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Impact of a population based intervention to increase the physical activity promoting practices of childcare services: learnings for large scale implementation in childcare.

Meghan Finch^{1,2}, Luke Wolfenden^{1,2}, Maryann Falkiner¹, Danielle Edenden⁶, Nicole Pond¹, Louise L Hardy³, Andrew J Milat^{4,5}, John Wiggers^{1,2}

¹ Population Health, Hunter New England Health District, Wallsend, Australia

² School of Medicine and Public Health, University of Newcastle, Callaghan, Australia

³ Physical Activity, Nutrition and Obesity Research Group, The University of Sydney, Australia

⁴ Evidence and Evaluation Branch, NSW Ministry of Health, Australia

⁵ School of Public Health, Medical Foundation Building, The University of Sydney, Australia

⁶ Community Services, Samaritans Foundation, Cessnock, Australia



Why focus on physical activity?



- Physical activity contributes to:
 - Musculoskeletal health
 - Social, psychological and motor skill development
 - Obesity prevention
- Australian research suggests:
 - 44% of children not meeting physical activity guidelines during weekdays
 - 80% of time sedentary
 - 2 hours watching TV each day

Why intervene through childcare?



- Reach 72% of preschool age children
- Time and opportunity to obtain significant proportion of recommended hours
- Supportive organisational infrastructure and educational environment
- Evidence that services influence child physical activity



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Evidence to practice gap



- Evidence that interventions in this setting effective
- Room to improve policy and practice
- Limited research to inform implementation interventions

Study aim:

To describe the impact and acceptability of a population based intervention to increase the implementation of physical activity promoting policies and practices in centre based childcare services.

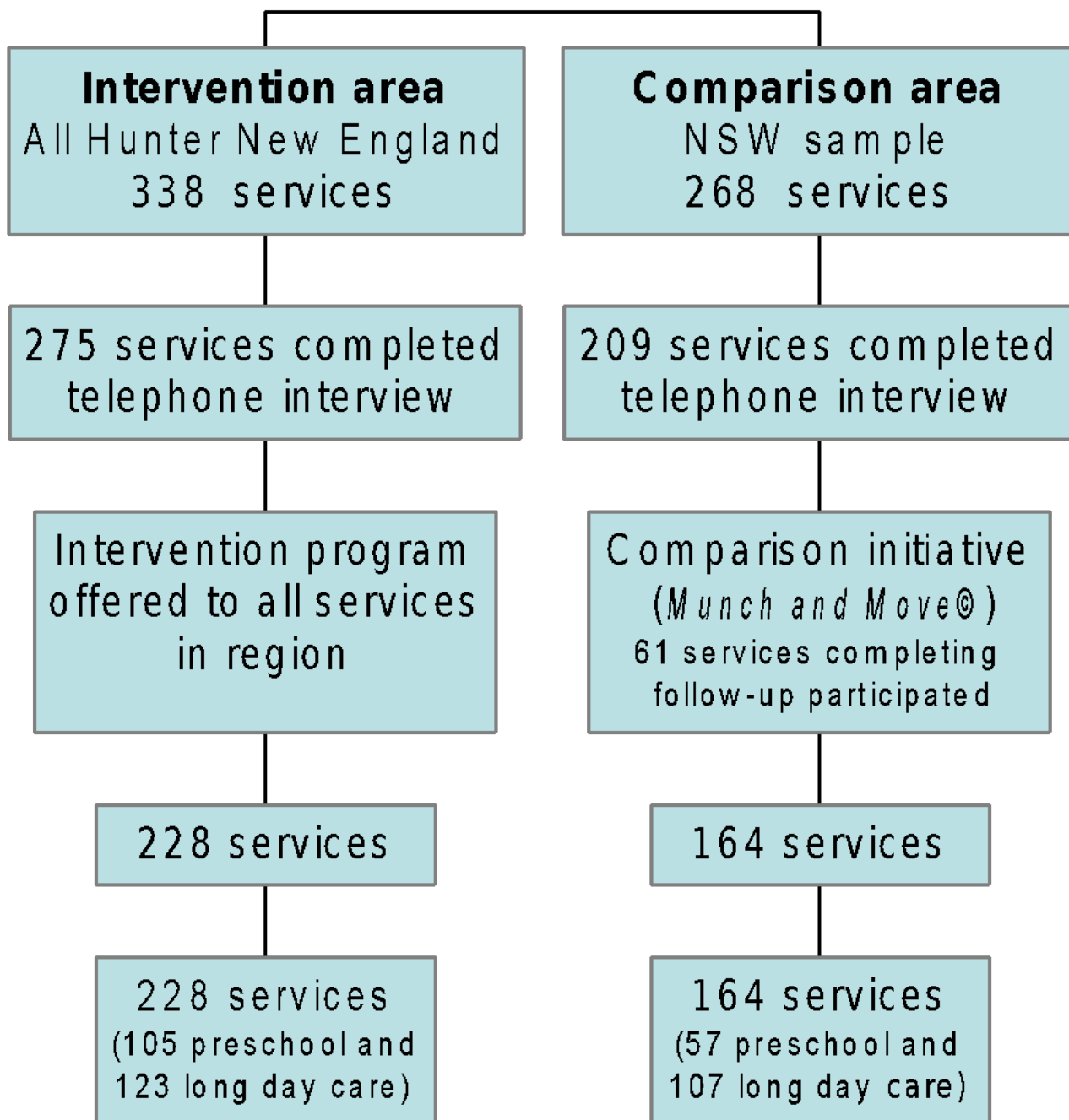
Methods

Invited to participate

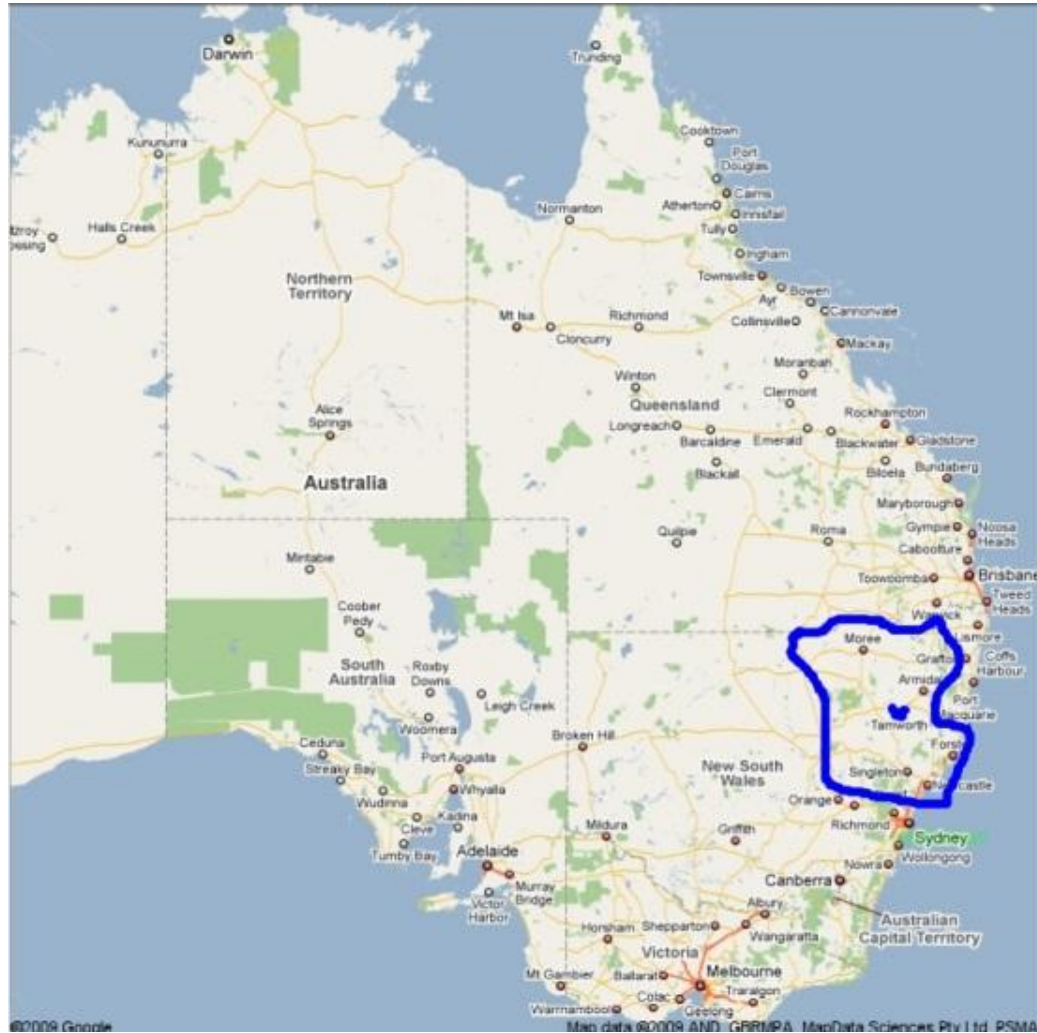
Baseline data collection
Mar- Jun 2009

Follow-up data collection
Oct-Nov 2010

Included in analysis

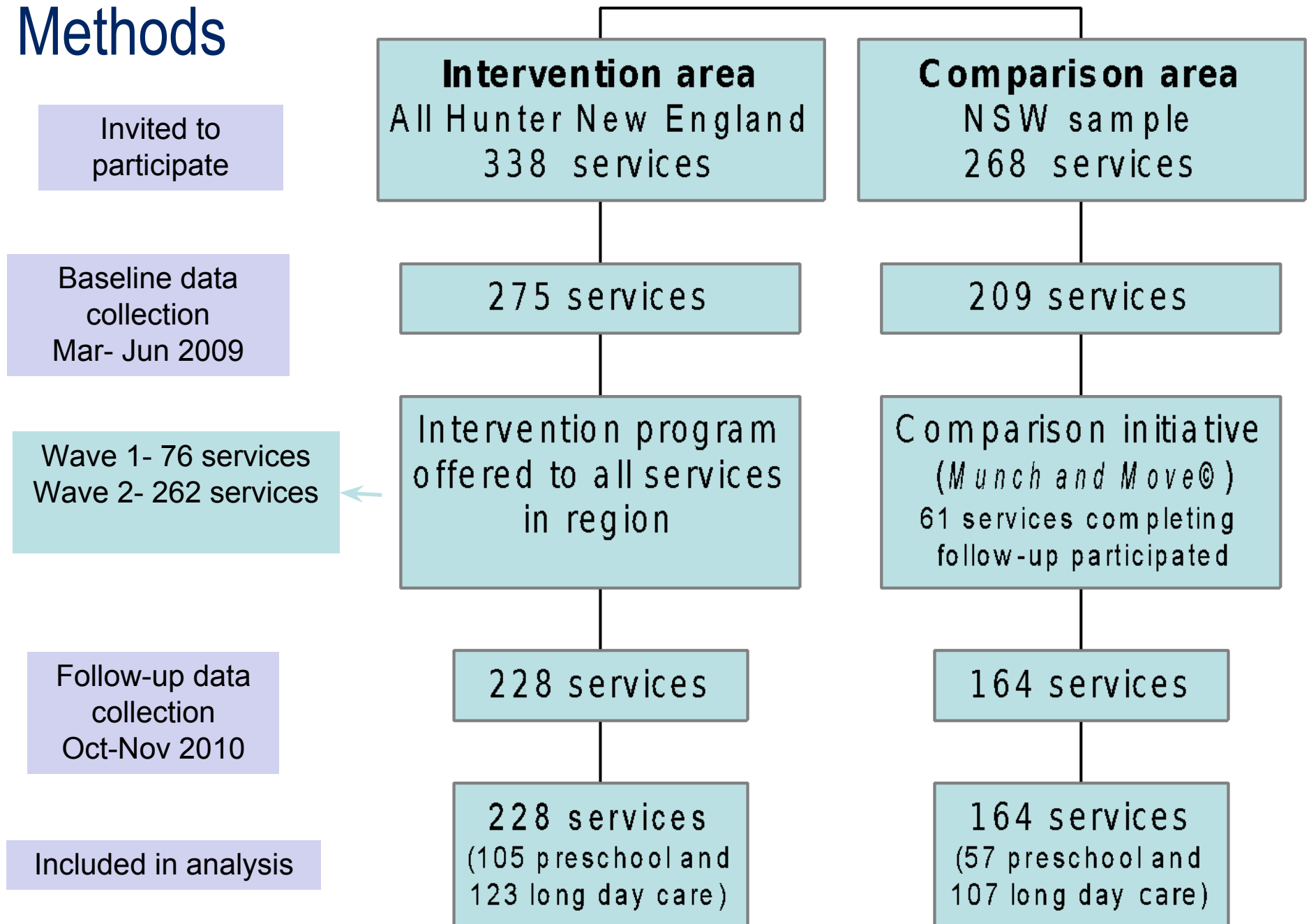


Methods



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Methods



Core components - Active ingredients



1. Service physical activity policy
2. Provision of daily fundamental movement skill sessions
3. Time spent on structured physical activities
4. Staff role modeling of physical activity
5. Staff provision of verbal active prompts
6. Limit small screen recreation
7. Limiting seated time
8. Staff with physical activity training



Implementation strategies

Strategy	Description	Reach
Training	Face to face: 6 hr workshop attended by up to 2 staff Online: 40 min web- based module	82% services participated 14% services completed
Resources	Manual, 3 instructional handbooks and DVD, games cards, posters, lanyards, policy templates, learning experiences and information for parents.	Delivered to all services
Follow-up support	2 x 15 minute scripted support calls 2 x support emails / faxes + 6 x newsletters Access to hotline	89% of services participated in both calls Delivered to all services
Performance monitoring and feedback	Support calls: Feedback to all services regarding individual service implementation Newsletters: Feedback on overall performance of services across the region	
Incentives	Services: Prize draw for educational toys and resources for physical activity policy and staff completing online training Staff: Prize draw to win holiday accommodation for completing online training	

Outcome measures



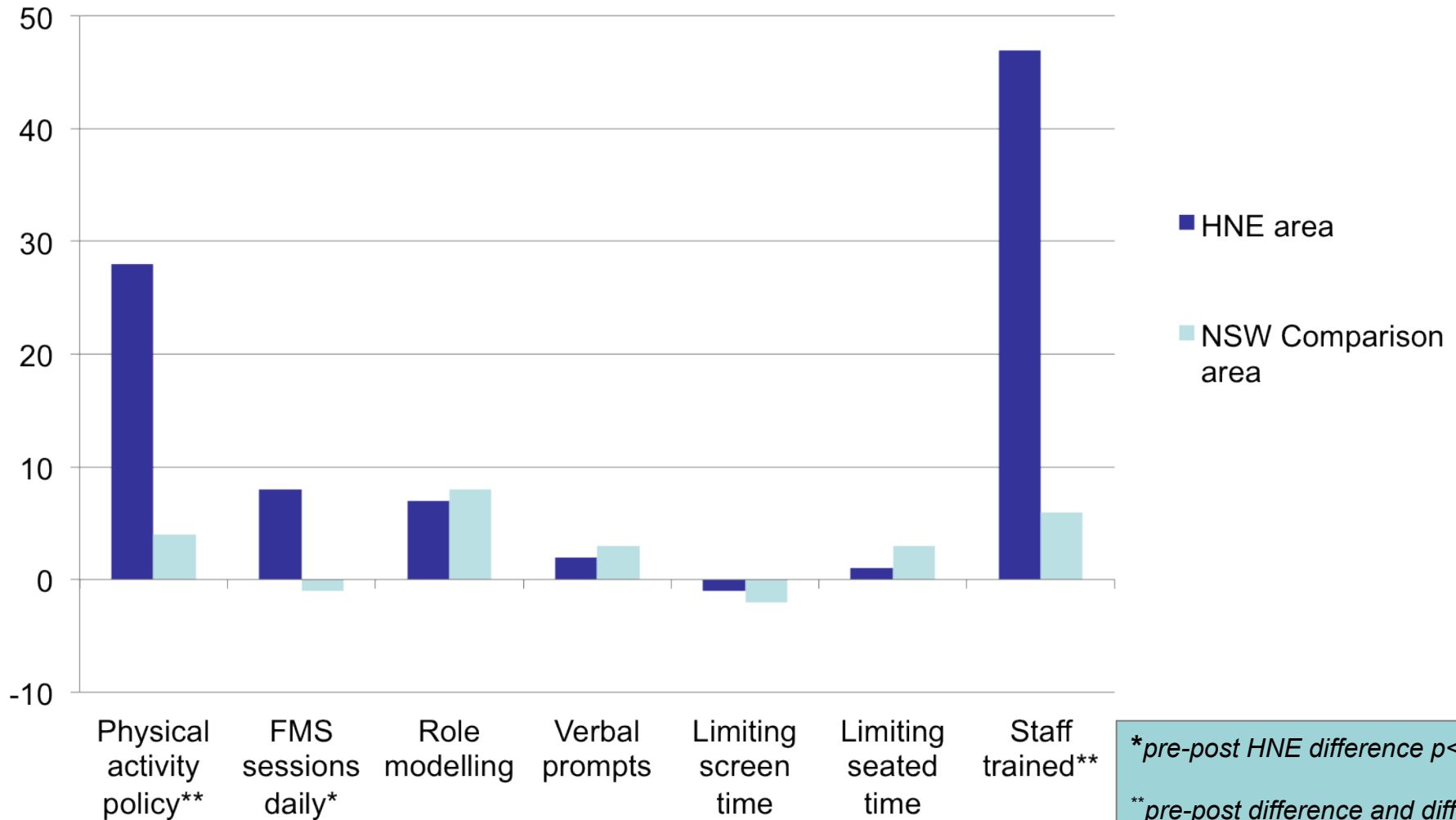
Outcome	Measure
Targeted policies and practices	<p>Services with a physical activity policy</p> <p>Services conducting daily fundamental movement sessions with recommended components (warm up, cool down, feedback, extension experiences, demonstration)</p> <p>Time spent on structured physical activities (mean hours)</p> <p>Services where all staff usually participate in free active play (role modeling)</p> <p>Services where all staff usually provide verbal prompts for physical activity</p> <p>Services where children are allowed to watch small screen recreation less than once per week</p> <p>Services where children participate in seated activities for no longer than 30 minutes at a time</p> <p>Services with staff trained in physical activity</p>
Acceptability & Satisfaction	<p>Likert scale (strongly agree, agree, disagree, strongly disagree and neutral e.g. “Children benefit from their involvement in the program” “I would recommend the intervention to other services”</p>

Results: Service characteristics at baseline by area



Variable	HNE	NSW comparison	P-value
Services in high socioeconomic area (% , 95% CI)	41 (37,46)	68 (62, 73)	<0.01
Service geographic locality(% , 95% CI)			
Major city	37(32, 41)	67 (62,63)	<0.01
Inner regional	31 (27,25)	21 (17,26)	<0.01
Outer regional	29 (25,33)	8 (5,11)	<0.01
Remote	3 (1, 4)	2 (0, 3)	<0.01
Services with children of Aboriginal background enrolled (% , 95% CI)	71 (66,75)	43 (37,48)	<0.01
Number of children enrolled (mean , 95% CI)	84 (78, 89)	70 (73, 87)	0.42
Tertiary educated staff (mean , 95% CI)	1 .3 (1.1, 1.5)	1.0 (1.1, 1.5)	0.83
Contact staff per day (mean , 95% CI)	6 (5.7, 6.3)	6 (5.6, 6.4)	0.94

% change in implementation between groups



*pre-post HNE difference $p < 0.05$

**pre-post difference and difference between intervention and comparison groups at follow-up (group x time interaction) $p < 0.05$

**** Structured time



Results: acceptability and satisfaction



- 96% agreed that they would recommend the program
- 94% would recommend the staff training
- 89% agreed that children in their service benefited from participation
- 68% found the resource kit useful
- 49% found the support calls useful



Discussion:



- Increased number of services with physical activity policy and trained staff
- Acceptable
- High participation and retention
- Feasible to deliver
- Several limitations

Key learnings:



- Delivery:
 - Improve relevance of support call
 - Increase within service reach
- Duration and dose:
 - Increase intervention length
 - Additional in person follow-up
- Implementation strategies:
 - organisational prompts and linking to setting reporting and quality improvement processes

Conclusion:



- Scope to use elements of this approach
- Greater practice change may require greater intensity and prolonged intervention
- Findings contribute to limited literature
- Insights into delivery of population based prevention in childcare



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Acknowledgements



With grateful acknowledgements of:

- My supervisors: Luke Wolfenden, John Wiggers and co-authors Maryann Falkiner, Danielle Edenden, Nicole Pond, Louise Hardy and Andrew Milat
- The population Health Early Childhood Education and Care team
- Participating Long Day Care services and preschools



Hunter New England Population Health is a unit of the Hunter New England Local Health District.

Supported by funding from NSW Health through the Hunter Medical Research Institute.



Developed in partnership with the University of Newcastle.

Resources available from:

<http://www.goodforkids.nsw.gov.au>