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6 – 8 May 2019
Aotea Centre, Auckland, New Zealand

**Impacting
health along
the life
course**

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FUNCTION

Chris Poulos

Burniston Oration

May 2019

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Outline

1. The importance of function
2. The classification of function
3. Function throughout the life course
4. The rehabilitation (*function-focused*) approach
5. The health, aged and disability sectors, and function

George Garrett Burniston

1914-1992

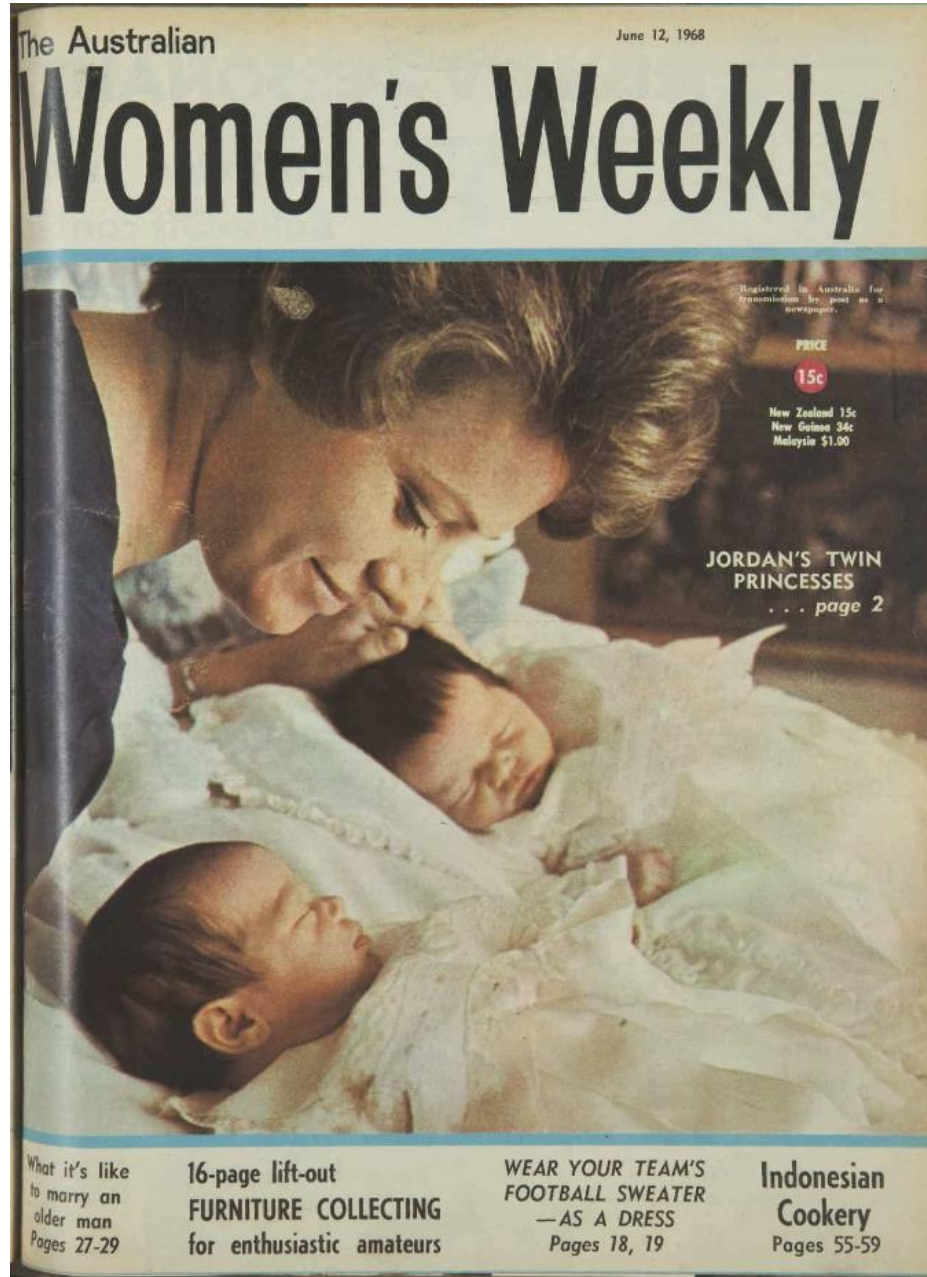
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John Carmody and Chris Cunneen, 'Burniston, George Garrett (1914–1992)', Australian Dictionary of Biography, National Centre of Biography, Australian National University: <http://adb.anu.edu.au/biography/burniston-george-garrett-18568/text30224>

Published online 2016, accessed online 24 March 2019.



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<http://nla.gov.au/nla.news-page4831118>
Accessed 03/05/2019

● *Dr. George Burniston, head of the Department of Rehabilitation Medicine, Prince Henry Hospital.*

● The third Australian Medical Congress, to be held in Sydney from August 12 to 16, will be attended by some 2500 doctors from all over the world. Papers will be read on a wide range of subjects, including "Transplantation of the Heart" by Professor Christian Barnard. There will be four plenary sessions and group and section meetings, involving papers followed by general discussion. The fourth plenary session will be devoted to the theme of "Back to Work," dealing with a handicapped patient's needs in returning to a normal working life.



THEIR WORK IS TO HELP HANDICAPPED

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<https://trove.nla.gov.au/newspaper/article/51273980/4831129>

Accessed 03/05/2019

“If medical science is keeping people alive it must help them toward the fullest life they can live.”



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Keavney, Kay. 'Their Work is to Help the Handicapped.' *Australian Women's Weekly*, 12 June 1968, 12-13

https://archive.org/stream/The_Australian_Womens_Weekly_12_06_1968/The_Australian_Womens_Weekly_12_06_1968_djvu.txt

Accessed online 24 March 2019

“We want all doctors and all patients to think in terms of rehabilitation from the very onset of the illness or injury.”



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Keavney, Kay. 'Their Work is to Help the Handicapped.' *Australian Women's Weekly*, 12 June 1968, 12-13

https://archive.org/stream/The_Australian_Womens_Weekly_12_06_1968/The_Australian_Womens_Weekly_12_06_1968_djvu.txt

Accessed online 24 March 2019

“Dr. Burniston knows every patient,
not as a problem but as a person.”



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Keavney, Kay. 'Their Work is to Help the Handicapped.' *Australian Women's Weekly*, 12 June 1968, 12-13

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Accessed online 24 March 2019



1968 Ford Cortina

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<https://www.carsales.com.au/cars/details/ford-cortina-1968/SSE-AD-5785452/>
Accessed 03/05/2019

The importance of function

- Function matters!

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The importance of function

- A predictor of health outcomes and survival
- Functional decline is often preventable
- Results in burden and cost on individuals and society



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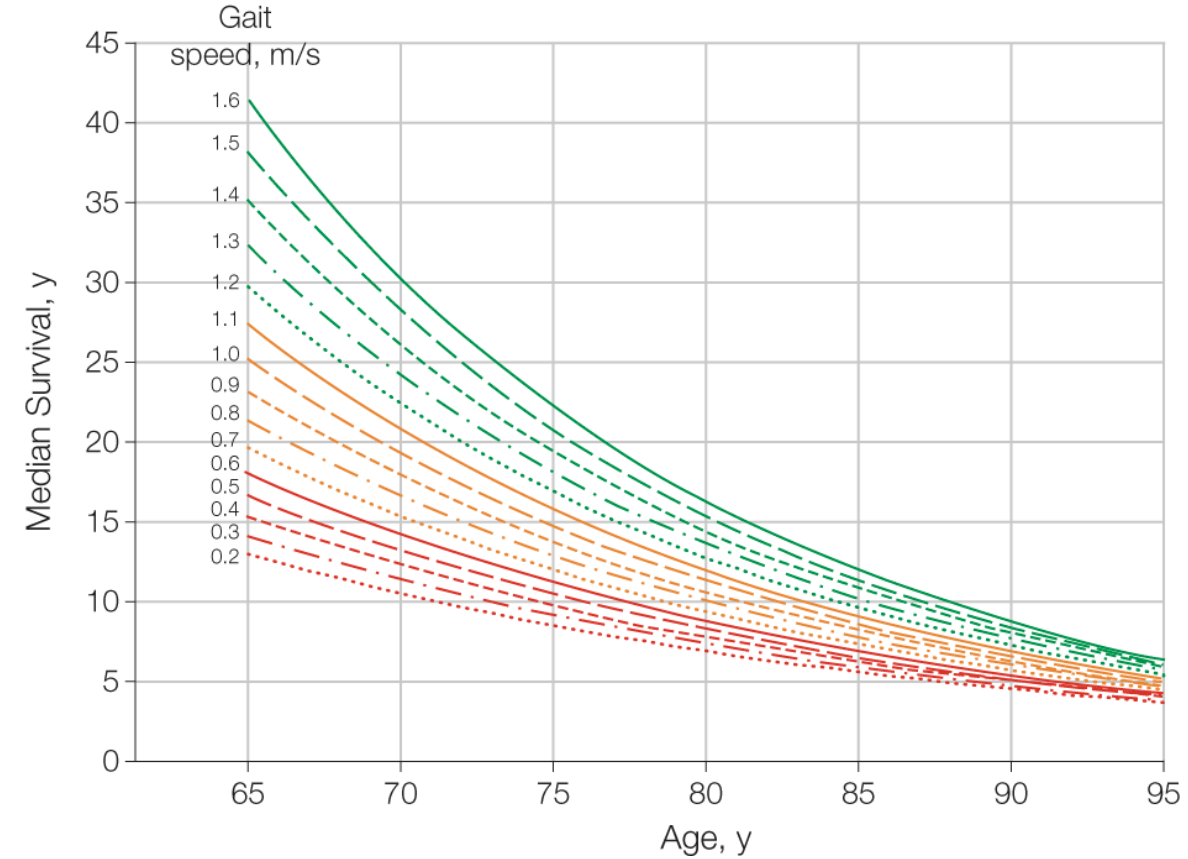
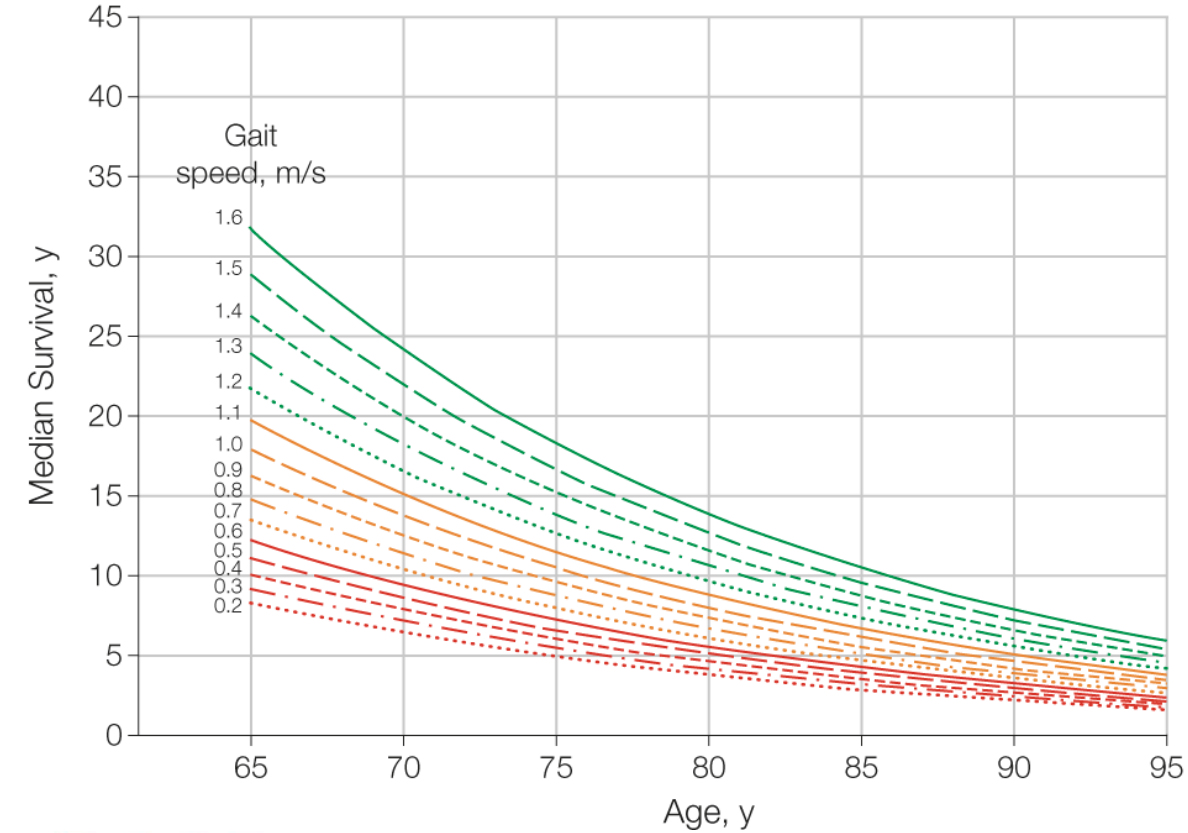
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Predicted median life expectancy in older adults, by age and gait speed

Men

Women



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Studenski S, Perera S, Patel K et al. Gait Speed and Survival in Older Adults
JAMA. 2011;305(1):50-58. doi:10.1001/jama.2010.1923

The importance of function

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JAMDA

journal homepage: www.jamda.com



Original Study

Preventable Iatrogenic Disability in Elderly Patients During Hospitalization



Sandrine Sourdet MD^{a,*}, Christine Lafont MD^a, Yves Rolland MD, PhD^{a,b,c},
Fati Nourhashemi MD, PhD^{a,b,c}, Sandrine Andrieu MD, PhD^{a,b,c},
Bruno Vellas MD, PhD^{a,b,c}

^a *Gérontopôle, Hôpital La Grave-Casselardit, Toulouse, France*

^b *Inserm Unit 1027, Toulouse, France*

^c *Department of Medicine, University of Toulouse III, Toulouse, France*

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Sourdet S, Lafont C, Rolland Y, Nourhashemi F, Andrieu S, Vellas B. Preventable iatrogenic disability in elderly patients during hospitalization. *J Am Med Dir Assoc.* 2015 Aug 1;16(8):674–81. PMID: 25922117

BED REST IN A SYDNEY TEACHING HOSPITAL

F. EHRLICH, R.G. POULOS, C.J. POULOS, B. BURRASTON, S. LORD
and R. SALGADO

School of Community Medicine, University of New South Wales, Sydney, P.O.
Box 1. Kensington, NSW, 2033, Australia

SUMMARY

This paper looks at two surveys of bed rest, conducted in a general hospital. The first survey, conducted early one afternoon, assessed the prevalence of bed rest within the hospital. It was found that most of the patients (67 %) were in bed, and nearly half of those (42 %) were in bed for reasons other than being too sick or unsafe to be up, or because bed rest was part of their treatment. A second survey, in which a sample of general hospital patients was repeatedly observed throughout the day, found that patients with no requirements for bed rest spent 63 % (95 % confidence limits: 51–75 %) of the active part of the day in bed. It may be that because of the nature of hospital design, many patients are unnecessarily confined to bed because there is simply nowhere else to go. Inappropriate use of bed rest has implications for patient health and the utilization of scarce hospital resources.

Point prevalence:
67% of patients in bed.
42% of those were in bed
without any requirement

Observed sample:
Patients with no
requirement for bed rest
spent 63% of the active
part of the day in bed.

The importance of function

- A predictor of health outcomes and survival
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- Results in burden and cost on individuals and society



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The Australian Health Services Research Institute (AHSRI) is a major research facility at the University of Wollongong, established in May 2011. AHSRI brings together eight research centres, and is part of the Sydney Business School, University of Wollongong (Faculty of Business).

AHSRI aims to improve the management and provision of health and community services in Australia by achieving greater equity in resource distribution, fairer access to services, better continuity within and across the health and community care sectors, and the use of evidence to assist management decision-making.

In addition to producing robust academic output, the products of the Institute include practical and expert advice to a variety of government and non-government agencies and interest groups.

AHSRI is comprised of the following research centres:

- Centre for Health Service Development (CHSD)
- Palliative Care Outcomes Collaboration (PCOC)



australian health services
research institute

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Recently Released
AHSRI Publications

FINAL REPORTS NOW
AVAILABLE - Resource
Utilisation and
Classification Study



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Resource Utilisation and Costing Studies - RUCS

- It is not diagnosis per se that drives cost, but rather the impact of diagnosis on the person's ability to mobilise, undertake daily self-care activities and to understand their environment.
- Activity of daily living scores are a proxy for cognition and behaviour as well as reflecting a resident's underlying diagnosis.

K. Eagar, J. McNamee, R. Gordon, M. Snoek, C. Duncan, P. Samsa & C. Loggie, The Australian National Aged Care Classification(AN-ACC). The Resource Utilisation and Classification Study: Report 1 (Australian Health Services Research Institute, University of Wollongong, 2019).

Westera, M. Snoek, C. Duncan, K. Quinsey, P. Samsa, J. McNamee & K. Eagar, The AN-ACC assessment model. The Resource Utilisation and Classification Study: Report 2 (Australian Health Services Research Institute, University of Wollongong, 2019).



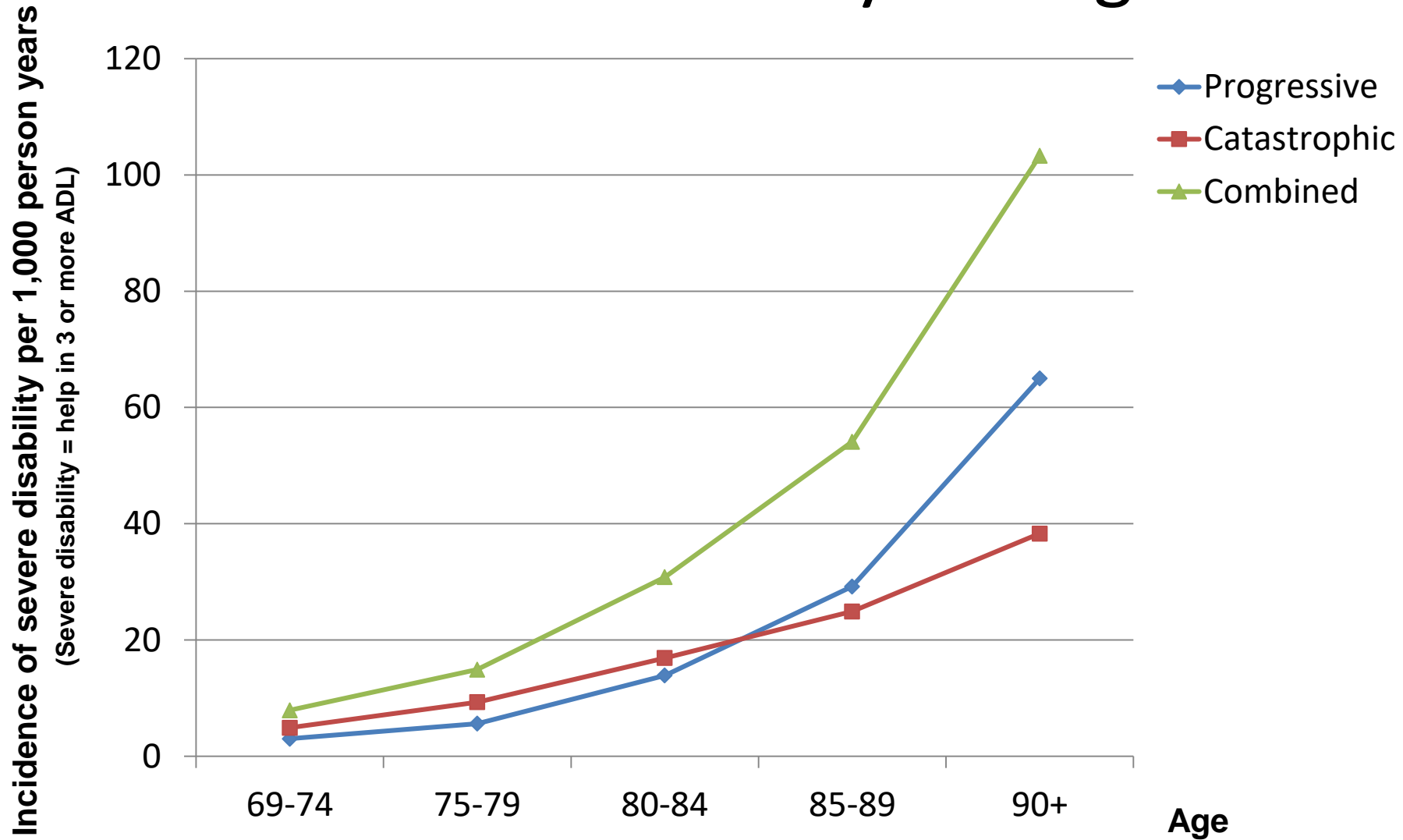
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HammondCare
Champion Life

Onset of disability and age



6,640 persons followed for 6–7 years with no reported severe disability at baseline.
Catastrophic: no previous help in ADL; Progressive: some previous help in ADL

Ferrucci et al. *Progressive vs Catastrophic Disability: A longitudinal view of the disablement process.*
The Journals of Gerontology: Series A, Volume 51A, Issue 3, May 1996, Pages M123–M130

The classification of function

- 1980 – International Classification of Impairments, Disabilities and Handicap (ICIDH)
- 2001 – International Classification of Function (ICF)

International Classification of Diseases (ICD)



International classification of Impairments, Disability and Handicap (ICIDH)



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International Classification of Impairments, Disabilities, and Handicaps.

A manual of classification relating to the consequences of disease.

Published in accordance with resolution WHA29. 35 of the Twenty-ninth World Health Assembly, May 1976

Accessed online April 16th 2019



Disturbance at the **organ level** – i.e. abnormalities of **body structure and appearance**, or **organ or system function**

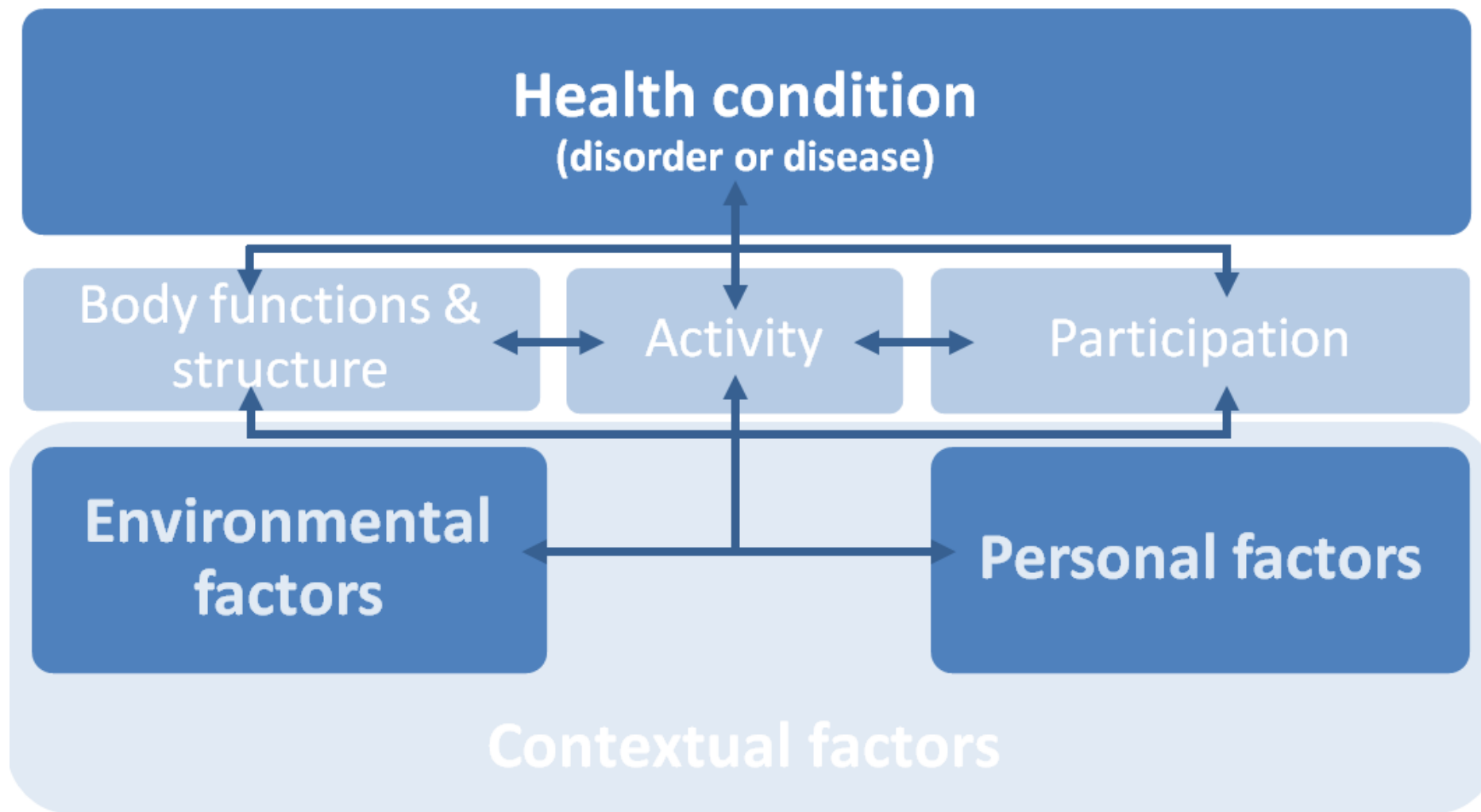


Disturbance at the level of **the person**.
Represent the **consequences of impairment** in terms of **functional performance and activity by the individual**.



Reflect interaction with, and adaptation to the individual's surroundings. Concerned with the **disadvantages experienced by the individual as a result of impairments and disabilities.**

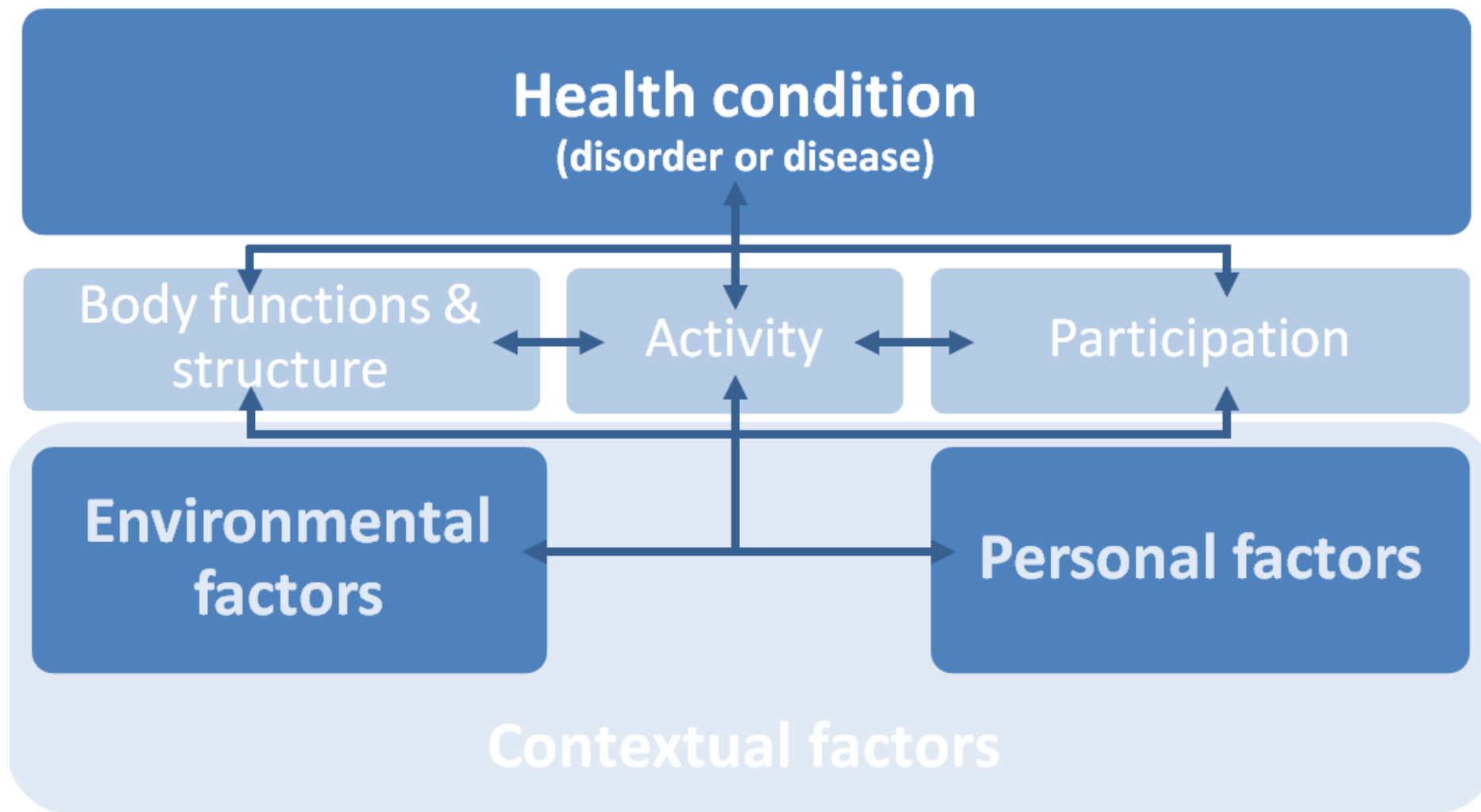
International Classification of Function (ICF)



International Classification of Function (ICF)

Dimensions of Functioning	Dimensions of Disability
Body Functions and Body Structures	Impairments
Activities	Activity limitations
Participation	Participation restrictions

International Classification of Function (ICF)



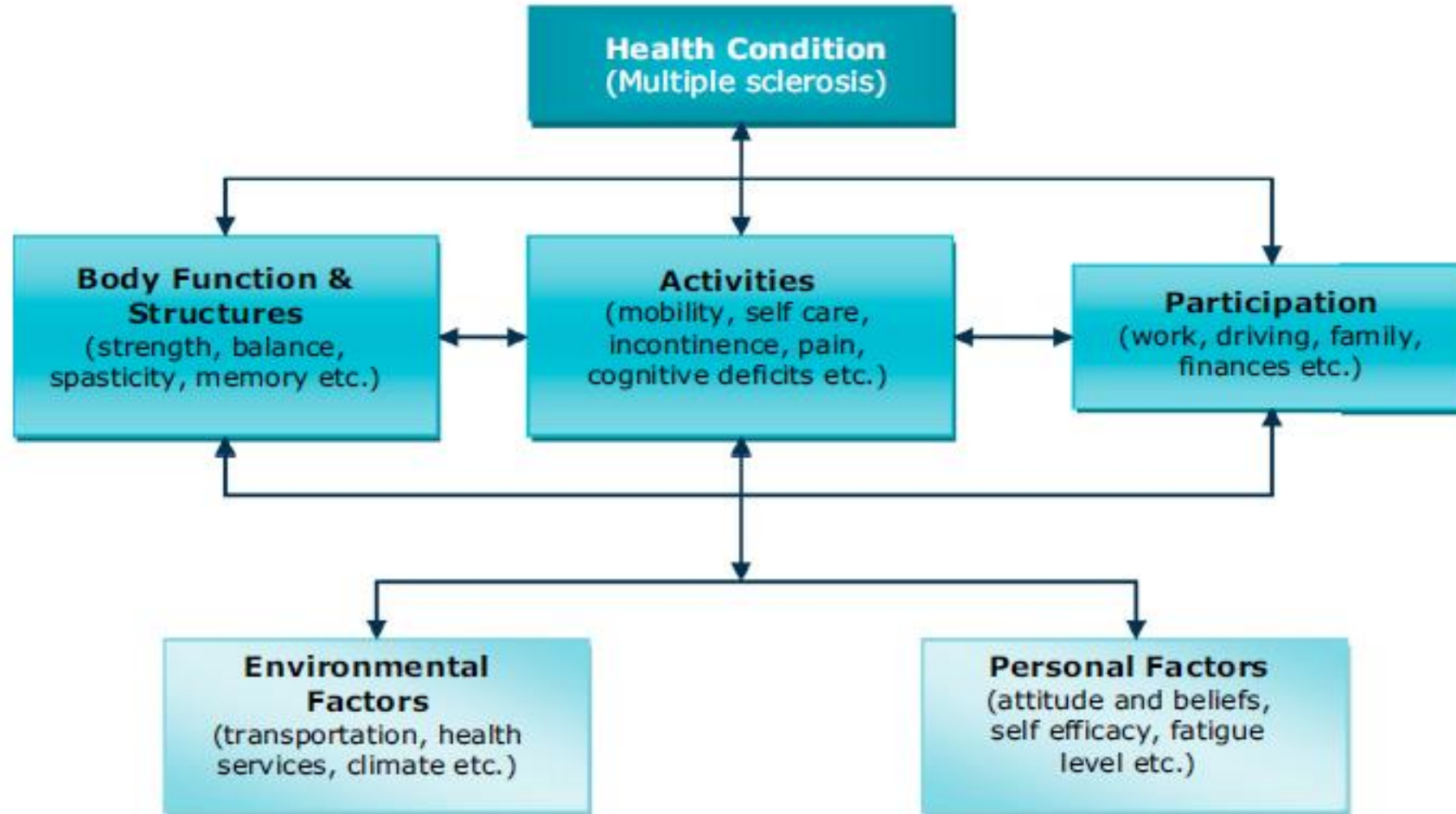
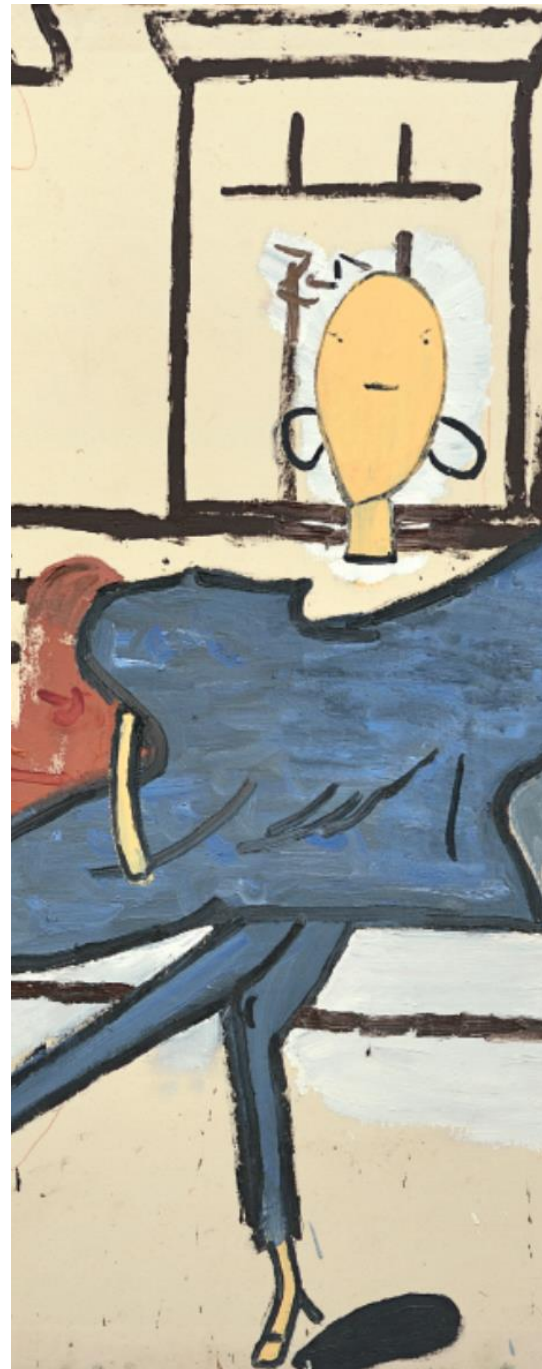


Fig 1 *International Classification of Functioning, Disability and Health* model with case example for MS.

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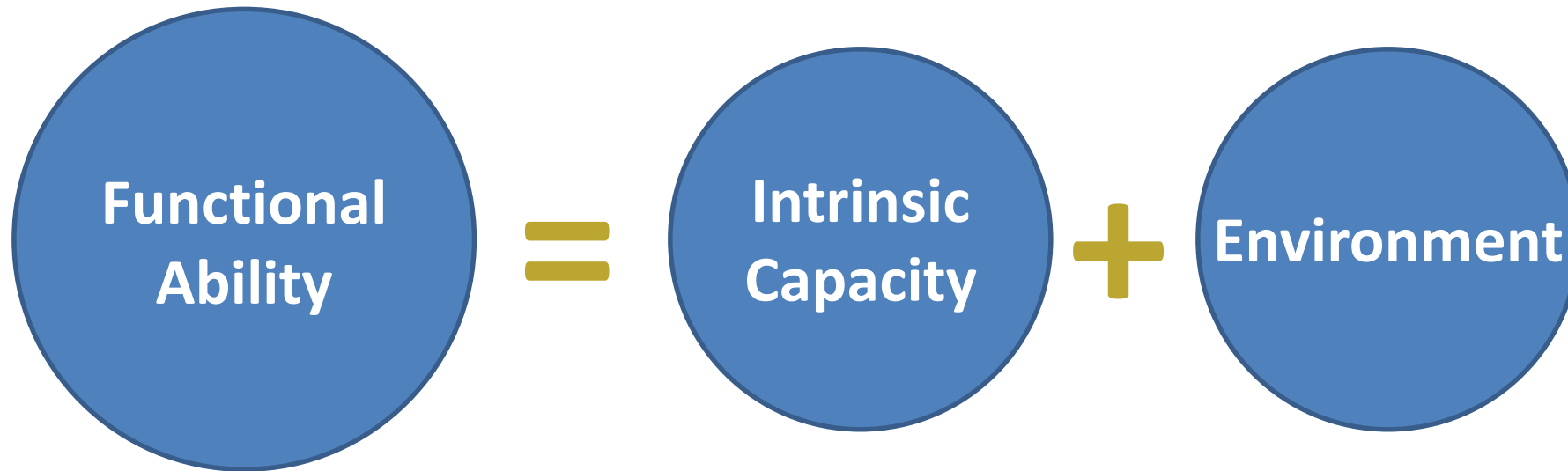
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World Health
Organization

WORLD REPORT ON **AGEING AND HEALTH**



the health related attributes that enable people to be and to do what they have reason to value.

the composite of all the physical and mental capacities of an individual.

all the extrinsic factors – assistive technologies, physical environment, social policy, formal & informal support etc.

ICIDH

International
Classification
of
Impairments
Disability &
Handicap

1980

ICF

International
Classification
of Function

2001

World Report on
Ageing & Health

Functional
Ability

2015

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Function across the life course

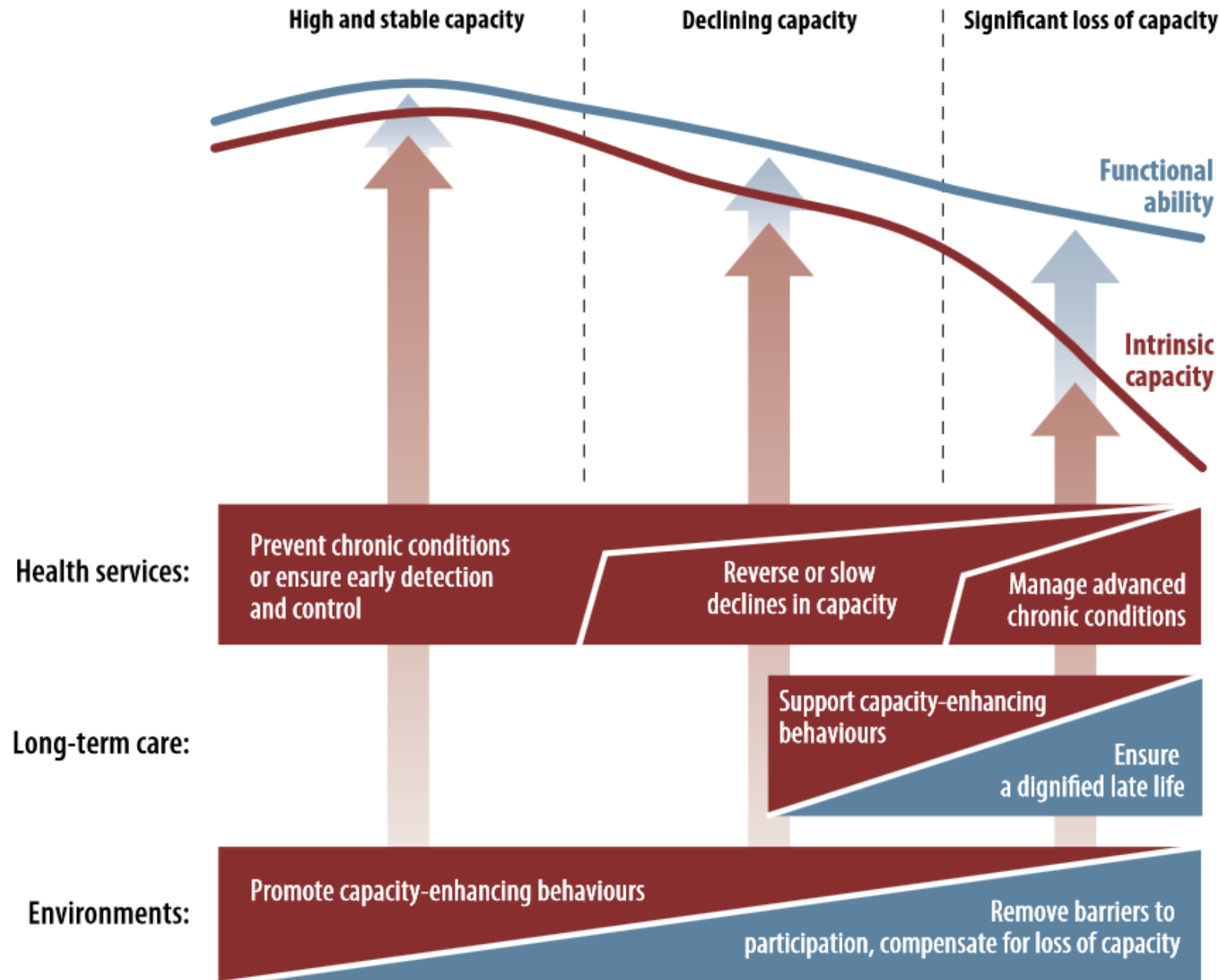


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Fig. 2.4. A public-health framework for *Healthy Ageing: opportunities for public-health action across the life course*



The rehabilitation (*function-focused*) approach

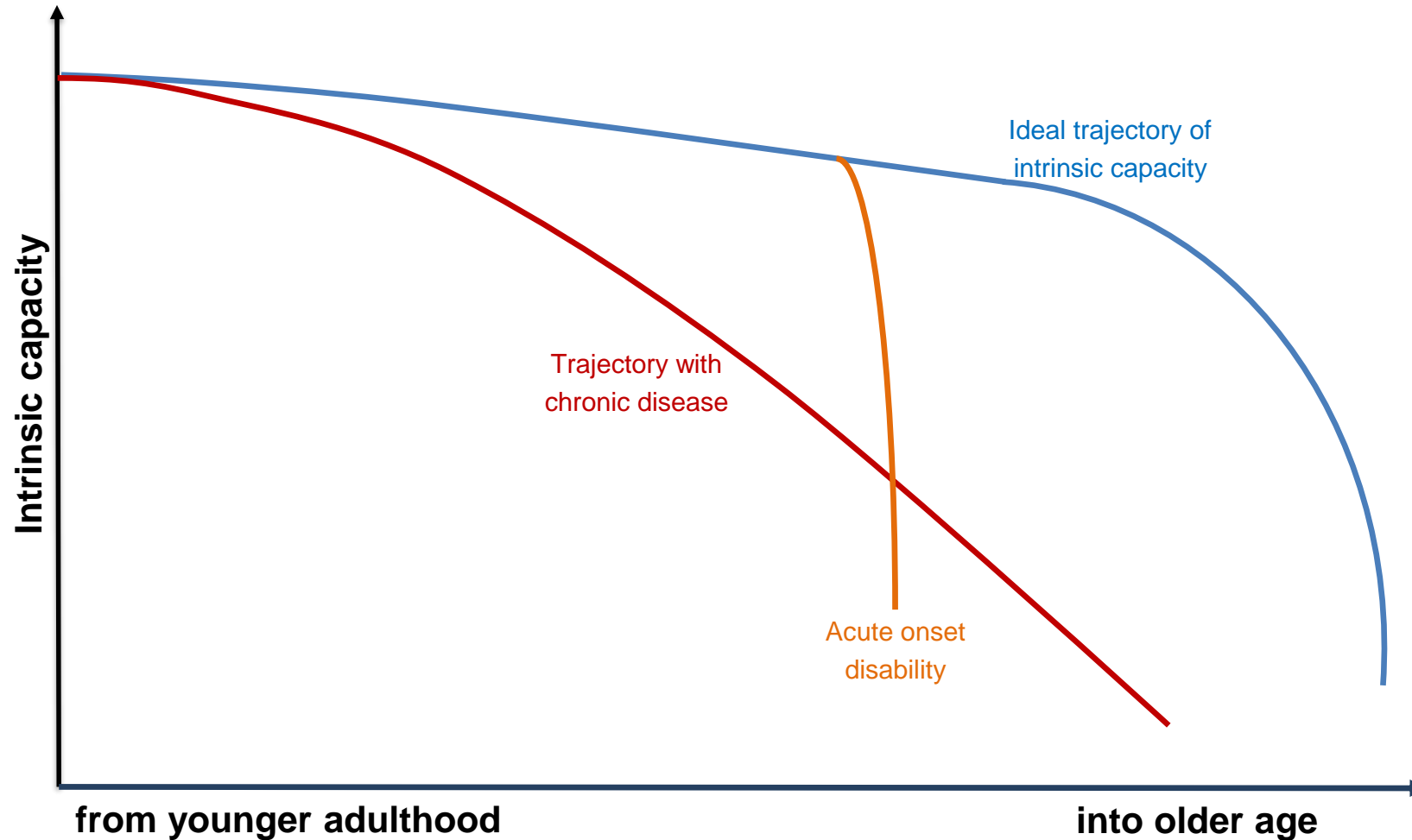


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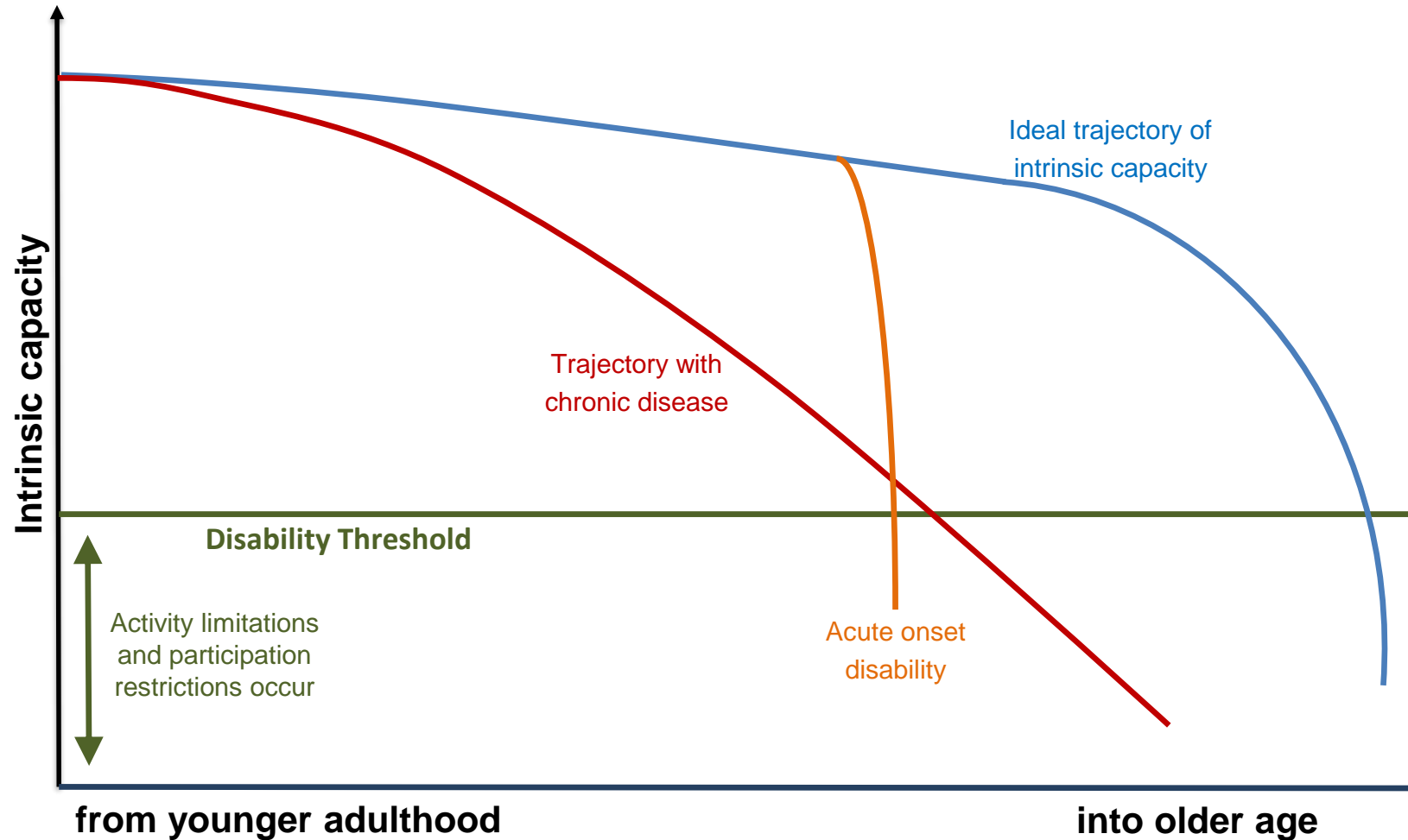
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Functional decline & functional reserve



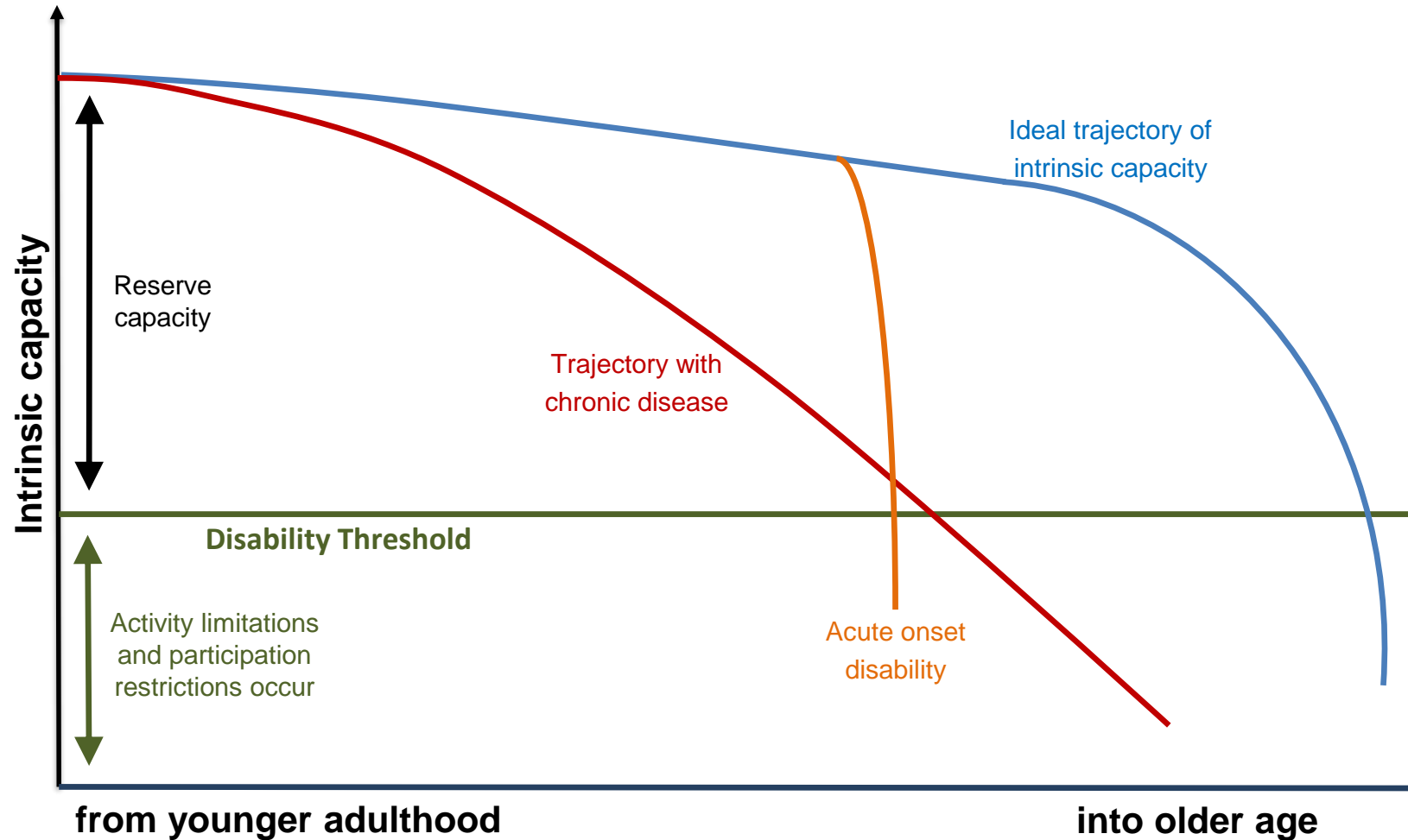
- NOTES:**
1. The 'Disability Threshold' is the point at which there is insufficient functional ability with which to undertake a particular task.
 2. The level at which the 'Disability Threshold' occurs varies depending on the nature of the task.
 3. Modified from: *Functional Capacity over the Life Course*, WHO/NMH/HPS, 2000, by A/Prof Chris Poulos, June 2014

Functional decline & functional reserve



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Functional decline & functional reserve



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The rehabilitation
(function-focused)
approach

Clinical assessment and optimal disease management

Functional assessment

Goal setting

**Evidence-based therapies and
lifestyle interventions**

**Assistive
technologies**

**Environment
modifications**

Carer support

**Services and
accommodation**

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**Driving quality and outcome improvements
in rehabilitation**

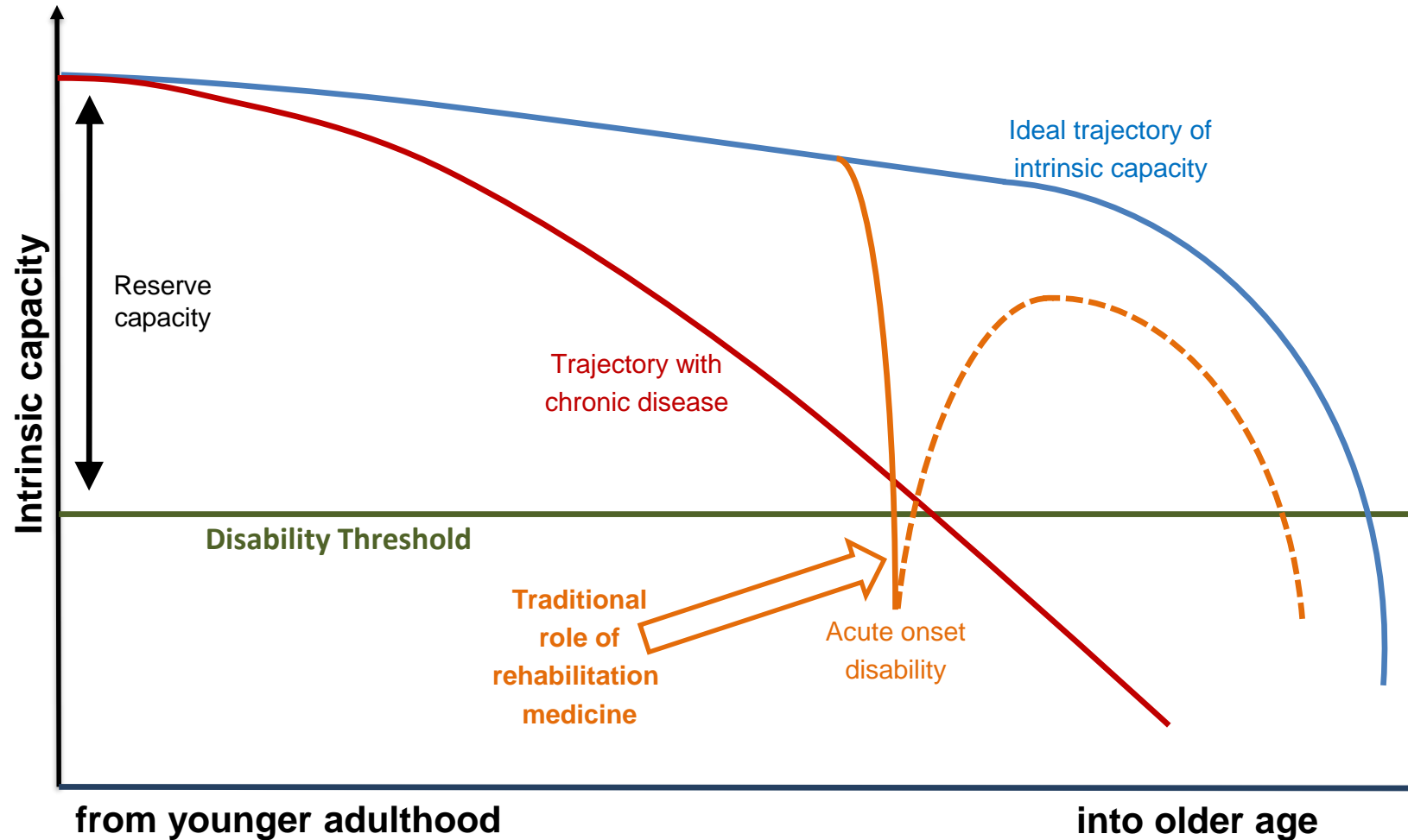
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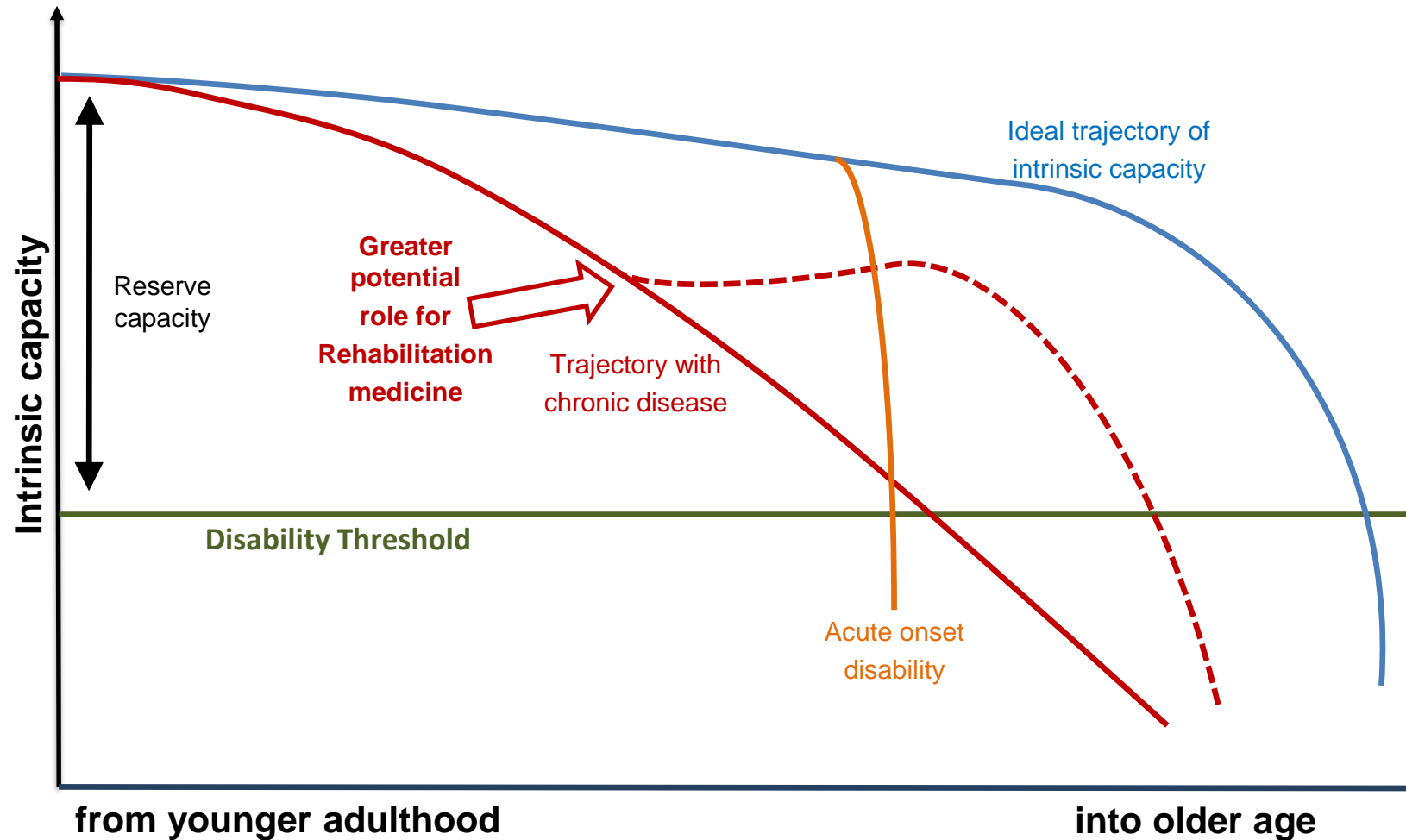
<https://ahsri.uow.edu.au/aroc/index.html>

Functional decline & functional reserve



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Function and the health, aged and disability sectors



Australian Government
Department of Health

Private Health Insurance

**CHRONIC DISEASE MANAGEMENT
INDIVIDUAL ALLIED HEALTH SERVICES UNDER MEDICARE**



**Short-Term Restorative Care
Programme Manual**
November 2017

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Outpatients



Australian Government
Department of Veterans' Affairs



Australian Government
Department of Health

**Transition Care Programme
Guidelines**

2015

Preventive health: How much does Australia spend and is it enough?

Hannah Jackson and Alan Shiell

Department of Public Health, La Trobe University
and the Australian Prevention Partnership Centre



June 2017

PREVENTION 1ST
Elevating preventive health policies to tackle chronic disease:
Australia's greatest health challenge



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Jackson H, Shiell A. (2017) Preventive health: How much does Australia spend and is it enough?
Canberra: Foundation for Alcohol Research and Education

Preventive health: How much does Australia spend and is it enough?

1.34%

Hannah Jackson and Alan Shiell

Department of Public Health, La Trobe University
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June 2017

PREVENTION 1ST
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VIEWPOINT

VOLUME 189 / ISSUE 6

Functional improvement of the Australian health care system — can rehabilitation assist?

Peter W New and Christopher J Poulos

Med J Aust 2008; 189 (6): 340-343. || doi: 10.5694/j.1326-5377.2008.tb02058.x

Published online: 15 September 2008

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Summing up

- Function is important to patients and to health outcomes.
- Throughout the life course, the approach to maximising intrinsic capacity and functional ability, and helping people adapt to lost function, changes.
- A comprehensive, multidisciplinary approach is required if we are to best address functional decline.
- Our health system can do more to support such an approach.

Summing up

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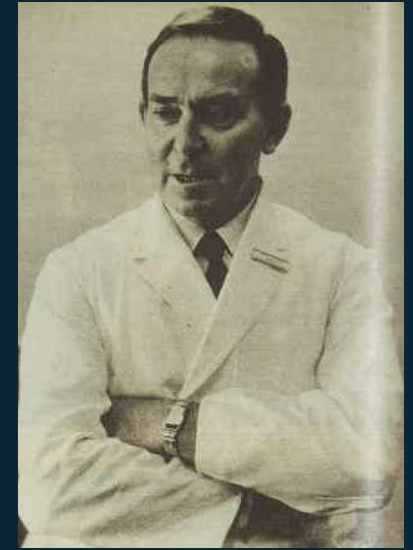


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