Abstract

Cervical screening coverage, in the United Kingdom (UK), has been steadily declining year-on-year. Concurrently, the Human Papillomavirus (HPV) vaccination schedule excluded women born before 1990, therefore there is growing need to promote screening to those who were ineligible. Local data may help inform practices to identify non-attenders and allow development of targeted strategies to improve screening attendance with aim to meet the national target of 80%. NHS England aims to eradicate cervical cancer by 2040, however, much remains to be done to achieve this goal. Innovations such as self-sampling may be a vital tool to promote screening. This article will explore global targets, and the lessons learnt from countries with higher success rates, than the UK, in eradicating cervical cancer.

Introduction

Since the introduction of the NHS Cervical Screening Programme in 1988, the number of deaths from cervical cancer has halved (UK Government 2023). Despite this success, cervical cancer incidence in the UK remains high, with latest figures from Cancer Research (2024) reporting around 3,300 new cases each year. It is estimated that 83% of cervical cancer deaths could be avoided if there was 100% screening coverage of eligible individuals (NHS England 2022). Coverage, which measures the percentage of eligible individuals over a defined

period, is declining across all age groups, with no local authority in England achieving the 80% acceptable performance coverage level for cervical screening in 2023 (NHS England 2023a). Current attendance rates reveal that only 65.8% of eligible women aged 25 – 49, and 74.1% of eligible women aged 50 - 64 attended screening, (NHS England 2024b). Research into the key barriers has identified time constraints, fear of pain and embarrassment (Wilding et al. 2022). According to Jo's Cervical Cancer Trust (2020), barriers to attending screening can hugely vary across different ages and communities. The ability of nurses to identify and address the barriers is crucial for improving participation rates to ensure more eligible women benefit from screening.

Psychosocial influences on cervical screening attendance

Cervical cancer epidemiology informs nursing practice through identifying at-risk groups and key risk factors. The use of this information, along with demographic data, is vital in identifying the relationship between sociodemographic variables and screening intentions. Deprivation negatively influences cervical cancer incidence, with rates reported at 65% higher in the most deprived quintiles compared to the least (Cancer Research UK 2020). Research suggests suboptimal cervical screening attendance in women from lower socio-economic groups is due to reduced individual awareness, including poor knowledge of cervical cancer risk factors (Marlow et al. 2017). Nurses as trusted professionals need to be mindful of the negative influences social determinants of health can have on patients' intentions to attend cervical screening. Furthermore, evidence links deprivation with an increased risk of factors associated with HPV

malignancies (Choi et al. 2023). Specifically, the risk of smoking tobacco results in a 21% increase in the risk of developing cervical cancer, due to its link in the cancerous progression of HPV-infected cells (Cancer Research 2018). The NMC (2018) Code sets out expectations for nurses and nursing associates, encouraging the recognition of diversity in patient population. The NMC also encourage registrants to treat people as individuals, recognise that their social needs are assessed, and are responded to compassionately. By addressing health inequalities by providing evidence-based information, nurses can help to mitigate the impact that deprivation has on risk factors, such as smoking. Key to achieving this, is the ability to recognise the challenges and resources individuals face when making decisions about their health (Johnson 2020). This includes understanding a patient's level of awareness and knowledge about HPV and cervical cancer.

The influence of age on screening uptake

In England, the lowest rates of screening uptake are found in the youngest and oldest eligible age groups. Latest figures show that between 2022 – 2023, screening coverage was 56.4% for the 25 – 29 age group, and 67.5% for the 60 – 64 age group (NHS England 2023a). During a recent student placement within a GP surgery in a small town in the East Midlands, I [CM] observed various barriers that contributed to non-attendance across different age groups. The Practice Nurses were actively promoting awareness and uptake of cervical screening, yet younger women cited lack of time and inflexible appointments. Other barriers included discomfort and embarrassment, anecdotally noted

amongst the over 50s. Pain experienced by speculum screening is a recognised barrier for post-menopausal women, due to vaginal atrophy associated with the menopause (Freeman et al. 2018). A further barrier impacting attendance is the influence of attitude. A study by Patel et al. (2018) identified that the attitude of participants in long-term monogamous relationships influenced intentions to attend screening, with participants perceiving themselves to be at less risk of HPV. In older women, Jo's Cervical Cancer Trust (2015) also highlighted inadequate knowledge about cervical screening. The study found that 60% of 50 – 64-year-olds failed to recognise HPV as the cause of most cervical cancer cases. Furthermore, many participants did not link the threat that historic sexual activity with the risk of HPV lying dormant, potentially impacting health in later years. Recognising these knowledge gaps is crucial for tailoring patient conversations and improving screening attendance.

The impact of the HPV vaccination

The vaccination against high-risk strains of HPV, introduced in 2008, is expected to significantly impact cervical cancer epidemiology. Estimates suggest that the peak age of diagnosis is expected to shift from the vaccinated late twenties to the not vaccinated late fifties by 2034 – 2040, with an anticipated 62% rise in incidence among the women over 50 in the next two decades (Castanon et al. 2018). This anticipated shift emphasises the importance of continued screening promotion to this age group. Not only because this age group has less frequent recalls to attend screening (reducing from 3 to 5-year intervals) but also because the NHS Cervical Screening Programme is currently their primary

prevention measure against cervical cancer. Nurses, as trusted professionals, have a crucial role in promoting wellbeing and preventing ill health during all life stages (NMC 2018). During the last quarter of 2023, only 17% of practices met the 80% standard of screening coverage in the 50 – 64 age group (NHS England 2024a), a fall from 28% in 2016. This is a concerning trend for women over 50 as the risk of HPV remains a threat, as high-risk strains of HPV can be asymptomatic for many years, and sexual partners can carry and transmit the virus long before it is detected (UK Health Security Agency 2023). Women aged 50 – 64 who had adequate screening with a negative HPV result, were 84% less likely to be diagnosed with cervical cancer aged 85 or older than unscreened women (Castanon et al. 2014). Health education in women born before 1990, who have not benefitted from the vaccination programme, is crucial to empower individuals to make informed decisions about continuing their screening until age 64. Addressing the barriers and providing evidence-based knowledge in mid-life can not only improve physical health but also contribute to increased disability-free years in later life (Office for Health Improvement Disparities 2022).

How does the UK compare globally?

In November 2023, NHS England set an objective to eliminate cervical cancer by 2040 (NHS England 2023b). Australia, a global leader in cervical cancer prevention is on track to be the first country to eliminate cervical cancer, with estimates predicting this could be as early as 2028 (Hall 2019). This is earlier than the national strategy to eradicate cervical cancer in its population by 2035 (Australian Centre for the Prevention of Cervical Cancer 2024). One key factor in

this difference between the two countries is vaccination coverage. Australia reports a vaccination coverage of 78.2%, while England's stands at 60.6% (Jo's Cervical Cancer Trust 2023). This difference highlights the need for enhanced vaccination efforts in England to be able to achieve the ambitious target within the timeframe set by NHS England.

Methods and innovations to address the low uptake

NHS England (2024a) publishes cervical screening coverage by primary care and integrated care boards (ICBs) to support practices and Sub-ICBs to improve coverage and reduce the incidence of cervical cancer. This information can support practices to identify the size of eligible cohort to help address and inform strategies to target non-attenders. One way of addressing the barriers contributing to screening non-attendance is to adapt the messaging in information materials. GP practices have the option to personalise a paragraph in the invitation letter sent to a patient, offering a more personal and humanistic approach. Evidence suggests that this endorsement, specific to the patient's GP practice, can have a positive effect on screening uptake (NHS England 2024c). A second reminder letter can be further personalised to include information to reduce potential barriers such as surgery opening times and reassurance. A Cochrane review of interventions aimed at increasing cervical screening attendance found that a personalised approach can result in higher attendance rates than standard recall alone (Staley et al. 2021), resulting in a more positive outcome for screening opportunities. This approach is further recommended by

Cancer Research (2022) as a strategy to reduce attendance barriers. Furthermore, the use of multiple messages in women aged 50 - 64 years was found to have a significant increase in participant intentions to attend screening, compared to a single individual message (Waite et al 2022).

As advances to overcome the barriers with traditional screening and tackle poor uptake evolve, future approaches to improving coverage can focus on the availability of choice in sampling methods. The innovation of self-sampling is a positive development that could offer the potential to overcome the barriers associated with clinician-led screening (Figure A).

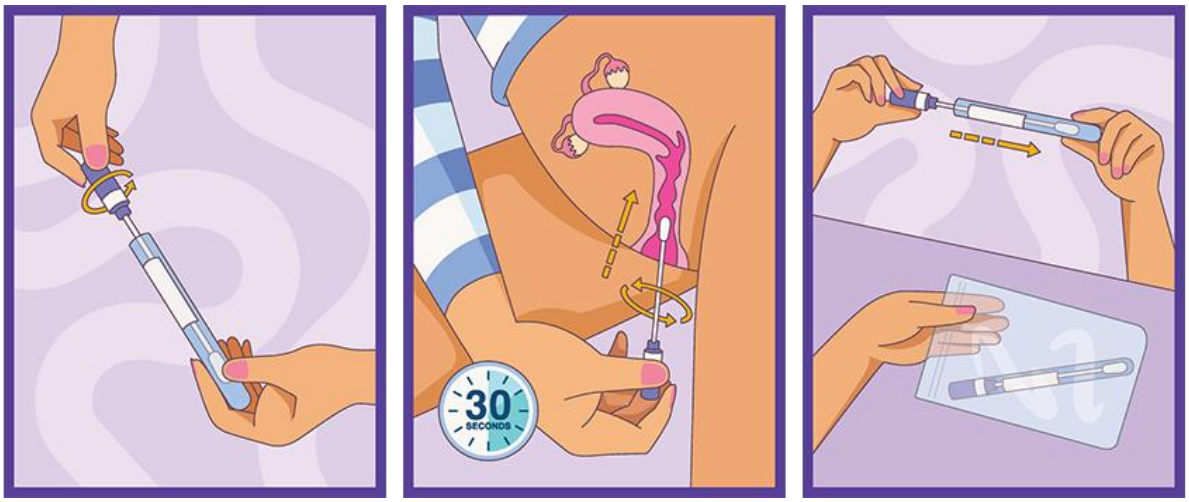

Figure A Australian Government: Department of Health and Aged Care (2024) Self screening

Globally, self-sampling is gaining increasing coverage, with nine countries now offering it as their primary screening option (Serrano 2022), which may help to mitigate embarrassment. Encouragingly, research into the approach's validity

identifies that self-sampling is non-inferior to clinician taken samples (Ornskov et al. 2021). The “YouScreen” trial (Lim et al. 2024) reports HPV self-sampling kits could enable a million more women in England, whose screening was at least six months overdue, to be captured in the screening programme over the next 3 years. Research using a sample of eligible women living in England reported that 71% of irregular attenders would choose self-sampling over clinician-led screening (Drysdale et al. 2022). For older women, this method could also positively influence their screening intentions. A Belgian study found that 20% of non-attending women aged over 50 returned their HPV self-sampling kit (Kellen et al. 2018). This option seems an obvious solution to women over 50 who may view the traditional method of clinician-collected screening using a speculum testing as a barrier for attendance. Providing a choice of screening methodology including clinician taken samples that are both speculum and non-speculum, together with self-sampling could be the most effective strategy for optimising cervical screening uptake (Landy et al. 2022). NHS England and the UK National Screening Committee are currently working on plans to rolling self-sampling out nationally.

Conclusion

Despite cervical cancer being a highly preventable and curable disease, screening coverage across all ages is declining year-on-year. Research (Cancer Research 2020; Marlow et al. 2017) has highlighted distinct inequalities contributing to screening attendance. The HPV vaccine is set to shift peak-age cervical cancer diagnosis and future initiatives need to acknowledge that under

screened women, born before 1990, will increasingly be at a disproportionally higher risk of cervical cancer. Self-sampling shows promising results and presents a huge opportunity to overcome the barriers to attendance and increase uptake. This initiative is likely to significantly change the landscape of HPV screening in the UK, but it may not appeal to all women. Health professionals have a key role to play in continuing to educate patients about HPV and offering a choice of screening methodology, ensuring screening appeals to all eligible women to improve coverage and ultimately hit the long-term goal set by NHS England.

Key points

- Cervical screening coverage continues to decline year-on-year and is lowest in the youngest and oldest eligible age groups.
- Barriers to cervical screening vary by age, deprivation and socioeconomic status. Having a knowledge of the demographic data available is vital to nurses to be able to educate patients.
- The HPV vaccination is set to significantly shift the age of diagnoses to the over 50s over the next two decades and this highlights the importance of screening for this age group in the future.
- Information is available for practices to be able to identify their non-attenders and inform strategies to target non-attenders and improve cervical screening attendance rates.
- NHS England aims to eradicate cervical cancer by 2040. There is still lots to be done to meet this ambitious target including the introduction of self-

sampling – what can we learn from other countries who have similar or more ambitious targets?

Key words

- Cancer screening
- Uterine cervical cancer
- Health promotion
- Post menopause
- Speculum
- Early detection of cancer

Reflective questions

- Identify the number of non-attenders for cervical screening in your surgery. What local strategies could be used to target non-attenders?
- Consider the level of patients' knowledge about HPV identified in this article. What information do you give to patients about HPV and the lifestyle factors associated with increasing risk of developing cervical cancer?
- For patients born after 1990, who have not been able to benefit from the HPV vaccination programme, how can you promote the significance of screening as a primary prevention measure?

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