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Behavioural and Implementation
Science Interventions
Yong Loo Lin School of Medicine



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#270 - Brief alcohol intervention in the breast screening setting? A hybrid type-II effectiveness-implementation trial

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Objectives/aims

Alcohol is a major modifiable risk factor for female breast cancer, even in very low amounts. Yet, awareness of this risk remains low, including among midlife and older-aged women who are drinking at increasingly risky levels. National breast screening programs are uniquely positioned to provide targeted alcohol information and behaviour change strategies, with potential for extensive reach. This study aimed to i) examine need and acceptability of brief alcohol intervention in the breast screening



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setting, and collaboratively design a brief alcohol intervention (Health4Her) with women in this setting; ii) test the effectiveness of Health4Her in improving awareness of alcohol as a breast cancer risk factor, improving alcohol literacy, and reducing consumption among women attending routine screening; and iii) examine the implementation strategy to accelerate the translation of this research into practice.

Methods

This was a hybrid type-II effectiveness-implementation trial comprising a randomised controlled trial (RCT) and mixed-methods program evaluation guided by the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework and Consolidated Framework for Implementation Research (CFIR). Formative evaluation comprised a retrospective analysis of alcohol consumption data, a web-based survey, and workshops/interviews with breast screening service consumers. The single-site, double-blind RCT recruited women attending routine mammography and reporting any level of alcohol consumption, who received a prototype e-health brief intervention including researcher-administered alcohol/lifestyle questions before randomisation (1:1) to the active arm (animation including brief alcohol intervention and lifestyle information) or control (lifestyle information only). Process evaluation included evaluation of trial administrative data, participant quantitative/qualitative feedback, and site staff qualitative feedback.

Main findings

This is the first known effectiveness-implementation trial of a tailored brief alcohol intervention implemented in the breast screening setting, a novel clinical setting that reaches a high-risk population previously overlooked as a target of alcohol health promotion. Formative evaluation determined need and acceptability. Of 49,240 breast screening service consumers, one-in-five ($n=8,464$, 18.3%, 95% CI 18.0–18.7) were drinking at a level exceeding current Australian guidelines for weekly consumption (>10 standard drinks). Of 391 women surveyed, 305 (78.0%) were unaware of the alcohol-breast cancer link, and 379 (96.9%) supported adding 5-minutes to their screening appointment to receive breast cancer risk reduction information. Co-production with 31 women resulted in the inclusion of audio-visual alcohol information alongside general lifestyle information to increase relevance to all women and reduce potential stigma. Results of the RCT with 557 women revealed significant increases in the proportions of participants identifying alcohol as a breast cancer risk factor at 4-weeks for active (65.4%v19.8%, OR=41.3, 95% CI 17.6–97.0) and control

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(37.8%v19.7%, OR=4.9, 95% CI 2.8–8.8) arms, with change over time greater for the active arm ($p_{\text{arm} \times \text{time}} < 0.001$). Alcohol literacy also increased in the active arm. Change in alcohol consumption was not observed. Women reported Health4Her to be trustworthy, credible and highly appropriate for breast screening services to provide. Staff were highly supportive of Health4Her as part of routine care, but reported possible implementation challenges at other screening sites, reinforcing the need for a self-completed version requiring minimal human resource to implement. The results of this study are informing further implementation research to spread and scale the intervention in a multi-site implementation-effectiveness trial using co-production.