The impact of height and weight on rescreening rates within a population-based breast screening programs

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Overview

- Routine height and weight measurement within BreastScreen WA
- The association between body mass index (BMI) and rescreening rates
- The BreastScreen*Plus* Project targeting obesity-related barriers to screening participation

Obesity

- The clinical definition of obesity is having a body mass index (BMI) >30kg/m^2.
- The term obese is often stigmatising for women and **BMI is not necessarily a reflection of one's health**
- People-first language strives to eliminate weight-bias by not labeling the person by their condition.

Background: Routine height and weight measurement within BreastScreen WA

- Weight-measuring scales and height-measuring stadiometers were installed across WA in January 2016
- All women attending BreastScreen WA were invited to have their height and weight measured/recorded as part of their routine mammogram.
- Participation in the trial was completely voluntary.
- Women were allowed to keep their shoes on and were dressed from the waist down along with a hospital gown.

Main Finding & Implications

Original Article

J Med Screen
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SAGE

Measuring height and weight as part of routine mammographic screening for breast cancer

Ellie Darcey[1], Ravi Ambati[2], Helen Lund[3], Andrew Redfern[4,5], Christobel Saunders[4,5], Sandra Thompson[6], Elizabeth Wylie[3,4] and Jennifer Stone[1]

- Of the 204,429 clients screened during the trial period over three quarters **(76%)** participated in the height and weight measurement collection.
- As of May 2018, BreastScreen WA asks clients to voluntarily self-report their height and weight measurements

Obesity, breast cancer, and screening

Australia has one of the highest rates of obesity in the world, particularly in older women.

Women living with obesity are at increased risk of postmenopausal breast cancer.

Women with obesity are less likely to participate in breast screening

What about the association between BMI and rescreening?

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RESEARCH ARTICLE

Cancer Medicine Open Access WILEY

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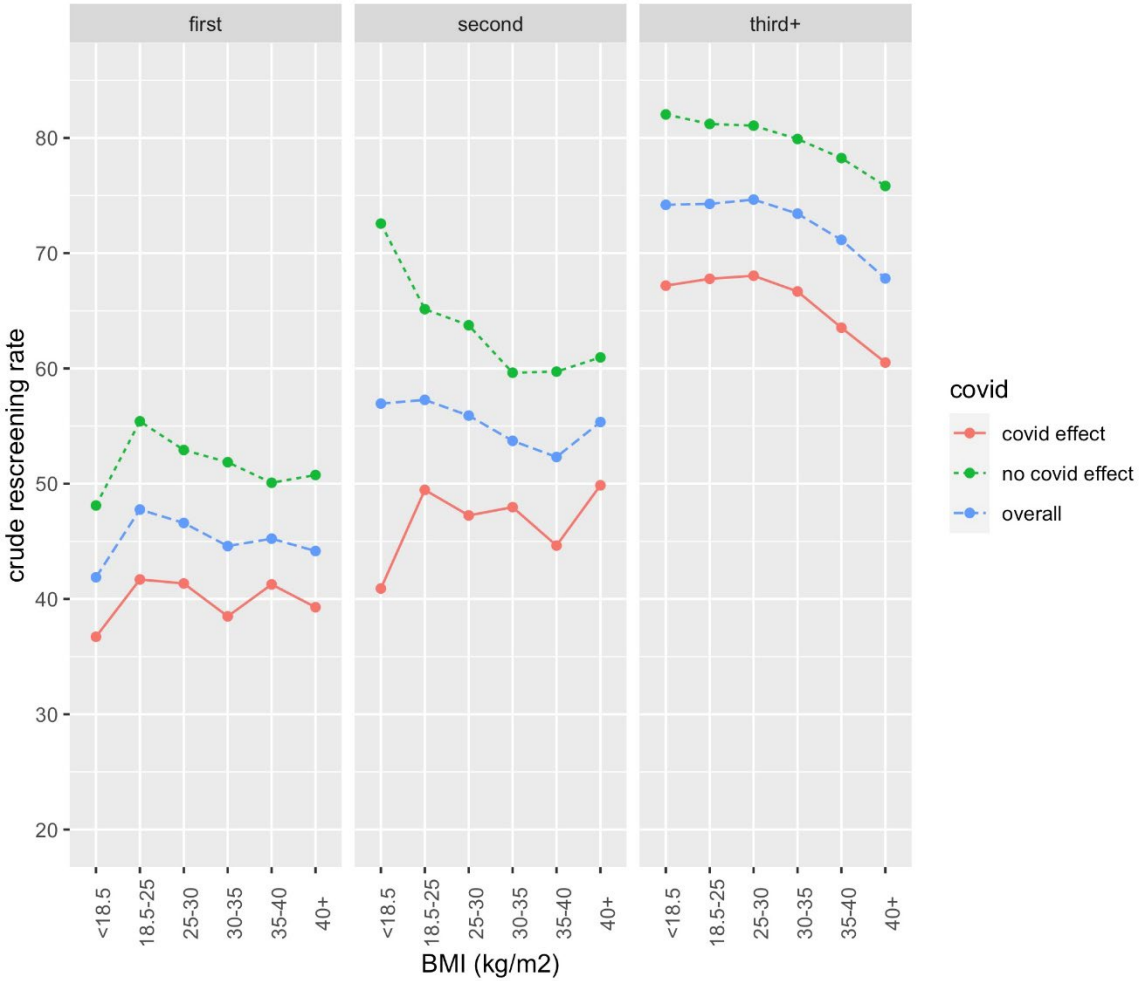
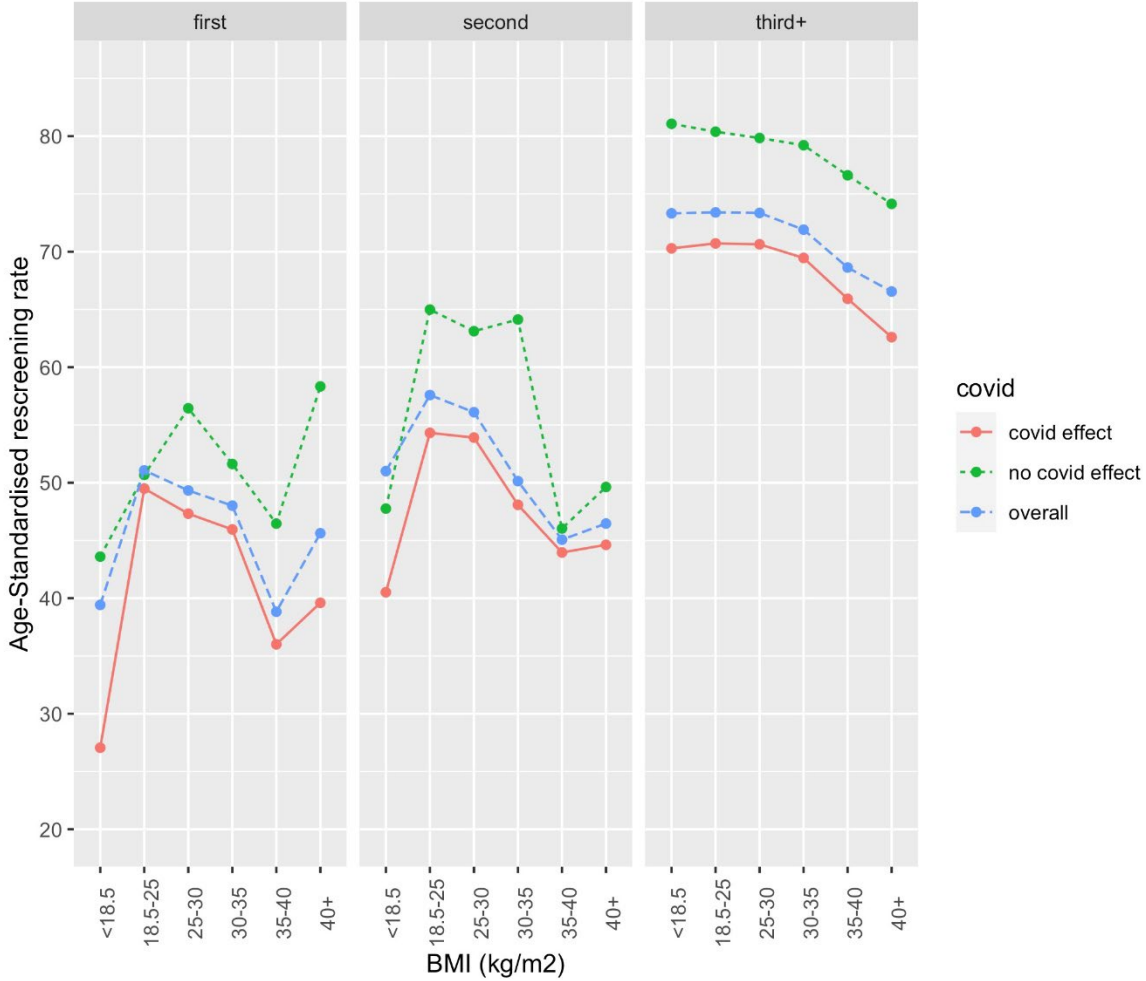
Does asking women their height and weight deter them from rescreening?

Data source	Year	First round		Second round		Third and subsequent rounds	
		Crude	ASR	Crude	ASR	Crude	ASR
BreastScreen Monitoring Report	2014	55.2%	51.9%	64.7%	62.4%	81.6%	81.6%
BreastScreen Monitoring Report	2015	53.0%	51.4%	63.0%	60.9%	80.1%	79.8%
Trial period	2016-2018	52.8% (6,242 / 11,824)	52.0%	62.6% (8,676 / 13,864)	62.7%	80.2% (100,487 / 125,323)	79.2%

Do rescreening rates differ by BMI?

Aged 50-72, 2016-2019





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- Large, prospective study that supports implementation of routine height and weight collection within breast screening programs.
- Asking women their height and weight does not deter women from returning to screening
- Women in the targeted age range with increased BMI are less likely to rescreen

Obesity-related barriers to screening

- Body image disturbances, such as body shame and body avoidance play a critical role in deterring women in larger bodies from mammographic screening.*
- Radiographers may also have negative experiences screening women with large breasts. Practical and mechanical problems may lead to frustration when screening women in larger bodies*
- Improving the mammogram experience for both women in larger bodies *and their attending radiographers* is likely to increase participation in screening.

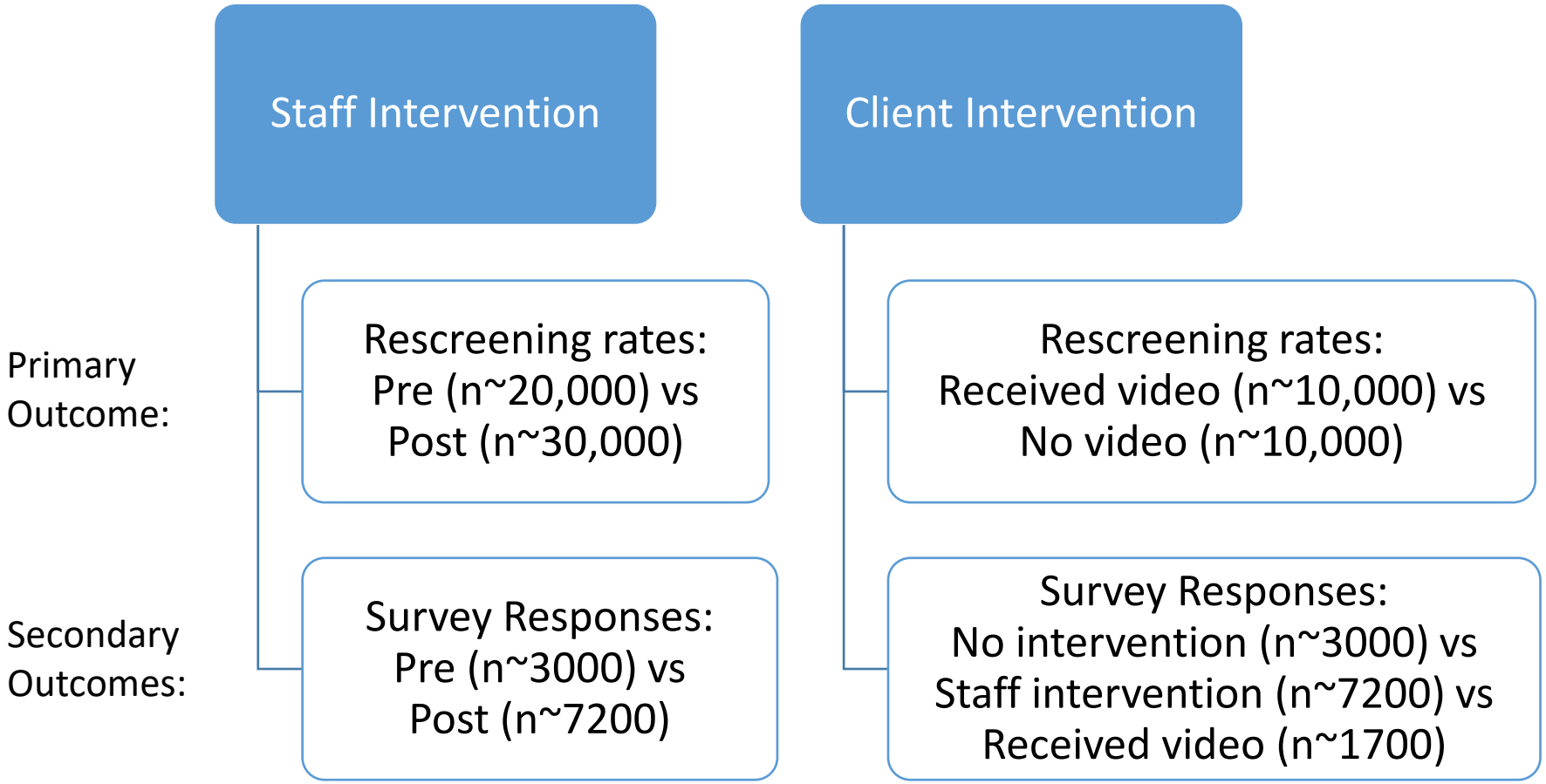
- *McBride K, Hogan S, Macmillan F. Obesity, body image and past screening experiences: impacts on breast screening participation. Public Health Prevention Conference2019.
- *McBride KA, Fleming CAK, George ES, Steiner GZ, MacMillan F. Double Discourse: Qualitative Perspectives on Breast Screening Participation among Obese Women and Their Health Care Providers. Int J Environ Res Public Health. 2019;16(4).

The BreastScreen*Plus* Project

- **Aim: co-design and evaluate a novel intervention to increase participation in breast screening for women in larger bodies**.
- The intervention has two components:
  - Promotional video for BreastScreen clients about what happens at mammography, using real women and normalizes body shapes and sizes
  - One-day in-service training for all BreastScreen service delivery staff to optimize their management of women in larger bodies, plus a 2-hour practical workshop for radiographers

6-month Implementation of Intervention

Evaluation of outcomes



Summary

- BreastScreen programs should consider capturing height and weight information at the time of screening
- Women with increased BMI are less likely to return to screening when next due
- There is an urgent need for evidence-based interventions to retain women in screening programs
- Our co-designed intervention targeting obesity-related barriers will hopefully improve rescreening rates and thereby, reduced mortality via early detection

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Royal Perth Hospital

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BreastScreen WA

National Breast Cancer Foundation

Cancer Council Western Australia

Australian Government Cancer Australia