**Cervical screening uptake in people aged 25- 29: A quality improvement project at a single GP practice in the UK**

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Cervical Screening | Quality Improvement

**Abbreviations**

None

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**About this paper**: This student essay, by a 1st year medical student, won the Dr Jim Appleyard Prize for Reflection on Practice, for best essay on person-centred care.

**Introduction:** The NHS National Cervical Screening Programme (NHSCSP) was introduced in 1988 by Public Health England (PHE) and is offered to all those with a cervix aged 25-64 (National Institute of Health and Clinical Excellence (NICE, 2003). The overall aim is to identify individuals at higher risk of developing cervical cancer by detecting pre-cancerous changes in cervical cells and offering further investigation (NICE, 2003). The development of cancer in cervical epithelial cells is such that pre- cancerous cells can only be detected through population screening (NICE,

2003). Once detected these cells can be removed, significantly reducing risk of further cancerous development.

Thus, routine cervical screening (CS) is a simple intervention that can have a significant impact on long-term outcomes, saving an estimated 5000 lives per year (NHS England, 2019).

Despite this, in 2019/20 national uptake was reported to be 72% (NHS Digital, 2020), falling short of the national target of 80% (PHE, 2017). Rates are lowest in younger people aged 25-29 at 61.7% (NHS England

2019; NHS Digital, 2020). My project

aimed to improve uptake in first-time attenders. I chose this topic due to my midwifery background and particular interest in gynaecology and Public Health. If patients engage with CS early on it is possible that this may improve their engagement and lifelong understanding of the CS programme.



Number without up-to-date smear test

Number with up-to-date smear test (uptake)

**Age Group**

60-64

55-59

50-54

45-49

40-44

35-39

30-34

25-29

0

68.4%

73.1%

200

76.5%

67.4%

54.4%

70.3%

69.7%

68.5%

800

600

400

**% Uptake of Cervical Screening in Eligible Patients, by Age**

**Results:** Practice data were collected by a simple search via EMIS in December 2020. Of the patients registered at the practice, 4695 were

**Number of Patients Invited for Cervical Screening**

*Table 1: Chart demonstrating uptake of cervical screening in different patient age groups*

aimed to evaluate the current CS uptake in those aged 25-29 at a single GP practice, consider barriers to participation and plan an intervention

invited for routine CS. In order to meet eligibility for NHSCSP, patients must be between the ages of 25-64 and have a cervix – this includes transgender males and non-

|  |  |  |  |
| --- | --- | --- | --- |
| Patient Group (Age 25-29, eligible for  NHSCSP) | Number of Patients | Cervical screening up to date | Uptake (%) |
| Transgender and non-binary | 1 | 1 | 100% |
| Temporarily registered | 7 | 2 | 28.6% |
| Language barriers | 96 | 17 | 17.7% |
| Intellectual disabilities | 6 | 1 | 16.7% |

*Table 2: Cervical screening uptake in vulnerable patient groups*

binary people assigned female at birth. Of these, 67.9% had up-to-date smear tests, meaning that overall uptake was lower than the national average and considerably less than the national target. Uptake was highest in those aged 40-44 (70.3%) and lowest in those aged 25-29 (54.4%) (Table 1).

There were 739 patients in the 25-29 age group, making up 16% of the eligible population. Of these, 402 (54.4%) patients had up-to-date CS, the majority of which were normal with only 26 (6.5%) being referred for colposcopy. Fifty-eight (14.4%) of the patients screened tested positive for human papillomavirus (HPV). It was also noted that within the

eligible population, 307 (76.4%) patients had received the HPV vaccine; 195 (63.5%) of these had up- to-date CS.

A further search was undertaken to explore uptake in low participation groups, such as those with learning disabilities, non-English speaking, transgender/non-binary and temporary patients (Chorley *et al*., 2016) (Table 2). Uptake was lowest in those with learning disabilities (16.7%) and patients with language barriers (17.7%). It was difficult to evaluate the uptake in transgender groups as patients are registered under binary genders (male/female), meaning there is no way to recognise these groups with a simple search. It is unlikely that the 100% uptake is a true reflection as the search was unable to identify transgender men (who have a cervix and are eligible for NHSCSP) who will be registered as male.

**Discussion:** There are many factors that can prevent individuals from

engaging with the cervical screening programme (Cancer Research UK, 2019). It is important to explore these issues when considering what kind of intervention may be successful in increasing uptake.

**Patient Demographic:** The practice serves communities with significant deprivation, including higher rates of low income, unemployment, crime and housing issues (Ministry of Housing, Communities & Local Government, 2019). These factors can create barriers to healthcare, lowering uptake of CS (Chorley *et al*., 2016). The city is also a university town, meaning it has a large transient population of young adults who may access screening services elsewhere, explaining the low uptake in temporary patients (28.6%).

**Age:** Patients’ experience of health and perception of risk changes throughout their lifetime, reflecting on their decision-making process around CS (Blomberg *et al*., 2011). This could explain why uptake was higher in other age groups where reproductive stages, such as parenthood and menopause, can encourage individuals to consider their gynaecological health (Chorley *et*

*al*., 2016). Younger persons may be more likely to perceive themselves to be low risk on account of their age, reflected by a lower uptake in this group. However, in reality, more than half of cervical cancer cases each year are diagnosed in those under the age of 45 (Cancer Research UK, 2020).

Perception of cervical cancer risk could be different in younger patients due to the HPV vaccine. The vaccine was introduced in 2008 for girls aged 12-13 (PHE, 2015), who, moving into the 25-29 age group, are now eligible for NHSCSP, having been the first to be vaccinated at school. It is possible that incorrect perceptions about risk following the vaccination could contribute to lower uptake in this group. Improved understanding of the role of HPV in cervical cancer can contribute to more accurate assessment and appreciation risk and value of cervical screening for younger patients (Nadarzynski *et al*., 2012).

**Vulnerable Groups:** It is important to consider vulnerable groups who may face more barriers to access care.

Research has shown that people with learning disabilities are 45% less likely

to be screened for cancer than those without (Osborn *et al*., 2012). Although screening leaflets are available in different languages, the uptake was particularly low (17.7%) in the 96 patients who faced language barriers. This was likely due to poor communication leading to a lack of understanding and therefore engagement in CS. Patients may also choose to use medical services/screening abroad, where they feel more familiar with healthcare systems. In addition, there are related cultural barriers and misconceptions around risk within some ethnic minority groups (Marlow, Waller and Wardle, 2015).

**Service Provision:** Research has suggested that practical barriers are often more predictive of screening uptake than emotional ones (Waller *et al*., 2009). Factors such as appointment systems and clinic times can prevent young people from attending (Waller *et al*., 2011). Local CS programmes also need to rise to the challenge of adapting information and organisation for groups of patients with different needs and life situations (Blomberg *et al*., 2011). The COVID-

19 pandemic has also put a significant strain on CS service provision throughout 2020, resulting in delayed invitations, appointments and follow up (Castanon *et al*., 2021).

**Proposed Intervention:** Changing the structure of the invitation and booking systems for CS may help to overcome logistical barriers to participation (Ryan, Waller and Marlow, 2019). At present, eligible patients are called for screening via the automated system, Open Exeter. An initial letter is sent in the post ahead of their 25th birthday, inviting them to book a CS appointment with their GP. The letter includes a ‘Cervical screening: Helping you decide’ leaflet by PHE. Those who do not participate are sent two further reminder letters. Studies have shown that the use of invitation and reminder letters is not an effective solution for all women in improving uptake, and that different interventions should be considered (Albrow *et al*., 2014).

My proposed intervention would be to implement a tailored SMS message for recall of patients aged 25-29 who are overdue their screening appointment. Use of SMS messages has been

proven to improve cervical screening uptake in non-responders by as much as 5% in the first six months (Huf *et al*., 2017; Ruwende, 2019; Huf *et al*., 2020). It has also been found to improve participation in under-served populations, including those with disabilities and low income, thus reducing screening inequalities (Duffy *et al*., 2016). Not only this, SMS reminders are a low-cost intervention, costing as little as 3p per message (Alford, 2020). The text message would include signposting for age- appropriate and accessible online information. This would aim to address patients’ perception of risk and understanding of the role of CS through education. If these changes are implemented, I would recommend re-auditing in 6-12 months to close the audit cycle and assess the value of this tool for future use.

**Conclusion:** In conclusion, NHSCSP saves lives by preventing cervical cancer and aims for 80% uptake in the eligible population (PHE, 2017). The data for this GP practice shows that screening uptake is lower than the national average, and patients aged 25-29 are less likely to engage than

those in other age groups. Uptake was particularly low in those with learning disabilities, temporary patients and non-English speaking patients. These are well-recognised barriers to CS and likely contribute to the low uptake overall. A higher rate of social deprivation in the area is another possible contributing factor. A tailored SMS message for the recall of patients who are overdue their screening appointment is one method proven to improve uptake and may be a useful low-cost intervention to implement for patients aged 25-29. Doing so has the potential to make a significant difference by reminding patients that their CS is due in a way that is accessible and user friendly.

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