

Factors influencing healthcare practitioners' decision to offer (or not) the choice of self-collection cervical screening in general practice in Victoria, Australia

Nicola S Creagh, Julia ML Brotherton, Jane S Hocking, Amalia Karahalios, Marion Saville, Megan A Smith, Karen Canfell, David Hawkes, Claire Nightingale

Background and objective

In July 2022, a policy change was enacted in the National Cervical Screening Program (NCSP) to allow all women and people with a cervix (hereafter people) the choice of a self-collected sample. This study aimed to understand healthcare practitioners' decisions, and factors related to, the provision (or not) of this change.

Methods

Semi-structured interviews (n=28) were conducted between February and July 2023 with general practitioners, nurses and practice managers. The COM-B model of behaviour change framework informed the analysis.

Results

Although most (n=22) interviewees reported that they, or healthcare practitioners at their practice, were providing a choice of self-collection to all, a minority (n=6) reported that either they (n=4) or their practice (n=2) were not. Factors that informed the selective provision of self-collection are reported.

Discussion

For self-collection to facilitate improved equity in the NCSP, strategies are needed to reassure healthcare practitioners that self-collection is an appropriate screening modality, and ensure people are aware of their screening choices.

ALTHOUGH AUSTRALIA is on track to be one of the first countries in the world to actively eliminate cervical cancer as a public health problem (less than four cases per 100,000),^{1,2} inequities remain. The National Cervical Screening Program (NCSP) has failed to reach Aboriginal and Torres Strait Islander people, who access screening at lower rates than non-Indigenous people.³ Participation is also lower among people who live in areas of higher socioeconomic disadvantage, and in rural and remote areas.³ The transition to primary human papillomavirus-based (HPV) cervical screening within Australia's NCSP in December 2017 facilitated the option for women and people with a cervix (hereafter people) to collect their own vaginal sample, known as self-collection, rather than undergo a speculum exam so the healthcare practitioner can collect a cervical specimen. Self-collection, as an evidence-based strategy to embed increased flexibility in how cervical screening is delivered, has been shown to increase participation among under- and never-screened people,⁴ while offering equivalence in sensitivity to clinician-collected samples for the detection of high-grade cervical intra-epithelial neoplasia 2 or above (CIN2+) when using polymerase chain reaction (PCR) assays.⁴

Australia introduced self-collection in January 2018, initially restricting access to under- and never-screened people aged 30 years or older, based on available evidence at the time, suggesting a potential loss of sensitivity for detection of CIN2+ when self-collected samples were used.⁵ In July 2022, the NCSP clinical guidelines were

updated, making self-collection available as a choice for all asymptomatic people eligible for routine screening.⁶ This change was informed by updated evidence of its equivalent accuracy to clinician-collected samples.⁴ The effective implementation of the updated guidelines, allowing all people to collect their own sample if they choose, is critical to increasing screening participation, and ensuring that the elimination targets are met equitably for all.⁷

In Australia, cervical screening is recommended at five-yearly intervals for people with a cervix, aged 25–74 years. Most cervical screening, including self-collection, occurs within general practice, in the context of a consultation. Pathology request forms need to be signed by a health professional with a Medicare Benefits Schedule (Australia's universal health insurance) provider number, hence limiting this role to general practitioners (GPs), nurse practitioners and other specialist physicians, except for specially funded schemes that support the autonomous practice of nurses in some jurisdictions. The screening guidelines currently state that every person due for screening should be offered a choice between a clinician-collected or self-collected test.⁶ Although most healthcare practitioners encourage self-collected samples to be collected in the clinic, it is allowable for collection to be done elsewhere (ie at home) if it is deemed suitable by the healthcare practitioner.⁶ The referring healthcare practitioner sends the self-collected sample to a pathology laboratory for testing in the same way that they would send the

clinician-collected sample, noting, however, that there are two self-collection collection methods in use in Australia; one that requires the healthcare practitioner to put the swab into liquid media prior to the sample being sent to pathology and another where the dry swab after collection is sent to pathology. In instances where HPV is detected, participants will either need to return to their primary care provider for a clinician-collected cervical cytology and/or to obtain a referral to a colposcopist. This model of a healthcare practitioner offering and overseeing cervical screening, including self-collection, acknowledges that support from a trusted healthcare practitioner is important for informed engagement in screening and for achieving high rates of follow-up, as observed within pilot studies.^{8,9}

Previous research found that, in the first two years of the NCSP, the restrictive eligibility criteria were a barrier to healthcare practitioners offering self-collection to under- and never-screened people;⁸⁻¹⁰ a problem now expected to be overcome by the updated guidelines and increased access to patients' prior screening histories held by the National Cancer Screening Register through the healthcare provider portal, which can now be integrated into most practice software.¹¹ Other concerns previously documented included the misconception that self-collection has inferior sensitivity,^{10,12,13} and its limited availability from a low number of pathology providers.^{14,15} The extent to which these concerns remain, in the context of the expanded guidelines for self-collection in Australia, is not known.

Since the guideline update in July 2022, there has been a month-by-month increase in the use of self-collection (4.4% of all cervical screening tests in July 2022 to 27.1% in October 2023).¹⁶ However, there is substantial variation in the extent of its use across States and Territories (15.4% in New South Wales; 41.1% in the Northern Territory)¹⁶ and between very remote (44%) and metropolitan locations (16.9%).¹⁷ This variation might be, in part, due to healthcare practitioner behaviour, with differences in the way healthcare practitioners choose to offer and facilitate the choice between clinician-collected and self-collected screening in practice.

This study aims to explore: (1) the extent to which healthcare practitioners are providing (or not providing) all screen-eligible people the choice to collect their own sample for cervical screening; and (2) the factors that influence their decisions for doing so.

Methods

This study used a qualitative semi-structured interview-based research design, using an interpretative description methodological approach within a constructivist paradigm, to explore healthcare practitioners' decisions, and reasons for, their approach to the delivery of cervical screening in the context of the availability of universal choice for self-collection. Research using an interpretative description methodological approach studies a specific phenomenon (ie the delivery of cervical screening) to integrate reasons for complex behaviour (ie provision, or not, of self-collection) among relevant individuals within their social settings (ie healthcare practitioners/those working within general practice in Victoria).¹⁸ Interpretative description emphasises clinically relevant and practical implications, and thus is a suitable qualitative methodological approach to understand the factors that influence the delivery of self-collection.¹⁸

Recruitment

A convenience sample of GPs, practice nurses (PN), nurse practitioners and practice managers working within general practice in Victoria, Australia, was recruited in two ways: (1) newsletter advertisements through Primary Health Networks where those interested contacted the research team by email; or (2) healthcare practitioner-delivered education sessions by the Australian Centre for the Prevention of Cervical Cancer where those interested expressed interest via completing an end-of-session evaluation survey. Snowball sampling was also used, via involved interviewees and their professional networks. Interviewees were eligible to participate if they worked in a Victorian general practice. Prior use of self-collection (either themselves or their practice) was not required.

Data collection

A trained qualitative researcher (NSC, female, PhD Candidate) conducted semi-structured

interviews either one-on-one or in a dyadic format¹⁹ with two or more people based at the same practice at their request by Zoom (Zoom Video Communications Inc, San Jose, CA, USA), telephone or in-person between February and July 2023. All interviewees were reimbursed for their involvement through a gift card or invoice at AUD 150.00 per hour. Informed consent was obtained from each interviewee, which included consent to audio record the interview. Only consenting interviewees were present during data collection. The interview guide was developed by the authors with extensive research and practice-based experience in the implementation of cervical screening and self-collection in the Australian context. The interview guide was tested for flow among colleagues not related to the project before the first interview was conducted. All participants were asked about their or their practice's approach in offering self-collection in the context of its universal availability, the reasons for their/their practice's approach and perceptions of its impacts. Data collection ceased when data saturation was reached, determined intuitively by the first author and confirmed by the senior author during data collection. This was defined at the point where the factors raised by those providing (or not) of self-collection were both: (1) similarly described and reoccurring; and (2) no additional factors were raised by interviewees from different interviews based at different practices.

Data analysis

Audio recordings of the interviews were transcribed verbatim by an automated transcription service (Otter.ai, Mountain View, CA, USA), with transcripts de-identified and cross-checked prior to analysis. Interviewees were provided with the option to review and amend the transcript. Our analysis comprised: (1) a content analysis,²⁰ where the whole interview and interviewees involved were categorised to the provision (or not) of self-collection; and (2) a framework analysis²¹ of the interview, using both inductive and deductive coding; the latter based on the COM-B model of behaviour change. The COM-B model of behaviour change is a well-established framework for understanding behaviour and the interplay between three interconnecting behavioural

Table 1. Demographic characteristics of interviewees from 16 Victorian general practices

	Total (N=28) n (%)
Practitioner type	
General practitioner	18 (64)
Nurse practitioner ^A	3 (11)
Practice nurse	4 (14)
Practice manager ^B	3 (11)
Gender	
Female	23 (82)
Male	5 (18)
Cervical screening practitioner^C	
Yes	21 (75)
No	7 (25)
Location	
Metropolitan	15 (54)
Rural	13 (46)

^ARegistered nurse who has undergone additional study at a Master's level or above.

^BAdministration leader responsible for managing non-clinical aspects of a general practice.

^CCervical screening provider refers to a healthcare professional that orders and oversees a cervical screening test. Non-cervical screening providers were those who supported the delivery of screening within the practice (ie were responsible for the practice's quality improvement activities and administration of recalls).

processes: (1) capability; (2) opportunity; and (3) motivation.²² For this study, the COM-B model was chosen as a suitable framework as it allows for the identification of direct or indirect influences on behaviour to propose strategies to increase the adoption of the offer of self-collection in practice. Coding was performed in NVivo (release 1.6.2.; QSR International Pty Ltd, Denver, CO, USA) by the first author, who coded data inductively according to factors that influenced interviewees approach to their delivery of self-collection within the deductive domains of the COM-B framework (final coding framework; refer to Appendix 1, available online only). Throughout the analyses, iterative discussions occurred with the senior author to ensure the appropriateness of the interpretation of findings.

Ethics approval

This study obtained ethical approval through The University of Melbourne, Human Ethics Committee (2022-23089-31430-7).

Results

We conducted 17 one-on-one interviews (mean duration: 39 minutes) and four group interviews (two to five participants, mean duration: 49 minutes). These included 18 GPs, four nurses, three nurse practitioners and three practice managers (Table 1). Most (n=21 [18 GPs, three nurse practitioners]; 75%) interviewees were cervical screening practitioners. All practice managers and practice nurses supported the delivery of screening within their practice.

The following information outlines participants' self-reported adoption of self-collection as a choice for all people and frames their rationale for this practice change within the domains of the COM-B framework – capability, motivation and opportunity (Figure 1).

Self-reported adoption of self-collection as a universal choice

Most (n=17 of 21) cervical screening providers interviewed reported that they

provided the choice of self-collection consistent with the guidelines. Conversely, four cervical screening providers interviewed (of 21) reported to prefer offering cervical screening via clinician-collection screening.

Most (n=5 of 7) non-cervical screening providers (practice nurses and practice managers) supported its universal availability and reflected that self-collection was being offered at their practice. At one practice, however, two participants (a non-screening practice manager and nurse who supports patients with bookings and cervical screening information) reported that screening at their practice was predominantly offered via clinician-collected screening, except in circumstances where a person specifically requests self-collection, as described by the following quote:

We've had a couple (of patients) who have come asking to do a self-collect, and that is on the back of them receiving a letter about self-collect. ... But the conversation I had (with the patient) was along the lines of, 'when you're next due ... it'd be beneficial to consider a proper pelvic examination ... from our practice point of view, it's still optimal to get a thorough pelvic examination. (PN, female)

Interviewees' rationale for providing universal access to self-collection

Among interviewees who were providing the choice of self-collection, **motivation** was a key driver of their adoption. Interviewees believed that the provision of screening options can 'improve the screening process' (Interview ID number [I22], GP), and increase screening uptake. As such, offering the choice of self-collection and giving people the choice between screening modalities had increased uptake of screening, and might better meet the needs of their clients.

I think it's sort of giving those women a choice and it has definitely increased the uptake of the screening program. Because otherwise ... whether you know, they are shy around it (clinician-collected screening) or have trauma around it, you know. It's just something they're not comfortable with. (GP, female)

Several **opportunities** were identified by these interviewees. Providing self-collection was described as ‘time efficient’ (I3, GP), allowing for either more time within the consultation to discuss other health issues, or shorter consultations:

It saves a lot of time for the service and the GPs, as well, for self-collection. So, it's sort of a nice balance of ease of use, privacy and easy collection for the patient, but also freeing up the GP. (GP, female)

Additionally, there was a perception among interviewees that self-collection allows greater potential for opportunistic screening within time-limited consultations. As noted by this healthcare practitioner, the availability of self-collection further provided greater **opportunities** for male healthcare practitioners to provide cervical screening to their patients:

I don't see a lot of women coming in for cervical screening to see me. But definitely, since the program (self-collection) has been available, I've done a lot more referrals for self-collection (GP, male)

Interviewees in support of self-collection also reported positive feedback from screen-eligible people because of their belief that they were **capable** to collect their own sample:

I think the fear ... you can see it, you know, when you just show them, you know, they go 'that's so simple. I could do it'. (GP, female)

Interviewees' rationale for considering clinician-collection to be superior to self-collection

Interviewees who maintained a preference for clinician-collected screening were **motivated** by the belief that clinician-collected screening was better for the patient as it included a more

comprehensive physical examination, which might identify incidental gynaecological or reproductive health issues.

It (clinician-collected screening) is patient centred. ... It is offering the best intervention for our patients. It's about not only collecting and making sure that they have no cancer, it's about ensuring there is nothing else going on for them. (PN, female)

Many interviewees who believed clinician-collected screening was superior were concerned about the **capability** of patients to perform self-collection and of the practice to handle the sample. These healthcare practitioners discussed barriers associated with various processes for different self-collection devices and timelines required for delivery to pathology. This uncertainty was compounded by undefined internal systems for self-collection within their practice.

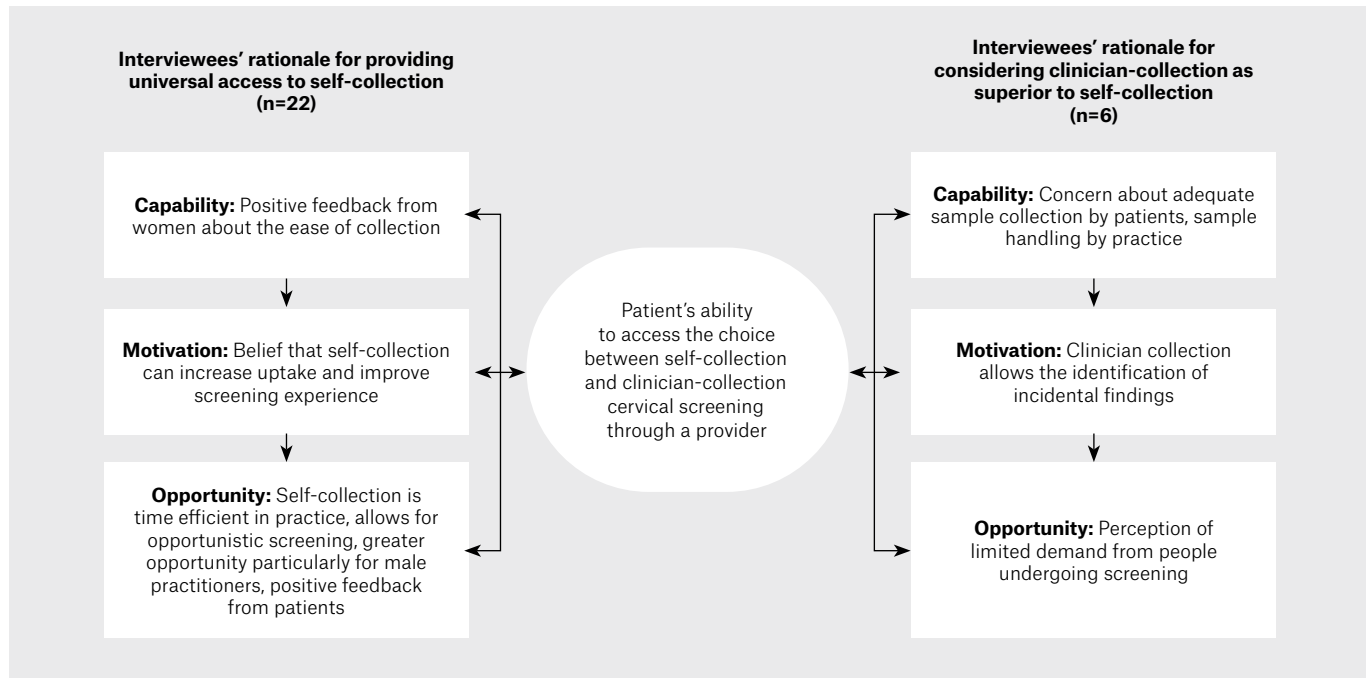


Figure 1. An overview of the findings mapped to the COM-B model of behaviour change framework identified in interviews with general practitioners, nurses and practice managers (n=28) relating to the provision of self-collection as a universal choice for cervical screening in general practice in Victoria, Australia.

Findings based on the COM-B model for behaviour change:²² (1) Capability: psychological and physical capacity to engage in the activity concerned, including the necessary knowledge and skills; (2) Motivation: brain processes that energise and direct behaviour, including goal, conscious decision making, habitual processes, emotional responding and analytical decision making; and (3) Opportunity: the external factors that make the behaviour possible or prompt it.

Apparently, there's a timeframe about how long the swab has been sitting there on the counter. So, the dry swab has to be delivered to the pathology lab within a timeframe. Whereas, if they bring it in, then if they do need to have it dipped into a medium, like a jar of liquid, then it becomes whether it's a reception job, whether it's a nurse job, whether it's a doctor's job. So that's where we are quite struggling with. (GP, female)

The approach of these interviewees, to largely provide clinician-collected cervical screening, was reinforced by their perception that their patients were happy with clinician-collection screening (**opportunity**):

I'll be honest, I don't always offer it. I don't know if I should be. Maybe I should be. I don't always offer it because like, a lot of my patients are happy just to have a traditional speculum examination. (GP, female)

Discussion

Increasing access to screening by increasing flexibility in how it is offered (including self-collection) is a key strategic priority in Australia's National Strategy for the Elimination of Cervical Cancer.⁷ Despite the substantial increase in the use of self-collection, national data indicate variation in uptake between jurisdictions and geographic areas.¹⁶ This study provides the first qualitative insight into factors that might be influencing healthcare practitioners' behaviour in relation to offering self-collection to screen-eligible people and indicates that there are some who are not yet doing so. We report factors related to capability, motivation and opportunity are impacting their adoption of self-collection. This variation in adoption is likely to have implications for the extent to which the guideline update allowing self-collection will be able to support greater equity within Australia's NCSP.

Patient-centred care is based on the 'fundamental concept of partnership between healthcare professionals and patients';²³ patients' preferences, values and autonomy are key.²⁴ Reassuringly, all interviewees in this study were motivated to provide high-quality and comprehensive cervical screening. Some providers recognised that offering the

choice of self-collection to everyone provided a new avenue for screen-eligible people to exercise their autonomy by choosing a screening option; a choice likely influenced by their values and previous healthcare experiences.^{25,26} However, others considered that providing what they thought to be the most comprehensive preventative health check was more patient-centred; thus, they might not always offer patients the choice of screening modalities. Regardless of healthcare practitioners' motivation, the current NCSP guidelines state that screen-eligible people should be offered the choice of collection method.⁶ Upskilling providers to undertake a shared decision-making process with screen-eligible people, which clearly articulates essential information about the implications of each choice, to support people choosing an option that aligns with their values and optimises their healthcare experience, is a priority.

To date, the Australian literature on the barriers to self-collection experienced by healthcare practitioners has focused on the limitations created by the restricted eligibility criteria,^{8,9,12} perceptions of test accuracy^{10,12,13} and the limited availability of pathology providers.^{14,15} Concerns about test accuracy likely stemmed from evidence used by the NCSP to restrict access to self-collection to under-screened people when first introduced in 2017.⁵ This evidence has now been superseded, with an updated meta-analysis demonstrating that if a PCR-based assay is used, the sensitivity is equivalent.⁴ The use of self-collection as a mainstream test is also supported by an Australian modelling study, showing that even if there was a small loss in sensitivity, the overall benefit of increasing participation through offering self-collection to all screen-eligible people would likely outweigh this loss.²⁷ Over the past few years, a commercially available test has been approved by the Australian Therapeutic Goods Administration, allowing greater uptake by pathology companies, mitigating the previous challenge of limited pathology providers.^{14,15} However, interviewees in our study did highlight continued challenges with the logistics of selecting the correct swab type, correct handling and understanding transport requirements, as these differ between pathology companies.

Among those interviewed, those who reported not consistently offering the choice of self-collection cited the missed opportunity for a speculum examination, which might identify incidental findings related to the vagina, external genitalia or cervix, other than cervical pre-cancer or cancer. Australian guidelines do not recommend routine genital inspection at cervical screening for asymptomatic women, but it can be offered for those at risk of vulvar disease.⁶ This position is also reflected in the Royal Australian College of General Practitioners' and international recommendations, which have all moved away from 'routine' pelvic examinations (insertion of a speculum and vaginal examination).^{28,29} Despite these recommendations, and available evidence that visual inspection and pelvic examination are not indicated for asymptomatic women,^{6,28,29} this is not guiding practice among many healthcare practitioners. Dissemination of targeted information addressing the concern that healthcare practitioners have of 'missing something' is needed to ensure a more optimal uptake of the offer of self-collection.

Interviewees, particularly those not routinely offering the choice of self-collection, were also concerned about adequate collection of the self-collected sample. This concern is also very frequent in studies of screen-eligible people discussing self-collection in a theoretical context;³⁰ however, the majority of those who have performed self-collection report being confident in doing so.³¹ As greater access to self-collection is facilitated within the NCSP, monitoring the unsatisfactory rate of self-collected samples in the program is important. This low rate (1–4%) has declined further since the change from restricted to universal access to self-collection.¹⁷

Findings from this study, mapped to the COM-B model of behaviour change, can be used to inform strategies to improve the adoption of self-collection in Australia's NCSP, recognising that multicomponent strategies are likely required to address the myriad of factors influencing healthcare practitioners' provision (or not) of the choice between self- and clinician-collection for cervical screening.³² To improve capability, practical guidance around

pathology consumables and logistics could be created. Healthcare practitioners can also be reassured that patients are readily able to collect their own samples correctly (given it is a low-mid vaginal swab and not required to be near the cervix) when given appropriate instructions.³¹ Decision aids are also an evidence-based intervention, which can improve informed values-congruent decision making.³³ In the context of the NCSP, decision aids could be co-designed by healthcare practitioners and screen-eligible people to promote greater shared decision making in practice. To improve opportunity, a planned national promotion campaign to the public will help to drive demand among people eligible for screening. Intervention champions have been shown to be a useful strategy to drive clinical practice change.³⁴ This intervention could be scaled to a whole-of-system level where healthcare practitioner and screen-eligible 'champions' provide positive testimonials about their experience of self-collection, which is communicated broadly as a form of promotion. Further, promotion of other opportunities that self-collection can create, including the facilitation of opportunistic screening and a greater involvement of male healthcare practitioners, could be leveraged. Finally, to address motivation, updates to cervical screening education modules and greater guidance within the NCSP guidelines, which specifically address concerns about potential missed opportunities for genital inspection, would be beneficial.

Limitations

Our sample was drawn from a convenience sample in Victoria, Australia, only, rather than nationally. Our qualitative research design is not intended to be representative of all healthcare practitioners and a larger study would be required to quantify the extent to which the offer of self-collection is being provided by healthcare practitioners. However, our findings build upon earlier work by Creagh et al⁸ and provide general insights from healthcare practitioners' perspectives, which might be applicable to other jurisdictions in Australia. We recognise that the perspectives of screen-eligible people should be central in the evaluation of the implementation of this guideline change; this is a focus of ongoing work.

Conclusion

We report the first qualitative findings on variations to the National Cervical Screening Program (NCSP) and factors that influenced how the recent guideline change, which expanded access to self-collection, has been implemented in practice. Our study provides an indication that there is variation in the delivery of self-collection within general practice in Victoria, given that a minority of interviewees reported predominantly providing clinician-collected screening. For these interviewees, factors that influenced their approach included the perceived loss of opportunity to perform a genital examination that might identify incidental findings, complexities in the sample logistics for different laboratories, and a perception that patients might be unable to collect their own sample. For self-collection to facilitate improved equity in the NCSP, strategies are needed to reassure healthcare practitioners that self-collection is an appropriate screening modality and to ensure that people are aware of their screening choices.

Authors

Nicola S Creagh BAdSc, MPH, Research Assistant, Centre for Health Policy, Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Vic

Julia ML Brotherton BMed (Hons), MPH (Hons), Grad Dip App Epi, FAFPHM, PhD, GAICD, Professor of Cancer Prevention Policy and Implementation, Centre for Health Policy, Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Vic

Jane S Hocking BAdSc, MPH, MHS, PhD, Professor, Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Vic

Amalia Karahalios BSc, MPH, PhD, Associate Professor of Biostatistics, Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Vic

Marion Saville MB ChB, Am Bd (Anat Path & Cytopath), FIAC, Grad Dip Med (Clin Epi), GAICD, Executive Director, Australian Centre for the Prevention of Cervical Cancer, Melbourne, Vic

Megan A Smith BE, MPH, PhD, Senior Research Fellow, The Daffodil Centre, The University of Sydney (a joint venture with Cancer Council NSW), Sydney, NSW

Karen Canfell D Phil, Professor and NHMRC Leadership Fellow, School of Public Health, The University of Sydney, Sydney, NSW

David Hawkes BSc (Hons), PhD, CCS, MAICD, Director, Molecular Microbiology, Australian Centre for the Prevention of Cervical Cancer, Melbourne, Vic

Claire Nightingale BSc (Hons), MSc, PhD, Associate Professor, Centre for Health Policy, Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Vic

Competing interests: MS and KC are investigators on the Compass trial for which MS and DH's organisation, the Australian Centre for the Prevention of Cervical Cancer (ACPCC), has received kits and partial funding from Roche. ACPCC has received equipment or supplies from Abbott, AusDiagnostics, BD, Cepheid, Copan, Hologic, Microbiologics, MicroBix, NRL, Qiagen, Rovers, Roche and Seegene for research and validation studies. JMLB was previously employed by the ACPCC. KC, MS and MAS are investigators on the 'Elimination of Cervical Cancer in the Western Pacific' program, which has received support from the Minderoo Foundation and equipment donations from Cepheid Inc. CN, MS and DH are members of the National Cervical Screening Program Clinical Advisory Committee. NSC, JSH and AK have no competing interests to declare.

Funding: This study was funded by the Victorian Government, acting through the Victorian Cancer Agency grant (CPRSG19022). The funder did not play any role in the study design, data collection, analysis or interpretation, reporting or publication. NSC is supported by an National Health and Medical Research Council Postgraduate scholarship (APP2014266) and an Australian Government Training Program Scholarship. CN is supported by a Mid-Career Research Fellowship from the Victorian Government, acting through the Victorian Cancer Agency (MCRF21039). JSH and KC are supported by a NHMRC Investigator Grant (JSH, APP2025960; KC, APP1194679).

Provenance and peer review: Not commissioned, externally peer reviewed.

Correspondence to:
n.creagh@unimelb.edu.au

Acknowledgements

The authors would like to acknowledge and thank all participants who provided their time to participate in this study. We would like to acknowledge and thank Alexis Butler, Wendy Pakes and Hannah Saunders for their support in the recruitment for this study. We thank Georgia Bartlett for their support in the cleansing of the data for this study.

References

1. World Health Organization (WHO). Global strategy to accelerate the elimination of cervical cancer as a public health problem. WHO, 2020. Available at www.who.int/publications/i/item/9789240014107 [Accessed 25 October 2024].
2. Hall MT, Simms KT, Lew JB, et al. The projected timeframe until cervical cancer elimination in Australia: A modelling study. *Lancet Public Health* 2019;4(1):e19–27. doi: 10.1016/S2468-2667(18)30183-X.
3. Australian Institute of Health and Welfare (AIHW). National Cervical Screening Program monitoring report 2023. AIHW, Australian Government, 2023. Available at www.aihw.gov.au/reports/cancer-screening/ncsp-monitoring-2023/summary [Accessed 25 October 2024].
4. Arbyn M, Smith SB, Temin S, Sultana F, Castle P; Collaboration on Self-Sampling and HPV Testing. Detecting cervical precancer and reaching underscreened women by using HPV testing on self samples: Updated meta-analyses. *BMJ* 2018;363:k4823. doi: 10.1136/bmj.k4823.
5. Arbyn M, Verdoodt F, Snijders PJF, et al. Accuracy of human papillomavirus testing on self-collected versus clinician-collected samples: A meta-analysis. *Lancet Oncol* 2014;15(2):172–83. doi: 10.1016/S1470-2045(13)70570-9.
6. Cancer Council Australia. National cervical screening program: Guidelines for the

- management of screen-detected abnormalities, screening in specific populations and investigation of abnormal vaginal bleeding. Cancer Council Australia, 2022. Available at www.cancer.org.au/clinical-guidelines/cervical-cancer/cervical-cancer-screening [Accessed 25 October 2024].
7. Australian Centre for the Prevention of Cervical Cancer (ACPCC). National Strategy for the Elimination of Cervical Cancer in Australia. ACPCC, 2023. Available at www.health.gov.au/resources/publications/national-strategy-for-the-elimination-of-cervical-cancer-in-australia?language=en#:::text=Extending%20the%2090%25%20HPV%20vaccination,commitment%20to%20achieving%20equitable%20elimination [Accessed 25 October 2024].
 8. Creagh NS, Zammit C, Brotherton JM, et al. Self-collection cervical screening in the renewed National Cervical Screening Program: A qualitative study. *Med J Aust* 2021;215(8):354–58. doi: 10.5694/mja2.51137.
 9. Zammit C, Creagh N, Nightingale C, et al. 'I'm a bit of a champion for it actually': Qualitative insights into practitioner-supported self-collection cervical screening among early adopting Victorian practitioners in Australia. *Prim Health Care Res Dev* 2023;24:e31. doi: 10.1017/S1463423623000191.
 10. Sultana F, Roeske L, Malloy MJ, McDermott TL, Saville M, Brotherton JML. Implementation of Australia's renewed cervical screening program: Preparedness of general practitioners and nurses. *PLoS One* 2020;15(1):e0228042. doi: 10.1371/journal.pone.0228042.
 11. Gertig D, Lee J. Supporting health care providers in cancer screening: The role of the National Cancer Screening Register. *Med J Aust* 2023;219(3):94–98. doi: 10.5694/mja2.52029.
 12. Foo YM, Goswami P, Grogan J, et al. Incorporation of human papillomavirus self-sampling into the revised National Cervical Screening Program: A qualitative study of GP experiences and attitudes in rural New South Wales. *Aust J Prim Health* 2021;27(4):284–90. doi: 10.1071/PY20209.
 13. Verbunt E, Boyd L, Creagh N, et al. Health care system factors influencing primary healthcare workers' engagement in national cancer screening programs: A qualitative study. *Aust N Z J Public Health* 2022;46(6):858–64. doi: 10.1111/1753-6405.13272.
 14. Bavor C, Brotherton JM, Smith MA, et al. STORIES team. The early impacts of primary HPV cervical screening implementation in Australia on the pathology sector: A qualitative study. *BMC Health Serv Res* 2023;23(1):1073. doi: 10.1186/s12913-023-10040-6.
 15. Zammit CM, Creagh NS, McDermott T, et al. "So, if she wasn't aware of it, then how would everybody else out there be aware of it?" – Key stakeholder perspectives on the initial implementation of self-collection in Australia's cervical screening program: A qualitative study. *Int J Environ Res Public Health* 2022;19(23):15776. doi: 10.3390/ijerph192315776.
 16. Service Australia. Medicare item reports. Australian Government, Services Australia, 2023. Available at http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp [Accessed 25 October 2024].
 17. Sultana F. Self-collection eligibility expansion overcoming barriers and improving uptake in the National Cervical Screening Program in Australia. Clinical Oncology Society of Australia Annual Scientific Meeting, 2023. Available at <https://cosa-2023.p.asnevents.com.au/days/2023-11-01/abstract/98795> [Accessed 25 October 2024].
 18. Thorne S. Interpretive description: Qualitative research for applied practice. 2nd edn. Routledge, 2016. Available at <https://doi.org/10.4324/9781315545196> [Accessed 25 October 2024].
 19. Morgan DL, Ataie J, Carder P, Hoffman K. Introducing dyadic interviews as a method for collecting qualitative data. *Qual Health Res* 2013;23(9):1276–84. doi: 10.1177/1049732313501889.
 20. Forman J, Damschroder L. Qualitative content analysis. In Jacoby L, Siminoff LA, editors. Vol. 11, Empirical methods for bioethics: A primer. Emerald Group Publishing Limited, 2007; p. 39–62. doi: 10.1016/S1479-3709(07)10003-7.
 21. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol* 2013;13(1):117. doi: 10.1186/1471-2288-13-117.
 22. Michie S, van Stralen MM, West R. The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implement Sci* 2011;6(1):42. doi: 10.1186/1748-5908-6-42.
 23. Australian Commission on Safety and Quality in Healthcare. Patient-centred care: Improving quality and safety through partnerships with patients and consumers. Australian Commission on Safety and Quality in Healthcare, 2010. Available at www.safetyandquality.gov.au/publications-and-resources/resource-library/patient-centred-care-improving-quality-and-safety-through-partnerships-patients-and-consumers [Accessed 25 October 2024].
 24. Delaney LJ. Patient-centred care as an approach to improving health care in Australia. *Collegian* 2018;25(1):119–23. doi: 10.1016/j.colegn.2017.02.005.
 25. Alam Z, Ann Dean J, Janda M. Cervical screening uptake: A cross-sectional study of self-reported screening attitudes, behaviours and barriers to participation among South Asian immigrant women living in Australia. *Womens Health (Lond)* 2022;18:17455057221096240. doi: 10.1177/17455057221096240.
 26. Butler TL, Anderson K, Condon JR, et al. Indigenous Australian women's experiences of participation in cervical screening. *PLoS ONE* 2020;15(6):e0234536. doi: 10.1371/journal.pone.0234536.
 27. Smith MA, Hall MT, Saville M, et al. Could HPV testing on self-collected samples be routinely used in an organized cervical screening program? A Modeled analysis. *Cancer Epidemiol Biomarkers Prev* 2021;30(2):268–77. doi: 10.1158/1055-9965.EPI-20-0998.
 28. The Royal Australian College of General Practitioners (RACGP). Guidelines for preventive activities in general practice. 9th edn. RACGP, 2018. Available at www.racgp.org.au/FSDEDEV/media/documents/Clinical%20Resources/Guidelines/Red%20Book/Guidelines-for-preventive-activities-in-general-practice.pdf [Accessed 25 October 2024].
 29. Tonelli M, Connor Gorber S, Moore A, Thombs BD; Canadian Task Force on Preventive Health Care. Recommendations on routine screening pelvic examination: Canadian Task Force on Preventive Health Care adoption of the American College of Physicians guideline. *Can Fam Physician* 2016;62(3):211–14.
 30. Whop LJ, Butler TL, Lee N, et al. Aboriginal and Torres Strait Islander women's views of cervical screening by self-collection: A qualitative study. *Aust N Z J Public Health* 2022;46(2):161–69. doi: 10.1111/1753-6405.13201.
 31. Meiselbach K, Nightingale C, Anderson S, et al. Do it for yourself: Australia's first experience of universal eligibility for self-collection cervical screening increases access for Aboriginal and Torres Strait Islander women. *First Nations Health and Wellbeing – The Lowitja Journal*. 2023;1:100002. doi: 10.1016/j.fnhli.2023.100002.
 32. Verbunt EJ, Newman G, Creagh NS, et al. Primary care practice-based interventions and their effect on participation in population-based cancer screening programs: A systematic narrative review. *Prim Health Care Res Dev* 2024;25:e12. doi: 10.1017/S1463423623000713.
 33. Stacey D, Lewis KB, Smith M, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev* 2024;1(1):CD001431. doi: 10.1002/14651858.CD001431.pub5.
 34. Santos WJ, Graham ID, Lalonde M, Demery Varin M, Squires JE. The effectiveness of champions in implementing innovations in health care: A systematic review. *Implement Sci Commun* 2022;3(1):80. doi: 10.1186/s43058-022-00315-0.

correspondence ajgp@racgp.org.au