

An audit of physical activity provision and promotion in brain injury rehabilitation services throughout Australia in 2023: Assessing care across the continuum

Liam Johnson^{1,3}, Sakina Chagpar^{1,4}, Gavin Williams^{2,3}, Belinda Wang^{1,4}, Daniel Cheung^{1,4}, Kerry West^{1,4}, Catherine Sherrington^{1,4,5}, Sean Tweedy⁶, Grahame Simpson⁷⁻⁹, Adam Scheinberg¹⁰, Luke Wolfenden¹¹, Kelly Clanchy^{12,13}, Anne Tiedemann^{1,4,5}, Leanne Hassett^{1,4,5}.

1. Institute for Musculoskeletal Health, University of Sydney and Sydney Local Health District, Gadigal Country, Sydney, Australia; 2. School of Health Sciences, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, Melbourne, Australia; 3. Physiotherapy Department, Epworth HealthCare, Melbourne, Australia; 4. Sydney Musculoskeletal Health, Faculty of Medicine and Health, The University of Sydney, Sydney, New South Wales, Australia; 5. Sydney School of Public Health, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia; 6. School of Human Movement and Nutrition Sciences, Faculty of Health and Behavioural Sciences, University of Queensland, Brisbane, Australia; 7. Sydney School of Health Sciences, Faculty of Medicine and Health, The University of Sydney, Sydney, Australia; 8. Liverpool Brain Injury Rehabilitation Unit, South Western Sydney Local Health District, Sydney, Australia; 9. John Walsh Centre for Rehabilitation Research, Kolling Institute, Northern Sydney Local Health District, Sydney, Australia; 10. Murdoch Children's Research Institute, Melbourne, Australia; 11. Hunter New England Local Health District, University of Newcastle, Newcastle, Australia. 12. School of Health Sciences and Social Work, Griffith Health, Griffith University, Gold Coast, Australia. 13. Menzies Health Institute of Queensland, Griffith University, Gold Coast, Australia

Introduction

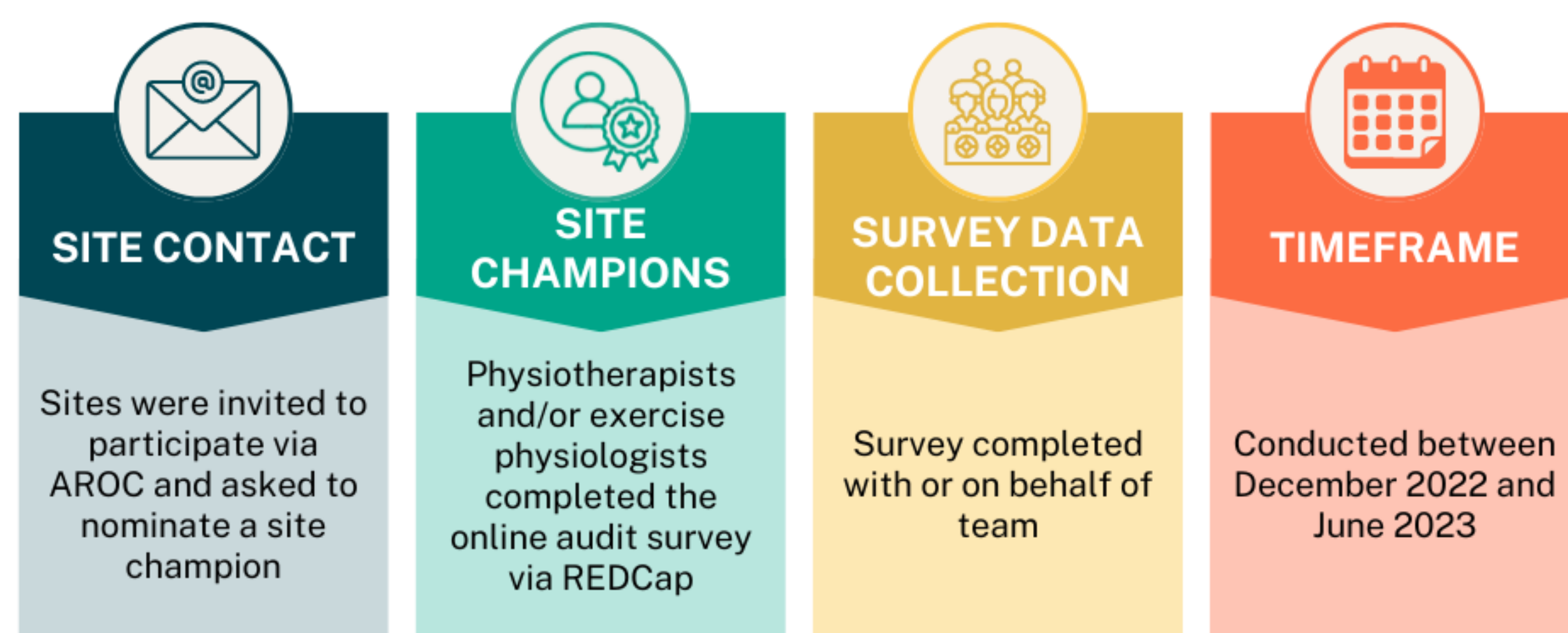
Physical inactivity is a pervasive global health challenge, particularly for survivors of traumatic brain injury (TBI). For people with moderate to severe TBI, physical activity should be prescribed and promoted within the rehabilitation setting, but our understanding of current practices is limited.

Aims

The aim of this audit was to investigate the provision of physical activity interventions in brain injury services across Australia.

Methodology

Health services providing rehabilitation to people with moderate to severe TBI were identified through the Australasian Rehabilitation Outcomes Centre (AROC) and via health and investigator networks. Forty-five (n=45) services across Australia were invited to participate in an online survey. Services were surveyed on how, and what factors influenced, their provision and promotion of physical activity, and what policies/procedures are in place to support physical activity provision and promotion. Physiotherapists and exercise physiologists at participating services completed the survey on behalf of their teams.



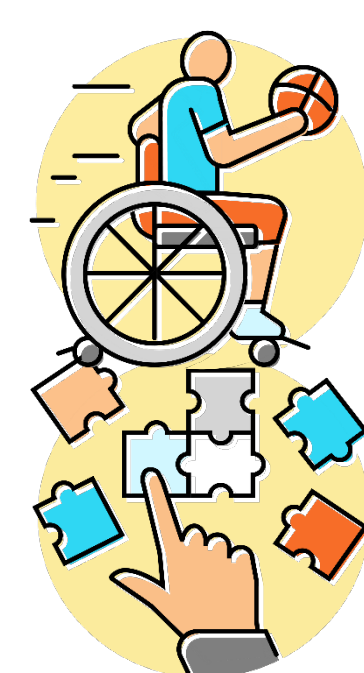
Conclusions



Physical activity provision and promotion is feasible



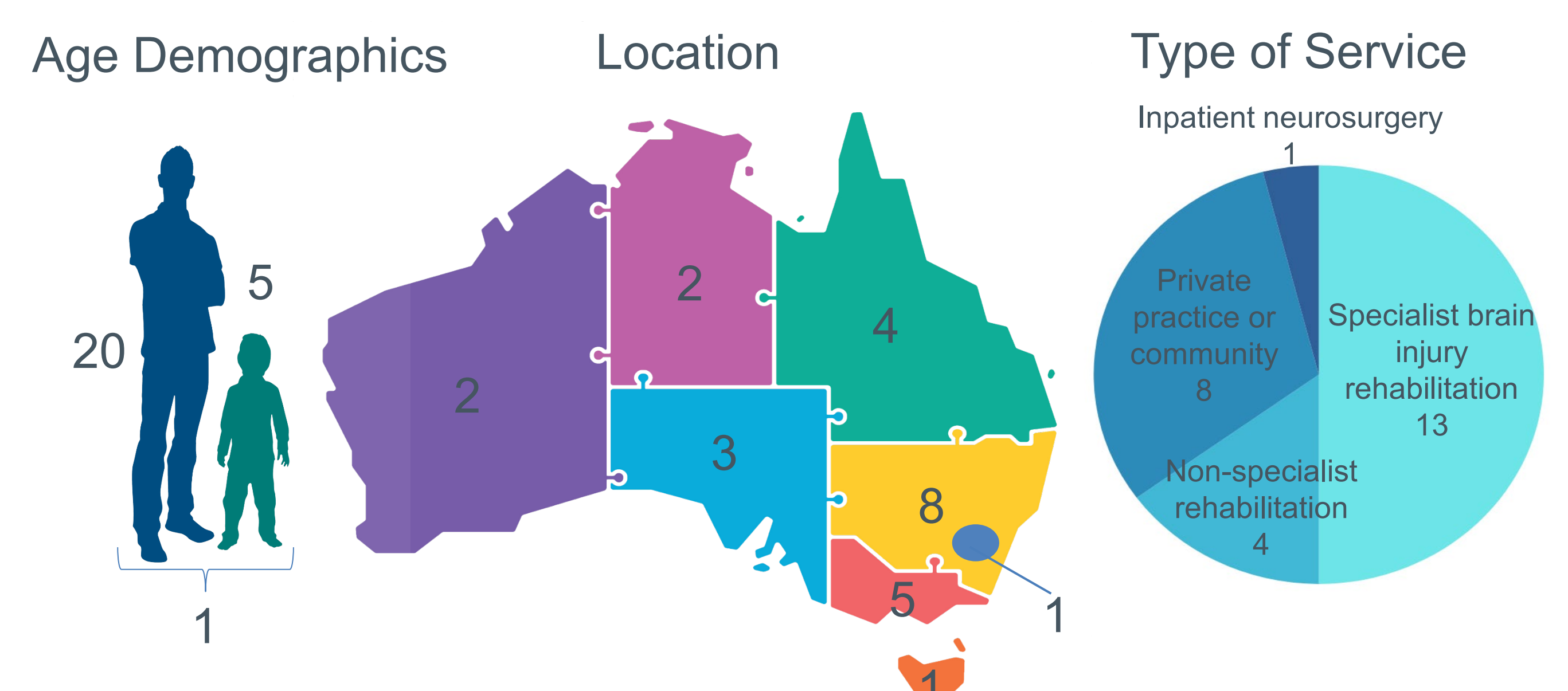
Practice gaps and inconsistencies exist



Identified barriers need to be addressed

TBI-specific and culturally appropriate resources are needed

Results



- Participating services (n=26) were in metropolitan (n=22), inner regional (n=2), and remote (n=2) areas of Australia.
- All services delivered strength and mobility training, while 25 (96%) services delivered aerobic training and promoted overall physical activity.
- All sites with paediatric services delivered unstructured play, and five of the sites servicing paediatrics also provided sport and physical recreation.
- We found inconsistencies in the dosing and assessment of aerobic fitness and muscle strength. For example, only 36% of services administer aerobic fitness tests, but 92% of services conduct muscle strength assessments.
- Barriers to delivering or promoting physical activity were identified using the COM-B framework.

