

Doctors' Motivations & Familiarity with Cervical Cancer

Vaccination and Screening Guidelines in Singapore

Mandi Lee ¹, Cindy Chng ², Ida Ismail-Pratt ³

1. National University of Singapore, 2. Alliance for Active Action Against HPV (A4HPV) 3. The Obstetrics & Gynaecology Centre, Mount Elizabeth Novena Specialist Centre

Background

- Cervical cancer is a preventable disease
- 10th most common cancer among women in Singapore ^{1,2}
- Only 41% of women did screening in the past 3/5 years¹
- Singapore lacks a call and recall system and relies heavily on primary healthcare doctors to initiate discussions on cervical cancer screening
- Primary healthcare doctors' knowledge and willingness to request the screening test becomes pivotal for early cervical cancer detection ^{3,4}

Methods

- All procedures were in accordance of National University of Singapore ethics guidelines (NUS-IRB-2023-827)
- 3366 survey invitations sent between 4 Oct and 15 Dec 2023 via
 - Personal contacts of A4HPV and authors
 - GPs on the mailing list of AIC
- 10mins survey with multiple-choice and multiple selections questions

Research objectives

1. To survey primary healthcare doctors' motivation and to understand how they update themselves on HPV vaccination and cervical cancer screening information in Singapore
2. To determine the primary healthcare doctors' familiarity with the HPV vaccination and cervical cancer screening guidelines in Singapore

Familiarity with national cervical screening guideline and HPV vaccination recommendations

At least 1 out of 5 doctors

Practice differently from the national guideline in the following:

- Type of subsidies available for vaccines and screening tests
- Eligibility criteria for HPV vaccinations
- Eligibility criteria for cervical cancer screening tests
 - Below age of 30
 - For non-sexually active women

More than half of the doctors

Practice differently from the national guideline in the following:

- Type of eligible vaccines for those above 26
- Cervical cancer screening results management
 - For positive HPV test results
 - For negative HPV test results

Understanding + Motivation drive actions to prevent cervical cancer

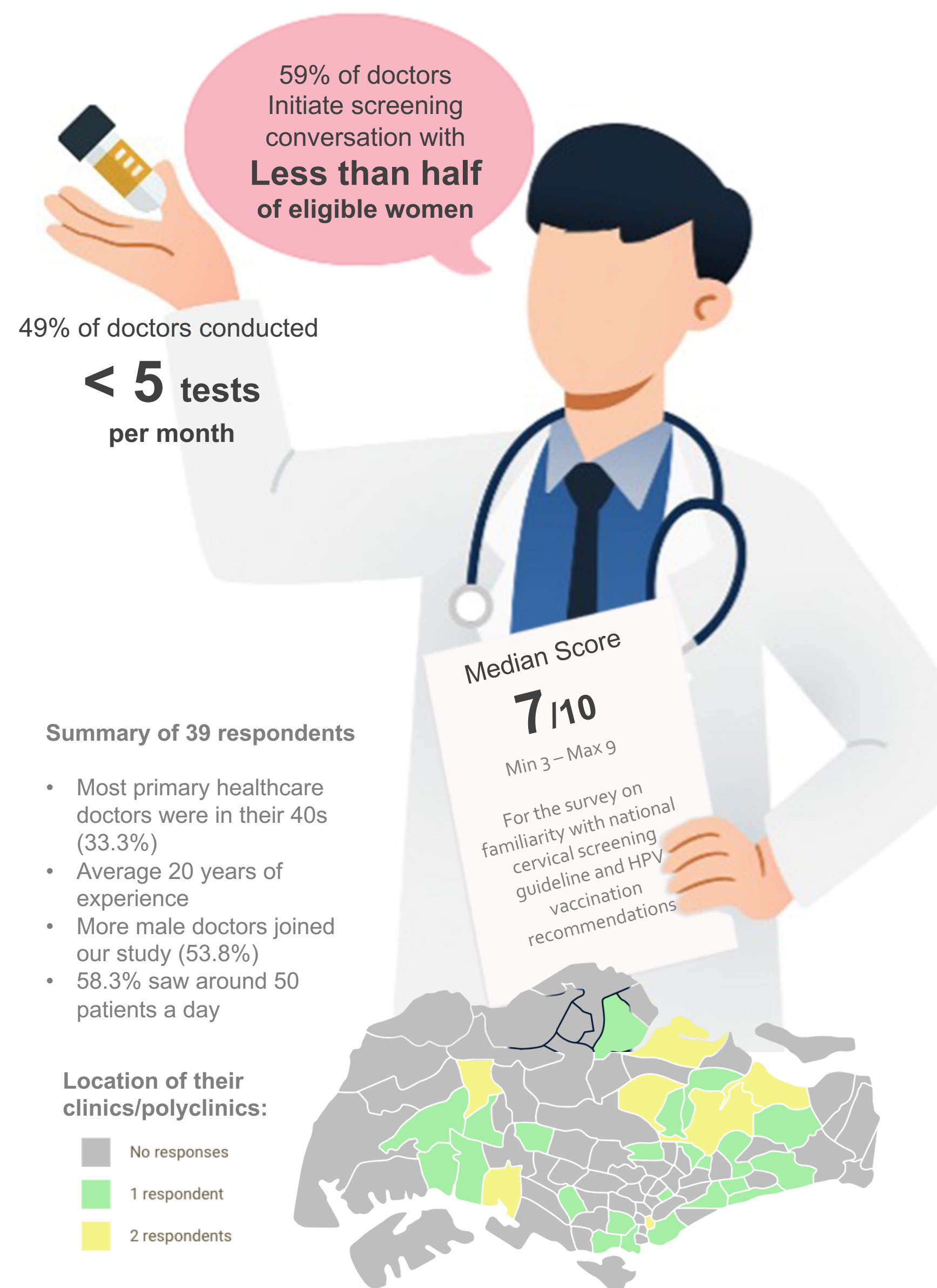
Next steps:

1. **Focus group** to deep dive into the motivations and familiarity with National Cervical Cancer Guidelines
2. Focus group to design interventions with primary healthcare doctors to better integrate screenings and vaccination counselling into practice
3. **Collaborate with College of Family Physicians Singapore and Health Promotion Board** to develop toolkits and materials to support primary healthcare doctors with updated information on cervical cancer screenings and HPV vaccinations

Upcoming:

- Family Practice Course in May 2024, capacity building targeted at primary healthcare doctors

Motivation to initiate cervical screening conversation or procedure with eligible women



- 1 **Automatic reminders** to attend screenings
- 2 Simplified processes for **subsidy claims** on cervical cancer screening tests
- 3 Ease of **tracking and sharing of test results** with patients

Survey questions on familiarity with national cervical screening guideline and HPV vaccination recommendations

Scenario 1. A 32-year-old woman with no symptoms of cervical cancer, no known health risks, and who has never had sexual intercourse consults you about cervical cancer screening.

1. What cervical cancer screening test(s) would you recommend for her?	
<input checked="" type="checkbox"/> None, not eligible for cervical cancer screening	82.1%
2. Would you recommend her to have the Human Papillomavirus (HPV) vaccination?	
<input checked="" type="checkbox"/> Yes	84.6%
3. If she wants the HPV vaccination, which subsidies would you recommend for her?	
<input checked="" type="checkbox"/> Pay out-of-pocket	82.1%
4. Please select all the types of vaccines she is available to receive.	
<input checked="" type="checkbox"/> Nonavalent vaccine Only	17.9%

Scenario 2. A woman of 25 years recently had her first baby.

5. What cervical cancer screening test(s) would you recommend for her?	
<input checked="" type="checkbox"/> Pap smear only	87.2%
6. Her Pap smear result is negative(NILM). When would you advise her to come back for cervical screening?	
<input checked="" type="checkbox"/> 3 years later	84.6%
7. If she wants the screening test, which subsidies would you recommend for her?	
<input checked="" type="checkbox"/> Covered through Screen for Life	84.6%

Scenario 3. A 36-year-old woman has been vaccinated with the bivalent HPV vaccine. She has two children.

8. Would you recommend her to have cervical cancer screening?	
<input checked="" type="checkbox"/> Yes	100.0%
9. Her HPV test is negative for high-risk HPV. When would you advise her to come back for cervical screening?	
<input checked="" type="checkbox"/> 5 years later	46.2%
10. If her HPV test is positive for HPV non-16/18, please select your recommendation for management.	
<input checked="" type="checkbox"/> Triage with cytology	41.0%

1. Ministry of Health (MOH) and the Health Promotion Board (HPB). National Population Health Survey 2021 Report. n.d. Available from: <https://www.moh.gov.sg/resources-statistics/reports/nphs-2020-21> [Last accessed: 8/27/2023].
 2. National Registry of Diseases Office. Singapore Cancer Registry Annual Report 2021, 2023. Available from: <https://nrdo.gov.sg/publications/cancer> [Last accessed: 9/27/2023].
 3. Chua BWB, Neo P, Ma VY, et al. Health care provider's experience and perspective of cervical cancer screening in Singapore: A qualitative study. *Frontiers in Public Health* 2022;10.
 4. Rodriguez NM, Brennan LP, Claire L, et al. Clinician practices, knowledge, and attitudes regarding primary human papillomavirus testing for cervical cancer screening: A mixed-methods study in Indiana. *Preventive Medicine Reports* 2023;31:102070. doi: 10.1016/j.pmedr.2022.102070.