

EFFECTIVE STRATEGIES TO IMPROVE THE UPTAKE OF PAP SMEAR SCREENING IN PONTIAN DISTRICT

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Abstract

Pap smear screening is proven to be an effective tool for the early detection of cervical cancer. Public Health Laboratory of the Ministry of Health Malaysia (MOH) reported that Pontian Health District achieved only 69.4% out of the 4,112 targeted Pap smear screening performed in 2014. Pontian District Health Office conducted a Quality Assurance (QA) project, aiming to increase the percentage of Pap smear screening uptake among women in Pontian district to 100%.

A cross-sectional study using questionnaires was conducted in January 2015 involving 256 women to measure their knowledge, attitude, and practice towards Pap smear screening. The results showed 93.8% of respondents have a good knowledge of Pap smear. However, only 72% agreed to do Pap smear screening while 28% refused to do the screening. The 72 women declined the Pap smear screening for various reasons, such as time constraint (27%) feeling shy (27%), perceived the procedure as painful (23%), afraid to know the result (19%) and perceived the screening as unimportant (4%). The results also revealed only 44% of the respondents received information about Pap smear screening from health staff.

Several strategies were identified to overcome the reasons; the expansion of Pap smear screening to the workplace and residences overcome time constraint issue, an innovative tool known as “*Sisih Malu*” to combat the shyness feeling of doing Pap smear screening, while “*Celik Servik*” demonstrates the procedure as simple and painless. Active promotion of Pap smear screening was also conducted by the clinics’ staff who emphasised on cervical cancer early detection, which is more treatable at an early stage. These improvement strategies were conducted from February until December 2015.

Post-intervention saw Pap smear screening in Pontian district increased to 4,936 (118.9%), exceeding the 4,152 target set for 2015 and increased 130.5% in 2016. Another survey among 99 women in January 2016 showed that a 100% willingness to undergo a Pap smear screening.

KEYWORDS: Pap smear, coverage, improvement

Problem

Cervical cancer remains a major threat to the health and life of Malaysian women and there is a need for early detection and management of cervical cancer. The proven screening method for early detection of cervical cancer is cervical cytology examination, typically referred to as the Pap smear examination. Thus, in 1969, Family Health Development Division established the cervical cancer screening programme, which was incorporated into the Maternal and Child Health programme of MOH, Malaysia. The programme was planned, organised and evaluated by the Family Health Development Division. Every year MOH gives a certain target for a total Pap smear screening for each state and district level according to the estimated women population which was obtained from the Health Information Centre, MOH. At the state level, Family Health Officer plans and coordinates activities related to Pap smear screening in which each district was given a target in terms of the number of Pap smear screening to be performed in a year. The target was then divided accordingly among different health clinics in the district. Pap smear screening is carried out by the Medical and Health Officers and Public Health Nurses and the smears were read by a trained Medical Laboratory Technologist at Public Health Laboratories.

The annual target for every district was set at 40% of the 1/3 estimated sexually active women of childbearing age. It was estimated that the population of women aged between 30 and 65 years in Pontian district for the year 2014 was 39,153 of which 76.14% was sexually active. This means that 4,112 women in Pontian district were expected to be performing the Pap smear screening in 2014. The standard given by the Johore State Health Department was 100%. Pontian District Health Office was not able to achieve the target since 2012 as shown in Figure 1.

The Quality Assurance project aimed to increase the percentage of Pap smear screening from 69.4% to 100% in Pontian district within one year.

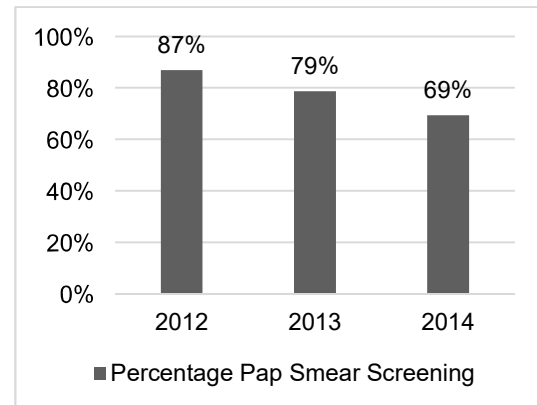


Figure 1: Trend of Pap smear screening (%) for Pontian district (2012 - 2014).

Background

Cervical cancer remains a major threat to the health and life of Malaysian women. It remained as the second contributor to cancer-related death after breast cancer in Malaysia (1). It was estimated that two women died of cervical cancer every day and 30% of the cervical cancer cases were detected at stage 3 and 4. Women who had never been screened or who have not been screened in the past five years face a greater risk of developing invasive cervical cancer (2). The proven screening method for early detection of cervical cancer is the cervical cytological examination using the Papanicolaou's stain, which is also known as the Pap smear examination. Pap smear screening was found to be cost-effective and useful for early detection of cervical cancer in women. The slow evolvement of cervical cancer through a latent period of 10 years makes early detection of this cancer possible and practical. Population-based cervical cytology screening programme offering the Papanicolaou testing every three to four years has reduced cervical cancer incidence and increased the mortality rate by up to 80% in developed countries in the last five decades (3). It was 100% treatable if cervical cancer was detected at an early stage. Subsequently, it prevents further metastasis and mortality caused by late detection. Early detection also reduces the cost of treatment.

A study by Yeo et al. showed that the demography, women's beliefs of the

effectiveness of Pap smear in detecting cervical cancer, the desire to detect health problems early and the perception on Pap smear being painful, were found to be the factors that significantly influencing Pap smear uptake(4). Healthcare professionals need to be mindful of these factors when encouraging women to undergo this procedure.

There are a few studies on the strategy to increase Pap smear screening. Marion M et al. stressed on the importance of building awareness and motivation for cervical cancer screening through various activities, such as continuous education, hosting screening events, specifically for women, improving the attitude and service of health care providers, and promoting screening tools (5). A study by Rebecca A et al. suggested that the use of letters or physician reminders and Human Papilloma Virus self-sampling might increase cervical screening uptake in young women (6). Another study by Amelia A et al. confirmed that using individual contact method and assigning a fixed screening date notably increased the participation in screening and the response was strongly dependent on age (7).

Measurement

The percentage of women who underwent Pap smear was chosen as the measure for this project and was calculated as the number of women who underwent Pap smear screening per total number of women targeted for Pap smear screening. The target was set at 100% given by Johor State Health Office for all districts in Johor. The targeted Pap smear screening for Pontian Health Office was 4152 for the year 2015. The monthly data of the number of women who underwent Pap smear screening were obtained from reports submitted by health clinics and Public Health Laboratory Johor Bahru. An assigned nursing manager of each clinic submitted the report electronically to the district office using a standardised format provided by MOH. The Public Health Laboratory was responsible for submitting the monthly statistic on Pap smear to the district health officer. Reports were compiled by the district matron and

subsequently sent to the State Health Department.

Initial Assessment of the Problem

This one year project started in January 2015 and involved all eight health clinics and 33 community clinics in Pontian district. The first evaluation was carried out in December 2015 and was subsequently monitored yearly. A cross-sectional study to identify the contributing factors was conducted in January 2015 involving 256 reproductive women aged from 20 to 60 years using a pre-developed questionnaire, which consisted of four components, namely socio demography and socio-economic features, knowledge, attitude, and practices towards Pap smear screening. The sample was taken among women attending eight health clinics in Pontian district to accommodate for any heterogeneity. There were two questions on knowledge, three questions on attitude and four questions on practice towards Pap smear screening. The study showed that 93.8% of respondents had knowledge of Pap smear screening and 72% of the respondents agreed to do a Pap smear screening. Seventy two (28%) respondents did not agree to do a Pap smear screening because of time constraint (27%), shyness (27%), perceived the procedure as painful (23%), afraid of knowing the result (19%) and perceived the screening as unimportant (4%). Only 44% of respondents received information about Pap smear screening from healthcare providers. The results showed that age, educational status, duration of the marriage and the number of children were significant factors associated with Pap smear screening ($p < 0.05$). The results also showed that the percentage of Pap smear screening was low among women aged 21 to 30 years old with high educational level, those who were married for less than five years, and have less than three children.

Strategy

Group members of this project identified several strategies to overcome the contributing factors of the low

percentage of Pap smear screening uptake. These strategies were implemented from February to December 2015. The issue of time constraint highlighted by the respondents was addressed by extending the Pap smear screening programme to the respondents' workplace and residence. Pap smear screening which was previously confined to health clinics only was also offered at the community clinic level. A dedicated room for Pap smear was provided in health clinics to facilitate clients to undergo the Pap smear screening, hence reducing the waiting time significantly.

Malaysian women are known to be shy when it comes to the private part examination. An innovative device called "*Sisih Malu*" was created to overcome shyness of braving the procedure. An oval hole (measuring at 9 inches × 7 inches) was made at the centre of a disposable green crepe paper (measuring at 39 inches × 39 inches) which costs only MYR 0.94. During the procedure, the Paper covered the lower part of the client's body and exposed only the private part. The nurse will explain to the client how to apply the "*Sisih Malu*" tool and the client will be left on her own to undress and apply the cover. The client has the privilege to call the nurse once she feels ready. After applying the "*Sisih Malu*" the client would call the nurse and the Pap smear procedure would be performed immediately. Once the Pap smear procedure was completed, the nurse will leave the client to dress on her own and once the client is ready she will be given further advice (Figure 2). The green Paper will be disposed of after use. This innovation helped to reduce clients' shyness during Pap smear screening.

Although women can be educated, many are not aware of the benefit of the cervical cancer procedure. Thus, an innovation called "*Celik Servik*" was developed as an educational tool to guide women on the Pap smear procedure. "*Celik Servik*" is a transparent model of a cervix. It was created using a plastic cup which

represents the vagina and an inverted pacifier at the bottom of the plastic cup represents the cervix. The cup is translucent so that a client can see how the procedure is conducted during a demonstration. By using this model, we are able to convince clients that the Pap smear procedure is not painful. This is a low-cost innovation that costed only MYR 5 per model. Recycled plastic cups can also be used to further cut the cost. This model can be made in various sizes and can be easily brought anywhere for demonstration purposes.

Some women were afraid to know the result of their Pap smear screening. In such cases, explanation was given to the client on the importance of Pap smear screening for early detection of cervical cancer which is highly treatable if detected early.

Another strategy was to increase the promotion of Pap smear screening as our study showed that only 44% of the respondents have received information on Pap smear screening from healthcare workers. The approach is rather opportunistic in which advice on Pap smear screening was given in the outpatient clinic setting, during a postnatal home visit, during a community event or health camp. We focused on women aged between 21 and 30 years who have high education level, with the duration of marriage less than five years, and have less than three children. After a briefing on Pap smear screening was given, the client's card will be tagged in pink to indicate that the client has been briefed, thus, avoiding a repetition.

The initial and modified process flow for performing a Pap smear is shown in Figure 2. The initial process was modified by adding two activities: i) a promotion on Pap smear screening using "*Celik Servik*" innovative tool and ii) using the innovation of "*Sisih Malu*" during a Pap smear procedure

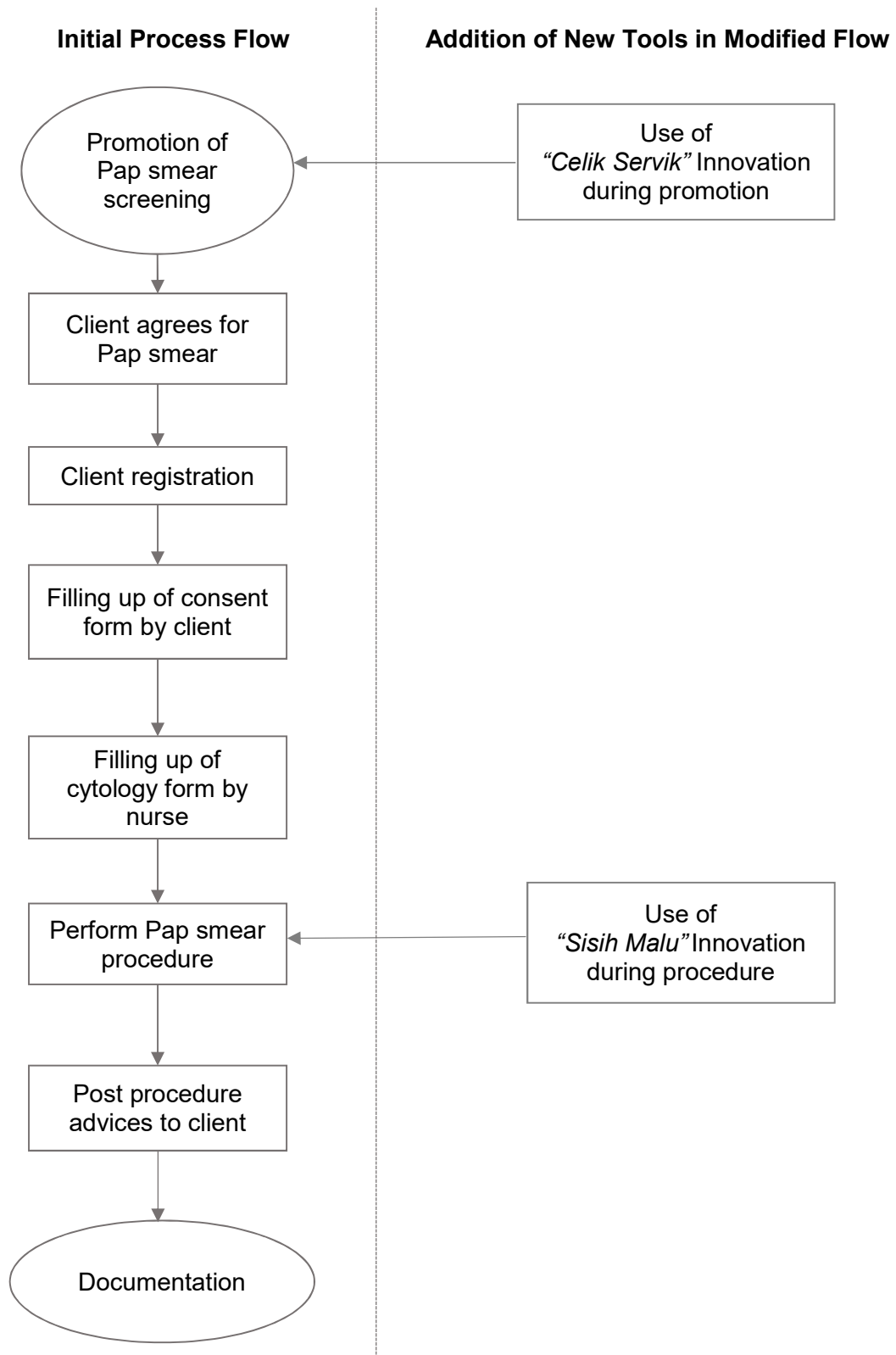


Figure 2: Modified flow-chart for Pap smear screening procedure using “*Celik Servik*” and “*Sisih Malu*” innovation.

Results

An evaluation was conducted on December 2015, one year following the intervention. Pap smear screening percentage has increased to 4,936 (118.9%), exceeding the 4,152 target for the year 2015 (Figure 3). Close monitoring showed that the performance continues to increase and exceed the target in the subsequent years, which proved that the strategies are sustainable.

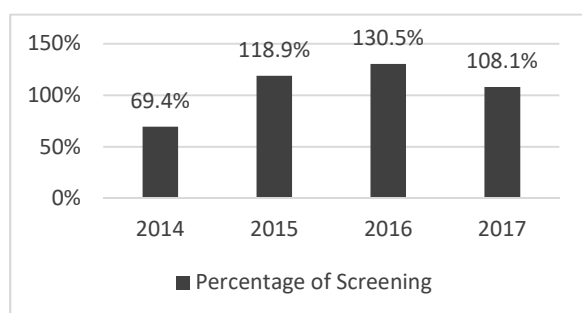


Figure 3: Percentage of Pap smear screening for Pontian district from the year 2014 to 2016.

Both the strategies of “*Celik Servik*” and “*Sisih Malu*” were able to improve the target set for Pap smear screening. The results of Pap smear screening for 2017 showed only Pontian district exceeded (108.1%) the target set while the other nine districts in Johor achieved less than 100%.

Detection of an early stage of cervical cancer has also increased concurrently with the increased number of Pap smear screening. Forty cases were detected in 2015 as compared to 27 cases in 2014 and no late-stage cervical cancer was detected in 2015 via the Pap smear screening programme. A post-interventional survey using the same questionnaire was conducted in January 2016 among women and the result is shown in Table 1.

Lessons and Limitations

The key learning point of this project is that simple and low-cost innovation coupled with continuous promotion of the importance of Pap smear screening could be the success factor in increasing the uptake of Pap smear screening. Notably, this study is only applicable to women who seek treatment or services at the health clinic as indicated by the sampling method.

Ideally, the sampling should cover the entire community so that the results can be generalised. Another major challenge of this study is the high turnover rate among nursing staff in Pontian district.

We continuously educate new staff about the interventions to ensure the sustainability of this project. If we were to undertake this project again, we plan to broaden the promotion of Pap smear screening to cover government and private hospitals and private clinics in order to reach a greater proportion of the community.

Table 1: Comparison of factors affecting consent for Pap smear screening before and after interventions.

Factors	Before QA project (n=256)	After QA project (n=99)
1. Did not agree to undergo Pap smear screening	28%	0%
2. No time for Pap smear screening	27%	11%
3. Shy to undergo Pap smear screening	27%	0%
4. Think Pap smear screening is painful	23%	0%

Conclusion and the Next Steps

This project has shown its sustainability since it started in 2015 until 2017 where the percentage of Pap smear screening for Pontian District Health Office exceeded the target of 100%. Our project team has appointed a number of champions in the team to ensure the continuation of the project and to expand it to other districts. This project might help to reduce the cost of treatment for cervical cancer patients by increasing the chance of cervical cancer early detection. In October 2017, this project was expanded to all districts in Johor. We aim to replicate this project to other states in Malaysia.

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Conflict of Interest

None

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None

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