Kingdom of Cambodia
Nation Religion King

National Maternal and Child Health Centre
(NMCHC)

Concordance of Self- and Clinician-Sampling for HPV testing and Acceptability of Self-Sampling among Cambodian Women at NMCHC

Presented by: Dr. Tep Samphas
Dr. Hang Sovannara

Contents

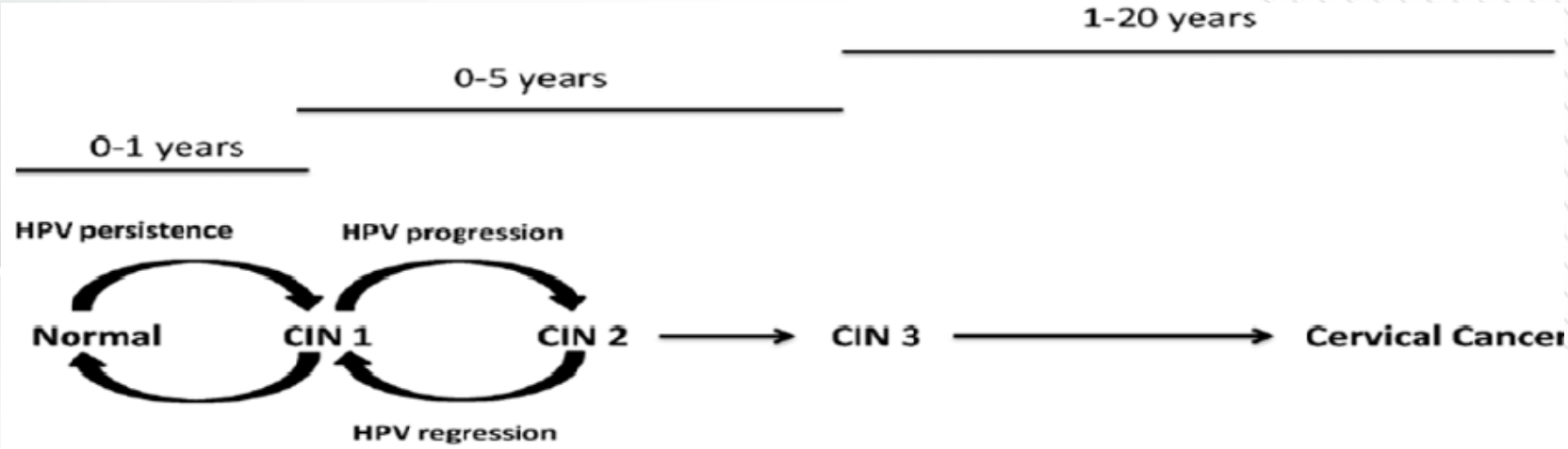
- Introduction
- Objectives
- Materials and methods
- Results
- Discussion
- Conclusion and Recommendation

Introduction

- Cervical cancer is the leading cause of death among women all over the world (1500 diagnosed cases and at least 900 women die each year in Cambodia).

- HPV testing is currently the most commonly used methods to detect pre-cancer lesions (WHO).

- HPV testing can be performed on vaginal samples collected by the woman herself, known as ***self-sampling***.



Cervical Histological Lesion	Regression to normal	Lesion persists but unchanged	Progress to CIN3	Progress to CC
CIN1	60%	20-30%	5-10%	1%
CIN2	40%	40%	15-20%	5%
CIN3	33%			10-12%

HPV persistence and progression to cervical abnormalities timeline

Objectives

This study aimed to examine the concordance of self- and clinician-sampling for HPV testing and acceptability of self-sampling among Cambodian women at NMCHC.

Materials and methods

- **Study design:** cross-sectional study
- **Location of study:** National Maternal and Child Health Centre (NMCHC)
- **Period of study:** between June 2021 and June 2022

Materials and methods

- Study population:

Sample size: 221 eligible women in the study

Inclusion criteria:

-Women aged between 20 to 49 years

-Enrollment and Informed consent

-Performed self-sampling HPV test

-Underwent pelvic examination and clinician collection for cervicovaginal specimen

Materials and methods

Exclusion criteria:

-Women who have never been married

-Women who are pregnant or within two months of giving birth

-Women who have a history of total hysterectomy

-Women who are in need of urgent medical treatment, such as heavy genital bleeding.

Materials and methods

- Method of HPV testing:

1. Self-sampling

2. Clinician-sampling

3. Paired specimens (self- and clinician-sampled HPV testing) were tested using careHPV (Qiagen, Germany)

CareHPV (QIAGEN) is relatively inexpensive and prequalified by WHO. It uses simplified hybrid method and shows the positive result when over 5000 copies of 14 high-risk types of HPV-DNA (type 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 and 68)

របៀបយកសំណាកតេស្តគំរូដោយខ្លួនឯង

ចំណាំសំខាន់: ប្រសិនបើអំឡុងពេលនីតិវិធីនេះ អ្នកជួបប្រទះការឈឺចាប់ ឬពិបាកខ្លាំង សូមបញ្ឈប់ និងពិគ្រោះជាមួយក្រុមការងាររបស់យើង។

1.សូមប្រុងប្រយ័ត្ន កុំអោយកំពប់អង្គធាតុរាវចេញពីបំពង់ បើកគម្របបំពង់ CareHPV Collection Medium ហើយទុកដាក់គម្របបំពង់លើផ្ទៃរឹងរាបស្មើ ដោយផ្ទារគម្របឡើងលើ។

2.សូមញែក/បើកផ្នែកខាងក្រៅទ្វារមាសរបស់អ្នកថ្នមៗ ហើយដាក់ច្រាសតូចបញ្ចូល (រូបភាពទី ១) ។

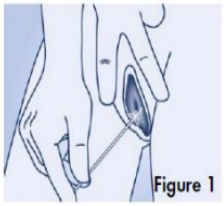


Figure 1

3.សូមបន្តបញ្ចូលច្រាសតូចដោយបង្វិលថ្នមៗទៅខាងឆ្វេងឬទៅស្តាំរហូតដល់អ្នកមានអារម្មណ៍ថាបានទល់នឹងអ៊ូមួយហើយ (រូបភាពទី ២) ។

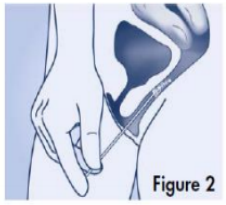


Figure 2

4.កាន់ច្រាសតូចនៅនឹងកន្ទៃដ៏ ហើយរាប់ចាប់ពីលេខ ១ ដល់ ១០។ បង្វិលច្រាសតូចជារង្វង់ ៥ ដង (រូបភាពទី ៣) ។

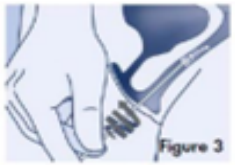


Figure 3

5.ដកច្រាសតូចចេញពីទ្វារមាសរបស់អ្នក ហើយដាក់ច្រាសតូចចូលទៅក្នុងបំពង់ CareHPV Collection Medium ដូច្នេះច្រាសតូចប៉ះនឹងផ្នែកខាងក្រោមនៃបំពង់ហើយជ្រាបចូលក្នុងអង្គធាតុរាវ។

6.កាន់បំពង់ CareHPV Collection Medium ឱ្យជាប់ដោយដៃម្ខាង ហើយប្រើដៃម្ខាងទៀតកាន់ដងច្រាសតូច។ កាច់ចុងដងច្រាសតូចដោយកាច់ត្រឹមមាត់បំពង់ (រូបភាពទី ៤) ។
មានតែផ្នែកខាងក្រោមដែលមានច្រាសតូចផ្ទាក់ចុះក្រោមចូលក្នុងអង្គធាតុរាវ។

7.បោះចោលផ្នែកចុងដងច្រាសតូចដែលបានកាច់ចេញ


Figure 4

8.បិទគម្របបំពង់ CareHPV Collection Medium រួចសង្កត់គម្របចុះក្រោម (រូបភាពទី ៥)។


Figure 5

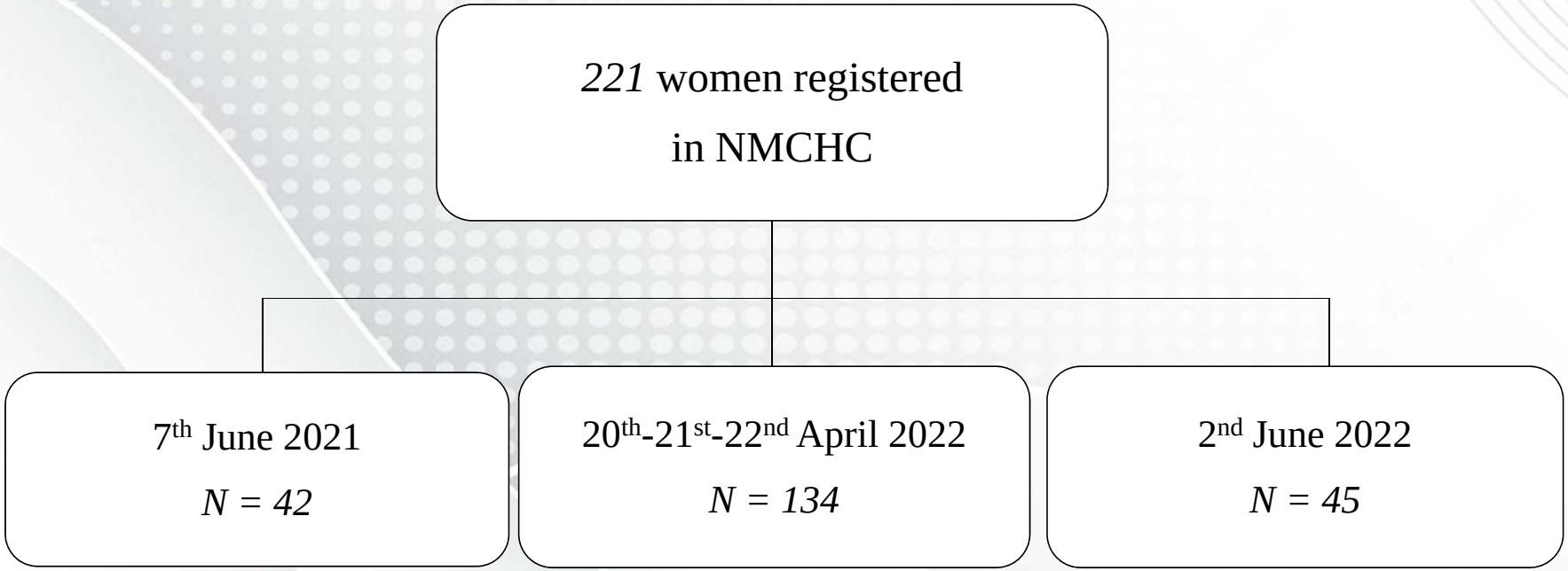
Materials and methods

- **Data collection:** Standardized data collection was performed on paper, which was inputted in Excel including population characteristics, HPV test results and answers to the post-screening questionnaire.

- **Data analysis:** Overall agreement rate and Kappa statistics were used to assess the agreement between HPV results obtained from self-sampled and clinician-sampled cervicovaginal specimens.

Results

Numbers of the study participants



Sociodemographic characteristics of participants

Variable	No. (%)
Age (years) mean	**37.6**
20-29	20 (9)
30-39	119 (53.9)
40-49	82 (37.1)
Marital status	
Married	206 (93.2)
Divorced	13 (5.9)
Widowed	2 (0.9)
Parity	
0	16 (7.2)
1	39 (17.7)
2	110 (49.8)
>3	56 (25.3)
Menstrual bleeding pattern	
Regular	123 (55.7)
Irregular	86 (38.9)
Menopause	8 (3.6)

Sociodemographic characteristics of participants

Variable	No. (%)
Highest level of school attended	
Primary school	20 (9)
Secondary school	49 (22.2)
High school	65 (29.4)
College or higher	86 (38.9)
Others	1 (0.5)
Employment status	
Employee (healthcare worker)	35 (15.8)
Employee (other)	89 (40.3)
Unemployed	52 (23.5)
Others	45 (20.4)

Concordance between high-risk HPV in self-collected and clinician-collected specimens

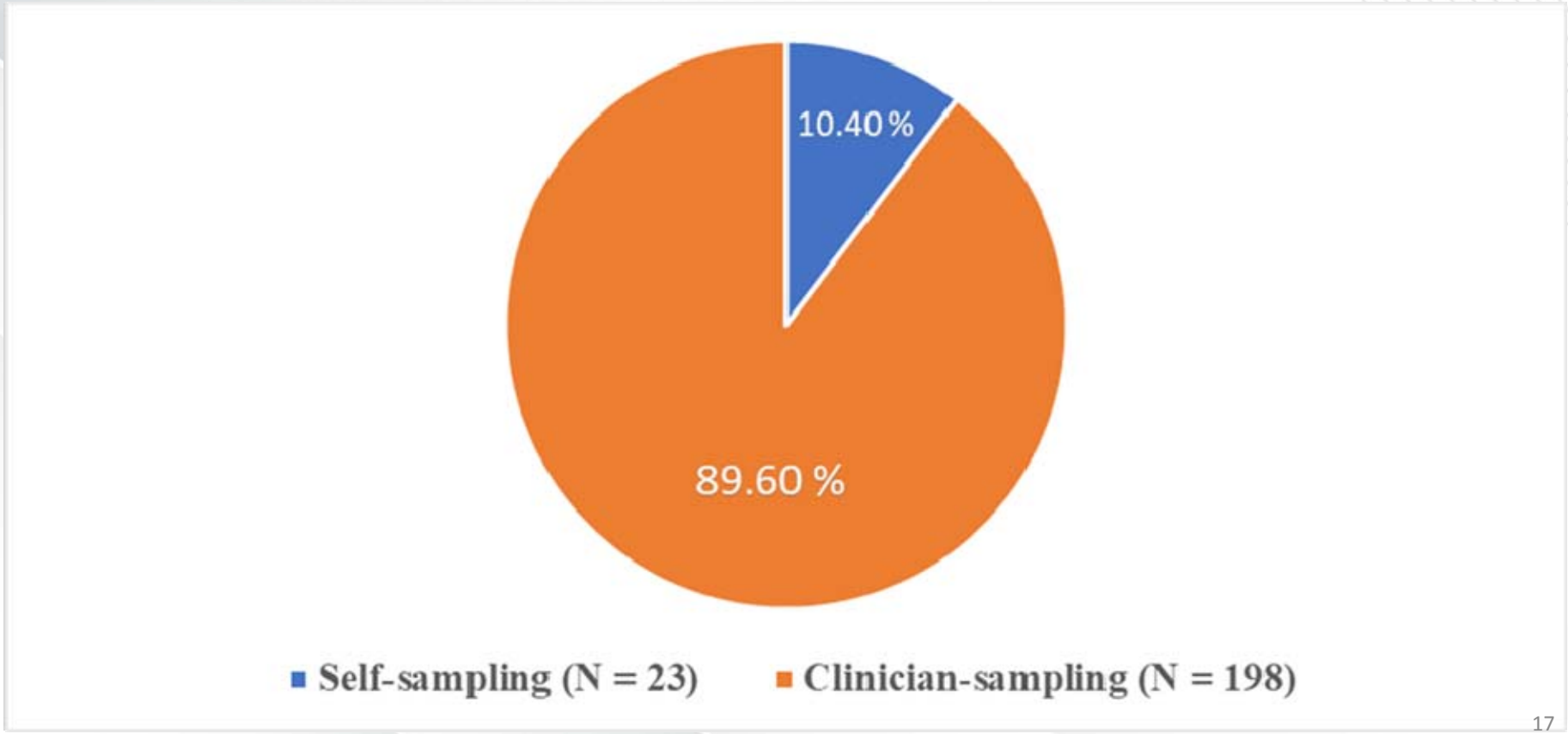
		Self-collected		
		HR-HPV Positive	HR-HPV Negative	Total (%)
Clinician-collected	HR-HPV Positive (%)	12 (5.4 %)	5 (2.3 %)	17 (7.7 %)
	HR-HPV Negative (%)	4 (1.8 %)	200 (90.5 %)	204 (92.3 %)
	Total (%)	16 (7.20 %)	205 (92.80 %)	221 (100 %)

The prevalence of **HPV DNA positivity** in the clinician-sampling was 7.7 %.

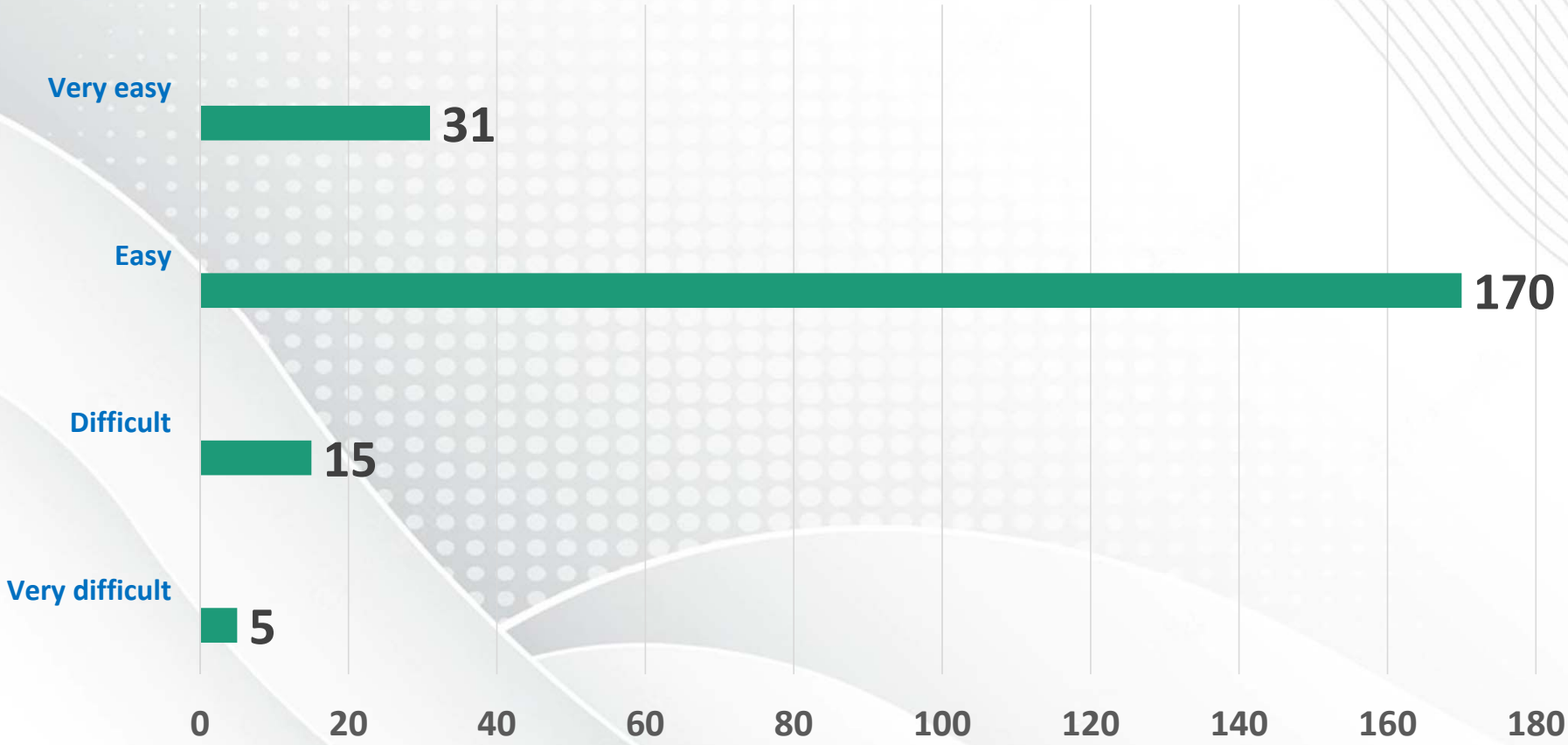
Agreement rate: (200+12)/221*100=95.9%

Kappa coefficient: 0.7 (95%CI: 0.57-0.83)

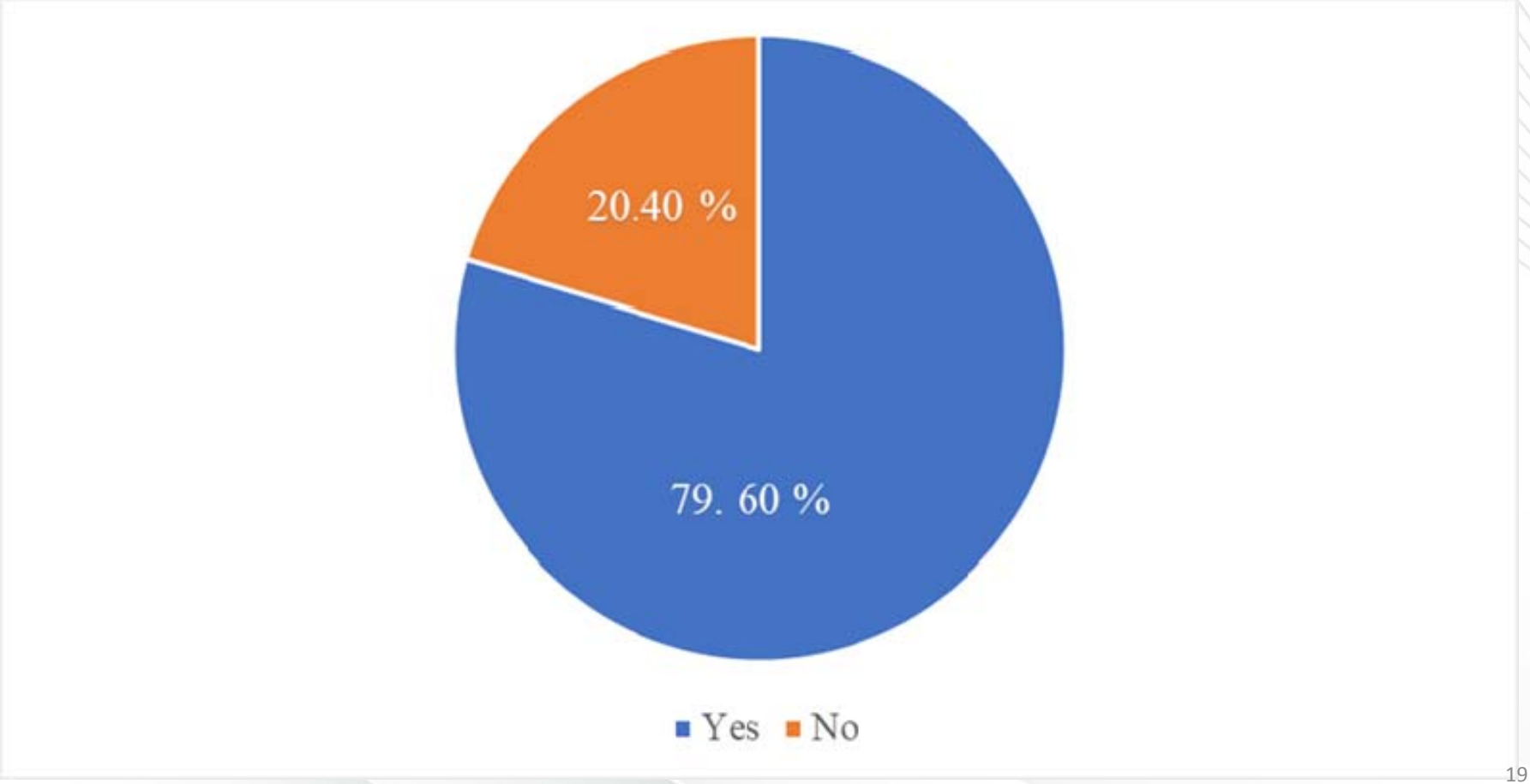
Cervical cancer screening examination preferences



Understanding instruction of self-sampling



Confidence of self-sampled collection



Acceptability of self-sampled HPV test

	Self-sampling	Clinician-sampling	P-value
Pain			
No pain at all	57 (25.8)	61 (27.6)	
Not so painful	146 (66.1)	152 (68.8)	
Painful	15 (6.8)	8 (3.6)	0.07
Very painful	3 (1.3)	0 (0)	
No answer	0 (0)	0 (0)	
Embarrassment			
Not embarrassing at all	88 (39.8)	38 (17.2)	
Not so embarrassing	118 (53.4)	137 (62)	
Embarrassing	15 (6.8)	43 (19.5)	<0.001
Very embarrassing	0 (0)	3 (1.3)	
No answer	0 (0)	0 (0)	
Concerned about accuracy of the result			
No concern at all	29 (13.1)	68 (30.8)	
Not so concerned	87 (39.4)	114 (51.6)	
Concerned	89 (40.3)	34 (15.4)	<0.001
Very concerned	16 (7.2)	4 (1.8)	
No answer	0 (0)	1 (0.4)	

Summary of the result and discussion

- The study found a high level of agreement between HPV test results from self-sampling and clinician-sampling.
- The study showed that the instruction of self-sampling was easy or very easy to understand and majority of women were confident to perform self-sampling. Despite the pain during the self-sampling, women felt significantly less embarrassed compared to clinician-sampling.
- Women chose clinician-sampling as a preferred method while HPV self-sampling was considered as a new introduction in Cambodia.

CONCLUSION AND RECOMMENDATION

- A rapid, affordable, HPV self-test kit can be used as the primary method of cervical cancer screening in Cambodia.

- HPV self-sampling will be a powerful tool for populations with limited access to health care or limited access to cervical screening while it could reduce barriers to cervical cancer screening, with performance comparable to clinician-collected specimens.

CONCLUSION AND RECOMMENDATION

- While the instruction on self-collection were provided in a user-friendly manner, rising awareness of cervical cancer and health education following the introduction of HPV vaccination are very essential.
- It is critical to ensure an adequate follow-up and management of screen positives. If not, gains on increased participation are of no use.

Acknowledgements

I would like to express my deepest appreciation to JSOG and SCGO teams for support in this study.

Thank You for your attention!!!