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An Evaluation of the Cancer Screening Collaborative

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Contents

Executive Summary

In December 2017, the Commonwealth Department of Health renewed Australia's National Cervical Screening Program (NCSP) based on recommendations made by the Medical Services Advisory Committee. The renewal involved a number of changes to the program, including a new test used to determine the presence of cervical cancer and the timeframe between tests.

In order to support general practices with the upcoming transition to the renewed NCSP, Improvement Foundation (IF) offered primary health networks and other support organisations the opportunity to engage their primary health care services in a quality improvement program, the Cancer Screening Collaborative (CSC). The aim of the CSC was to increase to 75% the percentage of women aged between 25–70 years of age with a recorded result from a cervical screening test conducted in the recommended time frame. Eastern Melbourne Primary Health Network (EMPHN) engaged IF to design and deliver the CSC, with support from EMPHN to recruit local general practices and to provide practical assistance. The CSC commenced in September 2017 and concluded in June 2018.

Following the conclusion of this program, EMPHN contracted IF to undertake a summative evaluation of the CSC. To do so, IF reviewed the program development, support and implementation activities and thematically analysed qualitative feedback provided by the participating practices and the EMPHN support team. The intent of this report is to examine the program outcomes to assess whether the program objective was met; the impact of the program on patient outcomes as well as the capacity of participants to embed continuous quality improvement, and to provide any recommendations for future iterations.

EMPHN recruited 21 practices into the CSC, however 6 of these withdrew from the program for a variety of reasons. A total of 15 practices completed the requirements of participation, including attendance at a series of online learning workshops, interspersed with activity periods. During the activity periods, participants applied the workshop learnings to identify and test change ideas for making improvements in their organisations. The tests of change were defined and refined using the Model for Improvement (MFI) framework, which enables change ideas to be developed at a local level, and implemented through a series of Plan Do Study Act (PDSA) cycles. A total of two hundred and twenty PDSA cycles were submitted during the course of the CSC. The most common, and often the most successful, PDSA cycles submitted related to the creation and dissemination of information on the renewal of the NCSP to patients as well as team members.

Screening data was collected in order to track progress towards meeting the CSC aim (as stated above) and to assess the impact of changes undertaken at the individual service level. Data received from the participants indicated that there was an increase of 27% in screening via Pap testing in the first six months, and the number of women screened via HPV testing increased from a baseline of zero in November 2017 to 1902 as of 30 June, 2018. The participants collectively did not reach the target figure stated in the aim, however most participants did make improvements to their baseline number and reported a timely increased awareness of the renewal across their eligible female patient cohort.

Participants were generally positive about the resourcing of the CSC with regard to materials, people and organisational capacity. The online learning workshops rated well, as did the

assistance provided by the EMPHN support team and to a lesser extent, the team at IF. Most highly rated were the new ideas and strategies learned, principally in the areas of improving cervical cancer screening rates and applying quality improvement tools and methods and to some degree, ways to engage and build the practice team. Several participants rated their involvement in the CSC highly, in terms of improvements made in the rates of cervical cancer screening and in relation to knowledge gained. The majority of participants also provided information on improvement activities they plan to undertake after their participation in the CSC in order to foster continuous quality improvement at the service level.

A number of challenges were also reported. These included:

- a belief that the duration of the CSC was too long to sustain innovation, with most improvements being realised in the earlier months,
- frustration with the processes of data extraction, data collection and technical or software issues, and
- frustration with the submission of MFI/PDSA cycles .

Lessons learned from the challenges and the feedback have informed a number of recommendations for future CSC initiatives. Recommendations include:

- reducing the duration to 6 months as improvement related to this topic can be achieved earlier than other topics,
- implementing an advisory or working group to undertake program planning, and
- simplifying the measure set, the data collection process and the process for submitting a Model for Improvement.

These may be achieved through providing an enhanced platform for data entry and visualisation, and strengthening strategies to foster ongoing engagement and motivation.

Background

On December 1, 2017, the Commonwealth Department of Health renewed Australia's National Cervical Screening Program (NCSP) based on recommendations made by the Medical Services Advisory Committee. The changes to the NCSP included:

- Replacing the Pap test with a new Cervical Screening Test (CST),
- Changing the test interval from two years to five years,
- Commencing testing at 25 years of age, and
- Offering exit tests to those aged between 70 and 74 years of age.

In recognising the central role that primary health care has with improving the rate of cancer screening, and to support general practices with the transition to the renewed NCSP, IF implemented a quality improvement program focusing on cervical cancer screening: the Cancer Screening Collaborative (CSC).

The purpose of a Collaborative program is to encourage and support participating primary healthcare services to deliver rapid, measurable, systematic and sustainable improvements in a nominated topic area. This is achieved through the sound understanding and effective application of quality improvement methods and skills.

The objectives of the CSC were to:

- provide support to general practices to improve processes and systems to increase cervical cancer screening rates,
- improve participation in cervical cancer screening, with a focus on women at heightened risk of not screening, including Aboriginal and Torres women, rural and remote women and women with disabilities, and
- support the transition to the renewed NCSP.

The CSC focused on increasing eligible female patients' participation rates in screening programs for cervical cancer, with the following aim:

- Increase to 75% the percentage of women aged between 25–70 years of age with a recorded result from a cervical screening test conducted in the recommended time frame.

In May 2017, a national promotion of this program was circulated via IF's media channels. In response to this promotion, EMPHN contracted IF to design and deliver the CSC, which included the development of the program, the provision of specialist advice and training, access to existing Collaborative methodology infrastructure, and ongoing support to the EMPHN support team for the duration of the Collaborative program, which commenced in September 2017 and concluded in June 2018.

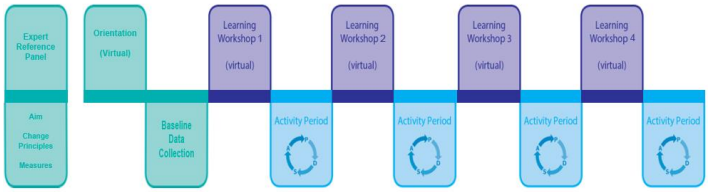
The PHN committed a number of resources to this program, including access to the POLAR clinical audit tool for participating general practices, a dedicated support team and a Program Lead.

Methods

The Intervention

A breakthrough Quality Improvement Collaborative (QIC) structure was employed (see Appendix 1), commencing with an Expert Reference Panel (ERP), followed by an orientation workshop and four virtual learning workshops via webinar. Supported action periods followed each workshop (see Figure 1).

Figure 1: The Collaborative Framework



Clinicians and staff from fifteen general practices attended the orientation session and the learning workshops. During the activity periods, participants applied the workshop learnings to make improvements in their organisations.

Improvement required teams to carry out tests of change and measure their impacts. The tests of change were defined and refined using the Model for Improvement (MFI) framework, which enables change ideas to be developed at a local level. The impact of the changes was assessed by analysing the regular data submissions made by participants on the improvement measures established for the program.

A General Practitioner (GP) with significant knowledge of quality improvement and vast experience in the Collaborative methodology was appointed Clinical Lead.

Development

The development stage of this Collaborative program involved an expert review of the materials and intellectual property developed by a previous Expert Reference Panel (ERP). An ERP is a carefully chosen group, based on members' capacity to contribute at an expert level through their content expertise or application expertise. It is formed to consider available evidence in the relevant topic area and ensure that such evidence is appropriately translated for the implementation environment. The ERP is responsible for advising on the aim of the program, key change principles for the topic, the measures that will be used to track improvement, and specific practical ideas for change that can be implemented by participants.

IF had previously worked with an ERP to develop measures and change principles on cervical cancer screening. This material was updated to reflect the renewal of the NCSP and developed

into a handbook containing the measures, change principles and change ideas, which collectively provided a focus for participating general practices and linked to the evidence that is necessary to develop a culture of trust, peer learning and support.

Please see Appendix 2 for the CSC aim, measures and change principles recommended by the ERP.

The development phase also included a series of training events for the EMPHN support team to provide them with education in the Collaborative methodology, specific information on the Cancer Screening Collaborative, training in the use of the MFI framework, and advice and guidance on how to engage and support participants during the program.

The Evaluation

Following the conclusion of the CSC, IF undertook a summative evaluation (July 2018) which was guided by a simple program logic model (see Table 1).

Table 1: CSC Program Logic Model

Inputs	Activities	Outputs	Outcomes
• Training materials • EMPHN staff • IF staff • Practices • Patients	• Workshops • Practice based activities • Recall system renewal • EMPHN support • Data submission	• PDSA cycles • Improvement activity • Recall system update • Improved teamwork	• Improved screening rates • Improved culture of continuous quality improvement

The evaluation aimed to address the following domains:

- Improved patient outcomes,
- Improved systems and processes at the health service level, and
- Contribution to the capacity of the workforce to support continuous quality improvement.

The process involved examining the program outcomes to answer the following questions:

- Was the program objective(s) met?
- What is the overall impact of the program on the domains of inquiry?
- Are there recommendations for future programs, including additional resources to address any weaknesses or barriers encountered?

A desktop review of documents relating to the planning and implementation of the CSC was carried out (see Appendix 3). General practice participants were asked to complete a 'Reflection Report' designed to assess the successful changes they trialed at a micro-systems level, the lessons learnt, and areas for further improvement. In addition, the participants and members of

the EMPHN support team were invited to provide feedback via an online survey (see Appendix 4). All qualitative data from the surveys were analysed thematically.

A mixed methods approach was used to understand the impact of the program on the evaluation domains. A mixed methods approach allows for a richer understanding of the factors that affect the domains and enables the key questions to be addressed more robustly than the use of a singular evaluation approach.

Quantitative Results

Recruitment and Participation

Recruitment of general practices was undertaken by the PHN, with support from IF. A total of 21 primary healthcare services in the EMPHN region were initially recruited to the CSC, however 6 of these withdrew their participation. The general practices who withdrew from the CSC, and their reasons for doing so, are listed below.

Table 2: Cancer Screening Collaborative - participant withdrawals

General Practice	Date of withdrawal	Reason for withdrawal
Box Hill Mall Medical Centre	August 2017	"Unforeseen circumstances"
Bellfield Medical Centre	October 2017	None provided
Glen Iris Medical Centre	October 2017	Do not have the resources to gain the most from the program
Doctors Care Clinic	November 2017	"Change of staff"
Waverley Medical Centre	December 2017	Unable to commit to time needed to participate
Doctors of Lalor	March 2018	Inability to dedicate resources to complete program; Difficulty with installing and using POLAR and reliable data as a result

The following 15 general practices from the EMPHN region completed the CSC:

Practice Name
Boroondara Medical Centre
Box Hill Super Clinic
Burwood Healthcare
Coldstream Family Practice
Deepdene Surgery
East Ringwood Clinic
Hanover Street Medical Centre
Heathmont General Practice
Middle Camberwell Medical Centre
Mooroolbark District Surgery
Mount Evelyn Medical Clinic
Mount Street Medical Centre
Northend Medical Centre
Park Orchards Family Practice
Top Care Medical Centre

Learning Workshops

Participants attended a series of four learning workshops, preceded by an orientation session. The orientation session was designed to give an overview of the Cancer Screening Collaborative and information on the support to be provided by EMPHN and IF. Due to the geographic distance between IF's Head Office (Adelaide) and EMPHN, it was decided that the orientation session and all workshops would be held virtually via webinar.

Learning workshops are designed to provide participants with evidence-based information, the opportunity to share knowledge and experiences with peers, and to build on knowledge gained from previous workshops. The learning workshop curriculum is predicated on the change principles and is designed to be iterative. The content and selected expert speakers or exemplars were agreed upon by IF, EMPHN and the Clinical Lead prior to each webinar.

The orientation webinar was held in September 2017, followed by the first learning webinar in October 2017 and the second learning webinar in November 2017. The first learning webinar provided information on the first two change principles, as well as training on how to apply the MFI framework. Learning webinar 2 involved a presentation from an expert speaker on the changes to the NCSP, advice on how to transition to the new system and guidance on supporting women with the changes to the system.

Learning webinar 3 was held in March 2018 and focused on the third change principle. An expert speaker from a women's health centre provided advice and guidance on working with women from diverse backgrounds to increase screening rates. The final learning webinar was held in May 2018 and featured CSC exemplars showcasing their learnings and successes, as well as information on embedding a culture of continuous quality improvement at a general practice level.

Data on attendance and satisfaction ratings are listed in the table below.

Table 4: Cancer Screening Collaborative workshop attendance and satisfaction

Learning Workshop	Percentage of general practices that attended	No. of EMPHN support team attendees	Overall Satisfaction Ratings
Orientation	93%	3	N/A
LW1	100%	4	83%
LW2	100%	6	88%
LW3	87%	5	74%
LW4	80%	2	82%

Activity Periods with Local Support

EMPHN and IF worked together to support the general practices during activity periods. The EMPHN support team undertook regular contact with the participating practices, including monthly support in the areas of:

- Data collection and submission,
- MFI submissions,
- Feedback on data and MFI submissions,
- Engaging practice team members,
- Sharing effective ideas trialled/implemented by other participants, and
- Troubleshooting any program issues.

IF provided regular advice and guidance to the EMPHN support team and the IF Support Centre assisted participants and the EMPHN support team with any issues relating to data collection and submission.

Data Submissions

As mentioned earlier, the CSC aim was to:

- Increase to 75% the percentage of women aged between 25–70 years of age with a recorded result from a cervical screening test conducted in the recommended time frame.

Progress towards meeting the aim, as well as the impact of the changes undertaken at the general practice level, was assessed by analysing the regular data submissions provided by participants on the improvement measures established for the program. These measures were:

1. The proportion of active female clients, aged 20 to 69 years (inclusive), who have not had a hysterectomy and who have had a recorded Pap test within the previous 2 years, and
2. The proportion of active female clients, aged between 25 and 70 years (inclusive), who have not had a hysterectomy and who have had a recorded HPV test within the previous 5 years.

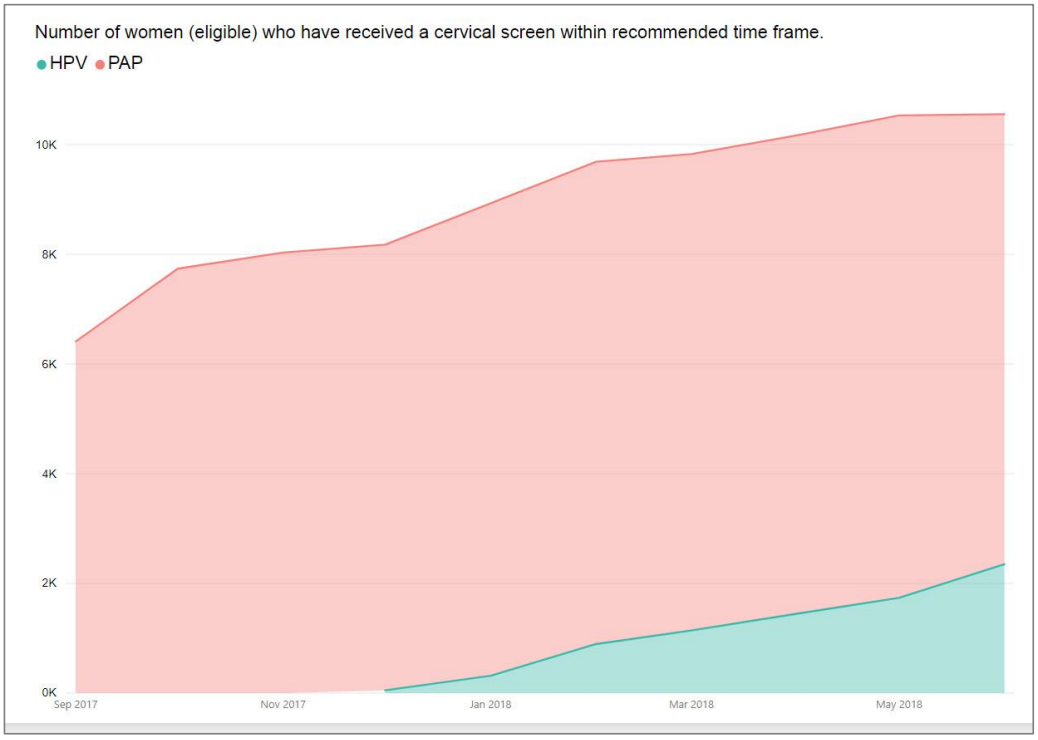
All participants were asked to submit monthly data. Between September and December 2017, participants submitted data on the Pap Test improvement measure. Following the renewal of the NCSP, participating practices were also asked to submit data on the HPV Test improvement measure.

Tables and charts summarising the various metrics regarding the CSC are shown below.

Table 5: Cancer Screening Collaborative data submission rates

	Baseline data	Oct. 2017	Nov. 2017	Dec. 2017	Jan. 2018	Feb. 2018	March 2018	April 2018	May 2018	June 2018
Data submission	80%	100%	100%	*N/A*	87%	87%	74%	67%	47%	67%
MFI/PDSA cycle submission	*N/A*	47%	73%	73%	80%	80%	53%	47%	*N/A*	*N/A*

Figure 4: Total number of eligible women screened via Pap or HPV test



The data submitted indicated that the total number of eligible women screened at the conclusion of the program numbered 10,556, with 8206 being screened via a Pap test and the remainder, 2350, being screened via HPV testing.

Model for Improvement Submissions

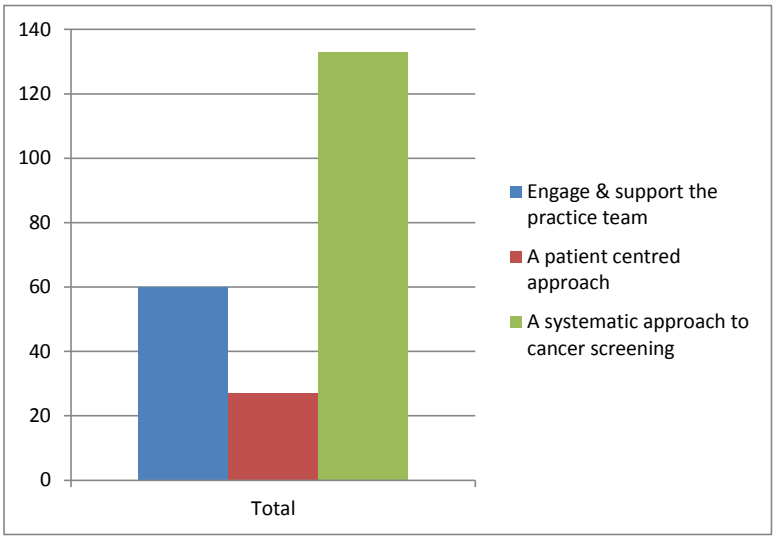
Use of the MFI is aligned to the change principles that guide participants through the Collaborative Wave. As mentioned previously, the CSC change principles recommended by the ERP were:

- Engage the practice team
- Have a systematic approach to cancer screening
- Deliver person centred care**.**

Participants were asked to submit two Plan-Do-Study-Act (PDSA cycles) per month for the duration of the CSC.

A total of two hundred and twenty (220) PDSA cycles were submitted during the course of the CSC. Analysis of the proportion of PDSA cycles submitted by change principle indicates that the majority of changes tested related to change principle 2: ‘A systematic approach to cancer screening’, with 133 cycles submitted (60% of the total). Sixty (60) PDSA cycles (27% of the total) were submitted under change principle 1: ‘Engage and support the practice team’, and twenty seven (13% of the total) were submitted change principle 3: ‘Have a patient centred approach’.

Figure 5: Total number of PDSA cycles submitted in Cancer Screening Collaborative



The most common, and often the most successful, PDSA cycles submitted related to the creation and dissemination of information on the renewal of the NCSP. Improvements were realised through the development of posters, flyers, signage and televisual presentations for patients that were displayed either in the waiting room or external to the premises. Participants also developed and disseminated information to team members, including flow charts, cheat sheets and reminder cards.

As stated above, a significant number of PDSA cycles were submitted under change principle 2 (a systematic approach to cancer screening). Several of the participants had participated in quality improvement initiatives prior to their involvement in this Collaborative and as such, were able to undertake activities related to change principle 1 (engage and support the practice team) in a streamlined way, enabling them to focus their efforts in trialing change ideas relating to screening the eligible cohort of women. Due to the work involved in transitioning to a new system after the renewal, it is likely that the participants lacked the time to trial more ideas relating to change principle 3 (have a patient centred approach).

Reflection Reports and Feedback Surveys

Due to issues experienced with submission of MFI/PDSA cycles, and due to some participants stating that they believed they had no further change ideas to trial, EMPHN and IF decided to forgo MFI/PDSA cycle submissions for the last two months of the Collaborative. As a replacement, the participants were asked to complete a 'Reflection Report' to review their improvement work. The reflection reports asked participants to:

- Review the activities they had successfully undertaken throughout the program,

- Reflect on what had worked well,
- Reflect on what had not worked well and identify areas for improvement, and
- Identify new ideas to continue beyond the completion of the program to embed a culture of continuous quality improvement.

Fourteen of the fifteen participating general practices provided these reports detailing the successful changes they trailed at a micro-systems level, the lessons learnt, and areas for further improvement.The only practice that did not provide a report was unable to do so due to the fact that the staff member who had assumed full responsibility for the practice's participation in this Collaborative resigned shortly before the conclusion date.

Eight of the general practices completed the online feedback survey, equating to 53% of the total. The responses, and the learnings from the online feedback surveys completed by the participants and also by members of the EMPHN support team, are discussed in the section below.

Qualitative Results

Inputs

Participants were generally positive about the resourcing of the CSC with regard to materials, people and organisational capacity. The CSC Handbook was considered useful, however the CSC Data Collection and Submission User Guide less so, as there was a need to update the guide several times to ensure that the data collection process for the second measure, the HPV test, was accurate. This lessened participants' and the EMPHN support team's faith in the data collection process throughout the program.

> *"The data collected via the methods given did not inspire confidence in the research rigor it should be subjected to."*

The EMPHN support team valued the training provided by IF, in particular the initial one day training workshop on the Collaborative methodology and the CSC. Feedback received from the EMPHN listed this as a success:

> *"Excellent session! Easy to understand. Engaging activities. Not too much info, so easy to take in. Thank you!"*

However, the timing of this training was perceived to be problematic as not all team members had been informed by PHN management of the active support role they were required to undertake. This led to a lack of engagement by some team members in the early stages of the program.

> *"…misunderstanding from the EMPHN support team regarding their role in the program caused initial pushback from some members of the team."*

Activities

Both the EMPHN support team and the majority of program participants rated the learning webinars positively. They were seen as an opportunity to hear from experts and to share ideas with other participants. Learning webinar two received the highest overall satisfaction rating and included the following feedback:

> *"Excellent webinar. We were 2 GPs and 1 nurse in the clinic listening and all agreed that it was one of the best webinars".*

A small number of participants stated that they did not find the learning webinars to be of interest, particularly if the subject matter was clinically focused. However, this did not preclude the information being shared with the appropriate team members.

> *"As a practice manager I didn't find the information relevant to me but I can forward some of the information to the relevant staff members. Most of the webinar I found was already practiced within our clinic I can't say definitely what the Dr/Nurse say or do within the*

confines of their rooms whilst performing CST as every patient's needs will be dealt with differently…"

"…it was more for the practice nurse than the practice manager, but my knowledge was increased. Thank you."

Participants spoke very positively of the support provided by EMPHN, with one participant describing their support person as "exceptional". The support provided by the IF team was considered helpful, in particular the regular email communication from the Improvement Consultant on topical information regarding cervical cancer screening change, the renewal of the NCSP and the sharing of resources.

The majority of participants reported significant and ongoing frustrations with the process of data extraction or data collection, a sentiment that was echoed by the EMPHN support team. There were several reasons for this frustration.

- Participants were offered the use of a data extraction tool or written information on the process for directly extracting the data from the clinical information software. The written process for data extraction was confusing for many participants and led to variation in the accuracy of the data when compared to the data extracted via the tool. This was exacerbated by the introduction of an untested second measure after the renewal of the NCSP on December 1, 2017. The second measure collected data from a different source than the first measure, which was not mapped clearly and caused further confusion. These issues led to a reduction in user confidence and affected the ability of the EMPHN support team to troubleshoot issues with practice teams.

- Following the renewal, there were delays in updating the terminology in the extraction tool and some of the clinical software programs with regard to the naming of the new testing regime, which limited access to relevant data and in some instances precluded data collection altogether. Collectively, the delays and the confusion resulted in some participants forgoing data submission in the latter months of the Collaborative. In addition, these participants became disengaged due to the inordinate amount of time spent collecting and reviewing the data, thus lessening the time available to undertake improvement activities relating to screening.

  "*Having to go from Paps to CST was quite a challenge. Extracting data was not easy when the new system came into effect*."

  "We had difficulty obtaining accurate and consistent data due to issues with the extraction tool and the practice software. This lead to generating numerous lists of patients that needed manual checking which was both time consuming and tedious."

  "*In an ideal world, at the stage of the ERP deciding on the program measures, we would beta test these measures with the clinical software and clinical audit tool prior to program commencing.*"

The process for monthly data submission involved participants entering the collected data into an Excel spread sheet which was then emailed to the IF Support Centre for upload into qiConnect, IF's web portal. This process rated well with the participants, despite one participant reporting that the process was cumbersome and not "…user friendly". Similar feedback was also received in relation to qiConnect, which several members of the EMPHN support team found to be less than intuitive and hard to navigate.

Some participants struggled to maintain enthusiasm and motivation to continue to make improvements due to the length of time of the program (ten months) as they believed that they had trialled all possible change ideas after six months. This lack of activity was noted by the CSC implementation team and discussed with the Clinical Lead. Strategies to overcome this included the provision of direct support to participants to share innovative ideas and relevant resources and an attempt to foster peer-to-peer sharing and learning via the promotion of a program discussion board on qiConnect, however these were unsuccessful.

> *"I found that I hit a roadblock around February and didn't know where to go!*
>
> *We had sent out letters, we had put posters up. We were updating our data. The doctors had been updated about talking their patients about taking their own sample.*
>
> *We had ordered from pathology and more."*

Outputs

As mentioned earlier, participants were asked to submit two PDSA cycles/month to qiConnect in order to document the success or otherwise of trialling their improvement ideas. Several participants found the process of entering MFI/PDSA cycles to be overly complicated and time consuming, leading to frustration and resistance. This was also observed by some of the EMPHN support team members.

> *"I personally found the CSC to be quite time consuming whilst still being involved in normal every day GP practice commitments. Both my nurse & I found it a challenge to be able to get together at a good time to prepare our PDSA's."*
>
> *"One practice said they were happy to do the work, but the amount of time taken to document it was too onerous in a busy time poor practice and the time to do this difficult to find, so this would be a deterrent in participating in future activities."*

Conversely, a number of other participants not only found the process to be straightforward, but also saw the value in using the MFI framework as a way to document successful outcomes and embed learnings.

> *"Certainly doing the PDSAs gave the team a feeling of achievement and advancement in our main goal of gaining a high rate of CST's being completed. They also allowed us to see the need for change."*
>
> *"What we learnt about PDSA cycles has helped us with data collection, data cleansing and best of all, we are now able to use our software system for recalls."*

The output rated most highly by both participants and the EMPHN support team were the new ideas and strategies learned, principally in the areas of improving cervical cancer screening rates

and applying quality improvement tools and methods and to a lesser extent, ways to engage and build the practice team. This was reinforced by the activities taken at the practice level as discussed in the PDSA cycles.

The activities most commonly undertaken at a practice level involved data cleansing to ensure the practice had an accurate database and were utilising it effectively for streamlining their recall and reminder systems and processes, and improving data entry by clinicians on the current rates of screening for the patient cohort.

> *"I think the program gave both practices great insight into how important data cleaning is to provide an accurate understanding of patient status."*

Many of the participants provided education sessions to inform their team members of the changes to the NCSP and allocated roles and responsibilities to individual team members to support with informing patients of the changes to the program and to improve screening rates.

> *"All staff are now familiar with the equipment and structured processes – across the whole patient experience."*

> *"Receptionist and the PN are prompt to remind patients to attend their routine CST while they booked in for another reason"*

Many resources were developed and distributed to the eligible patient cohort and education was provided via resources in the waiting room and through consultations with clinical staff. Several participants also stated that they would continue to promote cervical cancer screening via these educational resources, as well as sending electronic reminders for screening via SMS.

> "*We did conduct a few activities on PDSA from having a cervical screening question added to our Patient Registration Form to having it as part of the Medical History update. We had some letters and reminders generated on the system for its effectiveness, to having a poster on the wall making patients aware whilst they were in the clinic waiting room. Some of these strategies did work."*

Outcomes

As per Figure 4 on page 12 of this report, there were demonstrable increases in the rates of eligible women being screened for cervical cancer. The first measure collected data on the number of women screened via Pap tests throughout the Collaborative and following the renewal of the NCSP on December 1, 2017, participants also provided data on the number of women screened via HPV tests, from December 2017 to June 2018.

An increase of 22% was observed in screening via Pap testing in the first six months, and the number of women screened via HPV testing increased from a baseline of zero in November 2017 to 2350 as of 30 June, 2018. As a corollary, the proportion of women screened via Pap tests decreased in the latter months of the Collaborative due to the change in the testing method. Whilst data cleansing activities may account for some of the improvement observed in the first measure (Pap test), the increase in the numbers screened via HPV testing can only be attributed to the efforts of the participants to actively inform the patient cohort of the changes and undertake testing via the new regimen.

Several participants rated their involvement in the CSC highly, both in terms of improvements made in the rates of cervical cancer screening and in relation to knowledge gained and skills enhanced in quality improvement.

> *"Personally I found the CSC beneficial to myself as a nurse, particularly on the changes to cervical screening, enabling a better knowledge of the process for me to educate woman within my practice.*
>
> *I now have a better understanding of QI and the processes that need to be implemented to improve outcomes within my practice."*
>
> *"Enabling a whole staff approach to learning/ teaching new skills- we all learnt at the same time and developed a patient focused system after we had a clinic system wide approach ingrained into our everyday."*

These outcomes were also highlighted by members of the EMPHN support team, who provided the following comments in response the question of the areas of greatest improvement observed:

> *"The program and focusing on cervical screening helped practices to transition into the new cervical screening guidelines."*
>
> *"Clinics' understanding of QI and how to implement it in their clinic. Innovative ways of targeting hard to reach groups of women."*

Discussion

This evaluation describes the design and implementation of a project that addresses the issue of screening for cervical cancer through system change and is likely to be replicable in other regions of the country. The Collaborative has resulted in the production of transferable intellectual property such as the aim, measures, change principles and change ideas, which were combined into a handbook.

The CSC implementation team (IF and EMPHN) worked together to design the Collaborative, refine the measures, update the handbook, recruit general practices, plan workshops and design support systems over a period of five months. The feedback from participants indicates that the Collaborative was adequately resourced and generally well run. This success can be attributed to the experience and expertise of the IF with the design and implementation of quality improvement initiatives and the experience of the EMPHN with practice engagement and support.

The inclusion of an extra activity, the completion of the reflection reports, proved invaluable. The CSC implementation team were able to utilise the information provided in the reports to drive the program in its final months, particularly with those participants who were disengaged, and to ensure that participants' support needs were met and tailored to individual's and/or team's needs. In addition, the reports provided a rich source of qualitative information that has been analysed and included in this report.

Another identified useful outcome of this Collaborative has been the learning on the timing of undertaking a program of this type. The CSC illuminated challenges around the implementation of a program that focuses on supporting practices to transition to a new system whilst that change is occurring. This learning identified the need to further consider the level of, and ways to provide, support to participants in the design phase of a future iteration of this program.

The program aim was to increase to 75% the percentage of women aged between 25–70 years of age with a recorded result from a cervical screening test conducted in the recommended time frame. This aim was specifically selected by the ERP to encourage participants to make improvements to their current cervical cancer screening rates and whilst ambitious, provided an aspirational goal. The participants collectively did not reach the target figure, however most participants did make improvements to their baseline number, with one general practice undertaking screening via the HPV test of 34% of their eligible cohort in just six months.

As described by participants in their submitted PDSA cycles, all general practices created new registers of eligible women and subsequently made changes to their recall and reminder systems. Many of the participants reported that their participation in this Collaborative had enabled them to inform their staff and their female patients of the changes to cervical screening in a timely way and that as a result, they had been able to focus their efforts on improving cervical cancer screening rates. In addition, the majority of the participants stated that their involvement had enabled them to form a micro team with the explicit responsibility to undertake activities relating to this Collaborative. The majority, 70%, stated that they were provided with dedicated time to undertake these activities which they believed enabled their progress.

The reflection reports provided significant information on the innovative ideas that the participants trialled throughout the program. The successful change ideas that were tested not only enabled participants to make improvements to their processes and systems, but also improved the knowledge of the participating team members in ways to implement quality improvement methods and tools. This was underscored by the provision of a variety of change ideas that participants stated they would undertake to support embedding quality improvement at the service level. These ideas included continuing education for GPs and staff with reference to data cleansing, cancer screening or quality improvement more broadly; continuing to undertake a monthly recall process for cervical cancer screening and undertaking regular analysis of patient data. Several participants stated that they would continue to educate and support women to undertake cervical cancer screening and one participating general practice reported that they will develop quarterly patient health improvement programs to focus on key health matters and inform their patients of these programs.

Whilst participants provided feedback that there are improvements that can be made to future iterations to this program, 68% of participants stated that they would be either likely or very likely to recommend the Cancer Screening Collaborative to their colleagues and/or other general practices, highlighting a belief in the value of this program to support general practice teams to make sustainable improvements using the Collaborative methodology.

Recommendations

1. Reduce length of the Collaborative.

   This topic would suit a 6 month timeframe as participants lost motivation in the latter months due to a belief that they had undertaken all possible improvement work in the early months of the program.

   Alternatively, the topic could be expanded to include breast and bowel cancer screening. Participants would thus be able to trial change ideas and apply their learnings to increase their cancer screening rates for the broader patient population.

2. Implement a joint advisory or working group to collectively undertake program planning.

   Throughout the implementation phase, there was confusion as to the specific roles and responsibilities of IF and the PHN support team with regard to the development of protocols and resources relating to measure development and data collection/extraction processes. A working group could clearly identify and delineate the respective roles and responsibilities of each organisation.

3. Review the measure set and the data collection process.

   The multitude of problems experienced with data extraction and collection, the inability to effectively beta test the measures, the lag time in software development and the lack of data mapping led to distrust and disengagement from the support team and participants in the early months of the program.

   Active and ongoing participation in a program of this type requires confidence in the systems, processes and materials of the implementation organisation(s). Consider collecting a limited set of measures during the transition phase to enable concurrent testing of new measures without losing the engagement of participants.

4. Utilise enhanced platforms for data entry and data visualisation

   As discussed, both participants and members of the support team reported dissatisfaction with the utility of the online platform for entering MFI data and data visualisation. A new platform would enhance the user experience and provide more time for participants to focus on improvement activities.

5. Implement strategies to foster ongoing engagement and motivation.

   The strategies employed throughout the program were ineffective. Consider the use of regular e-newsletters that highlight innovative change ideas, discuss successful implementation strategies and support ongoing and continuous improvement efforts.

Glossary

Term/Acronym	Meaning
Change Principle(s)	A pathway that Collaborative participants can follow to guide improvements in a topic area
Clinical Lead	A clinician who provides clinical oversight of the Collaborative and supports participants
Collaborative	A specific method of quality improvement used to distribute and adapt existing knowledge to multiple groups to achieve a common aim
CSC	Cancer Screening Collaborative
CST	Cervical Screening Test performed on either a clinician-collected or self-collected screening sample
EMPHN	Eastern Melbourne Primary Health Network
GP	General Practitioner
GPMP	GP Management Plan
HPV	Human papillomavirus
IF	Improvement Foundation
MFI	Model for Improvement
NCSP	National Cervical Screening Program
qiConnect	Improvement Foundation's web portal

Appendix 1

Timeline of key dates

13/05/2017	National promotion of the Cancer Screening Collaborative to PHNs
20/09/2017	EMPHN formally contracts IF to design and deliver a Cancer Screening Collaborative
21/09/2017	Orientation Webinar
11/10/2014	Learning Webinar One
21/11/2017	Learning Webinar Two
01/12/2017	Renewal of the NCSP
07/03/2018	Learning Webinar Three
30/05/2018	Learning Webinar Four
30/06/2018	CSC concludes
03/07/2018	Online evaluation survey distribution

Appendix 2

Aim, Measures and Change Principles

The Aim of the CSC

- Increase to 75% the percentage of women aged between 25–70 years of age with a recorded result from a cervical screening test conducted in the recommended time frame.

Measures

- Total number of women screened with a Pap test
- Total number of women screened with an HPV test

Change Principles

1. Engage the practice team

    - Involve the whole team
    - Set realistic goals and use data to drive improvement
    - Ensure team members have protected time to complete tasks
    - Communicate in a regular and planned manner
    - As a team, regularly reflect, review and adjust what you are doing

2. Have a systematic approach to cancer screening

    - Consider how, when and to whom you will offer screening
    - Develop and maintain an effective recall and reminder system
    - Develop systems that support patient safety
    - Identify ‘at risk’ women and provide them with additional support
    - Support women who have a positive screening test
    - Undertake awareness raising

3. Deliver person centred care

    - Understand women’s perspectives, and design and deliver your services accordingly
    - Develop tools to support informed, shared decision making
    - Strengthen your team’s skills and practice systems in relation to person centred care
    - Use patient reported measures to drive improvement
    - Work in partnership to address environmental, cultural and other barriers to screening

Appendix 3

CSC resources and data sources reviewed:

A. Cancer Screening Collaborative Handbook
B. Cancer Screening Collaborative Data Collection and Submission User Guide
C. General practice data submissions
D. General practice participant Models for Improvement
E. General practice participant program reflection reports
F. General practice participant survey responses
G. EMPHN support team survey responses

Appendix 4

Participant End of Program Evaluation – online survey

Responses to be selected from the following scale:

- 1 – Needs Improvement
- 2 – Fair
- 3 – Good
- 4 – Very Good
- 5 – Excellent

1. How effective was the orientation webinar in providing an overview of the Cancer Screening Collaborative?
2. How effective were the learning webinars in providing relevant information and innovative ideas?
3. How effective was the Cancer Screening Collaborative Program Handbook in providing relevant resources and ideas to assist you with your quality improvement activities?
4. To what extent did you find qiConnect easy to navigate?
5. How effective was the data extraction method you used?
6. How effective was the system for recording measures in an Excel spread sheet and submitting them to IF via email?
7. How effective was the Cancer Screening Collaborative data collection and user guide in assisting you with data extraction, data submission and troubleshooting?
8. How effective was your EMPHN support officer in assisting you with your quality improvement activities?
9. How effective were the IF staff in supporting you with any issues, data related or otherwise?
10. How effective was IF communication throughout the program?
11. To what extent did the program provide you with new ideas/ strategies in relation to quality improvement?
12. To what extent did the program provide you with new ideas/ strategies in team building and communication at your general practice?
13. To what extent did the program provide you with new ideas/ strategies in relation to cervical cancer screening?
14. How likely would you be to recommend the Cancer Screening Collaborative to your colleagues/other general practices?
15. Overall, please indicate whether you found your participation in the Cancer Screening Collaborative to be of value to the practice?
16. Were you provided protected time to complete quality improvement activities? (Yes or No)

Respondents were also asked for any suggestions on improvements to the program.

EMPHN Support Staff End of Program Evaluation - online survey

Responses to be selected from the following scale:

- 1 – Needs Improvement
- 2 – Fair
- 3 – Good
- 4 – Very Good
- 5 – Excellent

1. How effective was the initial program training in providing you with knowledge about your role in supporting practices throughout the Cancer Screening Collaborative?
2. How effective was the second training session in upskilling you in quality improvement techniques and skills?
3. How effective was the orientation webinar in providing an overview of the Cancer Screening Collaborative?
4. How effective were the learning webinars in providing relevant information and innovative ideas?
5. How effective was the Cancer Screening Collaborative Program Handbook and other resources in providing relevant ideas to assist practices with their quality improvement activities?
6. How effective was the Cancer Screening Collaborative data collection and user guide in assisting practices with data extraction, data submission and troubleshooting?
7. Did any of the practices you supported have issues with data collection, data extraction and/or data submission? (Yes or No)
8. If yes, please provide detail the issues.
9. How effective were the IF staff in supporting you with any data extraction/submission issues?
10. To what extent did you find qiConnect easy to navigate?
11. How effective was IF communication throughout the program?
12. To what extent did the program provide you with new ideas/ strategies in relation to quality improvement?
13. To what extent did the program provide you with new ideas/ strategies in relation to cervical cancer screening?
14. To what extent did the Cancer Screening Collaborative meet your expectations?
15. Overall, please indicate whether you think your practices found their participation in the Cancer Screening Collaborative to be of value?
16. Overall, please indicate your satisfaction levels with the entire program

Respondents were also asked to provide feedback on:

- The area(s) of greatest improvement
- The greatest implementation barriers and strategies used to overcome them
- Suggestions for improvements to the program.