

**A CLINICAL AUDIT | THE UPTAKE OF CERVICAL SMEARS  
IN GENERAL PRACTICE |**

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## Abstract

**Introduction:** Primary care plays a critical role in the delivery of the Health Service Executive (HSE) Cervical Check Screening Programme in Ireland. The majority of cervical smears occur in general practice (GP), along with the education and support of women with regards to their health. The clinical benefits of screening and treating patients with cervical cancer earlier create a strong rationale for compliance with the programme. However, there is growing concern in Ireland with regards Cervical Check as a result of testing errors and issues in the handling of patient information, which is increasing the scrutiny on overall compliance. Improvements in coverage allow for earlier detection of cervical cancer leading to a treatable disease and more favourable outcomes.

**Methodology:** Data was collected by means of a patient completed survey during a GP visit, in order to identify women who never had a previous cervical smear completed. The original audit was carried out over a four month period in 2018. Subsequently, a re-audit was carried out post - intervention in 2019 over a three month period. Compliance with the current Cervical Check guidelines was then analysed for audit cycle one and audit cycle two.

**Results:** 446 (audit one) and 162 (audit two) women took part in this clinical audit by completing a survey. The data collected indicated that the defined threshold of > 80% screening compliance was achieved at this General Practice in both audit cycles one and two.

**Discussion:** Currently the national standards defined by Cervical Check are being met at this practice. However, it is still crucial to consider the reasons why women within the screening population are not being screened. In doing so, this will help to shape initiatives in order to promote continuous uptake of this life saving service. While the acceptable standard of screening is >80%, primary care providers should aim to achieve as close to 100% as feasible, acknowledging that some women may not wish to be screened. The reasons for not partaking in the Cervical Check Screening Programme included education, age, nationality, cultural barriers and anxiety.

**Conclusion:** General Practice plays an essential role in overseeing and implementing the Cervical Check Screening Programme nationally. It is essential to encourage all women within the high-risk population to partake in screening in order to optimise their health and reduce the risk of cervical cancer. Increasing the uptake of such a service requires an in depth analysis as to why these women have never had a previous smear. Future auditing is essential to gain such insight and continue to improve current practice. In addition, there is a need to engage directly with patients themselves to understand their perspective on the screening programme.

## Introduction

The process of screening is used to detect diseases, or early signs of a disease through testing or examination for people who do not currently possess signs or symptoms of the disease (Andermann *Et al.*, 2008). Cervical screening supports detection of cell abnormalities that have the potential to become cancerous. Since the initiation of the Cervical Screening Programme in 2008 there has been a significant decline in the incidence of the disease with a reported downward trend of -6.9% (NCRI, 2017). This provides clear evidence that there is a substantial benefit to screening the female population in the prevention of cervical cancer.

Cervical cancer accounts for 2.5% of all invasive cancers in Ireland and is the cause of 2% of all cancer deaths (NCRI, 2018). Infection with high risk HPV poses a significant risk to women for cervical cancer, as does smoking, HIV, high parity and low socio-economic status (SES). Due to the controversy surrounding the Cervical Check Screening Programme there is mistrust amongst the Irish population. According to the Scally report as much as 20% of women in Ireland do not undergo cervical smear testing currently.

A strengthened focus is required both nationally and locally to identify these women and improve the uptake of this service in order to significantly decrease the levels of cervical cancer in Ireland. GP's play a vital role in promoting this service and educating their patients. It is critical that all GP's are vigilant in ensuring all women are up to date with their smear tests in order to allow the screening process to run smoothly.

This report will focus on an audit that was initially completed between September and December, 2018 and the follow-up audit completed between April and June, 2019. The population audited was all women between the ages of 25-60 inclusive attending the Orchard Medical Group in Clondalkin, Co. Dublin.

Background research on cervical check and screening for cervical cancer was undertaken prior to auditing this service. The key words used to research this area included *cervical check*, *cervical screening*, *cervical cancer*, *guidelines for cervical cancer screening*, *cervical cancer in general practice*, *colposcopy*, *HPV* and *Scally Report*.

## **Aim of this audit**

The aims of the audit were:

- 1) To identify the amount/ percentage of women in the practice who have **never had a smear done**
- 2) Identify any trends that exist/ reasons as to why women may not have attended for a smear
- 3) Improve the uptake of cervical smears in this General Practice

## **Objectives of this audit**

The objective of this clinical audit was to assess the compliance rates of a General Practice with the standards set out by the National Cervical Check Screening Programme. This audit evaluated the potential need to improve methods used to encourage women to attend for cervical screening. Ultimately the objective is to improve the standard of care delivered, specifically the uptake of cervical smears in order to reduce the rates of cervical cancer.

## **Standards set for cervical screening**

The success of Cervical Check is dependent on the participation and uptake of women in the population of interest. In order for there to be a potential percentage reduction in the incidence of cervical cancer a minimum of 80% uptake needs to be achieved (National Cancer Screening Service, 2018).

The guidelines used to set this standard were the latest *NCS Guidelines for Quality Assurance in Cervical Screening*. All women between the ages of 25-60 require a cervical smear, initially every three years then every five years from the age of 44-60 inclusive.

A minimum threshold of > 80% is to be achieved for the uptake of cervical smears in General Practice.

## Cycle one audit

### Method and Sample:

The data was collected over a three month period (September- December 2018) by means of a survey. All patients were consented for this process and given the option to decline. Women were asked to fill out the surveys when they attended the surgery whilst waiting to see the nurse or doctor. Some patients required assistance in filling out the surveys due to the complexity of the questions- this will be discussed later in the report. The survey aimed to capture details such as the patients name, address, date of last smear, last menstrual period (LMP). Further information such as GMS status, age and nationality had to be manually extracted from the Health One computer system and added to the data collected by the surveys.

**Sample size:** 446 women in total completed the survey across two General Practice sites under the Orchard Medical Group.

**Population of interest:** All women between the ages of 25-60 inclusive who attend the Orchard Medical Group.

**Criteria to be measured:** If women between 25 and 60 have ever had a smear: yes/no.

**Ethical approval** was not required for this audit. This was an internal audit aiming to improve local quality of care. The data collected was solely for this purpose and stored in the practice.

### Cycle one results

In total 446 women took part in this audit. These women were between the ages of 25-60 inclusive and all attending the Orchard Medical Group. 16 of the surveys were deemed inadequate and so had to be excluded from the data.

Of the 430 adequate surveys collected **43 women were found to have never had a smear done- this represents 10%**. These women were immediately advised to book a smear.

Of these 43 women 32% were between the ages of 25-29. A further 21% of women were between the ages of 35-40 and the remaining women are represented below (see figures 1 & 2).

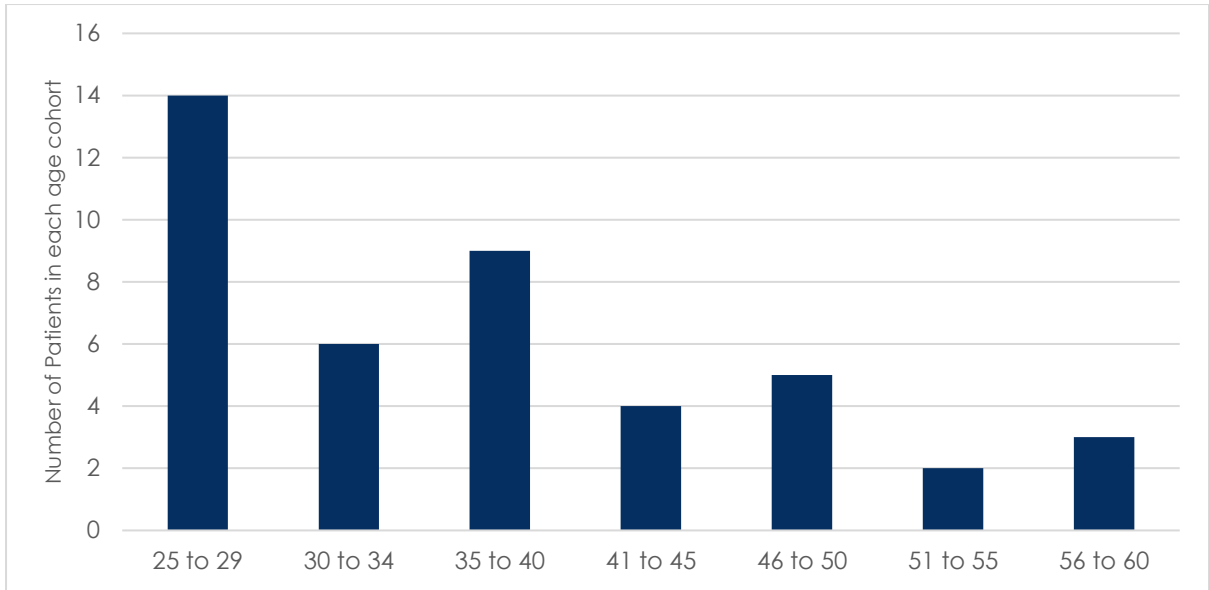


Figure 1 - Breakdown of Non-Compliance by Age Cohort in Audit 1

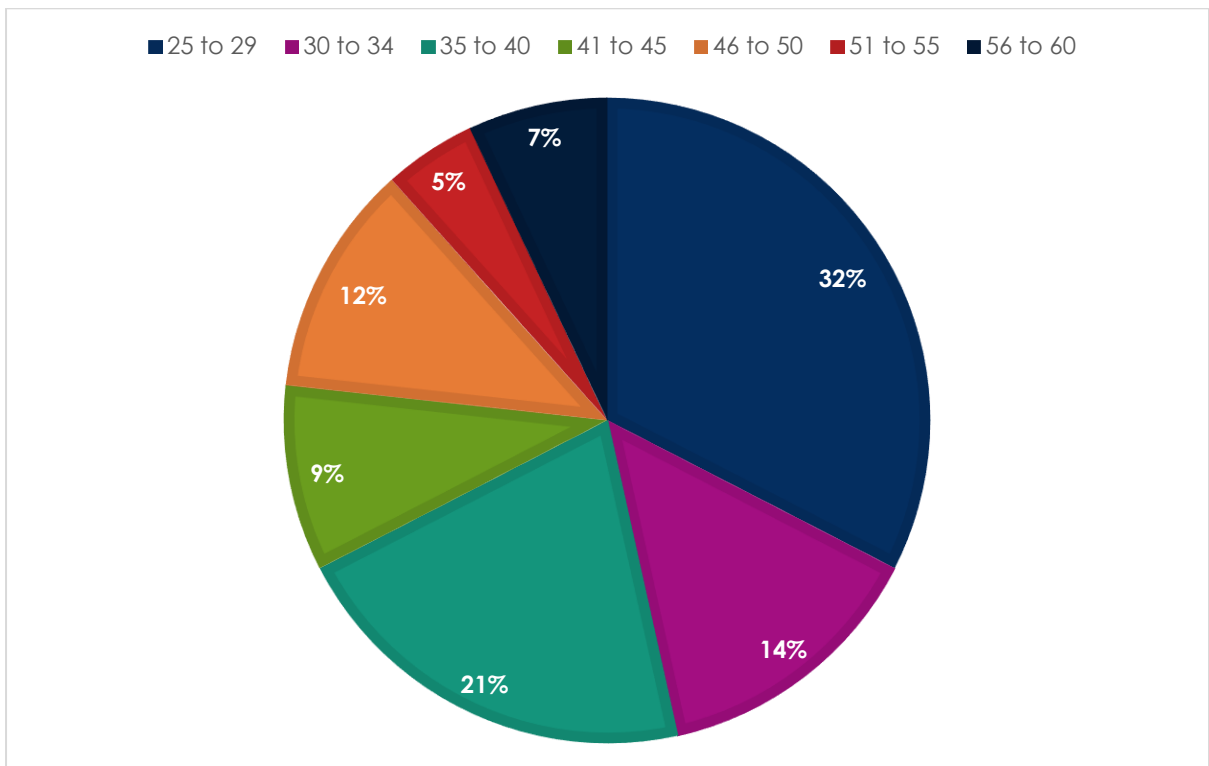


Figure 2 - Breakdown of Non-Compliance by Age Cohort Audit 1

GMS vs private patient status was considered when identifying correlations between non-compliance with cervical smears (see figure 3). 28 of the women (65%) were GMS card holders whilst 15 (34%) were private patients. This may represent the fact that patients that hold a GMS



card attend more their GP more frequently and therefore a higher number of surveys were completed by this cohort in comparison to private patients. Further discussion on the correlation between this can be found in the discussion section.

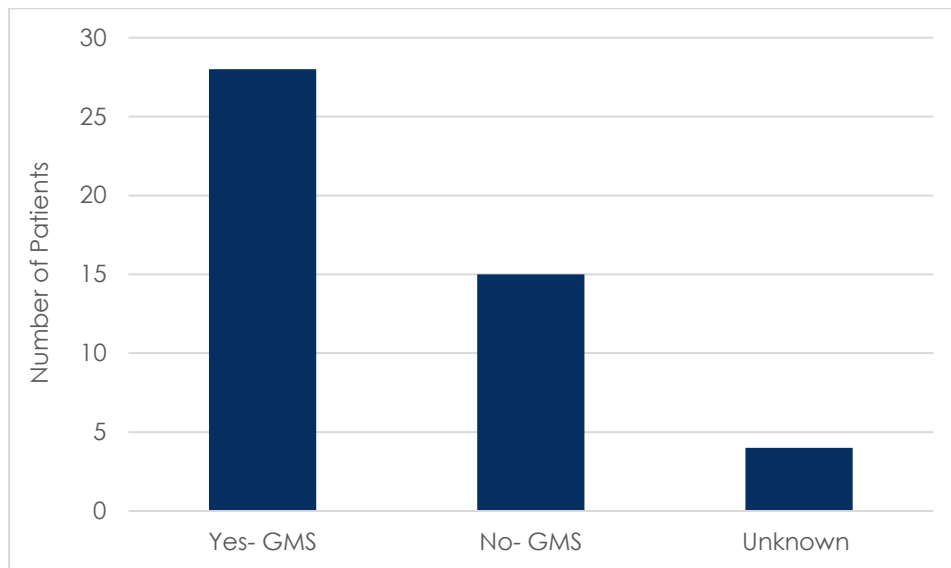


Figure 3 - Non-compliance by GMS status Audit 1

The nationality of the 43 women was evaluated and categories were split into Irish, European Union (EU) and non- EU (figure 4). 52% of the women were Irish which is expected, however 39% of patients were no- EU. When compared to EU citizens there were just 9%. Reasons for non-compliance will later be discussed.

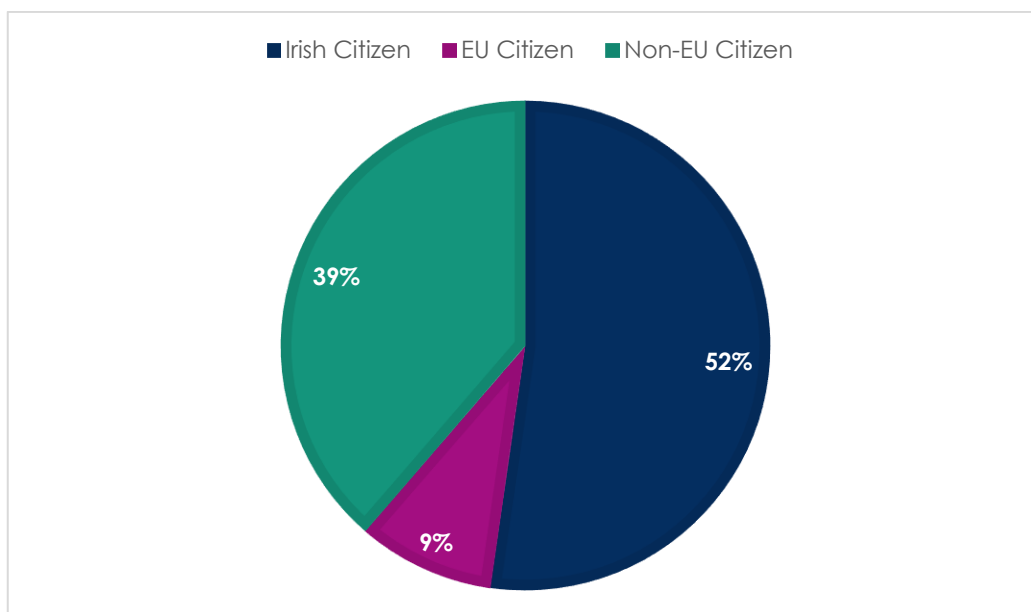


Figure 4 - Non-compliance by Nationality - Audit 1

### **Intervention post cycle one**

Following the first cycle of this clinical audit all women who were identified as never having had a smear were immediately contacted and advised to register with Cervical Check and attend for a smear. Healthcare providers across the two practices were advised to counsel women on the subject of cervical smears. This involved the education of women during consultations and advising women to actively engage with the service and to book their smears when appropriate.

## Cycle two audit

### Method and Sample:

Cycle two of the audit took place between April- June 2019 across two sites under the Orchard Medical Group. Once again women were asked to partake in a survey. An updated version of the original survey was used for the second cycle (reasons to be discussed later in report). All medical jargon was removed, the survey itself was shorter and new data was captured such as the age of each patient, if they have ever had an abnormal smear and if so were they referred for colposcopy.

Cycle two of the audit included a total of 162 women. These women were between the ages of 25-60 inclusive and all attending the Orchard Medical Group.

**Sample size:** 162 women in total completed the survey across two General Practice sites under the Orchard Medical Group.

**Population of interest:** All women between the ages of 25-60 inclusive who attend the Orchard Medical Group.

**Criteria to be measured:** If women between 25 and 60 have ever had a smear: yes/no.

The circumstances surrounding cycle two of this audit were the same as cycle one and so ethical approval was not necessary.

### Cycle two results

In total 162 women took part in this audit. These women were between the ages of 25-60 inclusive and all attending the Orchard Medical Group. None of the surveys collected in cycle two were deemed inadequate and could all be used for analysis of cycle two.

**Thirteen women** were identified as never having had a smear done. **This figure represents 8.2%.** Since the initial audit took place in December 2018 there has been a **1.8% decline** in the amount of women who have never had a smear taken /(the uptake has increased by 1.8%). These results are promising and highlight the need for women to be consulted on a regular basis about the importance of the Cervical Check Screening Programme.

## GMS status audit cycle two

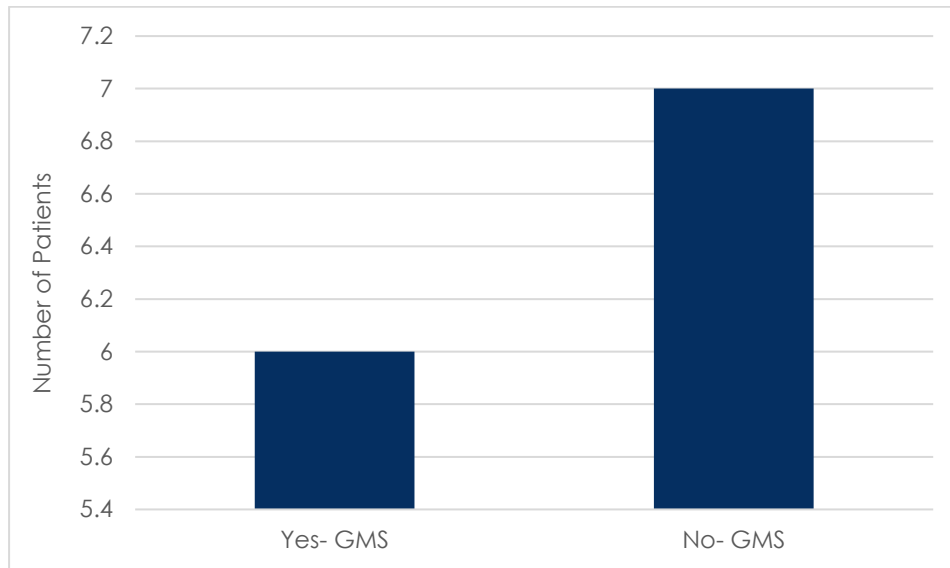


Figure 5 - Non-compliance by GMS status Audit 2

Cycle 2 of the audit demonstrates little difference in compliance between GMS and private patients (see figure 5). 46% of the patients were GMS whilst 53% were private patients.

As seen in figure 6.0 the majority of non-compliance occurs in the 25-29 age bracket, account for 54%- this figure is concerning as these women are at a high risk for developing cervical cancer if not screened. Following on from this 23% of patients were 35-40.

## Age profile audit cycle two

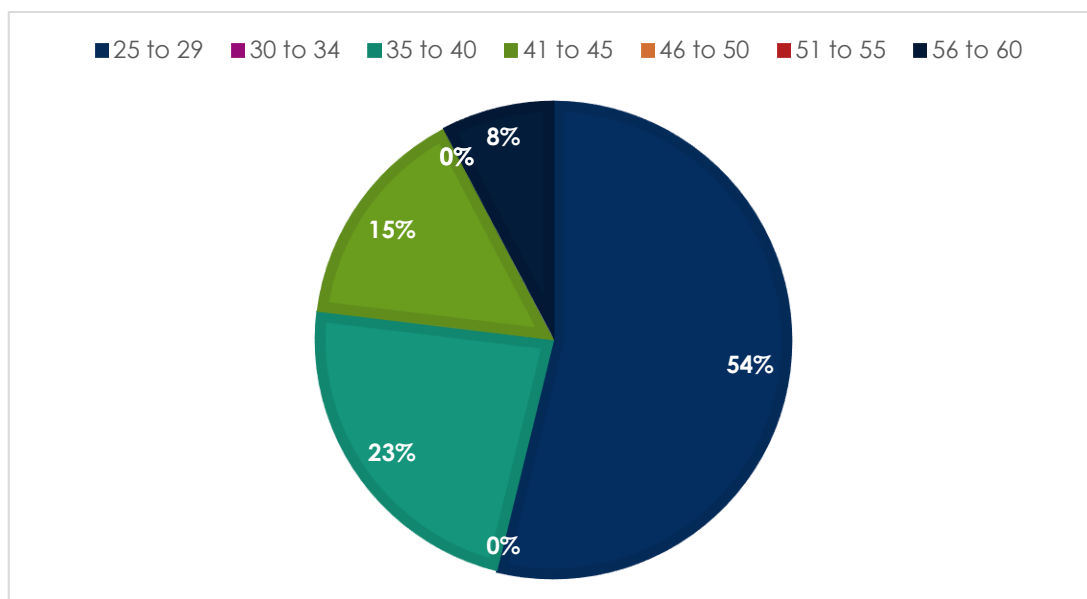


Figure 6 - Breakdown of Non-Compliance by Age Cohort Audit 2

## Nationality analysis cycle two

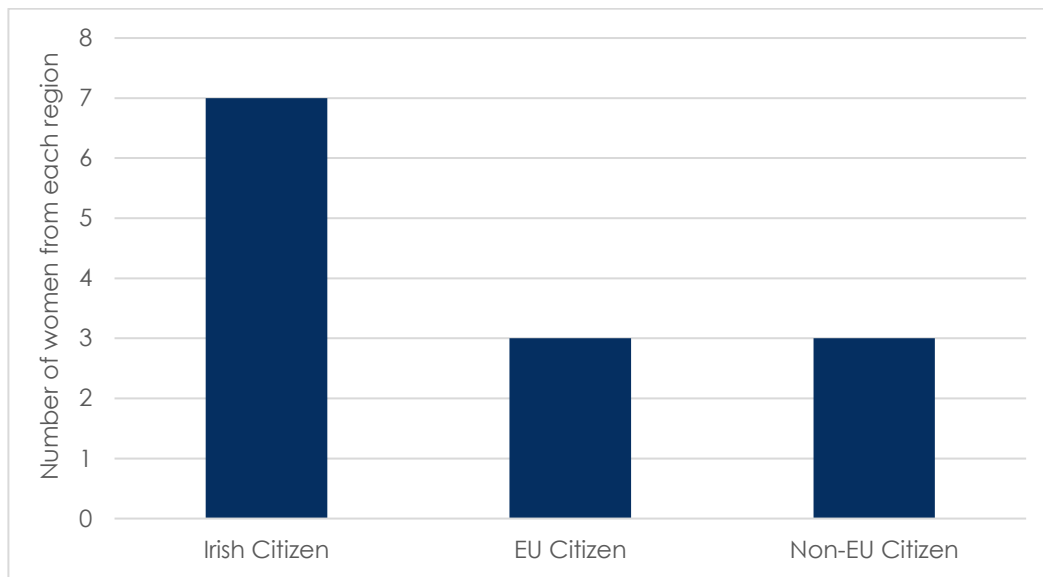


Figure 7 - Non-compliance by Nationality - Audit 2

Figure 7 represents the nationality of the thirteen women from cycle 2 that were non-compliant with screening. 53% of them women were Irish (similar to cycle one). However unlike cycle one Eu and non-Eu compliance rates were the same at 23.7%.

## Reasons why smear tests were not completed:

It is important to analyse and understand why women have never attended for a smear. In order to investigate this further a search was completed on the Health One computer system, which holds the GP practices digital patient record. All 47 women from cycle one and 13 women from cycle two were individually searched in order to gain further insight as to why they had not undergone cervical screening.

### Cycle One

Of the 43 women surveyed in cycle one it is unclear why 21 of them have never attended. Three women were noted to have refused smears due to **anxiety and fear** surrounding the procedure.

Five women were in the **post-partum period** and will have to wait three months before attending for a smear. Two women were pregnant. Two women refused because of **cultural** beliefs and two women were struggling to find the **time to attend**. One woman had only recently moved to Ireland from a non-EU country and had yet to register for cervical check.

Seven of the 43 women were 25 at the time of the original survey. This represents 16.2%. These women are all now eligible to register and attend for cervical smears.

## Cycle Two

Three women out of the thirteen (23%) were in the **post-partum period** and could not attend for a smear for three months. These three women also happened to be 25 meaning they would only be due to attend for their first smear this year. Five women were **pregnant** and could not attend for smears. Four of these women were over the age of 25 and so should have attended for their first smear prior to this. The reasons for not attending were unclear from the medical record alone.

There was no evidence as to why four women have never attended- they were between the ages of 28-44.

Two women had never attended due to **fear** of smears- this was documented in the medical notes.

In total four women of the thirteen (30%) were 25 when the survey was completed. We can therefore hypothesize that these women have either not registered for cervical check or are awaiting their appointment for their first smear. It will be important to remind these women that they will need to do so in the coming months

## Discussion

The results of this audit are promising. Currently the national standards set out by Cervical Check are being met at this practice. However, it is still crucial to consider the reasons why women are not attending for screening. In doing so this will help to shape initiatives for the future in order to promote continuous uptake of this vital service. Various aspects were looked at to include the age of patients, their nationality and their General Medical Service (GMS) status.

The reasons for not partaking in testing are well documented and include: lack of knowledge on the role of cervical screening and its benefits ( Peters *et al.*, 1989; Summers & Fullard, 1995), fear, embarrassment and pain (Hennig & Knowles, 1990; Murray & McMillan, 1993) and lack of availability of appointments outside of traditional working hours (Campbell *et al.*, 1996).

### GMS vs Private patients

It is difficult to deduce from the results if GMS status has a role to play in attendance for cervical screening. Whilst the results of the first cycle of the audit show that the uptake of

screening is significantly better in private patients, the uptake in cycle two showed marginally less private patients complying, but not such that it was statistically significant.

There was a higher proportion of GMS patients surveyed in total. The CSO statistics from 2015 show that 39.2% of females have a medical card (CSO, 2015). Examination of the literature shows that attendance rates to the GP are significantly higher with GMS patients (Nolan *et al.*, 2007) this gave us a greater chance of surveying these patients as they attended more frequently. It is therefore difficult to conclude if there is a true correlation between GMS status and compliance with cervical screening. Future auditing should continue to monitor the uptake of screening in these two cohorts of patients. By doing so trends can be identified to allow us to improve the overall uptake of screening services.

## Age

When considering methods used to increase the uptake of a screening programme age is a particularly important factor to consider. Identifying age groups that are non-compliant will shape future initiatives aimed at improving uptake for screening. With regards to cervical screening in particular, there is a strong link between decreased uptake with increasing age (Sabates & Feinstein, 2006). The reason for this is women believe that with increasing age their chances of developing cervical cancer decrease and thus eliminates the need to be tested.

In cycle one of the audit the largest cohort of patients that were non-compliant with screening were those between 25 and 29. This is not surprising as women who have recently turned 25 might be waiting for their smear test or have yet to register for the programme. However, research conducted in the UK suggests that one in three women aged between 25-29 do not attend for cervical screening (NHS,2018). Reasons for this include embarrassment, body shame, lack of education and time (NHS,2018). Educating these women and ensuring they sign up in the coming months will be crucial to ensure they avail of the service appropriately.

Non-compliance rates are quite evenly spread over the remaining age groups. Interestingly there is a larger number of women in the 35-40 age bracket. Women have previously reported in the practice that the opening hours do not facilitate working parents. Those in the 35-40 age group may be affected by this. There is no late night or early morning appointments as the practice opens at 10:00 and closes at 14:00. Going forward this may be something that will have to be considered in order to facilitate this age group. A survey in the UK reported that up to 35% of women had reported they would not attend for a smear if it meant they had to take time off work (NHS, 2018).

## **Nationality**

Whilst cervical screening has been carried out in the developed world for over 50 years it is not yet established across all developing countries. The issue with non-Irish nationals is the lack of education on the services that exist in Ireland and how to access them. There is a large cohort of non-Irish patients attending the Orchard medical Group. This includes both Eu and non-Eu women that have moved to Ireland.

In cycle one 39% of the patients were non Eu. This number is particularly high considering the majority of the patients attending the practice are Irish. Eu patients were lower at just 9% noncompliance. This is not surprising due to the recommendation of all EU members to adopt screening programmes for breast, colon and cervical cancer since 2003 (European Council, 2003). Unfortunately cervical screening programmes have not reached all parts of the world. The disparity that exists highlights the need for a global initiative to implement preventative programmes and effective education in order to ensure equal access to healthcare for all women. Going forward more emphasis needs to be put on educating this population and encourage the uptake of cervical smears in women immigrating to Ireland.

## **Culture and language barriers**

Assessment of population minorities such as immigrants with a range of diverse religious and cultural backgrounds is of particular importance. The link between minority subsets of the population and low uptake of cervical screening have long been established (Marlow *et al.*, 2015). Low uptake can be attributed to language barriers and lack of access to basic information on the services that exist. In a study conducted in New Zealand, language was consistently identified as the main barrier to screening (Lovell *et al.*, 2007).

## **Anxiety/ bad experiences with smears**

It is evident from the literature that women who have a positive experience whilst having their smear test done will continue to participate and reattend in subsequent years. However, it is also noted that bad experiences related to smear tests can be relayed to peers and negatively influence their future attendance as well as others (Doyle, 2006). A total of five women did not attend for smears due to fear and anxiety of the procedure. These women were counselled on the importance of the test and also reassured that the procedure should not be distressing. Going forward these women will be continuously counselled in the hope that they will attend for testing in the near future. It will also be critical to capture women who have had previously bad experiences with smear testing, understand what happened and encourage them to reattend in the hope that they have a more positive experience.



## Education

It is long understood that there is an established link between education and health. Education has a dynamic role in General Practice and serves to enhance people's understanding of the importance of screening for diseases such as cervical cancer.

Education is essential in enhancing preventative health services such as cervical check. Education raises awareness about the importance of attending for regular screening, improves understanding and increases women's confidence (Hammond, 2002).

General Practice in Ireland plays an essential role in carrying out cervical screening. In addition to carrying out the testing GP's also play a pivotal role in the promotion of this services and in empowering and educating women about cervical screening and cancer. They need to be aware of the barriers that exist and the beliefs of women in order to effectively promote this service.

Education currently takes place during the consultation with the GP and generally comes in the form of verbal information about the screening programme, the risk factors for cervical cancer and the process of obtaining a cervical smear. The difficulty with current practice is the lack of time for carrying out these services. The process of educating a patient occurs as an adjunct to a consultation for a different ailment that the patient initially presented for. This poses a significant challenge for the doctor as they need to deal with the patient's presenting complaint whilst also finding the time to educate their patients on their health and screening tools such as Cervical Check.

In light of the recent downfall of Cervical Check women are a lot more anxious about the process of cervical smears. Doctors and healthcare professionals need to be mindful of this and vigilance with education and reassuring patients is more important than ever before.

As seen in both of the audit cycles there are a number of non-Irish patients attending both sites of the Orchard Medical group. When considering methods used to educate patients it is important to take nationality and culture into consideration. English is not everyone's first language prompting the need for written information as well as verbal. It is also important to consider the fact that some women may have never heard of a cervical check programme, particularly those from outside of the EU. Staff should be vigilant in ensuring these women are aware of how to sign up to the screening programme and what it entails.

In order to provide the correct level of education and information to women surrounding the Cervical Check screening programme a number of things could be done in the practice:

- The introduction of **information sessions** either by healthcare professionals in the practice or external professionals. This would allow sufficient time to educate women in a calm environment where they are not rushed
- A clear explanation of exactly what the procedure entails to alleviate anxieties surrounding the test

- Supplying clear and simple written information on Cervical Check to all women attending the surgery- this gives them the opportunity to read about the service and come back with questions
- Direct women to the HSE Cervical Check website

### **Improving uptake in the future**

Continuous improvements are essential in medicine in order to provide a high quality of care to all patients. Whilst the results of this audit are promising it is important to consider ways in which the uptake of cervical smears can be increased.

In order to promote a higher response rates for the Cervical Check we have to consider the barriers that exist currently (as discussed above). In order to promote higher response rates to the cervical check screening programme a text reminder service could be put in to place. This will ensure that all women are aware of when they will be due to book in for their next smear test.

Education of patients is a continuous process which will continue to happen during consultations. More emphasis will need to be put on educating non Irish nationals as it has been identified that this cohort of women are at a higher risk of not attending.

### **Recommendations for future auditing**

The initial survey conducted for this audit proved to be over-complicated and littered with medical jargon. This made it difficult for patients to fill out and was time consuming for patients and staff alike. Whilst the names and addresses of the patients were collected on the questionnaire their ages and D.O.B were not. This data had to be manually checked off the Health One System which was a time-consuming and an inefficient method of collecting the data.

For the second cycle of the audit a new survey was devised. The purpose of this was to simplify the language used in order to make it more user friendly. Age and D.O.B were included in the new survey which reduced time when analysing the data for the second cycle. In addition to this, some of the unnecessary questions were removed from the survey in order to speed up the process for patients and staff.

The response rate for the second audit cycle was much lower than the first. Reasons for this may include: the time of year it was taken, patient preference, time constraints.

The initial survey was collected in the Winter months whereas the follow-up was done in the Spring of the following year. Statistically more people attend their G.P in the Winter meaning there would have been a larger amount of patients to offer the survey to.

Patients may have wished to decline to take part having already completed the initial survey in December. Furthermore, patients are often under time pressure when attending or have children with them and may have declined for this reason.

Encouraging higher response rates could be done by sending patients an online questionnaire to complete. I would recommend for all future questionnaires to be simplified by the removal of all medical jargon.

Whilst surveying can be a very insightful method for collecting data it is not the most efficient, particularly for an audit such as this. Going forward this audit could be carried out on the Health One computer system. All healthcare providers should actively engage with women about cervical screening and if women decline this should be documented in the notes. This will allow us to review reasons for non-compliance more in the future.

## **Conclusion**

The benefits of an effective and efficiently run cervical screening programme are well documented in the literature. Whilst there has been a significant decline in the rates of cervical cancer in Ireland there is still progress to be made. As with all screening tools there are limitations, and errors can be made. The recent downfall of cervical check has led to gross mistrust in the service amongst Irish citizens. Whilst every effort is being made at a national level to improve this service and prevent such an occurrence happening again it is impossible for women to forget the tragedies that arose from this case.

The role of the GP is critical in promoting this service and regaining women's trust. It is imperative that women continue to be screened and young women continue be educated on the signs and symptoms of cervical cancer and the importance of screening. General Practice plays an essential role in overseeing and implementing the screening programme for Cervical Cancer. It is essential to encourage all women of age to partake in this screening programme in order to optimise their health and reduce the risk of cervical cancer in this population.

This audit has highlighted the need for continuous monitoring in ensuring all women of the appropriate age are attending for cervical screening. In the future efforts should be made to approach this subject with women when they attend and encourage women to take ownership of their health. A re-audit of cervical smears should be carried out in the future months in order to assess the progress and effectiveness of the current practice and allow for future improvements in the service provided.

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