

# The Prospects and Pathways for Advancing Medical Rehabilitation Training and Practice in Nigeria

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# Outline

- Brief historical review
- Prospects for advancing medical rehabilitation
- Pathways for advancing training and Practice





# Medical Rehabilitation Training and Practice in Nigeria



# Some definitions

- **Medical rehabilitation:**
- An umbrella term of measures and therapies that assist individuals who experience, or are likely to experience disability, to achieve and maintain optimal functioning in interaction with their environments
- Facilitates and promotes the recovery from physical damage, psychological and mental disorders, and diseases
- The whole range of services from the time of the onset of the individuals' disability to the point at which he is restored to normal activity or the nearest possible approach to it
- With medical rehabilitation, it is not sufficient that the disorder be treated, the affected person ***must be enabled to function again***



# The MRTB, Nigeria

- Audiology
- Chiropractic Medicine
- Occupational Therapy
- Osteopathic Medicine
- Physiotherapy
- Prosthetics and Orthotics
- Speech Therapy





# Some historical perspectives

- The history of medical rehabilitation
  - Closely linked with disability
  - Closely linked with post war care



# Speech Therapy





- Many WWII soldiers returned with brain injury resulting in a dramatic increase in persons with aphasia
- During the 1940's and '50s, speech-language pathology researchers and practitioners began to focus more on “mentalism” or brain processing abilities.
- The field of speech pathology became speech-language pathology during this time.
- Advances in linguistics studies during the 1960's to the '80's, further enhanced the speech-language pathologist's understanding and ability to treat



# Audiology



- Audiology did not emerge as a professional discipline, until the 1940s when thousands of young servicemen and women returned from World War II with noise-induced hearing loss
- The U.S. government established hearing rehabilitation programs at the nation's military hospitals where hearing aid fitting and aural rehabilitation procedures were standardized and implemented
- University training programs followed, first in the Midwestern U.S. and eventually throughout the nation



# Physiotherapy



- Physiotherapy was introduced into Nigeria in 1945 by two British Chartered Physiotherapists; Miss Manfield and Mr. Williams.
- They were employed by the government of Nigeria and attached to the Royal (now National) Orthopaedic Hospital, Igbobi, Lagos.
- Their primary assignments were; first, to treat wounded and disabled Nigerians soldiers who returned home from Burma and other countries during the Second World War.
- With time, the training programme at Igbobi was discontinued. Just before then, plans were in progress to start a diploma course at University College Hospital, Ibadan. This was later changed to the Bachelor of Science Degree in Physiotherapy at the University of Ibadan.



# Occupational therapy





- Occupational therapy in Nigeria can be traced to the 1950s when two British trained occupational therapists were employed at the University College Hospital, Ibadan, Nigeria.
- The conclusion of the Nigerian civil war ushered into the country a fresh wave of foreign trained occupational therapists to cater mostly for the military hospitals and a limited number of civilian hospitals.
- In the last two decades in Nigeria, Occupational Therapy has achieved several milestones
  - Bachelor of Medical Rehabilitation (Occupational Therapy) @ OAU, Ile-Ife, in 2002
  - Bachelor of Occupational Therapy Degree programme at the UNIMED, Ondo in 2020.



# Prosthetics and Orthotics



- It's been in existence since Nigeria civil war between 1967-1970
- The country can boast of only a few trained professionals
- Recently, government gave approval for a training school to be established in the three National Orthopaedic Hospital in the country to train more hands in the field.
- The National Orthopaedic Hospital, Igbobi Lagos commenced with the training and the school is named Federal College of Orthopaedic Technology (FECOT.) The school is offering a National Diploma (ND) and Higher National Diploma (HND)



# Generally.....

- These first clinicians gained expertise in different ways
  - Some were from established professions, such as education, medicine
  - Served as apprentices to study the work of established clinicians
  - Some entered the fields after having developed methods for remediating difficulties in themselves or in someone they knew
- The process of “*backward integration*” played significant role
- Most of the early experts in Nigeria were expatriates



# The **Prospects** for Advancing Medical Rehabilitation Training and Practice in Nigeria







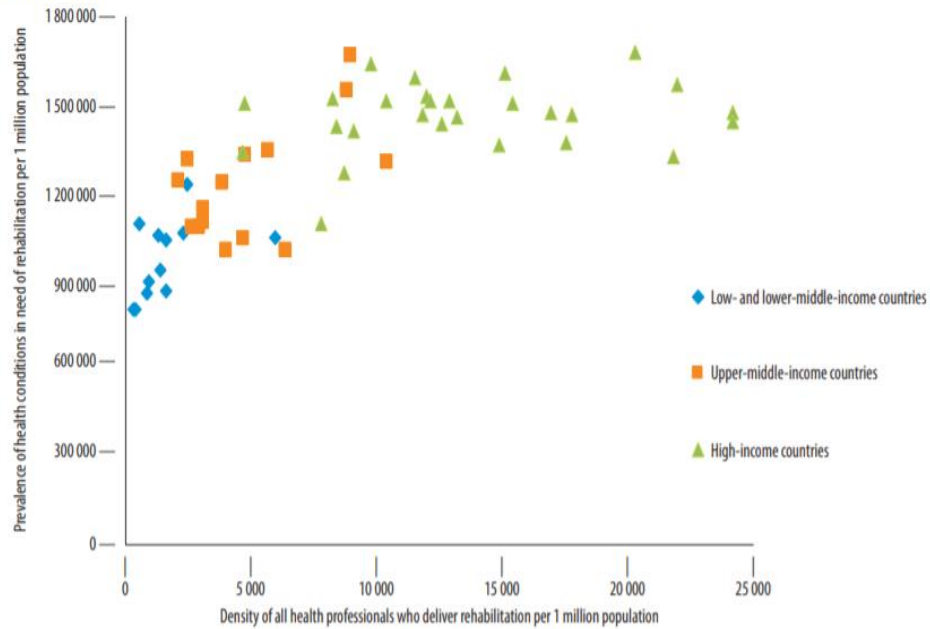
- Ever increasing need for rehabilitation
- Universal health deterioration of the population, the growth of primary disease and the chronization of diseases will bring about increased demand for medical rehabilitation.
- Medical rehabilitation care is relatively young and is in need of highly qualified personnel
- Currently rehabilitation of the sick and those with disability is one of the priority directions in medicine that helps to return millions of people to the sphere of socially useful life.



- The emerging epidemic of noncommunicable diseases **especially diabetes** are important problems in modern healthcare due to the high level of prevalence, temporary and permanent disability and mortality of the population
- The percent of full recovery is not more than 20 % of the survived in stroke with heavy demand for rehabilitation
- The need for rehabilitation continues to grow worldwide, especially in low- and middle-income countries.
- The demand for rehabilitation services already exceeds availability, leaving a large unmet need

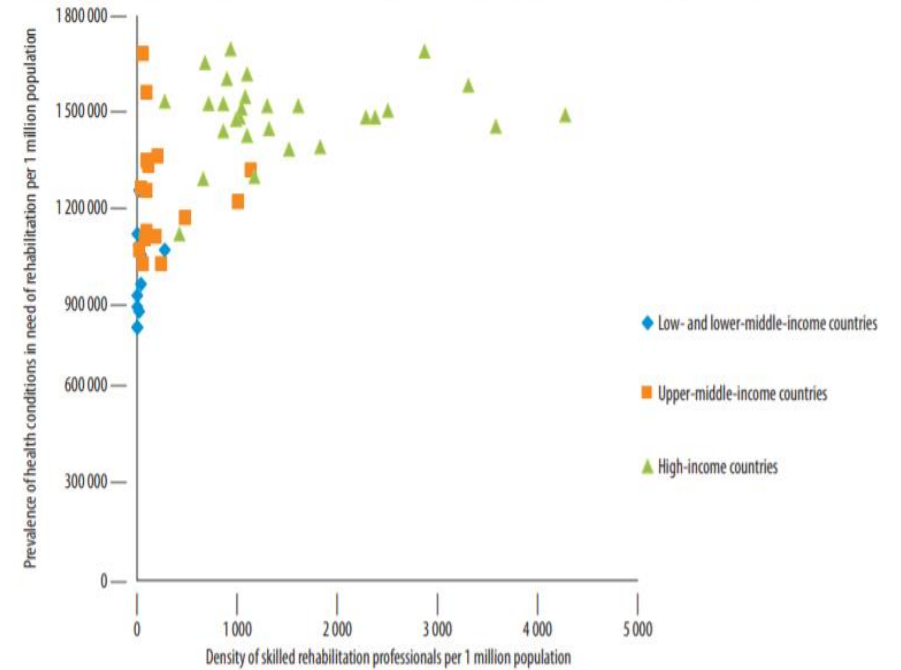
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Figure 1a. Prevalence of rehabilitation-relevant health conditions compared to the density of all health professionals who can deliver rehabilitation services in 12 low- and lower-middle-income countries, 16 upper-middle-income countries, and 31 high-income countries per 1 million population



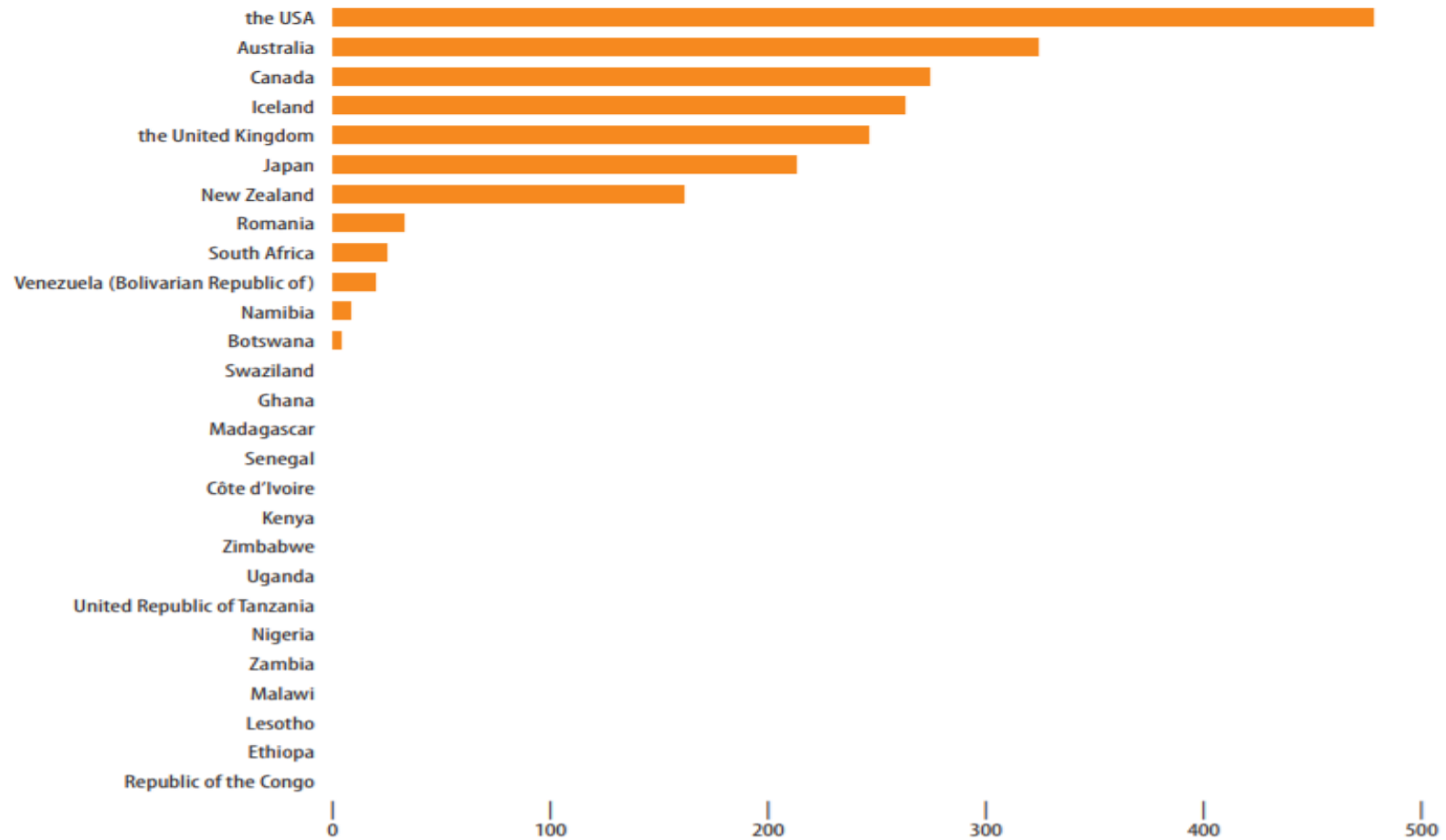
Note: Health professionals who can deliver rehabilitation services include physicians, nurses, midwives, physiotherapists, occupational therapists, prosthetists, and orthotists. Source: WHO's Global Atlas of the Health Workforce, (18) International Society for Prosthetics and Orthotics (ISPO), World Confederation for Physical Therapy (WCPT), World Federation of Occupational Therapists (WFOT), and Organization for Economic Co-operation and Development (OECD).

Figure 1b. Prevalence of rehabilitation-relevant health conditions compared to the density of skilled rehabilitation professionals in 12 low and lower-middle income countries, 16 upper-middle income countries, and 31 high-income countries per 1 million population



Note: Skilled rehabilitation professionals include physiotherapists, occupational therapists, prosthetists, and orthotists. Source: WHO's Global Atlas of the Health Workforce, (18) ISPO, WCPT, WFOT, OECD.

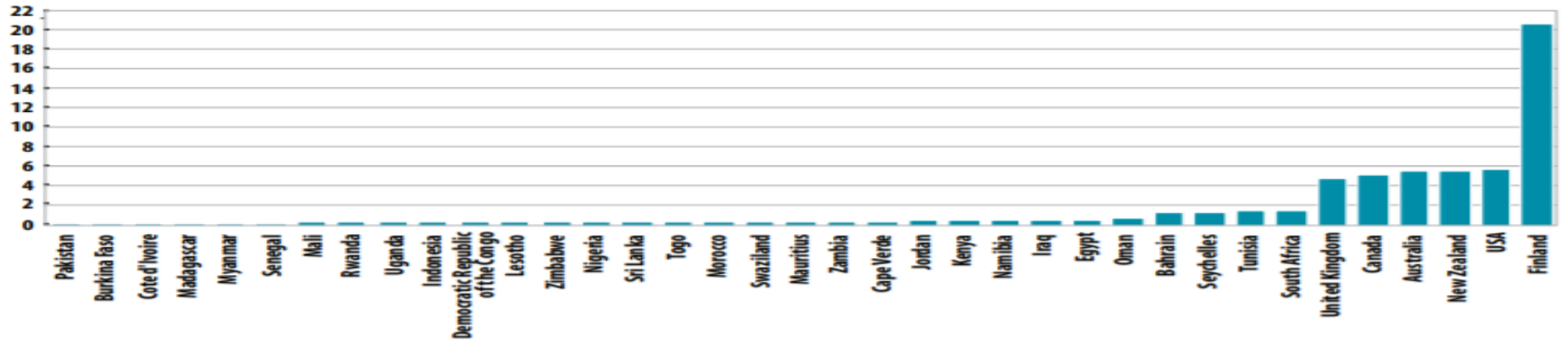
**Figure 6. Density of speech and language therapists per 1 million population in 27 countries**



Source: International Association of Logopedics and Phoniatics, and Fagan JJ & Jacobs M 2009 (20)

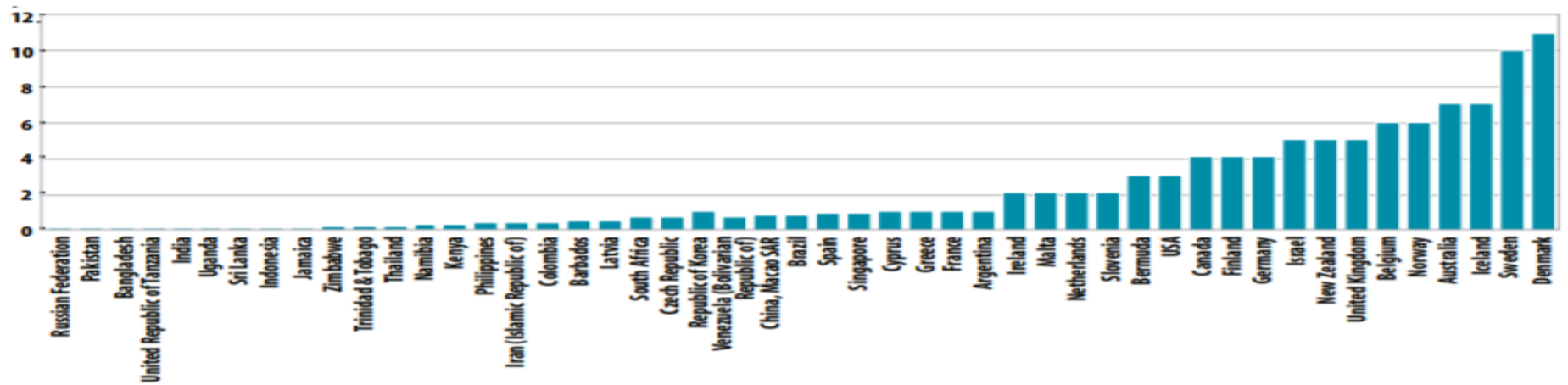


**Fig. 4.1. Physiotherapists per 10 000 population in selected countries**



Source (158).

**Fig. 4.2. Occupational therapists per 10 000 population in selected countries**



## Nigeria Population @ 200 Million People

### MRTB Register

• Physiotherapists	1696	1: 117,924
• Occupational Therapists	43	1: 4,651,162
• Speech Therapists/Audiologists	15	1: 13,333,333
• Prosthetists & Orthotists	3	1: 66,666,666





# Programme specific prospects.....

- Employment of **physical therapists** is projected to grow 18 percent from 2019 to 2029, much faster than the average for all occupations.
- Demand for physical therapy will come in part from the large number of aging baby boomers, who are staying more active later in life than their counterparts of previous generations.
- Older people are more likely to experience heart attacks, strokes, and mobility-related injuries that require physical therapy for rehabilitation.
- In addition, a number of chronic conditions, such as diabetes and obesity, have become more prevalent in recent years.



- Advances in medical technology have increased the use of outpatient surgery to treat a variety of injuries and illnesses.
- Medical and technological developments also are expected to permit survival of a greater number of trauma victims and newborns with birth defects, creating additional demand for rehabilitative care.
- Job prospects should be especially favorable in rural areas, where physical therapy services are less prevalent



- Employment of **audiologists** is projected to grow 13 percent from 2019 to 2029, much faster than the average for all occupations.
- Hearing loss and balance disorders become more prevalent as people age, so the aging population is likely to increase demand for audiologists
- The early identification and diagnosis of hearing disorders in infants also may spur employment growth
- Advances in hearing aid design, may make such devices more appealing as a means to minimize the effects of hearing loss



- Employment of **speech-language pathologists** is projected to grow 25 percent from 2019 to 2029, much faster than the average for all occupations.
- As the population grows older, there will be more instances of health conditions such as strokes or dementia, which can cause speech or language impairments.
- Speech-language pathologists will be needed to treat the increased number of speech and language disorders in the older population.
- Increased awareness of speech and language disorders, such as stuttering, in younger children will lead to a need for more speech-language pathologists who specialize in treating that age group.
- An increasing number of speech-language pathologists will be needed to work with children with autism to improve their ability to communicate and socialize effectively



	Physical Therapist	Speech & Language Pathologists	Audiologists
<u>2019 Median Pay</u>	\$89,440 per year \$43.00 per hour	\$79,120 per year \$38.04 per hour	\$77,600 per year \$37.31 per hour
<u>Typical Entry-Level Education</u>	Doctoral or professional degree	Master's degree	Doctoral or professional degree
<u>Number of Jobs, 2019</u>	258,200	162,600	13,800
<u>Job Outlook, 2019-29</u>	18% (Much faster than average)	25% (Much faster than average)	13% (Much faster than average)

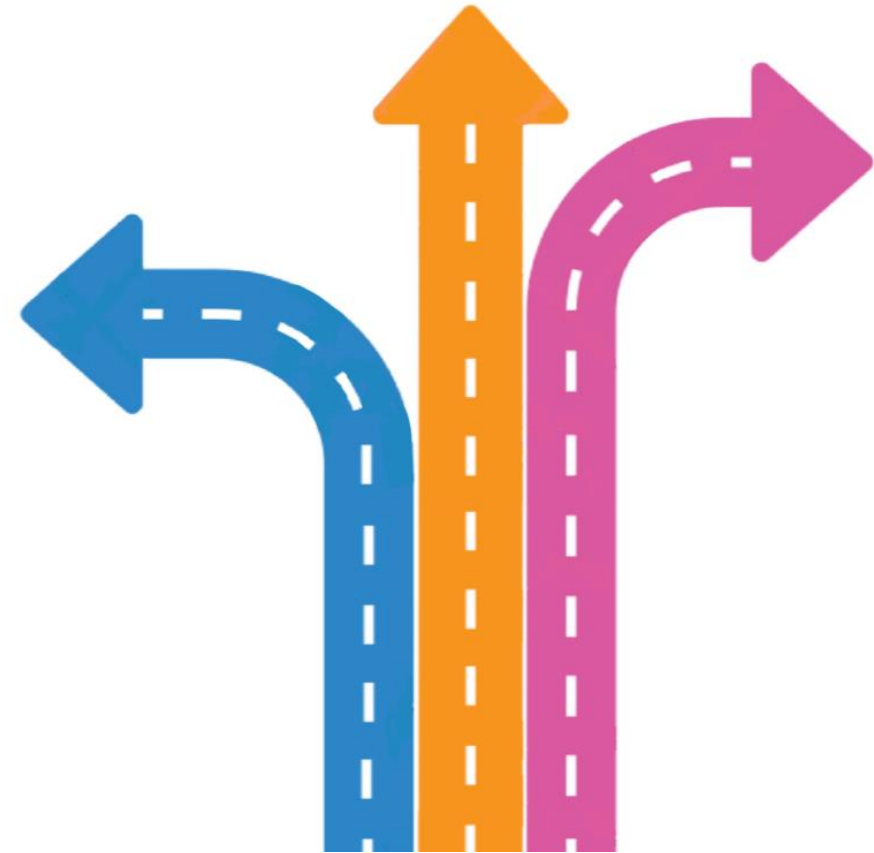
US Bureau of Labour Statistics



- Many institutions of higher learning in Nigeria are beginning to establish rehabilitation programmes
- Physiotherapy is already running in UI, OAU, UNILAG, UNN, UNIMAID, UNIZIK, BOWEN, KASU, CHRISLAND and some others
- UNIMED Ondo is blazing the trail with an unprecedented Faculty of Medical Rehabilitation!!!
- Efforts ongoing for other rehabilitation programmes both at bachelor and graduate levels
- Super hospitals and rehabilitation centres/homes for children and elderly



# The **Pathways** for Advancing Medical Rehabilitation **Training** and **Practice** in Nigeria



# Pathways for Advancing Training





- Expanding education and training in real terms
- One stop institutions for training e.g. UNIMED Ondo
- Active and extensive curriculum review with more focus on:
  - Clinical reasoning
  - Technological advancements
  - Hands-on learning
  - Synergy among rehabilitation disciplines and other healthcare providers
  - Entrepreneurship
- Curriculum-guided facility & structural acquisition for training
- Exposure of all other healthcare professionals to the rudiments of medical rehabilitation
- At the forefront is specialization



# Pathways for Advancing Practice



# Broadly speaking.....

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**Expanding and decentralizing service delivery**

Close look at Rehabilitation professionals in Primary Care



**Increasing the use and affordability of technology**

Assistive devices  
Telerehabilitation



**Expanding research and evidence-based practice**



**Information and good practice guidelines**

# Specifically.....

- **Governments/policy makers:**

- should develop, implement, and monitor policies, regulatory mechanisms, and standards for rehabilitation services, as well as promoting equal access to those services
- Develop or revise national rehabilitation plans, in accord with situation analysis, to maximize functioning within the population in a financially sustainable manner.
- Develop funding mechanisms to increase coverage and access to affordable rehabilitation services and devices.
- Promote equitable access to rehabilitation through health insurance
- Expanding social insurance coverage.
- Public-private partnership for service provision.
- **Reallocation and redistribution of existing resources**



- Increase the numbers and capacity of human resources for rehabilitation.
- **Deliberate effort at retaining Nigerian-trained skilled experts generally**
- Identify incentives and mechanisms for retaining personnel especially in rural and remote areas.
- Reducing duty and import tax on assistive technologies



- **Service providers:**

- Should provide the highest quality of rehabilitation services
- Where there are none, or only limited services, introduce minimum services within existing health and social service provision.
- Develop models of service provision that encourage multidisciplinary and client-centred approaches.
- Base interventions on sound research evidence
- Monitor and evaluate outcomes
- Professional specialization should be encouraged with each component of medical rehabilitation



- Increase research and data on needs, type and quality of services provided, and unmet needs
- Adopt the use of information and communication technologies - telerehabilitation
- Increase access to assistive technology that is appropriate, sustainable, affordable, and accessible
- Promote local production of assistive technology.



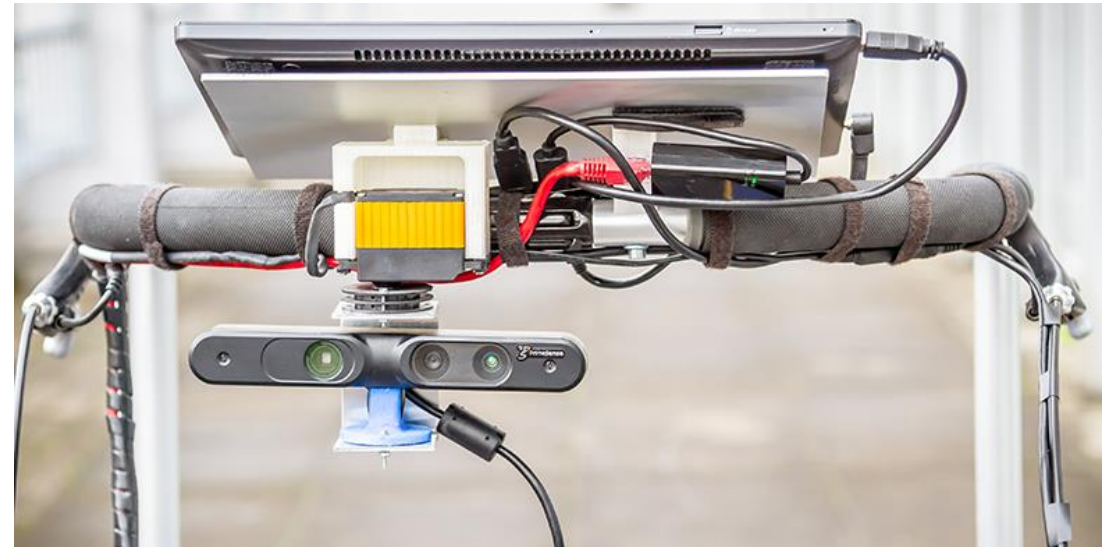
# Common types of assistive device

- Assistive devices range from simple, low-technology devices (e.g. walking sticks), to complex, high-technology devices (e.g. specialized computer software/hardware or motorized wheelchairs)
- **Mobility devices**
- Mobility devices assist people to walk or move and may include:
  - wheelchairs
  - tricycles
  - crutches
  - walking sticks/canes
  - walking frames/walkers.





- Mobility devices may have specialized features to accommodate the needs of the user



- **Vision devices**
- Low vision or blindness has a great impact on a person's ability to carry out important life activities
  - large print books
  - magnifiers
  - eyeglasses/spectacles
  - white canes
  - braille systems for reading and writing
  - audio devices, e.g. radios, talking books, mobile phones
  - screen readers for computers, e.g. JAWS (Job Access With Speech) is a screen reader programme.



- **Hearing devices**

- Hearing loss affects a person's ability to communicate and interact with others
  - hearing aids
  - headphones for listening to the television
  - amplified telephones
  - TTD/TTY (telecommunication devices: Teletypewriting Device for the Deaf/TeleTYpe)
  - visual systems to provide cues, e.g. a light when the doorbell is ringing.



# More modern technologies

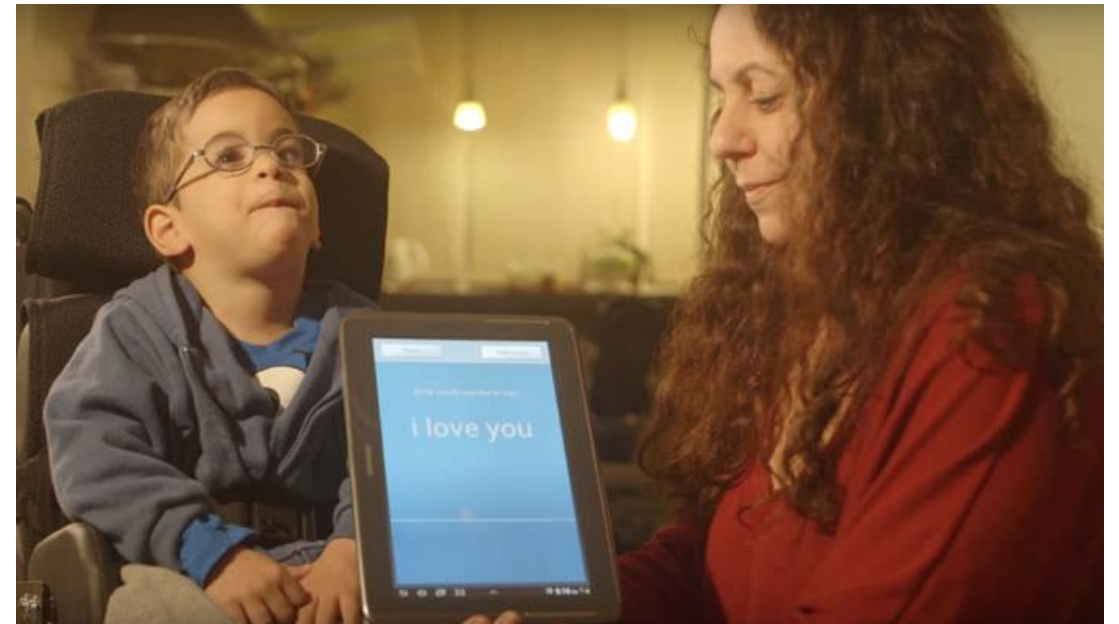
- **Dot**
- Dot is a wearable that is also the world's first Braille smartwatch
- Dot is a practical solution that is more affordable than regular e-Braille devices which may cost thousands, yet still works well for the blind
- Dot helps the blind access messages, tweets, even books anywhere and at any time.

dot   
Braille Smart Watch



- **Talkitt**

- Talkitt is an innovative application to help people with speech and language disorders to communicate with someone else
- It will translate unintelligible pronunciation into understandable speech so people can understand what they meant to say, despite the speech impediment



- sesame phone
- Introducing Sesame Phone, a touch-free smartphone designed for people with disabilities.



- **UNI**
- **UNI** is a two-way **communication tool for the deaf using gesture and speech technology**
- This tool works by detecting hand and finger gestures with its specialized camera algorithm, then converting it to the text in very short time to provide meaning of a given sign language



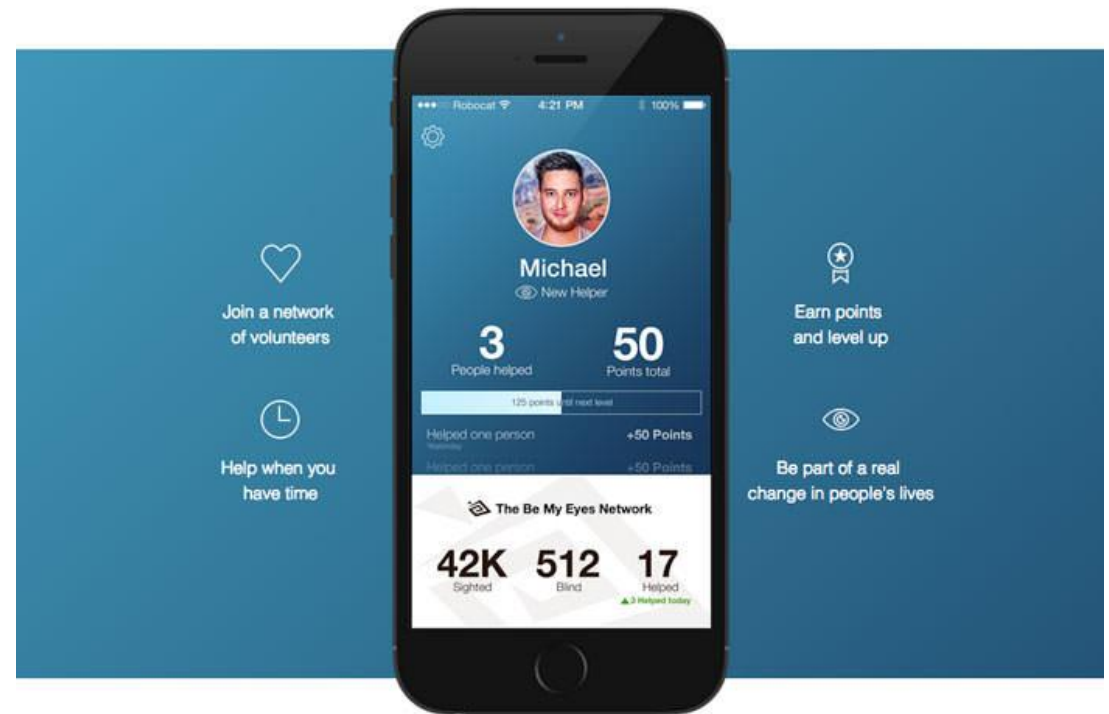


- **Finger Reader**
- Finger Reader is a wearable tool to help read text
- It has two functions: to help the visually impaired read printed text on a book or on an electronic device, and also to be used as a language translation tool
- A user can wear this device on a finger, then point it on a body of text, one line at a time





- **Be My Eyes**
- **By My Eyes** is a super application that helps blind people “see” the world
- It works by making a network that connects the blind with volunteers from around the world
- It is an easy way to ask for help for simple tasks like checking on the expiry date on a milk carton



- **Liftware**
- **Liftware** is a self-stabilizing handle on which can attach an eating utensil like a fork or spoon
- It is very helpful for patients who suffer from Parkinson's disease or other forms of motion disorders that causes hand tremors
- Liftware stabilizes up to 70% of the disruption and helps reduce the spilling of contents from the utensil before food reaches the patient's mouth



# Conclusions

- The need for medical rehabilitation is projected to increase in the following decades due to the ongoing demographic, epidemiological and **nutrition transitions**, as well as improved acute care and better survival
- Better data showing the actual number of health professionals generally, and rehabilitation professionals specifically in Nigeria, are needed.
- These data are especially important for evidence informed policy for rehabilitation in Nigeria.
- There is a need for research to estimate and predict the future number of health professionals per 1 million population required to satisfy the demands for rehabilitation in Nigeria.
- There is a need for global action by professional organizations, development agencies and civil society to work towards developing and maintaining a sustainable workforce for rehabilitation.
- More universities in Nigeria to emulate UNIMED Ondo on the establishment of Faculty of Medical Rehabilitation.



**“You may not know exactly what you want to do when you go into rehabilitation sciences, but you will find your passion and you will change the world!”**

**-Enetta Grindstaff, MS-SLP student**



Whatever category you belong to, you have been a wonderful audience.....

**Thank you!!!**



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