understanding Rehabilitation Massive Open Online Course Evaluation Report

December 2021





Summary

From September 13 to October 24, 2021, Learning, Acting, and Building for Rehabilitation in Health Systems (ReLAB-HS), led by Physiopedia, successfully delivered a Massive Open Online Course (MOOC) entitled "Understanding Rehabilitation as a Health Strategy" via the Physioplus online learning platform. The program consisted of four independent courses, which included:

- 1) Introduction to Rehabilitation
- **2)** Rehabilitation in Health Systems
- 3) Rehabilitation Infrastructures and the Rehabilitation Team
- 4) Competent Delivery of Rehabilitation Teams

In each course, the learner completed required learning activities and a final quiz that tested knowledge gained from the course. To complete the overall Understanding Rehabilitation as a Health Strategy program, the learner had the option to submit and pass a written assignment.

Course Type: Free, Open, Online

Institution: ReLAB-HS via Physiopedia

About this Course: This MOOC aimed to equip health and social care professionals with a comprehensive knowledge of rehabilitation within the current global context, so they can play an effective and proactive role in local and global efforts to increase access to high—quality rehabilitation.

Target Audience: These courses were designed and written for health and social care professionals, clinicians, students, assistants, and other rehabilitation-related health systems stakeholders.

Time Commitment: 16 hours over four weeks (with an optional extra eight hours)

Date: September 13 to October 24, 2021, (remains available on <u>Physioplus</u> platform to members)

Requirements: Participants were required to complete online learning activities, engage with additional resources, and complete the course evaluations and quizzes.

Assessment: There was a quiz at the end of each course, and participants could complete an optional final written assignment to demonstrate knowledge gained from the four courses.

Awards: Four course completion certificates awarding a total of 15.5 Physioplus (P+) points with an additional four Physioplus (P+) points available for the optional assignment.

Accreditation: Each individual course was accredited for continuing education and professional development (CE/CPD) by Texas Board of Physical Therapy Examiners and South African Society of Physiotherapy

Registrations: 10,703

Countries Represented: 107 **Professions Represented**: 25





Acknowledgments

The Understanding Rehabilitation as a Health Strategy MOOC was developed and delivered by ReLAB-HS and Physiopedia.

Course Coordinators: Rachael Lowe, Naomi O'Reilly

Content Contributors: Naomi O'Reilly, Cindy John-Chu, Habibu Salisu Badamasi, Khloud Shreif, Neha Duhan, Safiya Naz, Shreya Pavaskar, Tunde Aderonmu, Vidya Acharya, Liliane Kirenga

Course Facilitators: <u>Rachael Lowe, Naomi O'Reilly, Jess Bell, Tarina van der Stockt, Lucy Aird, Lucinda Hampton, Kate-Lynn Downey</u>

For information regarding this report, please contact: Rachael Lowe (rachael@physio-pedia.com)





	_				
	a	n	Te	m	т
u	v		LL		L

Introduction	5
1.0 About the Program of Courses	6
1.1 Aim	6
1.2 Learning Objectives	6
1.3 Intended Audience	6
1.4 Cost to Participants	6
1.5 Course Availability	7
1.6 Courses, Course Awards, and Accreditation	7
2.0 Demographics of the Participants	7
2.1 Country	7
2.2 Professions	8
2.3 Work-Based Setting	9
2.4 Age and Gender	10
2.5 Disability Related	11
3.0 Engagement of the Participants	11
3.1 Platform	11
3.2 Learning Activities	11
3.3 Discussion Forum	12
3.4 Final Assignment	13
3.5 Engagement versus Completion	13
4.0 Thematic Analysis of Discussion Forums	14
4.1 Access to Rehabilitation	14
4.2 Communication and Collaboration	16
4.3 Interdisciplinary Teamwork	17
4.4 Leadership	17
Figure 4: Conceptual Map of Themes and Sub-themes	18
5.0 Participant Feedback	18
5.1 Qualitative Data	21
5.2 Impact on Knowledge	22
5.3 Impact on Clinical Practice	22
6.0 Conclusion	23
Appendix 1 Course Participants Demographics	24
Appendix 2 Required Learning Activities	28
2.1 Course 1: Introduction to Rehabilitation	28





2.2 Course 2: Rehabilitation in Health Systems	28
2.3 Course 3: Rehabilitation Infrastructure and the Rehabilitation Team	28
2.4 Course 4: Competent Delivery of Rehabilitation Interventions	29
Appendix 3 Optional Discussion Forums	30
3.1 Course 1: Introduction to Rehabilitation	30
3.2 Course 2: Rehabilitation in Health Systems	30
3.3 Course 3: Rehabilitation Infrastructure and the Rehabilitation Team	30
3.4 Course 4: Competent Delivery of Rehabilitation Interventions	31
Discussion Forums	31
Appendix 4: Example Testimonials	32
4.1 Introduction to Rehabilitation Testimonials	32
4.2 Rehabilitation in Health Systems Testimonials	32
4.3 Rehabilitation Infrastructure and the Rehabilitation Team Testimonials	33
4.4 Competent Delivery of Rehabilitation Interventions Testimonials	34
Appendix 5: Impact on Clinical Practice Examples	35
5.1 Introduction to Rehabilitation Impact on Clinical Practice	35
5.2 Rehabilitation in Health Systems Impact on Clinical Practice	35
5.3 Rehabilitation Infrastructure and Team Impact on Clinical Practice	36
5.4 Competent Delivery of Rehabilitation Interventions Impact on Clinical Practice	37
Annendix 6: References	38





Introduction

During September and October 2021, ReLAB-HS, led by Physiopedia, delivered a Massive Open Online Course (MOOC) entitled, "Understanding Rehabilitation as a Health Strategy." This USAID-funded program built on Physiopedia's ten-year track record of developing and delivering MOOCs, being its tenth annual release of a customized learning program. The MOOC was delivered as four courses with an optional written final assignment to complete the program.

The Understanding Rehabilitation as a Health Strategy program aimed to equip health and social care professionals with a comprehensive knowledge of rehabilitation within the current global context, so that they can play an effective and proactive role in local and global efforts to increase access to high-quality rehabilitation services.

The four week-long courses presented different topics through a variety of learning activities to suit all learning styles. The required learning activities within each course were developed to take between four to six hours depending on the participant's learning style, and optional activities were provided should the participant wish to take part in additional learning. A short orientation period before the course provided participants with an opportunity to become familiar with the delivery platform and the topic via the provided pre-course resources.

The course was delivered through the <u>Physioplus</u> online learning platform, an innovative platform specifically developed to provide online education and support learners with a personalized learning dashboard. For each course, the related learning activities were released on a specific course page. Participants engaged with each course and the respective learning activities, and their activity was recorded and displayed in their personal learning dashboard.

A course was considered complete once the learner finished all required learning activities and successfully passed the final quiz that tested knowledge gained each week. There was also an optional written assignment designed for participants to apply the knowledge gained from all four courses. On completion of each course the participants had the option to download a completion certificate and export a record of their learning from their activity log.

This report evaluates the experiences and engagement of the participants on the Understanding Rehabilitation as a Health Strategy MOOC.





1.0 About the Program of Courses

1.1 Aim

Through this MOOC, ReLAB-HS aimed to build on recent work to strengthen the advocacy case for better recognition of rehabilitation in health systems by increasing knowledge among global stakeholders and build on Physiopedia's global community of professional learners to amplify the growing voice of professional identity and challenges for integrating rehabilitation into health systems.

In order to achieve this, a program of four courses was created with the aim of developing a comprehensive knowledge of rehabilitation within the current global context among health and social care professionals so that they can play an effective and proactive role in local and global efforts to increase access to high-quality rehabilitation services. The program included an introduction to rehabilitation, overview of rehabilitation with health systems, rehabilitation infrastructure and the rehabilitation teams, and competent delivery of rehabilitation interventions.

1.2 Learning Objectives

At the end of this program of courses, participants were able to:

- **1.** Explain what is meant by the term rehabilitation
- **2.** Describe conceptual models related to rehabilitation based on a case study
- **3.** Discuss the demographic trends triggering the growing need for rehabilitation
- **4.** Describe five benefits of rehabilitation
- **5.** Discuss Rehabilitation 2030 and three recommendations
- **6.** Describe health equity through a disability and intersectionality lens
- 7. Identify three factors leading to exclusion and inequities in health care
- **8.** Explain the key components of inclusion
- 9. Correctly describe the concept of Universal Health Coverage
- **10.** Describe the scope of rehabilitation in a health system
- **11.** Explain the role of the interdisciplinary team in rehabilitation services
- **12.** Describe the roles of five common team members within the rehabilitation team
- **13.** Describe the actions rehabilitation providers can take to manage and improve services
- **14.** Discuss the general impact of the Covid-19 pandemic on rehabilitation services
- **15.** Describe the different ways rehabilitation frameworks are used and the design features associated with different framework applications
- **16.** Justify the use of different therapeutic interventions depending on treatment goal for a patient
- **17.** Choose an appropriate set of interventions that could be included in a rehabilitation management plan of a patient

1.3 Intended Audience

This course is suitable for all rehabilitation professionals, students, and assistants, including but not limited to: physiotherapists, occupational therapists, speech and language therapists, rehabilitation doctors, rehabilitation nurses, prosthetists, orthotists, psychologists, audiologists, dietetics, social workers, and community-based health workers. Other health, social, and rehabilitation professionals interested in this subject are also invited to participate.





1.4 Cost to Participants

The course was free to all participants who completed the course within the 6-week timeframe and remains free to all <u>Physioplus</u> members and residents of low-income countries outside of this timeframe.

1.5 Course Availability

The program of four courses and optional assignment were made available on September 13, 2021. Participants had until October 24, 2021 to complete the courses under their free access to Physioplus. The course remains available on the Physioplus platform to members; membership is free to individuals from low-income countries and available at a discounted rate to individuals in middle-income countries.

1.6 Courses, Course Awards, and Accreditation

Four individual courses were created for the Understanding Rehabilitation as a Health Strategy Program, which can each be completed individually or can be completed as a program of courses with an additional assignment.

Course 1: Introduction to Rehabilitation (3.8 P+ Points)

Course 2: Rehabilitation in Health Systems (3.4 P+ Points)

Course 3: Rehabilitation Infrastructures and the Rehabilitation Team (4.2 P+ Points)

Course 4: Competent Delivery of Rehabilitation Teams (3.1 P+ Points)

Course Program: Understanding Rehabilitation as a Health Strategy (5.0 P+ Points)

Physiopedia provided individual course completion certificates to all participants that passed each of the four individual courses. For individuals who completed all four courses and completed the assignment were also provided with a program certificate for recognition of completing the full program.

2.0 Demographics of the Participants

2.1 Country

Of the 10,703 registered participants, 1,753 individuals started the Understanding Rehabilitation as Health Strategy program before the end date of October 24, 2021, representing 107 countries. The tables below show a breakdown by country and country income classification. A full list of the countries and number of participants from each country can be found in Appendix 1. In total, 335 individuals completed the fourth MOOC course, which is used as the definition of MOOC completion in the data below.

Table 1: Top Ten Represented Countries

Country	n (Participants Who Started)	n (% completed from country)
Australia	163	39 (24%)
Nigeria	160	36 (23%)
India	149	12 (8%)
United Kingdom	137	27 (20%)
Philippines	84	11 (13%)
Egypt	65	6 (9%)
United States	62	14 (23%)





Pakistan	62	15 (24%)
South Africa	51	13 (25%)
Uganda	39	11 (28%)

Data are numbers (n) and percentage of country participants (%)

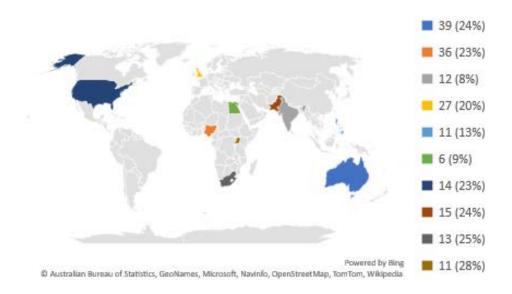


Table 2: Country Income Classification

Classification	n (Participants Who Started)	n (Participants Who Completed)				
High	608	145 (24%)				
High-middle	206	51 (25%)				
Low-middle	702	114 (16%)				
Low	121	27 (22%)				

Data are numbers (n) and percentage of country participants (%)

Table 3: ReLAB-HS Countries

Tuble 5. Reliab 115 Countries						
Country	n (Participants Who Started)	n (Participants Who Completed)				
Myanmar	8	1 (13%)				
Pakistan	62	15 (24%)				
Uganda	39	11 (28%)				
Ukraine	10	3 (30%)				

Data are numbers (n) and percentage of country participants (%)





2.2 Professions

Twenty-five different professions including carers and patients started the Understanding Rehabilitation as Health Strategy program before the end date of October 24. The top ten represented professions can be found in Table 4. A full list of participants' professional backgrounds is in Appendix 1.

Table 4: Participants' Professional Backgrounds (top ten)

Profession	n (%)
Physiotherapist / Physical Therapist	882 (73.9%)
Student (all professions combined)	82 (6.9%)
Occupational Therapist	57 (4.8%)
Physical Rehabilitation Physician / Physiatrist	21 (1.8%)
Nurse	18 (1.5%)
Physiotherapy / Physical Therapy Assistant	30 (2.5%)
Doctor of Medicine (not Rehabilitation / Physiatry specialist)	16 (1.3%)
Personal Trainer	11 (0.9%)
Massage Therapist	10 (0.8%)
Prosthetist / Orthotist	8 (0.7%)
Speech Therapist	8 (0.7%)

Data are numbers who completed the competency rating tool (n) and percentage of all respondents (%)

2.3 Work-Based Setting

Course participants come from a wide range of work-based settings. Work-based settings are outlined in Table 5.

Table 5: Current Workplace of Participants

Professional Role	n (%)
Governmental Organization	311 (31.7%)
Private Sector Business	250 (25.4%)
Academic Institutions	172 (17.5%)
Nongovernmental Organization	113 (11.5%)
Other	75 (7.6%)
Community-Based Organization	28 (2.8%)
Organization of Persons with Disabilities	23 (2.3%)
Faith-Based Organization	10 (1.0%)

Data are numbers who completed the competency rating tool (n)and percentage of all respondents (%)

2.4 Age and Gender





Figure 1: Gender of Participants by Age Range

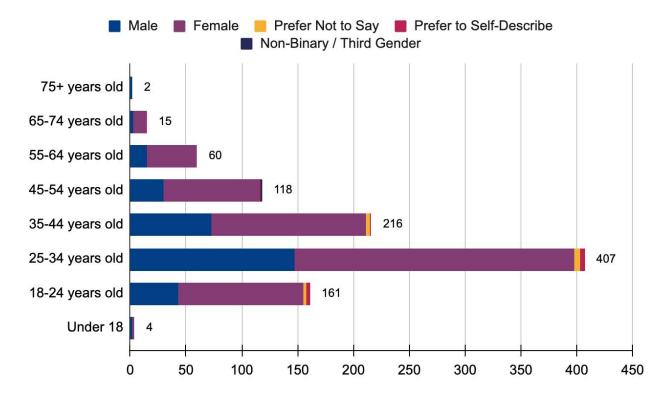
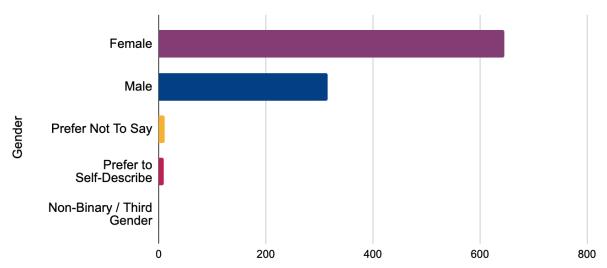


Figure 2: Gender of Participants

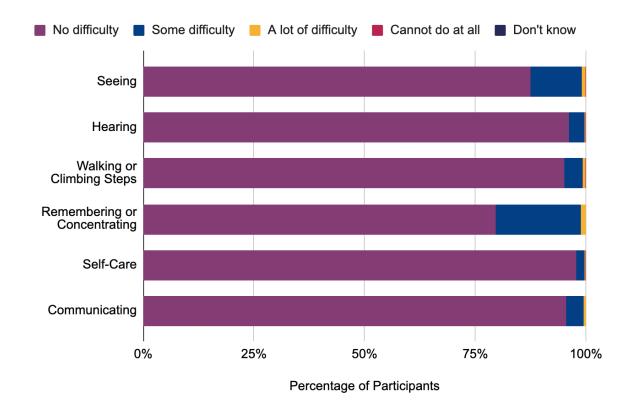


2.5 Disability Related

Figure 3: Disability of Participants







3.0 Engagement of the Participants

3.1 Platform

The Understanding Rehabilitation as a Health Strategy program and associated four courses were delivered on Physioplus. Thirty-eight knowledge-sharing topic summary articles on Physiopedia were either created or updated for the learners to use during these courses; these articles received 91,221 unique views before the final date of the supported course on October 24, 2021.

3.2 Learning Activities

The program included a total of 51 required learning activities, such as watching videos, directed reading, and discussions (the full list of learning activities can be found in Appendix 2). To complete each course, participants were required to fully engage with the required learning activities and pass a quiz. Once successfully completed, Physioplus Points (equivalent to hours of learning) and a completion certificate were awarded. A breakdown of the number of required learning activities and the number of learning activities that were completed in each course can be found in Table 6.





Table 6: Learning activities logged and total Physioplus Points awarded for each course

	Course 1: Introduction to rehabilitatio n	Course 2: Rehabilitati on in health systems	Course 3: Rehabilitati on infrastructu re and the rehabilitati on team	delivery of rehabilitati on	Program completion	Total
Required Learning Activities	10	14	12	11	6	53
Learning Activities Logged	18,411	7,374	5,284	5,280	832	37,181
Physioplus Points Awarded	4,686	2,119	1,860	1,702	209	10,576

3.3 Discussion Forum

Each course contained four to five optional open forum discussions. Learners were encouraged to engage with international course participants on a wide range of different topics associated with the course. These discussions were intended to provide a rich learning experience to the learner through self-reflection and community engagement. Participants submitted thousands of forum comments and questions, an impressive level of engagement given all Physioplus discussions throughout this course were optional.

In total there were 4,815 discussion posts over the course of the program. There were 596 comments on the most active discussion, which considered the individual context participants were working in, what rehabilitation means within those contexts, and the challenges they were facing in providing rehabilitation services both within those contexts and within the constraints of the COVID-19 pandemic. Table 7 presents an outline of the number of discussion posts for each discussion forum in each of the four courses.

Table 7: Number of Discussion Forum Posts

	Course 1: Introduction to rehabilitation	Course 2: Rehabilitation in health systems	Course 3: Rehabilitation infrastructure and the rehabilitation team	Course 4: Competent delivery of rehabilitation interventions	Total
Discussion 1	596	272	209	168	1,245
Discussion 2	449	218	205	160	1,032
Discussion 3	358	204	171	172	905
Discussion 4	326	212	179	107	824
Discussion 5	361	N/A	N/A	148	509
Reflections	176	52	39	33	300
Total	2,266	958	803	788	4,815

Data are Number (n) of Individual Posts





The discussion forums have provided an overview of barriers and challenges that rehabilitation workers currently face when providing rehabilitation services, particularly in the context of the COVID-19 pandemic. Many creative solutions to increase access to services have been highlighted in these discussion forums across a broad range of settings and contexts worldwide.

The most thought-provoking discussion forum was the one that looked at the global needs for rehabilitation, where course participants were asked to explore the WHO Rehabilitation Needs Estimator Tool and share the rehabilitation needs of their community based on this tool. They also were asked to consider the impact this might have on their service provision over the next five years. Common conditions highlighted were low back pain, neurological conditions, and hearing loss. This forum highlighted just how important the role of rehabilitation professionals is and will be in helping to maintain and improve quality of life. These forum discussion posts provide great insight into the state of rehabilitation across the world and ReLAB-HS recommends anyone interested in rehabilitation to look at these in more detail. The forums will stay active, and Physioplus members can continue to read and contribute to the discussion points as they complete the courses.

3.4 Final Assignment

An optional final assignment was designed to give participants an opportunity to reflect on their learning and use the knowledge gained throughout the courses. Participants were asked to follow the <u>assignment guidelines</u> or <u>video assignment guidelines</u> on Physiopedia, and the Physiopedia team assessed the submitted assignments. To successfully pass the final assignment, learners needed to demonstrate: evidence of learning from the course, academic skill with evidence-based writing, and proper referencing. Assignments had to be written in English. A total of 23 assignments were submitted of which nine have currently met the assignment requirements and were rewarded with a passing grade and program certificate.

3.5 Engagement versus Completion

1,753 learners began Course 1 (Introduction to Rehabilitation) of the Understanding Rehabilitation as Health Strategy program, with 37.1% completion rate. The number of learners who began and completed each of the four individual courses can be found in Table 8.

Table 8: Course Initiation and Completion

	Course 1	Course 2	Course 3	Course 4	Program
Learners who Started	1,753	689	490	515	233
Learners who Completed	635	434	360	335	6
Percentage Completion	36.2%	63.0%	73.4%	65.0%	2.6%

Data are Numbers (n) of Learners

Of the 10,703 learners who registered to take part in Understanding Rehabilitation as a Health Strategy program, 1,753 (16.8% of registered learners) began the first course before October 24, 2021. Table 9 displays the number of learners who began and completed the first and final course and the optional final assignment.

High numbers of dropouts are a common challenge for MOOC's, suggested to be related to limited participant interactions (Fricton et al., 2015) and lack of face-to-face sessions, which generate a sense of isolation and disconnection (Jessica et al., 2021). While smaller numbers completed each consecutive course in the Understanding Rehabilitation as a Health Strategy program, the completion rates for the later courses were much higher than for the initial course,





suggesting a good connection with the content. Overall, these completion rates are well above those seen for both health-related MOOC's, with completion rates reported to range between 4.3% and 11% (Maxwell et al., 2018), and technology-related MOOC's that are generally below 13% (Onah et al., 2014).

4.0 Thematic Analysis of Discussion Forums

Given the role and the importance of the discussion forums as a means for rehabilitation professionals to interact and share their expertise and knowledge with others across the world it was determined that a further thematic analysis be conducted on the discussion forums across each of the four courses to understand the overriding themes and sub-themes evident when examining rehabilitation.

First, all discussion forums from each course were reviewed in detail. Following this, forum discussions were further analysed to gain an understanding of the overall themes expressed across the four courses of the MOOC. Next, initial codes were generated utilising the WHO Rehabilitation Competency Framework as a guide to explore in greater detail the content of the selected discussion forums. Common emerging codes were then grouped to form themes and sub-themes. After themes and sub-themes were found, a second review was conducted to look for keywords to ensure that no common themes or sub-themes were missed. Overlapping themes were then identified. Themes and sub-themes were then searched for across each of these discussion forums (Nowell et al., 2017). The thematic analysis was performed on the selected discussion forums using NVivo 12 Software (NVivo Version 12.6.1).

Four main themes were identified that appeared across all discussion forums, with a further 12 sub-themes also identified. Table 10 and Figure 3 display the themes and associated sub-themes.

Table 10: Themes and Sub-Themes of Understanding Rehabilitation Discussion Forums

Themes		Sub-Themes	
1	Access to Rehabilitation	Challenges Barriers Facilitators	
2	Communication and Collaboration	Person-Centred Care Advocacy - Rehabilitation, Person, Family Cultural Competence	
3	Interdisciplinary Teamwork	Facilitate Sharing of Knowledge Interpersonal Skills Sense of Purpose	
4	Leadership	Leading by Example Positive Attitude to Change Sharing Culture	

4.1 Access to Rehabilitation

Contemporary models and practice in rehabilitation recognize the right of individuals to have choices about their care, and the capability of people to do so as experts in their own lives and individual goals. It is a highly person-centered health care strategy by which treatment caters to the underlying health conditions, as well as to the goals and preferences of the user (Mauk, 2012). Throughout all four courses of the MOOC, access to rehabilitation was a key point of discussion, both within high- and low-resource settings, with concerns around disparity being





very prominent within much of the discussion. Repeatedly, participants across all contexts identified and examined the challenges and barriers they faced to providing the right access to rehabilitation at the right time.

In many places distance and cultural values have a huge impact on access to rehabilitation services.

"In Australia, a large country with a relatively small population, the main barriers to rehabilitation services I see are 1. People in rural areas have to travel hundreds of KMs to access services (relying on the flying doctors for emergencies). 2. The indigenous population have different cultural attitudes and are often misunderstood and or remote populations."

While in other contexts it is very evident that rehabilitation professionals have very limited input towards health policy, often resulting in disjointed services with poor care pathways.

"In Nigeria rehabilitation professionals are not involved in making health policies, rehabilitation services are not properly integrated into and between Primary, secondary and tertiary healthcare systems."

A key issue highlighted by huge numbers across both low- and high-resource settings was the shortage of rehabilitation professionals to meet the current rehabilitation needs. In some settings this results in long waiting times to access services, but in other situations it can result in no access to services at all.

"Similar to friends in Nigeria, we in Cambodia have very few rehab professionals like PTs, P&O and social work. We almost do not have a rehab medical doctor, and have no training in OT, or Speech Therapy, We do not have rehab nurses. In addition to limited workforce, other resources are also poor such as ATs, rehab settings, and most importantly fund allocation, from government, developmental partner and private. The political will is not aligning with the 2030 goals of health for all, primarily the conflict of interests of officials and institutions that try to keep most of rehabilitation service under its not-prioritised agenda."

The following discussion highlights many of the challenges and barriers that continue to impact access to rehabilitation services:

"...policy is not sufficient to support, less resources, less available human resources, unused available human resources, infrastructure not sufficient where it is available, geographical context of Nepal, unavailability of equally distributed services, too costly to get services, long travelling to reach service areas, lack of sufficient budget, peoples motivation and lack of awareness, undervalued by government officials, unavailable sufficient education opportunity for rehab courses and employment after that...."

Despite these challenges and barriers, it was also evident that participants of the MOOC were able to identify facilitators across all contexts to try and bridge the gaps. Innovation was a key part of this, and a passionate workforce with an overriding recognition of the benefits of rehabilitation. Changes in policy, particularly around provision of services for individuals with a disability are some of the key changes that many feel have helped support better access to rehabilitation, as have the implementation of community-based rehabilitation programs.





"Implemented government policies to facilitate people with disabilities and rehabilitation programs (eg. National policy for persons with disabilities and National action plan for disabilities)"

"Implementation of CBR programs in some areas by government and private sector with the help of NGOs"

Finally, there was a lot of recognition of the role of knowledge sharing as a key facilitator both for access to rehabilitation, and more importantly support for change, with many individuals recognising that higher-income countries often have increased access to funding to support service development.

"Opportunities for knowledge sharing and change management within organisation; opportunities for better representation of rehab professionals in decision making processes and service development. Some families do appreciate and value the role of rehab professionals in their children's recovery and participation; developed, higher income countries therefore have easier access to funding for service development".

Overall, this leads into the next theme of communication and collaboration, which has the capacity to be a huge facilitator for change in all aspects of the health care systems.

4.2 Communication and Collaboration

Just as communication and collaboration is prominent throughout each individual rehabilitation profession's guidelines and standards, and a key element of the WHO Rehabilitation Competency Framework, it is no surprise that it has emerged as a key theme within our discussion forums, with the discussion forums identified as a community of practice that allow sharing of knowledge and expertise at a remote level. Across the board there was recognition of the importance of understanding the patient's perspective when developing and adapting plans of care as vital to the rehabilitation process and the clinical decisions being made. All professions recognized that cultural competence was necessary when responding to the patient's unique needs and the needs of the populations that the professional works with.

"Having the patient as a key team member in decision making and involving the multidisciplinary approach for a successful intervention to achieve the best results."

"While interacting with patients first it provides information about their psychological status. Along with understanding of diseases and the manifestation as a result of that disease it gives an idea about rehabilitation. But a person's needs, beliefs, family support, surroundings, education, job, activity level, employment, persons interest and the outcome of disease should be considered. Without understanding these aspects it can have a great impact on rehabilitation needs."

All professions also agreed that being an advocate for their patients, their patient's family, and their rehabilitation profession was key. But it also became more apparent within the discussion forums as to the role rehabilitation professionals play in advocating for rehabilitation services, and more importantly, for services suitable for the specific culture and context.

"I think I learnt quite a lot from this course, and I feel my behavior and thinking now have changed. For example, I think about how to promote the introduction of a competency framework not only for ensuring competency of personnel in





my current setting but for all rehabilitation centers in Cambodia. Beyond this is lobbying for introducing to training institutions to improve their training curriculum to produce graduates with sets of competencies for rehabilitation workforce"

"Everybody should be conscious about the importance of rehabilitation. We need to inform people about these different stages of rehabilitation. If more people promoted rehabilitation to be a part of our health systems at all levels then our patients and the people in our communities will reap the benefits."

4.3 Interdisciplinary Teamwork

Working efficiently and effectively on an interdisciplinary team was identified by many as an important aspect of the rehabilitation process, regardless of the phase, setting, and context.

Knowledge sharing within this team allowed members to gain a better appreciation and understanding of the roles of other rehabilitation professionals and each profession's unique contribution to patient care. It also provided an opportunity to develop a common sense of purpose, provided a mechanism to work together towards common goals, with a focus on participation to improve quality of life.

"The MDT approach is most effective here in the refugee setting where I work due to comprehensive goal setting and comprehensive service provision. Communication, practical knowledge & keeping client centered are the key qualities."

"I work in an interdisciplinary team and we often overlap in tasks, especially the nurses. We have regular MDT meetings to discuss the patients goals etc. This style of rehab is focused on the patient to enable them to achieve their goals and have the best outcome. We all work together with the patient."

4.4 Leadership

Effective leaders in health services emphasize safe, high-quality, compassionate care as the top priority. They promote continuous development of knowledge, skills, and abilities in order to improve quality of patient care, safety, compassion, and the patient experience. They ensure the voice of patients is consistently heard at every level: patients' experience, concerns, needs and feedback (positive and negative). They offer supportive, available, empathic, fair, respectful, compassionate, and empowering leadership, employing participation and involvement as core leadership strategies. They consistently encourage, motivate, reward innovation, and introduce new/improved ways of working (West et al., 2015).

"Qualities of a team should be effective leadership and communication; clinical weekly meetings are part of it, a good team spirit; collaborating effectively, Respect for each discipline; knowing one's limits, as well as team support; builds each one's strength."

Leadership was highlighted as a key factor in capacity to develop successful rehabilitation services. Leaders influence the culture – both positively and negatively. Good leaders — lead by example while providing an open and safe environment for team members to share their thoughts and generate opportunities for innovation (HSE Quality Improvement Division, 2018).

There must be direction, alignment, and commitment to a shared, holistic view of care that includes commitment to improving linkages with other providers and to achieving system goals, such as continuity of care. This in turn implies alignment across different parts of organizations, different providers, other relevant groups, and different levels of care. Ensuring key cultural





elements are in place also requires leadership that creates direction, alignment, and commitment in relation to these cultural elements (West et al., 2015).

Barriers Challenges Facilitators Access to Rehabilitation Sharing Person-Centred Culture Understanding Communication Rehabilitation Positive Attitude to Leadership and Advocacy as a Health Change Collaboration Strategy Lead by Cultural Example Competence Interdisciplinary Team Work Facilitate Sense of Sharing of Purpose Knwoledge

Interpersonal Skills

Figure 4: Conceptual Map of Themes and Sub-themes





5.0 Participant Feedback

After the completion of each of the four courses, learners had the option to share their feedback on the course. The learners were asked to rate their overall opinion of each course on a five-point scale ranging from excellent to poor. Figures 5 to 8 display the results for each course.

Figure 5: Course Rating for the Introduction to Rehabilitation (n=403)

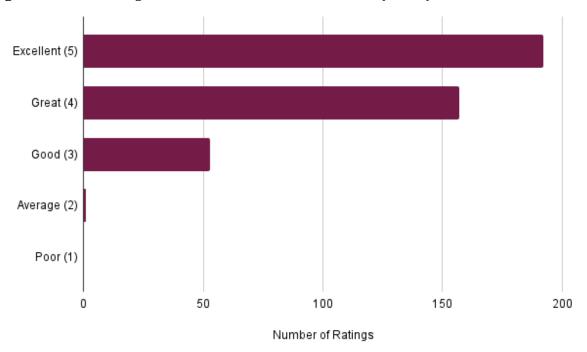


Figure 6: Course Rating for the Rehabilitation in Health Systems Course (n=165)

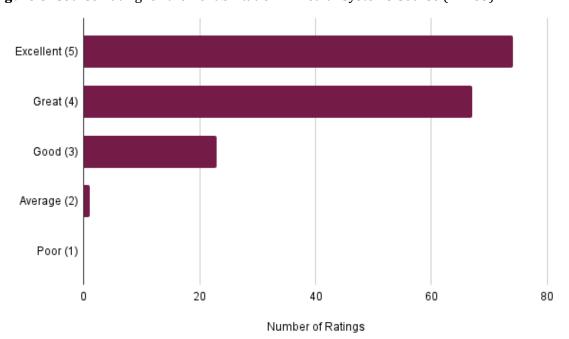






Figure 7: Course Rating for Rehabilitation Infrastructure and the Rehabilitation Team Course (n=114)

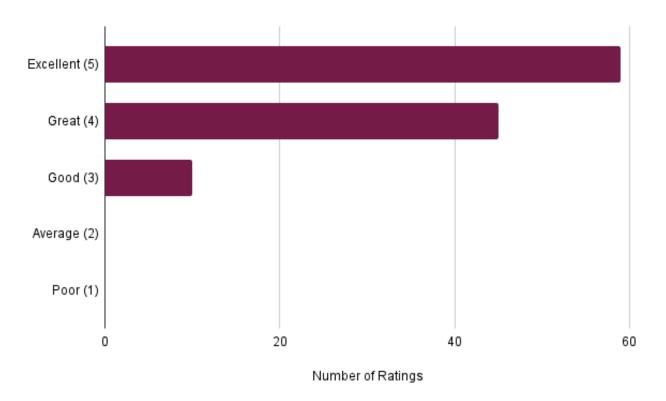
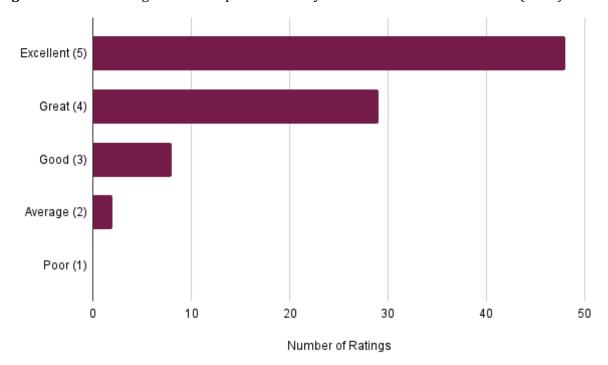


Figure 8: Course Rating for the Competent Delivery of Rehabilitation Interventions (n=87)



5.1 Qualitative Data

Participants were provided with the opportunity to give qualitative feedback on their experience with each course. When asked, "What were the best elements of this course?" overall, the learners reported that they enjoyed both the written and visual media materials in the courses





that were supported by transcripts and up-to-date research highlighting a global view of rehabilitation. Participants reported that the information provided was presented clearly and in an engaging way with excellent speakers who were experts in their field.

In Course 1 (Introduction to Rehabilitation), the learners appeared to agree that the content on the WHO Global Needs Estimator and the International Classification of Functioning, Disability, and Health (ICF) were most beneficial to their learning and provided great resources to help support rehabilitation planning and encourage big-picture thinking.

"The vast scope of rehabilitation requirements in a global context are brought to one's attention..."

In Course 2 (Rehabilitation in Health Systems) participants overall identified that universal health care and health for all was the highlight of the course, and it was evident that it provides a grounding for development of health systems and structure.

"I loved the presentation on the chronological progression of universal health care. It was descriptive and effectively hit home the importance of and efforts towards provision of universal health care."

In Course 3 (Rehabilitation Infrastructure and the Rehabilitation Team), it was evident that learners enjoyed the content and felt the course enhanced their current level of understanding around the role of rehabilitation team members and the different structures in which they can work. Additionally, they recognize the impact they have on delivery of interventions with an appreciation for the consideration of a wide range of contexts—through all phases of the rehabilitation process. In particular, Cornelia Barth's presentation provided a hugely practical-based learning experience that many felt spoke to the present lived experience of many rehabilitation professionals working within low-resource settings, which highlighted the importance of presentations that provide support around interventions within a wide range of settings.

"I loved the way Cornelia Barth compared the health system with a car and how us a workers have to adapt our knowledges and everything in order to make it work and how it affects the way things work."

Finally in Course 4 (Competent Delivery of Rehabilitation Interventions), the case study was the most important element highlighted by participants, which they felt provided an opportunity to put into practice all the theory that they had learnt across the MOOC. It brought the person-/family-centred focus back to the fore and highlighted the opportunity to provide real improvements in the quality of life, functionality, and independence for people through simple interventions at the primary care level, as well as the use of technology to more reliably deliver physical rehabilitation into community settings.

"I really liked the case studies, for you immediately see the application of the theory you have just read. Listening to Alan and what he 'missed' in his rehab programme and how it did not appear to be person focused highlighted the importance of involving the individual in goal setting and developing a rehabilitation plan that is relevant to their life."

When asked, "How could this course be improved?" learners requested that the course be offered for a longer period of time. Learners felt that having access to more case studies across a range of different settings and contexts would have been helpful for their learning. A majority of participants stated that they would have liked to have more video content, including content more representative of low- and middle-income countries. There were also multiple suggestions





to simplify language, have less written materials, and, where possible, offer course translations in other languages to enhance understanding. There were also a number of participants who requested the opportunity for some live webinars to be incorporated as part of the course to allow for more feedback and opportunities for questions.

Throughout the MOOC, it is evident from all the qualitative feedback that a key value highlighted by many participants has been discussion forums and the opportunity they provide for rehabilitation professionals, across all disciplines, to share their experience and knowledge with others from across the world. It highlights the key role that online learning can play as a communication and collaboration tool to provide a community of practice for rehabilitation professionals who can help support each other and strengthen the development of responsive and sustainable physical rehabilitation services in the communities where they are most needed.

"I liked the discussion groups and the fact that it was both videos and write ups. Knowing that there are discussions helps you pay better attention and the entire format of the course is captivating, ensuring that you learn a lot. I also like that it was very integrating, involving different professionals in different countries, pooling together their experience and resources."

5.2 Impact on Knowledge

In order for a participant to show increased knowledge they needed to complete both the Preand Post-Course Knowledge and Competency Self-Rating Tools. Increase in knowledge can be evidenced by an increase in the average (mean) self-assessment scores between the Pre- and Post-Course Knowledge and Competency Self-Rating Tools.

Only 116 participants completed the Pre- and Post-Course Knowledge and Competency Self -Rating Tool, accounting for 30% of the final course completion participants. Of those, 110 participants (95%) registered an increase in knowledge. A general rate of knowledge increase across all course participants could be inferred from this percentage, which would suggest about 626 participants would show increased knowledge from taking part in the MOOC.

As a result of this experience, the method of collecting data on increased knowledge has been simplified with a single question being added to each separate course evaluation survey.

5.3 Impact on Clinical Practice

In the evaluation, learners were asked to "Describe any changes to your clinical practices that you have made or intend to make as a result of participation in this course." Generally, it appears that the Understanding Rehabilitation as Health Strategy program facilitated improvement of learners' awareness of the role that all rehabilitation professionals can play in advocating and developing rehabilitation services. Overall, the most important change highlighted by a large number of individuals has been the need to ensure more personcentred or family-centred care that involves the patient and their support structures throughout each phase of the rehabilitation process. Learners emphasized that they acquired a new appreciation for how to incorporate the ICF model into their rehabilitation services. Illustrative sample comments on the impact of clinical practice can be found in Appendix 4.

"It has helped to broaden my thinking as often patients will have goals in mind that may not be what I as a physio see as the most important issue. The case study really highlights the need to discuss with the client what they want to achieve out of the therapy rather than just what as a physio we tend to target functionally. As he said in the case study, the physio was happy but he wasn't so he felt let down. It really just drives home the need for expectation discussions





and goal setting at the start of the intervention being the driving force of the therapy, not just what the main presenting issues are. Patient-centered care is key!"

6.0 Conclusion

Physiopedia, in collaboration with ReLAB-HS, successfully delivered a MOOC on Understanding Rehabilitation as a Health Strategy program over six weeks in September and October 2021. Over 1,753 learners from across 107 countries from around the world completed one or more of the courses provided within the program. It is apparent from the course registration data that this course was a topic that was important to all health, social care, and rehabilitation providers across the world. It is evident from learners' feedback that learners gained a new appreciation for rehabilitation within a global context, and that communities of practice are seen as valuable for individuals across all settings.

Future Physiopedia MOOCs will build on the feedback received from participants in this program to improve resources, attrition rates, and engagement throughout the entire course. Additionally, Physiopedia intends to provide further opportunities for communities of practice to support each other globally through virtual networks, where individuals can share their knowledge and expertise to strengthen rehabilitation, so that they can play an effective and proactive role in local and global efforts to increase access to high-quality rehabilitation services.





Appendix 1 Course Participants Demographics

Table 11: Number of Participants from the 107 Represented Countries

Country	N	Country	N
Afghanistan (AF)	2	Netherlands (NL)	8
Albania (AL)	8	New Zealand (NZ)	32
Antigua And Barbuda (AG)	1	Nigeria (NG)	160
Australia (AU)	163	Norway (NO)	1
Austria (AT)	1	Oman (OM)	3
Bahamas (BS)	1	Pakistan (PK)	62
Bangladesh (BD)	14	Papua New Guinea (PG)	1
Belgium (BE)	2	Paraguay (PY)	1
Benin (BJ)	1	Peru (PE)	2
Botswana (BW)	3	Philippines (PH)	84
Brazil (BR)	8	Poland (PL)	4
Cambodia (KH)	1	Portugal (PT)	6
Cameroon (CM)	3	Qatar (QA)	18
Canada (CA)	32	Romania (RO)	2
Chile (CL)	2	Russian Federation (RU)	3
China (CN)	2	Rwanda (RW)	23
Colombia (CO)	5	Saint Lucia (LC)	1
Congo, Democratic Republic (CD)	1	Saudi Arabia (SA)	11
Croatia (HR)	5	Sierra Leone (SL)	1
Cyprus (CY)	2	Singapore (SG)	8
Egypt (EG)	65	Slovenia (SI)	1
Ethiopia (ET)	9	Somalia (SO)	4
Fiji (FJ)	2	South Africa (ZA)	51
Finland (FI)	3	Spain (ES)	9
France (FR)	8	Sri Lanka (LK)	28
Georgia (GE)	5	Sudan (SD)	14
Germany (DE)	7	Suriname (SR)	3
Ghana (GH)	15	Switzerland (CH)	6
Greece (GR)	8	Syrian Arab Republic (SY)	5
Grenada (GD)	1	Tanzania (TZ)	5
Guyana (GY)	2	Trinidad And Tobago (TT)	7
Haiti (HT)	3	Tunisia (TN)	2





Indonesia (ID) Iran, Islamic Republic Of (IR) Iraq (IQ) Iraq (IQ) Iraq (IE) Iraq (IL) Iraq (IE) Iraq (IL) Iraq (IE) Iraq (IE) Iraq (IE) Iraq (IC)	Hong Kong (HK)	8	Tu
ran, Islamic Republic Of (IR) raq (IQ) raq (IQ) reland (IE) rael (IL) rall (IE) rael (IL) range (IL	ndia (IN)	149	Ug
raq (IQ) reland (IE) reland (IE) ratel (IL)	ndonesia (ID)	12	Ukr
reland (IE) reland (IE) reland (IE) rally (IT) ramaica (JM) rapan (JP) rapan (JO) razakhstan (KZ) reland (KE) ramaica (JM) rapan (JO) razakhstan (KZ) ramaica (JM) rapan (JO) razakhstan (KZ) rambi razakhstan (KZ)	ran, Islamic Republic Of (IR)	2	Unite
Venezu taly (IT) 3 amaica (JM) 19 apan (JP) 3 aranaica (JO) 13 Zambia Zazakhstan (KZ) 2 Zenya (KE) Zenya (KE) Zenya (KE) Zenya (KG) 3 Zenya (KG) 3 Zenya (KG) 4 Zenya (KG) 5 Zenya (KG) 1 Zenya (LA) Z	raq (IQ)	13	United
taly (IT) 3 amaica (JM) 19 apan (JP) 3 ordan (JO) 13 Kazakhstan (KZ) 2 Kenya (KE) 28 Kuwait (KW) 3 Kyrgyzstan (KG) 1 Lao People's Democratic Republic (LA) 6 Lebanon (LB) 5 Libyan Arab Jamahiriya (LY) 3 Macao (MO) 1 Macedonia (MK) 1 Madagascar (MG) 5 Malawi (MW) 7 Malaysia (MY) 14 Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	reland (IE)	12	United S
Virgin Isl apan (JP) apan (JP) apan (JO) apan (JP) apan	srael (IL)	4	Venezuel
Japan (JP) Japan (JP) Japan (JO)	Italy (IT)	3	Viet Nam (
Jordan (JO) Kazakhstan (KZ) Kenya (KE) Kuwait (KW) Syrgyzstan (KG) Lao People's Democratic Republic (LA) Lebanon (LB) Libyan Arab Jamahiriya (LY) Macao (MO) Macedonia (MK) Madagascar (MG) Malawi (MW) Malawi (MW) Malaysia (MY) Malta (MT) Mauritius (MU) Mexico (MX) Moldova (MD) Mongolia (MN) Myanmar (MM) Namibia (NA) Zambia (ZN Zimbabwe Zambia (ZN Zimbabwe I all a comparition of the service of the se	Jamaica (JM)	19	Virgin Islar
Kazakhstan (KZ) Kenya (KE) Kuwait (KW) Kyrgyzstan (KG) Lao People's Democratic Republic (LA) Lebanon (LB) Libyan Arab Jamahiriya (LY) Macao (MO) Macedonia (MK) Madagascar (MG) Malawi (MW) Malawi (MW) Malaysia (MY) Malta (MT) Mauritius (MU) Mexico (MX) Moldova (MD) Mongolia (MN) Myanmar (MM) Namibia (NA) Zimbabwe (A	Japan (JP)	3	Yemen (YE)
Kenya (KE) Kuwait (KW) Syrgyzstan (KG) Lao People's Democratic Republic (LA) Lebanon (LB) Libyan Arab Jamahiriya (LY) Macao (MO) Macedonia (MK) Madagascar (MG) Malawi (MW) Malaysia (MY) Malta (MT) Mauritius (MU) Mexico (MX) Moldova (MD) Mongolia (MN) Myanmar (MM) Namibia (NA) 1 Laba 1 28 Kuwait (KE) 1 A B A B B B B B B B B B B	Jordan (J0)	13	Zambia (ZM
Kuwait (KW) Kyrgyzstan (KG) Lao People's Democratic Republic (LA) Lebanon (LB) Libyan Arab Jamahiriya (LY) Macao (MO) Macedonia (MK) Madagascar (MG) Malawi (MW) Malaysia (MY) Malta (MT) Mauritius (MU) Mexico (MX) Moldova (MD) Mongolia (MN) Myanmar (MM) Namibia (NA) 1 Lao People's Democratic Republic (LA) 6 Lebanon (LB) 5 Libyan Arab Jamahiriya (LY) 3 Macao (MO) 1 Macao (MO) 1 Macedonia (MK) 1 1 Macedonia (MK) 1 Malaysia (MY) 1 Malaysia (MY) 1 Malaysia (MY) 1 Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) Mongolia (MN) 1 Myanmar (MM) Namibia (NA)	Kazakhstan (KZ)	2	Zimbabwe (2
Kyrgyzstan (KG) Lao People's Democratic Republic (LA) Lebanon (LB) Libyan Arab Jamahiriya (LY) Macao (MO) Macedonia (MK) Madagascar (MG) Malawi (MW) Malaysia (MY) Malta (MT) Mauritius (MU) Mexico (MX) Moldova (MD) Myanmar (MM) Namibia (NA) 1 Lebanon (LB) 5 Libyan Arab Jamahiriya (LY) 3 Macao (MO) 1 Macao (MO) 1 Macedonia (MK) 1 1 Macedonia (MK) 1 Macedonia (MK) 1 1 Macedonia (MK) 1 Malaysia (MY) 1 Malaysia (MY) 1 Malaysia (MY) 1 Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) Mongolia (MN) Namibia (NA) 12	Kenya (KE)	28	
Lao People's Democratic Republic (LA) 6 Lebanon (LB) 5 Libyan Arab Jamahiriya (LY) 3 Macao (MO) 1 Macedonia (MK) 1 Madagascar (MG) 5 Malawi (MW) 7 Malaysia (MY) 14 Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Kuwait (KW)	3	
Lebanon (LB) 5 Libyan Arab Jamahiriya (LY) 3 Macao (MO) 1 Macedonia (MK) 1 Madagascar (MG) 5 Malawi (MW) 7 Malaysia (MY) 14 Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Kyrgyzstan (KG)	1	
Libyan Arab Jamahiriya (LY) Macao (MO) Macedonia (MK) Madagascar (MG) Malawi (MW) Malaysia (MY) Malta (MT) Mauritius (MU) Mexico (MX) Moldova (MD) Myanmar (MM) Namibia (NA) 1 1 1 1 1 1 1 1 1 1 1 1 1	Lao People's Democratic Republic (LA)	6	
Macao (MO) 1 Macedonia (MK) 1 Madagascar (MG) 5 Malawi (MW) 7 Malaysia (MY) 14 Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Lebanon (LB)	5	
Macedonia (MK) Madagascar (MG) Malawi (MW) Malawi (MW) Malaysia (MY) Malta (MT) Mauritius (MU) Mexico (MX) Moldova (MD) Mongolia (MN) Myanmar (MM) Namibia (NA) 1 1 1 1 1 1 1 1 1 1 1 1 1	Libyan Arab Jamahiriya (LY)	3	
Madagascar (MG) 5 Malawi (MW) 7 Malaysia (MY) 14 Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Macao (MO)	1	
Malawi (MW) 7 Malaysia (MY) 14 Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Macedonia (MK)	1	
Malaysia (MY) 14 Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Madagascar (MG)	5	
Malta (MT) 1 Mauritius (MU) 1 Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Malawi (MW)	7	
Mauritius (MU) 1 Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Malaysia (MY)	14	
Mexico (MX) 6 Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Malta (MT)	1	
Moldova (MD) 14 Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Mauritius (MU)	1	
Mongolia (MN) 1 Myanmar (MM) 8 Namibia (NA) 12	Mexico (MX)	6	
Myanmar (MM) 8 Namibia (NA) 12	Moldova (MD)	14	
Namibia (NA) 12	Mongolia (MN)	1	
	Myanmar (MM)	8	
Nepal (NP) 23	Namibia (NA)	12	
	Nepal (NP)	23	

Numbers represent the number of participants registered for the Understanding Rehabilitation as a Health Strategy MOOC from that particular country.





Table 12: Number of Participants' from Each Professional Background

Profession	N (%)
Physiotherapist / Physical Therapist (including DPT)	882 (73.9%)
Student	82 (6.9%)
Occupational Therapist	57 (4.8%)
Physical Rehabilitation Doctor	21 (1.8%)
Nurse	18 (1.5%)
Physiotherapy / Physical Therapy Assistant	30 (2.5%)
Doctor of Medicine	16 (1.3%)
Personal Trainer	11 (0.9%)
Massage Therapist	10 (0.8%)
Orthotist	8 (0.7%)
Speech Therapist	8 (0.7%)
Sports Therapist	7 (0.6%)
Prosthetist	6 (0.5%)
Psychologist	5 (0.4%)
Athletic Trainer	4 (0.3%)
Exercise Physiologist	4 (0.3%)
Osteopath	4 (0.3%)
Physiotherapy Technician	4 (0.34%)
Occupational Therapy Assistant	3 (0.2%)
Carer	3 (0.2%)
Patient	2 (0.2%)
Chiropractor	2 (0.2%)
Social Worker	2 (0.2%)
Auditory Therapist	1 (0.1%)
Podiatrist	1 (0.1%)
Orthopaedic Trauma Technologist	1 (0.1%)
Medical Rehabilitation Technician	1 (0.1%)
Allied Health Assistant (AHA)	1 (0.1%)
	•

Data are numbers (N) and percentage of total participants (%)





Appendix 2 Required Learning Activities

2.1 Course 1: Introduction to Rehabilitation

Lea	rning Activity	Delivery Medium
1	Introduction to Rehabilitation	Reading
2	Health for All: Time to Act for Rehabilitation	Video
3	What is Rehabilitation - Stephen Wagner and Derrick Wade	2 Videos
5	Defining Rehabilitation: An exploration why it is attempted & why it will fail	Reading
6	International Classification of Functioning, Disability and Health (ICF)	Reading
7	Understanding Rehabilitation ICF Case Study	Case Study
8	Rehabilitation Global Needs	Reading
9	Global Need for Rehabilitation / Need to scale up rehabilitation services	Video
10	WHO Rehabilitation Need Estimator	Database
11	IHME Rehabilitation Need Estimator Visualization Tool Explained	Video
12	The Inter-relationship between Rehabilitation and COVID	Reading
13	Benefits of Rehabilitation	Reading
14	WHO - Rehabilitation after COVID-19	Video
15	Introduction to Rehabilitation Quiz	Quiz
16	Course Reflection	Discussion Forum

2.2 Course 2: Rehabilitation in Health Systems

Learning Activity		Delivery Medium
1	Rehabilitation Governance	Reading
2	Sustainable Development Goals	Reading
3	Rehabilitation, Sustainable Development Goals and Inclusion	Reading
4	The Relevance of Rehabilitation in the 21st Century	Video
5	Health Care Systems	Reading
6	Rehab Matters	Video
7	Health for All	Reading and Video
8	Universal Health Care	Reading
9	UHC Compendium - Health Interventions for Universal Health Coverage	Reading
10	Principles of Rehabilitation	Reading
11	Rehabilitation in Health Systems Quiz	Quiz
12	Course Reflection	Discussion Forum

2.3 Course 3: Rehabilitation Infrastructure and the Rehabilitation Team

Learning Activity	V		Delivery Medium





1	Rehabilitation Teams	Reading
2	What Type of Healthcare Teams are there?	Video
3	Rehabilitation Team Members	Reading
4	Levels of Healthcare	Reading
5	Rehabilitation Phases	Reading
6	Rehabilitation Settings	Reading
7	Rehabilitation Contexts	Reading
8	The Role of Rehabilitation in Low Resource Settings Cornelia Barth	Video
9	The Role of Rehabilitation in Humanitarian Emergencies Claire O'Reilly	Video
10	Rehabilitation and COVID-19: What are the Implications? Janet Bettger	Video
11	Rehabilitation during a Pandemic in People with Specific Rehab Needs	Reading
12	Rehabilitation and the Rehabilitation Team Quiz	Quiz
13	Course Reflection	Discussion Forum

2.4 Course 4: Competent Delivery of Rehabilitation Interventions

Lea	rning Activity	Delivery Medium
1	Rehabilitation Frameworks	Reading
2	Clinical Guidelines	Reading
3	Rehabilitation Interventions	Reading
4	Rehabilitation for People with NCD in Low Resource Settings Martin Heine	Video
5	Multidisciplinary Rehabilitation and COVID-19	Video
6	Rehabilitation as an Intervention	Reading
7	Alan Dineen Case Study Video	Video
8	Rehabilitation Interventions Case Study	Case Study
9	Competent Delivery of Rehabilitation Interventions Quiz	Quiz
10	Course Reflection	Discussion Forum





Appendix 3 Optional Discussion Forums

3.1 Course 1: Introduction to Rehabilitation Discussion Forums

- **1.** Consider the context you currently work in and your role. What does rehabilitation mean to you within that context? What are some of the challenges you currently face in providing rehabilitation services?
- **2.** When we look at Grania there are a large number of factors that may impact her rehabilitation journey. What are the key contextual factors that may impact her rehabilitation process, and what challenges do you think this may pose in developing a rehabilitation programme?
- **3.** Consider the area in which you work, either in terms of the part of the world you live in, or the type of condition you work with. What are the rehabilitation needs based on this Needs Estimator? What impact do you think this might have on your service over the next 5 years?
- **4.** What short and long term impacts have occurred within the area where you work as a result of the COVID-19 Pandemic. How has this impacted on both availability and access to rehabilitation services?

3.2 Course 2: Rehabilitation in Health Systems Discussion Forums

- 1. Article 26 of the UNCRPD highlights the right for provision of rehabilitation services to "enable persons with disabilities to attain and maintain maximum independence, ... and full inclusion and participation in all aspects of life", and SDG3 "to ensure healthy lives and promote well-being for all" have a direct link to Rehabilitation Professionals. What are the main barriers and facilitators within your work context in achieving these?
- 2. Now consider the context in which you currently work, are there strong health plans and policies that guide your rehabilitation services? Does your country have a National Rehabilitation Plan that guides the development of Rehabilitation services nationally? Share your thoughts on the impact of the health care system on the availability of rehabilitation services where you work.
- **3.** Consider the context where you currently work, what is access to health care like? Is universal health care available within your context? If not, what are the main challenges you see in relation to access to health services?
- **4.** Consider now who you are and what makes you a person, unique from others. You are a composite of your biology and life experiences, and how you interpret these. It is this that you bring to your interactions with your patients. How do you think this impacts on how you approach the person undergoing rehabilitation?

3.3 Course 3: Rehabilitation Infrastructure and the Rehabilitation Team Discussion Forums

1. What do you think are the qualities of a team that promotes success in provision of rehabilitation services? What type of team do you think works best within your work context?





- 2. When we consider the different phases of rehabilitation there is a huge amount of variability based on the specific condition, the setting and context in which the rehabilitation is taking place. What are the main challenges you have found in the transition between these phases of rehabilitation? How can we best support these transitions for individuals?
- **3.** What are the main challenges within your work context in relation to availability and access to rehabilitation? What contextual factors have the greatest impact on rehabilitation services?
- **4.** How has the COVID-19 impacted on your provision of rehabilitation services over the last 18 months? What strategies have you used to adapt?

3.4 Course 4: Competent Delivery of Rehabilitation Interventions Discussion Forums

- 1. Rehabilitation frameworks provide a great resource to promote, develop and guide clinical practice but should always be adapted for specific contexts. What frameworks guide your current clinical practice? How do you and/or your organisation utilise these frameworks to identify your learning and development needs to guide your continuing professional development both in terms of personal development and career progression?
- 2. Clinical Guidelines can have their limitations and there is often controversy surrounding some recommendations. How do the use of clinical guidelines guide your current practice? What are the benefits and challenges of working within the realms of clinical guidelines? Share a guideline you currently use within your practice and why you like it.
- **3.** Why do you think exercise-based rehabilitation interventions play such a big role when working with individuals with non-communicable disease? What are the challenges you face in provision of exercise-based interventions? Share some strategies to counter these challenges.
- **4.** What are some of the challenges you may face in the provision of rehabilitation interventions for people following infection with COVID-19? What rehabilitation guidelines or interventions are currently being used within your work context? Alternatively, share your thoughts on what types of rehabilitation interventions may be most appropriate within a community setting.
- 5. Alan's rehabilitation requires the input of a number of different team members in order to achieve his ultimate goals of return to work and sport. Considering your professional role, what interventions do you think you could utilise in order to address Alan's Activity or Participation Level within the ICF? Justify your choice of intervention and provide an outline of the intervention you have chosen. Do any of the personal or contextual factors impact on your choice of intervention?





Appendix 4: Example Testimonials

4.1 Introduction to Rehabilitation Testimonials

- 1. This course is very insightful. Rehabilitation needs are unmet all over the world, and there isn't enough attention given to this public health problem. Taking this course would help you know how you can solve this ubiquitous problem.
- **2.** This course is an excellent starting point for any therapists who are passionate about rehabilitation. It will definitely make you reflect on your clinical practice and help you make the positive changes necessary in order to provide quality care to patients.
- **3.** This course is systematic, I can learn at my own pace, through diverse means and learning materials. I am glad to know more about rehabilitation.
- **4.** To everyone involved in rehabilitation (physiotherapist, occupational therapist, speech and language therapist, psychologist etc) this course is an eye opener on how relevant we are; and will be in the future. Fasten your seat belt
- **5.** I think this is a wonderful initiative that helps people change their perspective in the practice of medicine. It addresses many health related problems and highlights how we sometimes neglect rehabilitation, which is very important in improving all round functionality. With the turn of the world today, everyone needs to learn more about rehabilitation as a key to improving our lives and that of those around us.
- **6.** Through this course, I have learnt the need for rehabilitation as a health strategy for all people and that it is needed by anyone with a health condition, impairment or injury, acute or chronic, that limits functions and that it is not only for persons with disabilities.
- 7. This course challenges your perspectives on rehabilitation. It provides an opportunity to reflect on the essential requirements for rehabilitation, while providing evidence based ideas related to successful rehabilitation. The presenters integrate resources to identify unique rehabilitation needs in different regions, clinical decision making models (ICF, Biopsychosocial, and Human Development Model) and the WHO's Rehabilitation 2030 call for action. The participant leaves reflecting on the future of rehabilitation across the globe: What are the world's needs, how can we design interventions that are meaningful, and how can we create a strategy that optimizes function for all.
- **8.** Rehabilitation is far beyond what a therapist wishes to achieve. It's rather about what the patient wishes to achieve. I wouldn't have understood this extremely important concept this much if I had not taken this course
- **9.** Quite a comprehensive course. I appreciated the deliberate approach to highlight the relevance of rehabilitation in previously under recognised areas.

4.2 Rehabilitation in Health Systems Testimonials

- 1. It's been great to learn about rehabilitation in health systems and how policies affect availability, delivery and accessibility of health services.
- **2.** The importance of rehabilitation cannot be over emphasised as it is the key to universal health.
- **3.** This course has been very engaging and informative. It has concisely explained the position of rehabilitation in today's health system and efforts to better rehabilitation as a key factor in patient management.
- **4.** Rehabilitation in Health Systems is a comprehensive course about health systems. I really enjoyed it because it was informative, instructive and engaging. I particularly enjoyed it and you can look forward to a very interesting activity that gives a chronological overview of the global movement of health for all from ancient times to date. I thoroughly enjoyed and recommend this course.





- **5.** To achieve inclusion of Rehabilitation in Health system we need to follow this theme' mobilize efforts to end all forms of poverty, fight inequalities and tackle climate change, while ensuring that no one is left behind"
- **6.** Fun, interesting, interactive, informative, easy to use, up to date learning. Allows reflections on yourself, your practice & the greater community. Try it for yourself. Highly recommended.
- 7. This course has helped me learn more about the right to health, health for all, and some principles of rehabilitation. Keep it up.
- **8.** Due to the knowledge I gained through this course, I feel I am more equipped to promote rehabilitation to patients, among peers and with management in the setting I work in. If more people promoted rehabilitation to be a part of our health systems at all levels then our patients and the people in our communities will reap the benefits. This course is a confidence booster for any rehabilitation health professional.
- **9.** This course was great! It really helped to understand the structure of a Health System, and they are so important in the workings and efficiency of delivering health services to patients in need, similar to how it is important for factories to deliver products to companies in need.
- 10. This is a wonderful training. We are all contributors to Rehabilitation which contributes to the realization of the right to health and to SDGs but specifically SDG3 on health and well-being. This part of the course has been an eye opener; it has inspired me to find more information about my government concerns and plans on the Health Care System in the country. Good governance is what can improve the Universal Health Coverage; addressing corruption, being transparent and being accountable.
- **11.** Great course! gave me a better understanding of how health systems affect the delivery of health services and what governments can do to help improve health systems.

4.3 Rehabilitation Infrastructure and the Rehabilitation Team Testimonials

- 1. This very relevant course explores the contexts in which rehabilitation takes place from low-resourced settings, to conflict / disaster zones and ends with the time we are living through. It gives a foundational lense through which to view rehabilitation in extreme times and places.
- 2. The whole course was extremely insightful. There are many terms that we often use interchangeably. But, in this course, each term is defined and demonstrated with clarity using examples to understand various levels of care, health settings, types of teams etc. Also, beneficial strategies to deal with challenges in providing effective rehabilitation during the Pandemic were provided.
- **3.** This course has brought me face to face with challenges faced by physiotherapists who take rehabilitation to remote areas to help improve the quality of life of those they can reach.
- **4.** Great course. Excellent source of information for new and experienced health professionals about working in interdisciplinary teams and different settings
- 5. It has been a mind changing experience in how you see the whole rehabilitation process and how important it is to not only stay up to date in techniques but in human/social relationships. Everyone should take the time to participate here too, no matter your profession, we all are part of the team and our goal is the same.
- **6.** This course is very effective and invaluable for rehabilitation team members. Therefore, all team members should attend this course. All of the topics, contents and videos are excellent
- 7. Was a great course. I learned about the different types of teams in health care and what attributes foster good health teams. Also learned about the different infrastructure that make up the health care system. What really stood out to me is the relevance to the





- pandemic. This course touched on how COVID has affected the delivery of rehab and ways in which health care professionals can continue to assist and deliver rehab services in new and innovative ways.
- **8.** This has been an illuminating course and the value of this should not be under-estimated. The diversity and yet core fundamentals of rehabilitation mean that deepening and widening your perspective through this course will assist everyone, even those who feel they work in a well resourced and supported environment.
- **9.** Understand rehabilitation phases, team, members, and contexts help me to support governance team for a more effective delivery of rehabilitation by trying the best to have people with the right skills, procedures, and harmonized working culture, to have suitable settings in term of where, size, and how far from service users of different stages, and to consider the current and future context of Covid-19 continuing to infection people, for example using the efficacy tele-rehabilitation, without or little compromise of rehabilitation outcomes.

4.4 Competent Delivery of Rehabilitation Interventions Testimonials

- 1. After finishing the course I am more mature as a PT by having an understanding of my role in the rehabilitation team. Excellent course, I recommend it to anyone who needs help to better advocate about rehabilitation.
- **2.** Great course! Finally completed all 4 courses. Enhanced knowledge and skills to implement rehab interventions and working in different teams to encounter patient specific health conditions.
- **3.** I encourage all Physiotherapist and other rehabilitation professionals to pick an interest in this, as it is very informative and educative for the betterment of proper rehabilitation treatment to our patients.
- **4.** This is an extremely useful, worthwhile and enlightening course that teaches all aspects of the rehab journey from systems change to patient focused. I have found this extremely useful and recommend it to anyone who wishes to learn more about rehabilitation.
- **5.** We all need to put Rehabilitation in at the planning stage in all health care systems.
- **6.** As I already suggested a few points about improvement of this course. Few more examples and practice regarding ICF and policy guidance in strengthening rehabilitation must be added.
- **7.** This was a great course! It really helps with understanding the standards of rehabilitation, and the background to various rehabilitation techniques.
- **8.** This course was certainly a reminder to always take a look into the different aspects of rehabilitation. There is a strong gap between rehabilitation and the world. Hoping more would get to see these courses, to help us physiotherapists strengthen our advocacy towards Rehabilitation 2030.
- **9.** Good course, Helps to zero in on how to make rehab interventions specific to the context it is being applied in.
- **10.** This course has broadened my knowledge to be more international in my assessment for research purposes.
- **11.** Be informed on the growing need for rehab and how to be confident in delivery
- 12. It is now difficult to have a common language on rehabilitation. This is due to the complexity and variety of rehabilitation for different agendas, contexts, and systems. On top of that, taking the case in Cambodia, rehabilitation happening in hospitals have very limited record for learning, reporting, and researching. Acknowledging the fact that we particularly from many developing countries do not have data on rehabilitation for decision makers making sense of investment on rehabilitation, research purposes, and comparing with the





other rehabilitation in the world, introducing and using ICF measures may help to address these issues.





Appendix 5: Impact on Clinical Practice Examples

5.1 Introduction to Rehabilitation Impact on Clinical Practice

- **1.** Use of ICF model and Biopsychosocial approach in my daily practice Patient centered of care problem solving approach Establishment of rehabilitation center within our context
- **2.** I'll work hand in hand with other rehabilitation experts, as they have so much to offer that can ensure faster patient recovery.
- **3.** I intend to use the facts of this course to educate staff and patients of the value of rehab. It is also the 1st time I have been properly taught how to use the ICF.
- **4.** It helped me broaden my thinking and change my perspective. Now when assessing patients and history, I view problems from different aspects and am focused not just how to treat the but am reminded that this person may not only be in pain but is a human with feelings and problems and that the medical approach needs to help patients not just stop being sick but recover in every possible aspect, as much as possible.
- **5.** I intend to do more health education on the benefits of rehabilitation as a health strategy to both the community and local government structures.
- **6.** My clinical practice will greatly change in a way that I would be able to share this knowledge with my colleagues and friends about the growing need of rehabilitation, I would also be able to motivate and better be able to spread awareness of benefits of rehab.
- **7.** After taking this course I will take a more holistics way. Before I used to focus only on body structure but now I will consider the patient's environmental and personal factors.
- **8.** I work part-time as a clinical audiologist specializing in balance dysfunction. This course helps me understand how comorbid conditions and other social factors impact my clients' balance function.
- **9.** I will take a video or two from this course and integrate it into a CBR & AT Training I am developing for Save the Children staff (globally).
- **10.** I will definitely be looking at the global needs estimator again and draw its attention to our hospital management. Advocate more for our profession as a more engaged MDT member.
- **11.** I'm planning to start virtual rehabilitation sessions for the patients who couldn't continue their rehabilitation with this pandemic.
- **12.** I am using experiences so far gained from the course to beef up the justification and arrangements to set up a rehabilitation service in the clinical program I head at the facility.

5.2 Rehabilitation in Health Systems Impact on Clinical Practice

- 1. Use of ICF model and Biopsychosocial approach in my daily practice Patient centered of care problem solving approach Establishment of rehabilitation center within our context
- 2. I know that as much as it is important to be emotionally apart in order to be objective, I remember that the person is being treated not the disease so I try to be more sensitive m, accommodating and take all personal factors into account to optimize functioning and adaptation
- **3.** To try and better utilise our existing resources in a smarter way. Explore cheaper or cost effective measures especially as one of the articles stated that rehabilitation is very useful in making healthcare more cost effective in prevention of disability and thus the burden on the health system.





- **4.** I intend to focus on Maori and Pacific Health where these populations have lower access to health care. I intend to contact leaders within these groups to try and access more ethnic peoples to offer the same services that other populations get more easily
- **5.** It has motivated me to network more with other organisations to achieve better health for my local population.
- **6.** I intend to put the sustainable development goals as an increased priority in my practice as it is not something that I had thought about before I started this course.
- **7.** It will certainly make me think about the services I offer and how I could improve inclusiveness.
- **8.** Due to the knowledge I gained through this course, I feel I am more equipped to promote rehabilitation to patients, among peers and with management in the setting I work in.
- **9.** Thinking of 'People-centred' approach versus 'Person-centred' approach to further improve our rehab goals and reach.
- **10.** I am going to restructure my first session with clients to incorporate a clearer understanding of recovery/adaptation as goals of the rehab. In some cases it will be communicating with the family members of very frail clients. After doing this course I realised that my communication of my understanding of the process has been inadequate.
- **11.** Addressing a patient as a whole and considering other external factors.
- **12.** I am now more a patient advocate for rehabilitation services as some patients do not access rehabilitation services because they do not know how to access them.
- **13.** It has not caused an immediate change in my clinical practice however, I have a better grasp about how health systems can affect the delivery of rehabilitation.

5.3 Rehabilitation Infrastructure and Team Impact on Clinical Practice

- 1. In my place of work, we practice an intradisciplinary team approach, which I intend to change to either a multi, inter and up to transdisciplinary approach which I feel are more patient centered and will have more positive results. I already improve my interactions with patients and caregivers by getting them more involved in rehabilitation.
- **2.** The course has given me a broader understanding of the roles for various members of the rehabilitation team. This has helped to clarify some misconceptions about who is responsible for what and made it easier to approach others with some knowledge of their individual role.
- **3.** I have asked for a meeting with the practice-owner at the conclusion of the series of courses to discuss what possible changes can be implemented.
- **4.** Information provided will be utilized in lobbying/advocacy for policy modifications.
- **5.** I am trying as a team leader to encourage the team members to share their experience with colleagues.
- **6.** My setting has a lack of other rehabilitation team members other than PTs, OTs and the physiatrist. We as OTs have to step in and provide interventions that are more in the speech and language therapist's scope of practice. Understanding of the transdisciplinary team dynamics validated that I can provide said interventions within reason in order for my patients to achieve their optimal capacity.
- 7. I intend to let patients and their families/friends know that they are the key role in the rehabilitation process and just let go of the ego that I cannot teach them how to do things





- because they might do it wrong. The purpose is to make them feel comfortable and more active so definitely that.
- **8.** It really made me reflect and question a lot on my own behavioural and treatment practices especially as I've been working for a long time and how I should adapt or challenge them more. And also to never stop advocating for our profession or patients.
- 9. This has given a good overview of the structures around rehab but as these are well established where I work that may not change my practice but I have grown a greater understanding of the issues for rehab around the world and would be keen to see how I could get involved either with knowledge links, information sharing or other connections to rehab physios elsewhere.

5.4 Competent Delivery of Rehabilitation Interventions Impact on Clinical Practice

- 1. It has helped to broaden my thinking as often patients will have goals in mind that may not be what I as a physio see as the most important issue. The case study really highlights the need to discuss with the client what they want to achieve out of the therapy rather than just what as a physio we tend to target functionally. As he said in the case study, the physio was happy but he wasn't so he felt let down. It really just drives home the need for expectation discussions and goal setting at the start of the intervention being the driving force of the therapy, not just what the main presenting issues are. Patient-centered care is key!
- **2.** I have to make sure I have a clear understanding of the patient's needs and to be patient specific and not focus on what I think the patient needs.
- 3. Using clinical guidelines to deliver quality rehabilitation services to clients
- **4.** Being more mindful of patients expectations in the rehabilitation process
- **5.** I have got to learn the importance of sharing ideas with other team members, this helps to improve the overall improvement in the patient's life.
- **6.** It has not changed as yet but it will do. I am working on rehab programmes for specific patient cohorts and plan to utilise what I have learnt, into my teaching.
- 7. Practicing use of ICF and diligently looking into clinical guidelines to help improve delivery of rehabilitation services. I also hope to strengthen advocacy of rehabilitation awareness and its importance not just to people with disabilities but also to the community.
- **8.** I will look again closely at the levels of care and rehabilitation interventions that may apply in a low-resource setting like the one I am targeting.
- **9.** Realizing small steps are actually okay in the rehabilitation of Covid-19 patients, each individual at his or her own pace, a bit difficult in the private sector where patients have to pay when medical aid funds have been depleted.
- **10.** I am more open minded to keeping my rehab sessions simple even though clients may not be progressing at a rate I expected.





Appendix 6: References

- Fricton, J., Anderson, K., Clavel, A., Fricton, R., Hathaway, K., Kang, W., Jaeger, B., Maixner, W., Pesut, D., Russell, J., Weisberg, M. B., & Whitebird, R. (2015, September). Preventing Chronic Pain: A Human Systems Approach Results from a Massive Open Online Course. *Global Adv Health Med.*, 4(4), 23-32. https://journals.sagepub.com/doi/pdf/10.7453/gahmj.2015.048
- HSE Quality Improvement Division. (2018). *A Practical Toolkit Leadership Skills for Engaging Staff in Improving Quality*. Health Service Executive. https://www.who.int/publications/i/item/9789240008281
- Jessica, L., Giacomo, R., & Alvisa, P. (2021, April). What knowledge is available on massive open online courses in nursing and academic healthcare sciences education? A rapid review. *Nurse Education Today*,, 99. https://doi.org/10.1016/j.nedt.2021.104812
- Mauk, K. L. (2012). Chapter 1 Overview of Rehabilitation. In K. L. Mauk (Ed.), *Rehabilitation Nursing: A Contemporary Approach to Practice* (pp. 1 13). Jones & Bartlett Learning. https://publish.jblearning.com/index.php?mod=jbbrowse&act=book_details&id=162
- Maxwell, W. D., FAbel, P. H., Diaz, V., Walkow, J. C., Kwiek, N. C., Kanchanaraksa, S., Walmsley, M., Chen, A., & Bookstaver, P. B. (2018, June). Massive open online courses in U.S. healthcare education: practical considerations and lessons learned from implementation. *Currents in Pharmacy Teaching and Learning*, 10(6), 736-743. https://www.sciencedirect.com/science/article/pii/S1877129716304026
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International journal of qualitative methods.*, 28;16(1):1609406917733847. https://journals.sagepub.com/doi/full/10.1177/1609406917733847
- Onah, D. F., Sinclair, J., & Boyatt, R. (2014). Dropout Rates of Massive Open Online Courses: Behavioural Patterns. *EDULEARN14 proceedings*, *1*, *5825-5834*. http://wrap.warwick.ac.uk/65543/1/WRAP-9770711-cs-070115-edulearn2014.pdf
- West, M., Armit, K., Loewenthal, L., Eckert, L., West, T., & Lee, A. (2015). *Leadership and Leadership Development in Healthcare: The Evidence Base*. London, Faculty of Medical Leadership and Management. Retrieved December 1, 2021, from https://www.kingsfund.org.uk/sites/default/files/field/field-publication-file/leadership-leadership-development-health-care-feb-2015.pdf
- World Health Organization (WHO) (Ed.). (2020). *Rehabilitation Competency Framework* (Licence: CC BY-NC-SA 3.0 IGO. ed.). Retrieved December 1, 2021, from https://www.who.int/publications/i/item/9789240008281