NHS Greater Glasgow and Clyde

BIOPSYCHOSOCIAL THINKING IN STROKE

Rehabilitation of people, not just impairments

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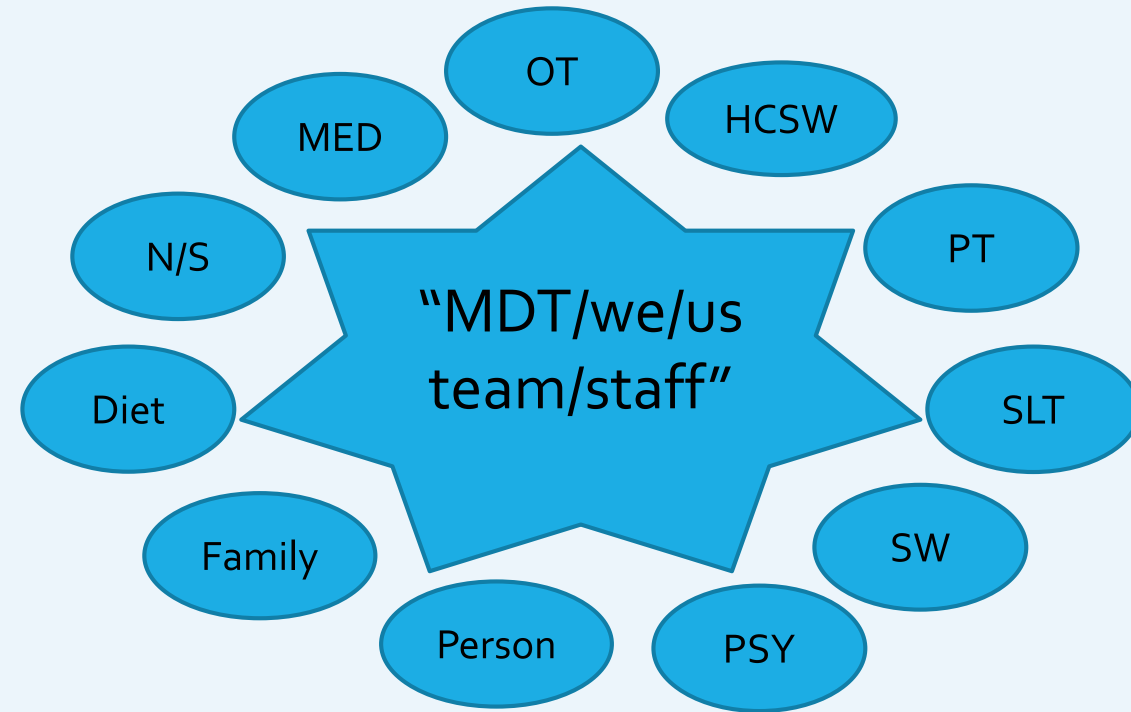
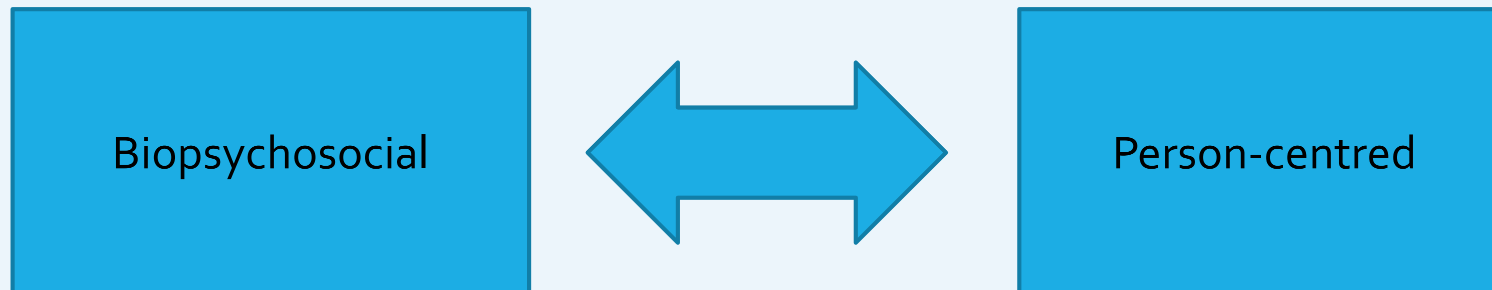
Research Fellow in Clinical Health Psychology, the University of Strathclyde

Some caveats....

- No expert – based on clinical observations, research and clinical guidelines
- Focus on practical applications of theory
- Multidisciplinary focus – The"we"
  - + person with stroke and family and loved ones
- Biopsychosocial AND person-centred





1. To start off, take a few seconds and think of a colleague

2. How would you describe them to someone who has never met them?

Personality?

Traits and characteristics?

Work/roles/skills?

Likes?

Dislikes?

Valued activities?

Strengths?

Weaknesses?

Score on a mood screen?

Weight?

Blood pressure?

Ability to move their limbs?

If they can sit or get out of their bed?

How they take or make tea?

Their cognitive scores?

Score on a mood screen?

Weight?

Blood pressure?

Ability to move their limbs?

If they can sit or get out of their bed?

How they take or make tea?

Their cognitive scores?

"Have you met my friend, Peter? Their GAD7 anxiety score is in the mild range, and their immediate verbal recall is in the 75th percentile"

"We probably matched on tinder as we both have a preference for level 6 foods"

"You'll get on well with my partner, they have full LL/UL ROM, and they initiate and sequence nicely when making toast"

"Meet Tom, our new colleague, he's 76 kg, sit to stand independently, and transfers to a standard chair without assistance"

Score on a mood screen?

Weight?

Blood pressure?

Ability to move their

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"Meet Tom, our new colleague, he's 76 kg, sit to stand independently, and transfers to a standard chair without assistance"

It is still important stuff!!

Plan for the next 15-20 min

1. **What** is the biopsychosocial model in rehabilitation?
2. **Why** talk about it?
3. **How** can it look like in real life stroke rehabilitation?

What?

Biomedical model

- The process:
  - Identify what is wrong (assessment/diagnosis)
  - Each discipline focus on specific part
  - Fix it for the patient
  - Discharge
- Great for medical problems
- Potential consequences of purely biomedical in stroke rehabilitation
  - Sole focus on impairments – less on the person
  - Disciplines working in silos with own goals – less with the person
  - NHS badge = expert
  - Ongoing impairments = no "rehab potential"
- Rehabilitation is complex!

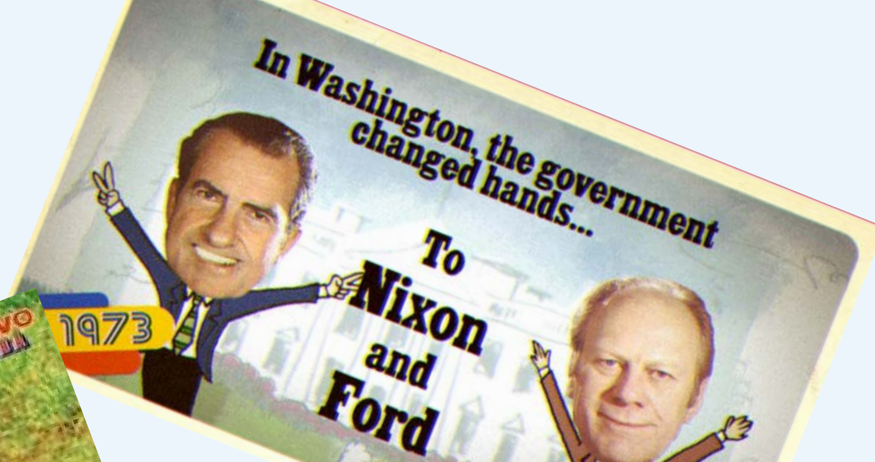
Biopsychosocial model

- Engel (1977) *The need for a new medical model: a challenge for biomedicine*

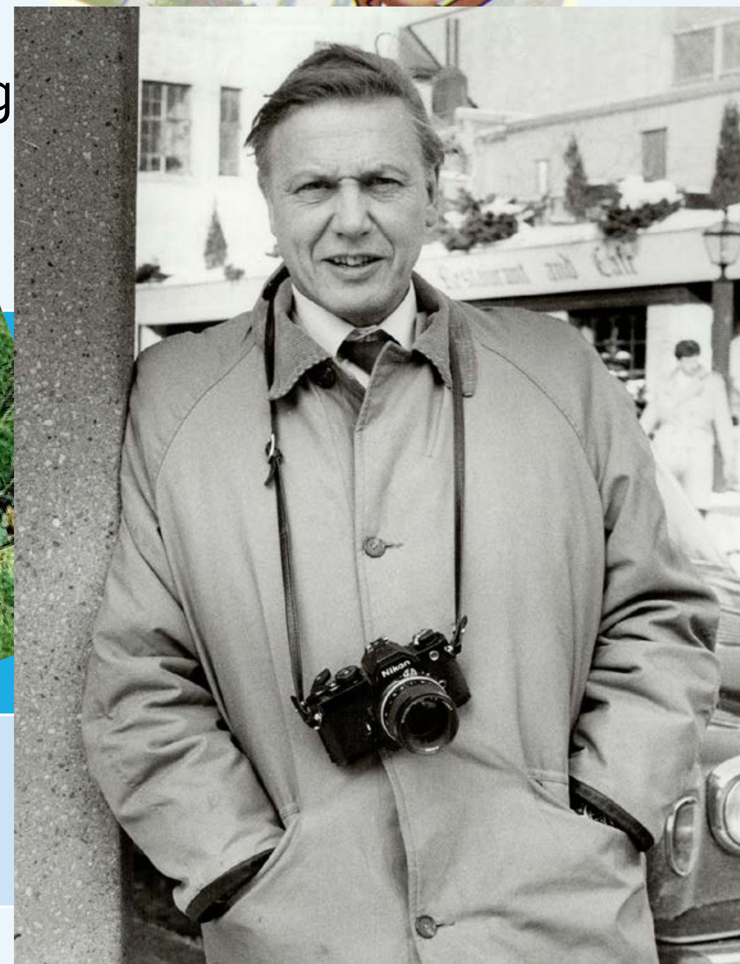
What is it?
• A way of thinking/working with complex and multifactorial problems • A way of delivering complex/multifactorial interventions • Ensuring the whole person is included in decisions and interventions, by the whole team
What is it not?
• A roadmap to solving all problems • A one-off event • Complicated – it is kind of happening all the time • New – 1977 was not yesterday…

...odel

...edical model: a ch...

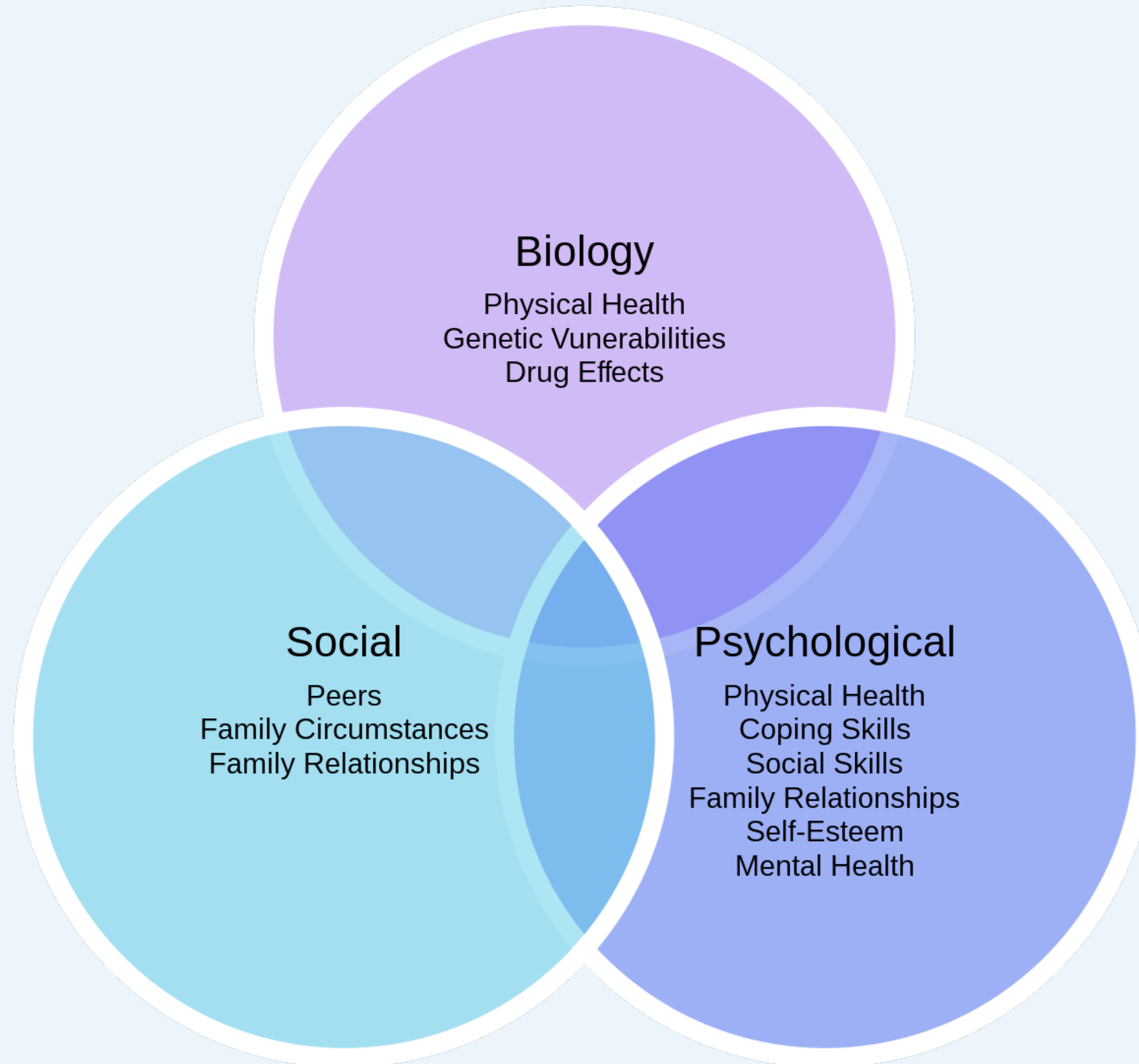


- "Illness an... ...olog factors." (Wade & Hall...



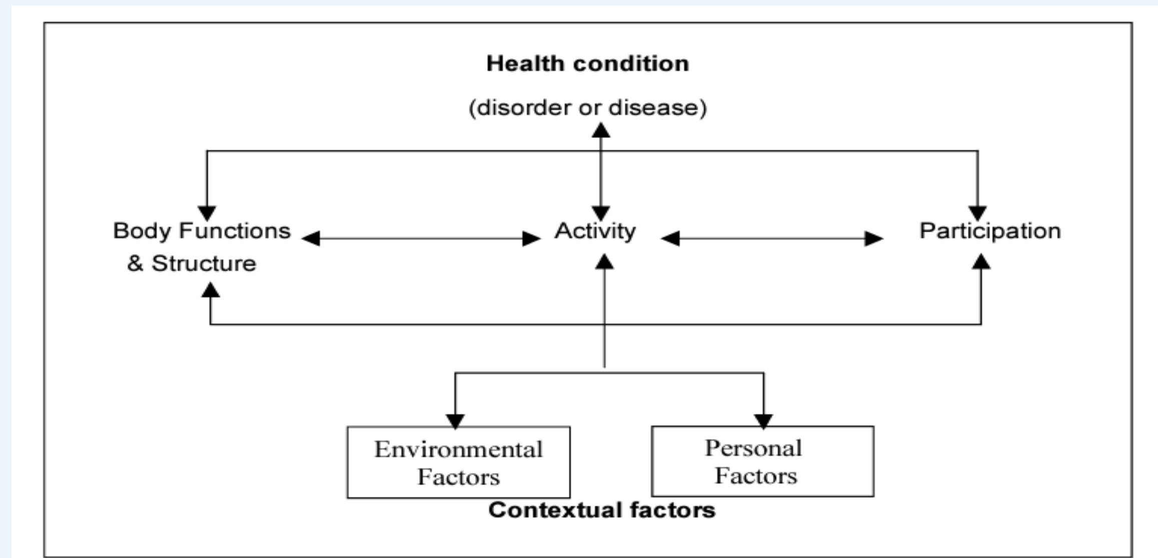
What is it?
• A way of t... • A way of de... • Ensuring the...
What is it not?
• A roadmap to so... • A one-off event t... • Complicated – it is... ...e

"*Illness and health are the result of an interaction between biological, psychological, and social factors*."
(Wade & Halligan, 2017).



Influence

- WHO's International Classification of Functioning (WHO ICF, 2001)



- Dr Howard Rusk (often credited as the 'father' of modern comprehensive rehabilitation) proposed two principles for successful rehabilitation outcomes in the 70s
  1. *'the whole person needed rehabilitation, not just the part of him that had been damaged'*
  2. *'Ultimately, the success of all rehabilitation depends on the patient himself'*

Why?

Guidelines and policy

- Progressive Stroke Pathway, Scottish Government, 2022

"Stroke rehabilitation should be based on a holistic biopsychosocial approach which seeks to understand the interactions of a diverse range of factors in a person's presentation (i.e. biological, psychological and social factors". "...shared understanding promotes interdisciplinary working"

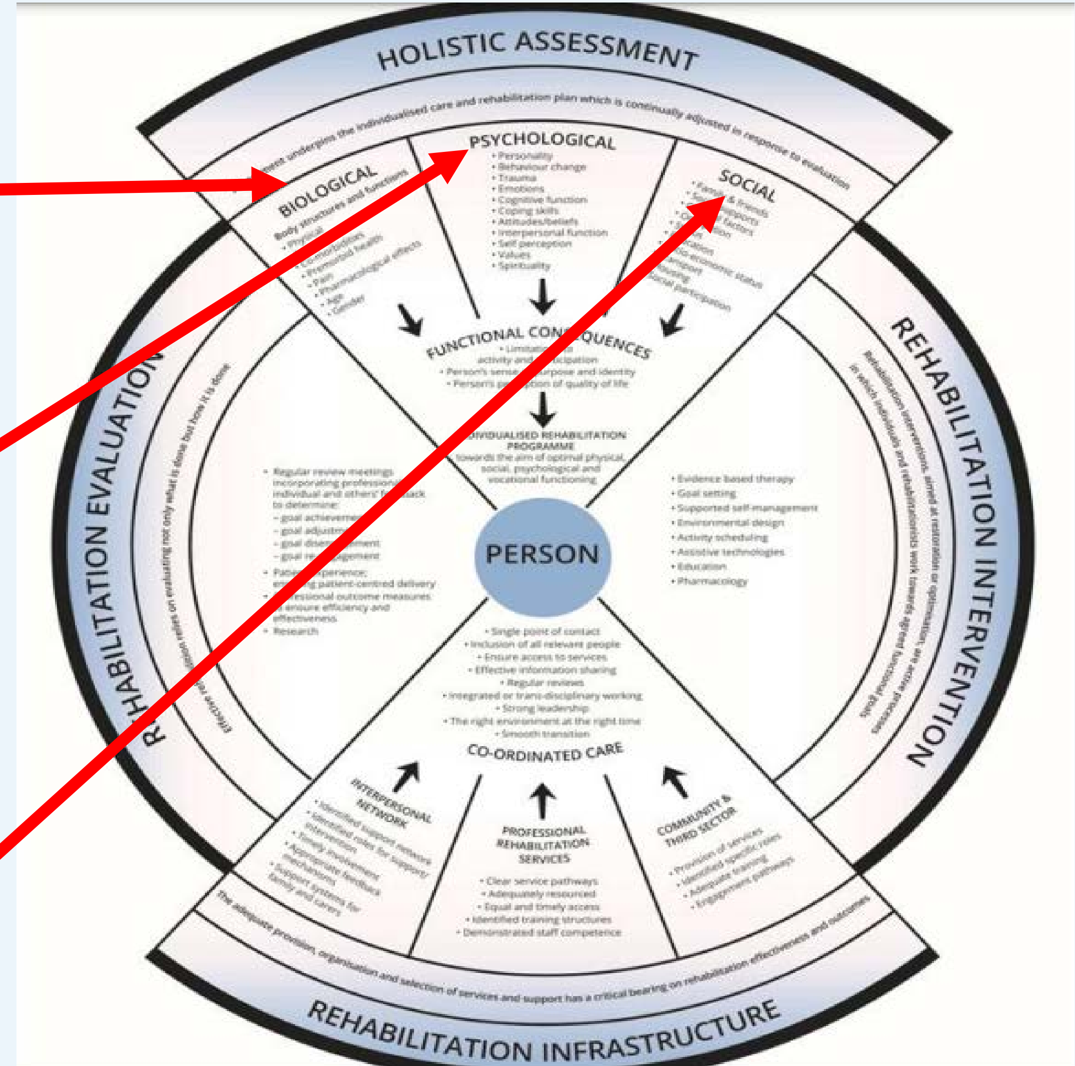
- Stroke Improvement Plan, Scottish Government, 2023

- "[Stroke] Rehabilitation should be based around a holistic biopsychosocial approach. This approach to rehabilitation seeks to understand the interactions of a diverse range of factors (biological, psychological and social factors) when providing care. Such a model helps ensure that goals and interventions are tailored towards the preferences and needs of every individual"

- National Clinical Guideline for Stroke for UK and Ireland, 2023

- "Access to rehabilitation should be driven by the presence of stroke-specific goals. These should not be limited to functional improvement and should include domains such as adjustment, psychological well-being, education regarding stroke, social participation, management of complications, and the management of care needs. All domains should be considered as aspects of rehabilitation and therefore the term 'no rehabilitation potential' is not appropriate and should not be used."

Biological (body structures and functions)	Physical Sensory Co-morbities Co-morbid health Pain Pharmacological effects Age Gender
Psychological	Personality Behaviour change Trauma Emotions Cognitive functions Coping skills Attitudes/beliefs Interpersonal function Self perception Values Spirituality
Social	Family & friends Social support Cultural factors Occupation Status/socio economic Education Transport/housing Social participation



From Progressive Stroke Pathway, Scottish Government, 2022

Research tells us that…

- …we are still focusing a lot of our efforts on the bio part, the structural impairments, whilst people with stroke often want to focus on participation in meaningful activities in stroke rehab
  - (i.e. Morris et al., 2015; Saito et al., 2021)
- …aspects of the psychosocial domains have direct and indirect impact on peoples recovery (i.e.Bishop et al., 2024)
- …there appears to be a link to effectiveness of rehabilitation (Winstein, 2018)
- …interventions that are considering whole biopsychosocial spectrum rather than focusing on impairment-based goals are beneficial for people with stroke in terms of health related quality of life and independence (Harwood et al., 2012; McNaughton et al., 2023)

Clinical Rehabilitation
Volume 37, Issue 7, July 2023, Pages 975-985
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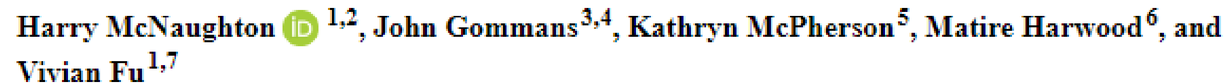
https://doi.org/10.1177/02692155221145433

SAGE journals

Exploratory studies

A cohesive, person-centric evidence-based model for successful rehabilitation after stroke and other disabling conditions


Harry McNaughton [1,2], John Gommans [3,4], Kathryn McPherson [5], Matire Harwood [6], and Vivian Fu [1,7]

Keywords
Rehabilitation, Biopsychosocial model, evidence-based, stroke, person-centred

McNaughton, H., Gommans, J., McPherson, K., Harwood, M., & Fu, V. (2023). A cohesive, person-centric evidence-based model for successful rehabilitation after stroke and other disabling conditions. *Clinical Rehabilitation*, *37*(7), 975-985.

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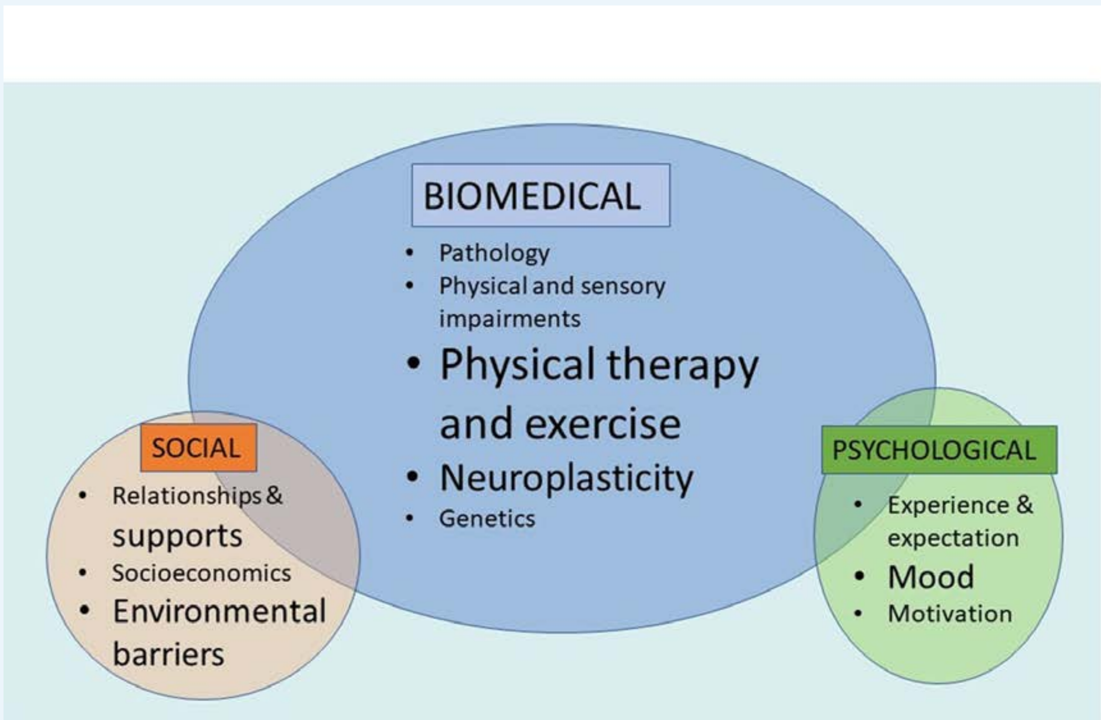

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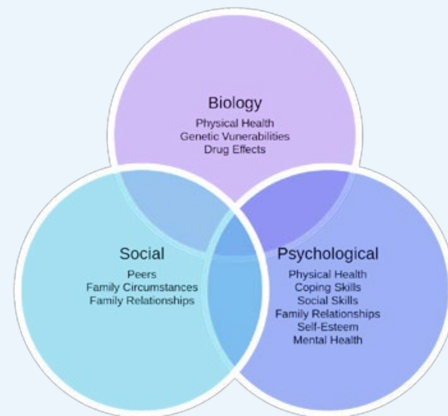
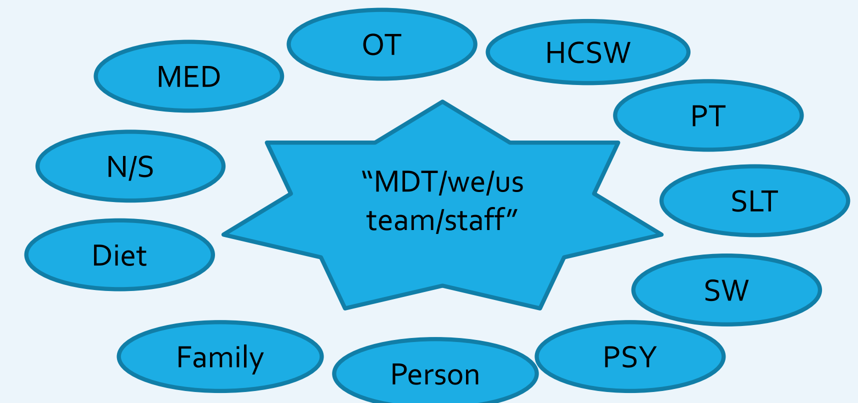
How?

Spoiler: three projects and a few ideas

Project 1: Formulation/case discussions

- Used in other areas of healthcare and rehabilitation where MDT work is central
- Allows for open thinking and blurring disciplinary boundaries
- Can be facilitated/chaired by any discipline or have a flexible structure (i.e. therapist/nurse led)
- Can be centred around a specific issue/stuckness/goals/reflection etc
- Based on a biopsychosocial model





History and social network

Brain pathology

Social/identity loss

Insight

Cognitive function & communication

Affect

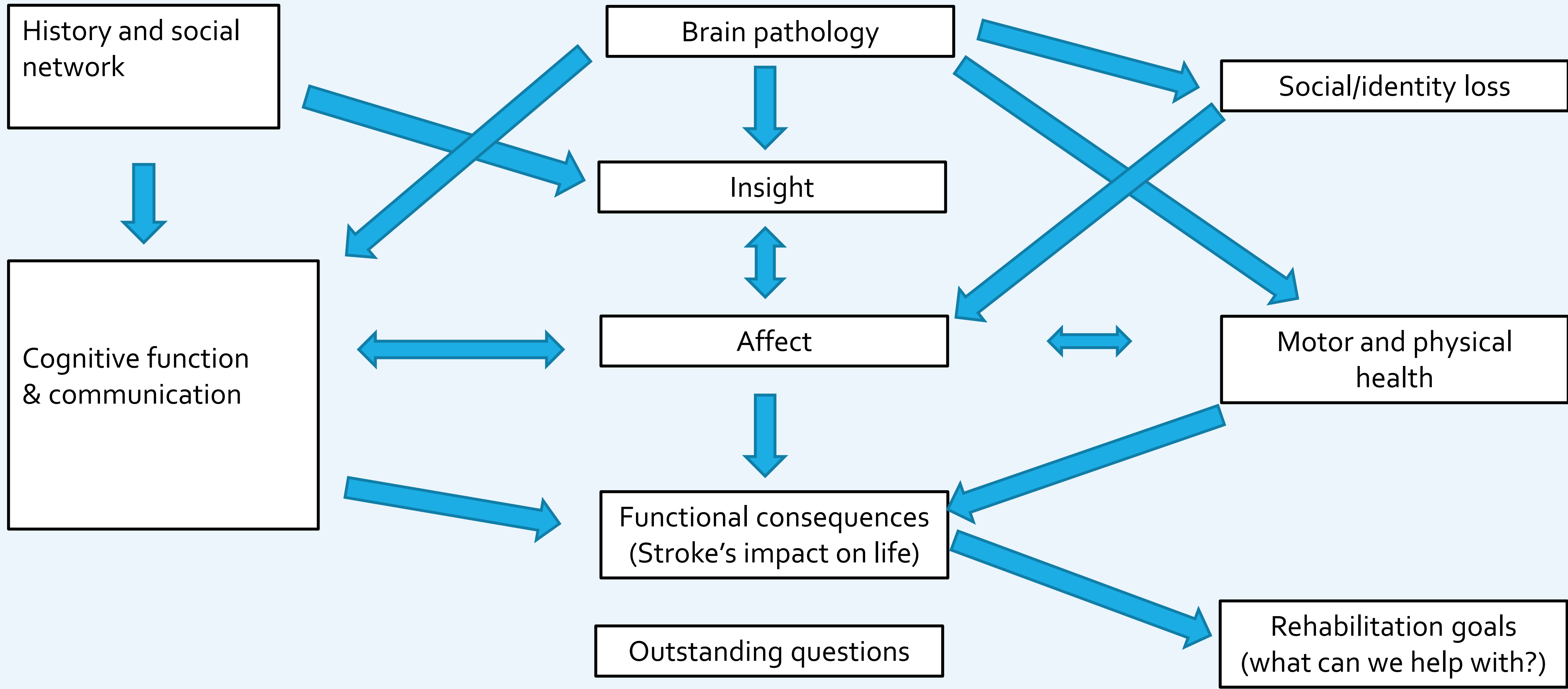
Motor and physical health

Functional consequences (Stroke's impact on life)

Outstanding questions

Rehabilitation goals (what can we help with?)

Evans (2006) in Wilson, Gracey, Evans and Bateman (2009)



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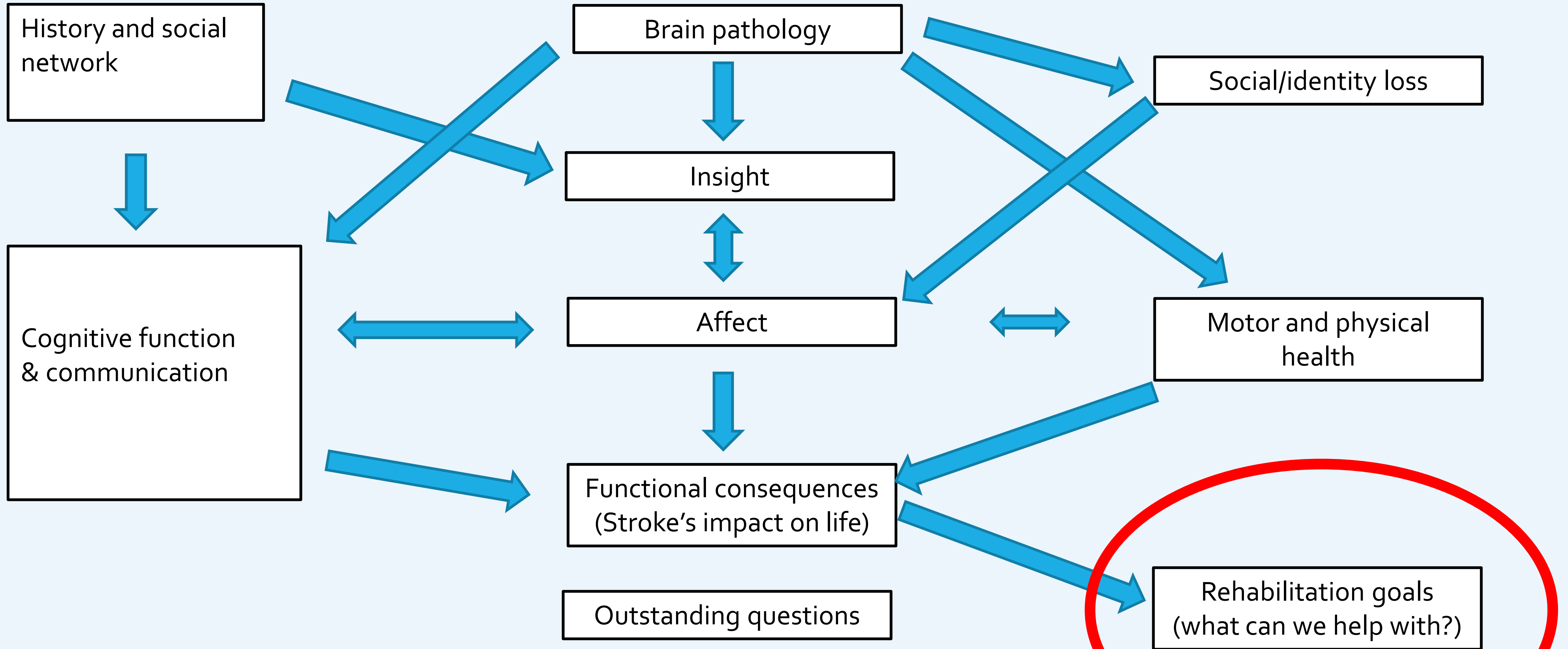


Evans (2006) in Wilson, Gracey, Evans and Bateman (2009)

Formulation/case discussions

- In our service
  - Piloted as part of psychology service when someone was already referred
  - Next: Via MDT meeting for regular monthly forum
- Reflections from a small sample

  + Highlighted what we don't know; "things between disciplines" – also sharing what we do know!

  + Generated goals that incorporated the whole person, their interests and values

  + Forward planning. Formulation shared with services and families, and patients at discharge

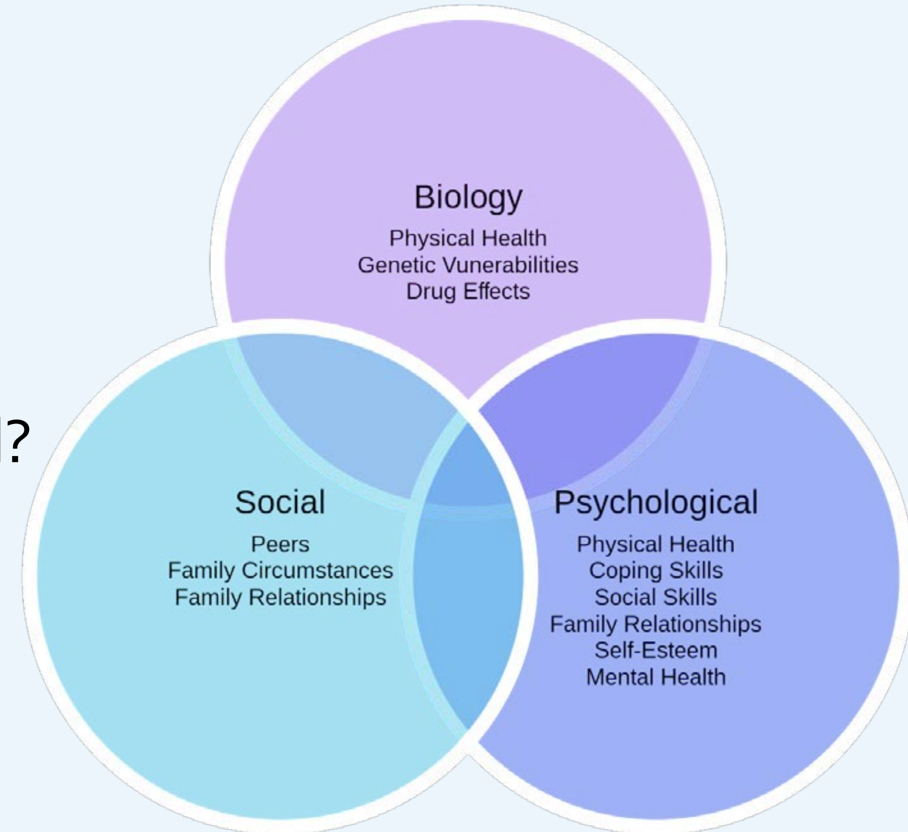
  - Person with stroke/family not involved enough at the time of completion

  - Static event – as only carried out once, likely to only have impacted on staff present at the formulation

  - Buy-in essential at all levels and disciplines

Project 2: Observations/1:1

- Idea based on clinical observations
- What is the focus of hourly/1:1/constant observations?
- What aspects of the biopsychosocial model is prioritised?
- Could this aspect (1:1) of rehabilitation be improved for everyone involved?
    - Person on observation?
    - Person undertaking observation?
    - Nurses on ward?
    - Family?



- Resource developed over the past months by nursing and psychology
- Interdisciplinary learning big part of development

- Now ready to pilot
- Everyone who is offering enhanced observations/1:1
- Evaluation in three steps
  1. Ask what needs we currently prioritise
  2. Introducing resource on ward
  3. Ask about needs again

Shout out to Catriona McGhee!!!

Enhanced observations on ward 56/57

In stroke rehabilitation, we give special consideration to patients who have difficulties to fulfil their own needs. For example, patients can be confused/unable to communicate/at risk of falls or wandering. You can imagine what a challenging time this is for the patient and their family.

We would like to **thank you** for helping us support this person. We hope the below ideas will help prevent the patient from becoming stressed and worried, or help to reduce distress. Please see the whiteboard above the bed and the "Getting to Know Me" document for further information on who your patient is as a person. We appreciate your time and efforts and will support you when you require a break and with any questions you may have.

Human needs / What can you do?

Biological needs

Toileting (Urine/bowel)
Temperature
Hunger/thirst
Smoking
Comfort
Being pain free
Hearing/vision

- Ask if the person needs: the bathroom, nicotine (smoke/inhaler), painkillers, food/drink, sleep
- Make sure the temperature is OK (ask if hot/cold)
- Open or close the door to the room
- Ensure curtains are up/down – is the light appropriate for time of day?
- Turn the TV on or off – ask what the person wants
- Offer blanket
- Offer glasses/hearing aid if they use this (check batteries)

Psychological needs

Stimulation (not be bored)
To feel safe
Sense of control
Meaningful activity
A calm environment

- Communication [tone, wording] - check SALT recs
- Provide reassurance
- Help orient the person by saying "you are in hospital" "you are safe"
- Offer hand massage
- Exercise program - ask ward staff for this
- Use activity stations – there are several on the ward
- Paint nails/pampering session
- Interact readers - ask activity coordinator for this
- Listen to audio book or music - ask as above
- Ask what music/hobby they like and chat about this
- Use activity box to offer activities
- Talk about/add things on the **what-matters-to-me**
- Look out the window and describe what you see
- Read for the person

Social needs

Company
Activation and interaction
Contact with family/friends
Connection to own life

- Ask about the person's hobbies/occupation/family
- Reminiscence activities - use **what-matters-to-me**
- Attend art class (Mon/Tue)
- Go for a walk round the ward, to the family room, or downstairs to the garden or for a coffee
- Arrange video call for family
- Watch DVD (activity coordinator has portable player)
- Arrange for persons dog/pet to visit

Human needs

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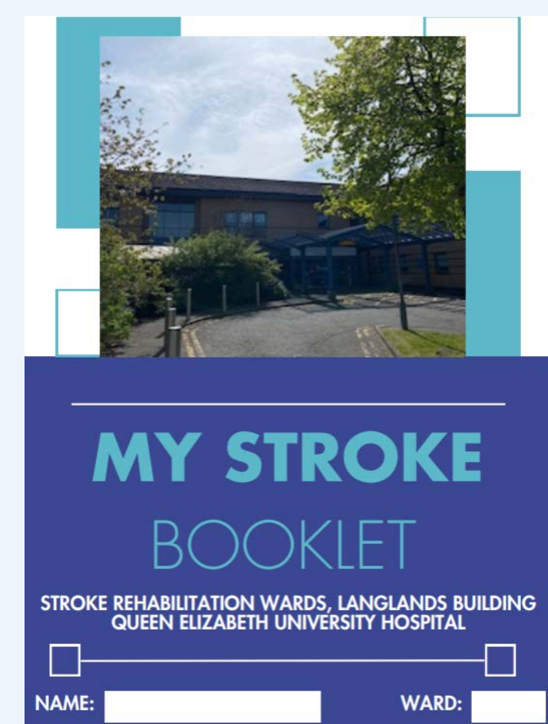
Project 3: Stroke ward booklet

- Providing information/sharing knowledge and vice versa
- Encourage involvement and ownership
- Holistic and person-centred
- Biopsychosocial thinking throughout, particularly around:
  - Development – survey with people with stroke and families
  - 'What matters to me' section
  - Goal setting section
  - Wording and phrases
  - Fully multidisciplinary project - Shout out to the team on ward 56/57!!



What matters to me?

Rehabilitation is about what matters to you. If you want to, please help us get to know a little about you and what you care about. Feel free to get help from a family member, friend or staff to complete this.

I like to be called:________________________

Three areas of my life that matters a lot to me are:

1)

2)

3)

Some people and relationships that matters to me are:

(These can be any people such as friends, family, colleagues or pets!)

Three activities that I enjoy and care strongly about in life are:

(Any type of activity in your day-to-day life!)

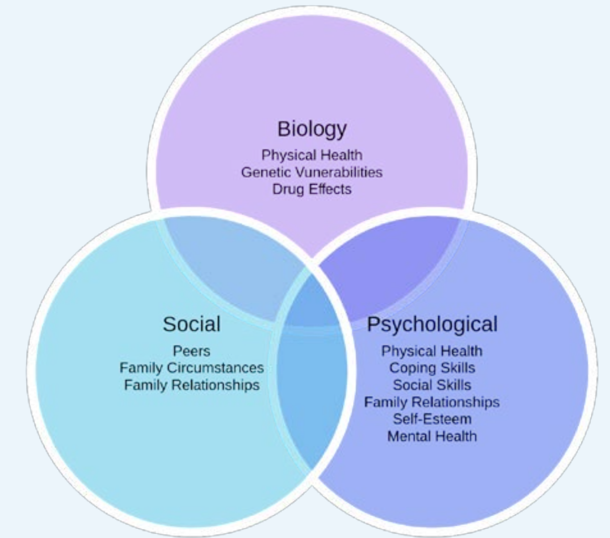
1)

2)

3)

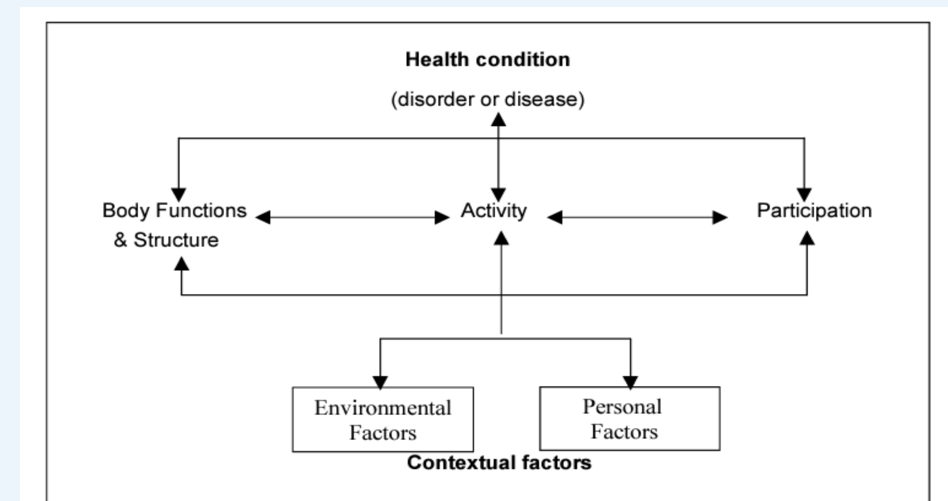
Other things that matters to me that might be helpful to know:

Potential areas to increase biopsychosocial thinking in stroke rehabilitation:



- MDT meetings – what do we focus on?
- Assessment – what are we assessing and why?
- Activities on the ward/at home/community (outwith therapy sessions) – this is rehab!
- Get to know me/what matters to me – is this information informing rehab or just in the background?
- Carer/family involvement – the experts!
- Interdisciplinary working/learning – break out of the silos!

- Goal setting – how are goals linking impairments to person
  - ie activity and participation – how will this benefit the person's QoL?



Goal setting

- Lloyd et al., 2018:
  1. Person-centered goal setting is possible but often does not occur
  2. Practitioners shape the context of goal setting
  3. Practitioners need to listen to the person and know "who they are" – there is a need for an individualized approach to goal setting
  4. Recovery is ongoing and unpredictable
- NICE guidelines, Stroke Rehabilitation in Adults, 2023
  - Ensure that people after stroke have goals for their rehabilitation that are:
    1. Meaningful and relevant to them
    2. Focus on activity and participation (i.e. the person rather than the impairment)
    3. Are challenging but achievable
    4. Include both short- and long-term elements

Summary of the last 15-20 min...

- What the biopsychosocial model is, and how it fits with rehabilitation ethos
- Stroke rehabilitation policy and research suggests that there are real benefits of thinking like this in stroke rehabilitation
  - And that the people we work with are often doing so as they ARE the WHOLE person
- Implementation can be small things and simply thinking differently to what we are already doing – change in practice not always required!
- Opportunities (and responsibility) in this area going forward...

BIOPSYCHOSOCIAL THINKING IN STROKE

Rehabilitation of people, not just impairments

Thanks for listening!

Dr Nils Rickardsson

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