



How to increase the uptake of cervical screening: a profile of success

A cervical smear test is an effective method for the early detection of cervical cancer, and for reducing cancer mortality. However, testing rates fell in 2012, and the rate of screening among women in high need groups remains significantly lower than the total population. We interviewed managers and clinicians from three successful regional cervical screening programmes, and present their advice on how primary care can increase the uptake of cervical screening, especially for women in the high need group.

Cervical cancer screening needs a boost

There has been much work done in recent years to improve cervical screening rates in New Zealand. Screening rates for the total population reached 75% in 2011 (as measured by the PHO Performance Programme indicator for cervical cancer).¹ However, it is important to keep cervical screening “on the agenda” because the number of women who have been screened can still be improved.

In 2012, the percentage of women up to date with their cervical screening dropped from 74.8% to 73.9%.¹ Of the 35 PHOs in New Zealand, 28 had fewer women up to date than in the previous year, for the total population group.¹ In the high need group the uptake of screening was 66%, also dropping from the previous year’s level.¹ The high need group for the PHO Performance Programme comprises Māori and Pacific peoples and people living in the lowest (NZDep 9 and 10) socioeconomic areas.¹ The National Cervical Screening Programme (NCSP) also identifies Asian women as having consistently lower screening rates than the total population group and includes them in their high need group.

Increasing the rate of uptake of cervical screening is essential. Cervical cancer has a ten to 20 year latency, and regular smear tests* can effectively identify the majority of pre-cancerous lesions.² The incidence of invasive cervical cancer and subsequent mortality rate has dropped by 50% in New Zealand since the implementation of the national screening programme.² An inadequate screening history is associated with increased rates of cervical cancer and cervical cancer mortality. This is particularly apparent among the high need group; Māori women are more than twice as likely to die from cervical cancer as European women.³

Although cervical screening rates have decreased overall, there are individual practices and clinicians around New Zealand who continue to achieve high rates of screening. The following article profiles three such groups, asking them why they have been successful and what other practices can do to increase uptake of cervical screening in their populations.

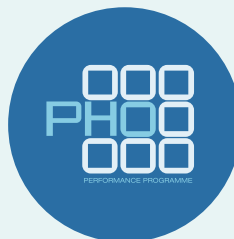
* A cervical screening test may be done by the conventional Papanicolaou smear method or by using liquid-based cytology. For brevity, we refer to both tests as a “cervical smear” in this article.

The PHO Performance Indicator: Cervical screening

The current PHO Performance Programme (PPP) indicator for cervical cancer screening aims to increase the number of women aged 20 – 69 years who are up to date with their smears. The Programme goal is to have 75% of all eligible women recorded as having a smear within the last three years. The indicator comprises 9% of a PHO’s performance payment, with 3% for achieving the target in the total eligible PHO population and 6% in the high need population.⁴

The high need population for this indicator is Māori and Pacific women and women living in NZDep decile 9 and 10 socioeconomic areas.

The indicator is calculated by dividing the number of women aged between 20 – 69 years who have had a cervical smear within the past three years, by the total number of women aged 20 – 69 years within the practice population. The denominator for this indicator (the total number of women in the age range) is adjusted for the number of women expected to have had a complete hysterectomy.



The Panel:

Vivienne Back, Regional Manager and Ngahina Waretini, Māori Health Promoter, National Cervical Screening Programme (NCSP), Canterbury Region, CDHB. This group facilitates and provides health-promotion services to 143 practices across three PHOs, three independent service providers (He Waka Tapu, Pacific Trust and Family Planning), a Māori Health Promoter for the NCSP and Arowhenua Whanau Services, who in turn collectively provide screening services to over 140 000 women in the Canterbury region. The NCSP health promotion team comprises Māori, Pacific and Asian health promoters and a clinical team of seven nurses. They have faced a unique set of challenges recently with the Canterbury earthquakes, which have affected screening uptake rates and changed the health focus of many of the women in the region. (CDHB)

Jenny Cawston, Manager, Population Health Programme, Hawke's Bay DHB and Victoria Speers, Team Leader, General Practice Facilitation, Health Hawke's Bay PHO. This group provides overall management and support to the screening

services offered by General Practice and other allied healthcare providers within the Hawke's Bay region. Using targeted funding, innovative IT support, professional development for Nurses and General Practitioners and social marketing, they have screened 80% of their total population, 80% of Pacific and Asian women and 74% of Māori women: exceeding the national average for all groups. (Hawke's Bay DHB and PHO)

Robyn Taylor, Nurse Manager, Karori Medical Centre, Wellington. Karori Medical Centre is a general practice facility that has developed and implemented a highly successful cervical screening programme. They have achieved the 75% threshold for their total patient population, and importantly, have also achieved the target in the high need group. Their focus is on providing cost effective alternatives to women in the high need group, being proactive in contacting women due or overdue for a smear and opportunistically offering smears to those women who are unable to be contacted but present for other reasons. In the future they aim to use more outreach resources and integrate screening into other existing initiatives, such as their immunisation programme, to provide smears to their remaining hard-to-reach women. (KMC)

What the panel had to say: a summary

The three interviewed groups had unique approaches to managing their cervical screening programme and increasing uptake in high need groups. This is largely due to the different population sizes in which they operate, e.g. across a DHB versus within a single General Practice, and the different barriers they face, e.g. the Canterbury earthquakes. However, when asked why they thought they had been successful or what other practices could do to improve screening uptake, there were many similarities in their answers.

Three points that were regularly reinforced were:

- Be proactive in contacting women for their smears, including:
 - The use of text, telephone and letters
 - Setting up alerts using the PMS
 - Making use of the NCSP register and register team to keep the practice's patient population database accurate
 - Contacting women prior to their 20th birthday to let them know that they now require regular screening (if they have ever been sexually active)
- Develop strategies to improve access to cervical

screening services, including:

- Making after-hours and weekend appointments available for screening where possible
- Offering screening when women who are overdue for their smear present for any reason, i.e. opportunistic screening
- Fully informing women of their options regarding screening services in the region, including their options for choice of screener
- Providing educational resources to those women who are not yet ready to be screened

- Work with the community and with regional and national-level screening programmes, the NCSP promotion teams and independent service providers to ensure coverage

By using innovative ways to reach and communicate with women in the high need group, and making smears accessible and cost appropriate, the nationwide screening level should increase. As one of the interviewed groups summarised: "It's about taking a proactive approach for women, to know that they should 'take care, have a smear'. What's most important is that one size doesn't fit all".

Why is the high need group falling behind?

Women who are eligible for screening, particularly those in the high need group, face many potential barriers to receiving regular smears, such as:⁵

- Embarrassment/shyness/whakamā
- Cost
- Lack of transport
- Inability to take time off from work/family commitments preventing attendance
- Fear of the results
- Pain or discomfort from the smear
- Not knowing what to expect
- Not understanding the need to receive a smear

Health can be viewed differently by different groups of people and traditional attitudes toward medicine are often more prevalent among people of Māori, Pacific and Asian ethnicity. This is also true of sexuality, and the association between sexual activity, cervical screening and cervical cancer prevents some women from being comfortable presenting for a smear. Because of these differences, as well as a higher level of socioeconomic barriers, such as lack of transport and the cost of screening, levels are well below the desired level.

“[The barriers we see are] outstanding debt with a practice, lack of transport, shyness, inability to attend during normal working hours due to work, home and personal commitments.” — Hawke’s Bay DHB and PHO

“The same barriers are seen in each PHO – lack of awareness, lack of transport, lack of willingness to attend the medical centre.” — KMC

“We have an evaluation form that women fill out... the top barrier for women is cost.” — CDHB

However, it is important to acknowledge that these barriers are not limited to the high need groups. Explaining to women that they do not qualify for free screening can be difficult. It is important to phrase the issue as one of reducing disparities within the New Zealand population, but to also approach the way the practice funds smears on a case by case basis.

“Sometimes [the issue of funding] can cause quite a bit of a discussion. Imagine you’re a woman and you’re not part of that priority group; there can be discussion around ‘how come these women are funded for smears but I’m not!... In addition, it can be difficult as there is no standard price for a smear [between practices in New Zealand].” — CDHB

While many of these barriers are common to all types of health care, cervical screening faces an additional hurdle in that it is a “wellness” programme, performed in women who are asymptomatic, rather than a “sickness” programme where symptoms or reduced health are a strong motivating factor for women attending the practice. Preventative medicine is often low in the list of priorities for people in lower socioeconomic groups.³

“It’s a case of stretching that family budget. So it’s food, it’s a roof over their head, all those things they might need, and women will always put their smear test last.” — CDHB

On a more technical level, accurate coding of ethnicity data was also identified as being important for ensuring that eligible women are able to access all of the available services. By correctly coding ethnicity, women in the high need group can access lower-cost or free smears from certain providers. In addition, funding for the clinic, through the PHO Performance Programme and other sources, better represents the make-up of the practice population if ethnicity coding is accurate. Women should be asked what ethnicity they identify with, when they present for a smear, and this can be checked for consistency with their coded ethnicity. In addition, accurate coding of other data, such as phone numbers and current address are important at a practice level to ensure that women are able to be contacted in the future.

“Improving the quality of ethnicity data has positively impacted on screening coverage for Māori. Smear takers are encouraged to verify a woman’s ethnicity and ensure it is recorded on the laboratory form.”
— Hawke’s Bay DHB and PHO

“At the regional service level, we receive hundreds of return-to-sender letters every week, for result letters, recall letters, contact letters, which are going out to women that no longer live at that address.” — CDHB

How can general practice reach the high need groups?

Being proactive in contacting and making appointments for women in the high need group is likely to increase screening in the women at higher risk of poor cervical cancer outcomes. Each of the interviewed groups have implemented an active approach to reaching out to high need women, and attributed this as important to the relative success of their programmes. General practice should implement a systematic approach to find and contact women who have not received a smear within

the last three years. The following method may be used:

- Search patient records to identify the women aged 20 – 69 years in the practice population who have never had a smear or who have not had one within the last three years
- If the woman is not up to date, use the PMS to place an alert on her medical record so that a smear can be offered the next time they attend the general practice
- All women who are overdue for a smear should be contacted by text message, letter or telephone and encouraged to make an appointment for a smear
- If the woman cannot be contacted, contact the NCSP (0800 729 729) to verify their contact information and to check if a smear has been performed by another provider, such as Family Planning
- Those women who decline to have a smear in General Practice or are unable to, to should be offered referral to another provider based on their reason for declining, e.g. to a regional provider if they feel uncomfortable being screened by someone they know or wish to be screened by a culturally specific provider, or to a free provider if cost is an issue (if available)
- Women who still decline or wish to withdraw from the national register should have their details forwarded to the NCSP, so that they can be removed from the register. In addition, they should be regularly asked whether they wish to begin screening again, and any barriers to testing discussed.

Such an approach has proven successful for Karori Medical Centre:

“We have designed the cervical screening programme to contact women for their three-yearly cervical smear by sending a recall letter just before they are due, followed up with a text or phone call (or second letter if no mobile phone number [has been recorded]) about two to three months later. If the patient still does not present, another letter is then sent and the recall moved on to start the process over again. The same process happens for women needing annual cervical smears but within a tighter timeframe.” — KMC

Despite these measures, some women will still be missed. Taking the opportunity to offer a smear to women when they attend general practice for another reason can help to “capture” those women who are unable to be contacted or are unable to present for a smear.

“Our high needs women can also have a cervical smear free of charge if they come in for another reason, e.g. with a child or for some other health reason. An alert/dashboard [on their medical record] will show they are overdue so they can be identified while at the practice.” — KMC

To complement these approaches, regional providers (available in most regions through either the DHB or PHO and occasionally through non-government organisations) are able to help general practices maintain and stay current with their database of women requiring or overdue for a smear.

“We also work alongside [Primary Care] practices to help with data matching of their register, if a practice needs to, they can provide us a complete list of their population, their overdue women, and we will take that back to the [National] register and update the information for them.” — CDHB

What strategies can help general practice make screening more accessible and comfortable?

The major theme from the comments of each respondent was to encourage practices to make the screening process as simple and accessible as possible. Strategies to make screening easier generally focus on directly addressing barriers, and include:

- Normalise the procedure as routine, and explain that this is recommended for all women as part of maintaining their health
- Give women a choice of smear-taker (gender, ethnicity, anonymity)
- Make sure that low cost screening options are in place for women who cannot afford a full consultation, or that referral to a free screening provider (if one is available within the region) is offered for women who cannot meet the cost of being screened in general practice
- Consider running a nurse-led smear clinic after hours or at weekends, as this may increase uptake among patients with work and other commitments
- Provide advice and educational material about cervical cancer, the smear test and about what the results mean, i.e. an abnormal cervical smear result rarely indicates cancer

Such an approach was encouraged and used by all three respondents:

“Give women a variety of service options – evening and weekend clinics, kaupapa Māori service providers, outreach smear clinics, female nurse smear-takers.”

— Hawke’s Bay DHB and PHO

“By having the clinics in the evening and on a Saturday, women who work could access the service... An extra project is then implemented six monthly to capture our remaining high need patients by offering open and booked clinics at no charge...The results were seen almost immediately with a strong uptake within two to three weeks of sending out texts or phone calls.” — KMC

“We [understand] that family member’s and extended families’ children might need to come, because mum might not have someone to babysit the children, and while mum is in with the nurse our team are there to support the family members. Family support is really important as well, especially for Māori, so when women attend a clinic it’s really encouraged that the practitioner knows to invite a support person, and that this person will be different for different groups.” — CDHB

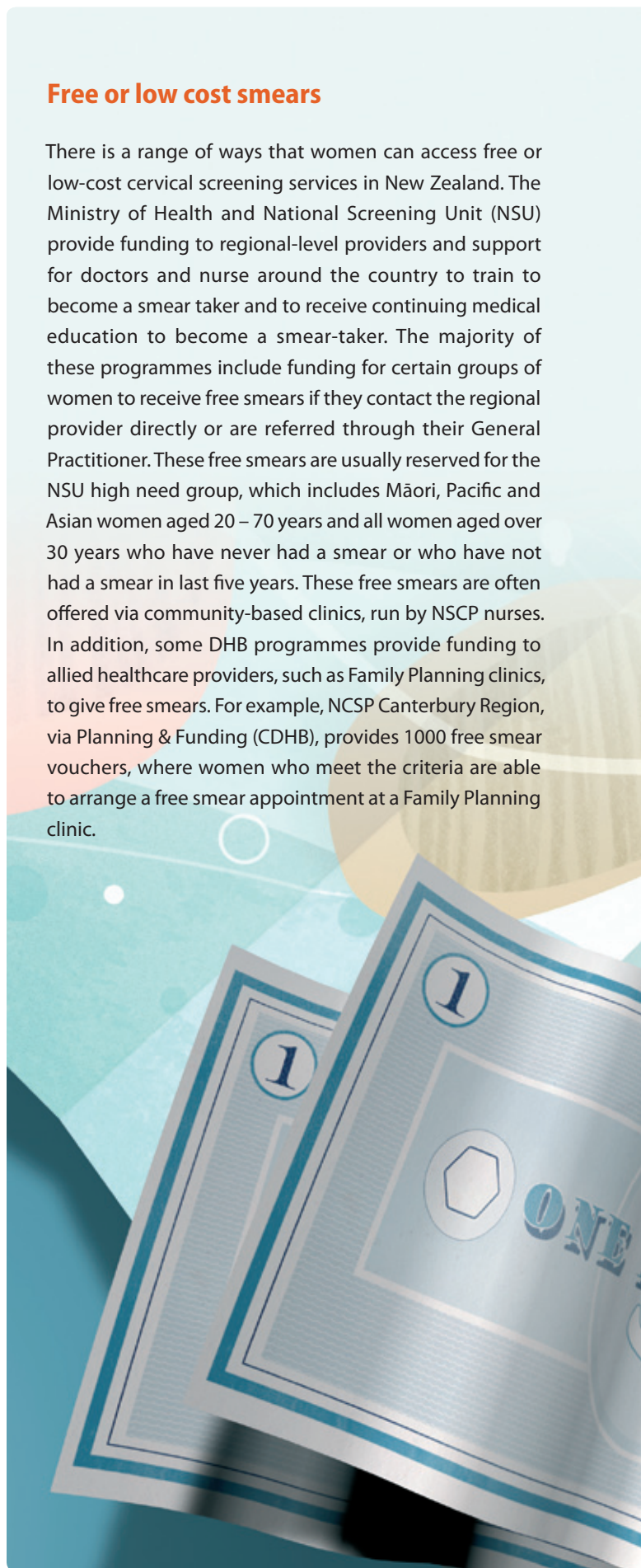
Financial barriers of the clinic, as well as staffing requirements, will mean that not all practices are able to provide services on week-nights and weekends or to provide smear-takers to suit all ethnic groups. However, there are other ways to reduce the barriers that many people face in attending screening, such as referring to clinics that provide free screening (see: “Free or low cost smears”).

Many women are not aware that screening is important, that it is necessary from an age as young as 20 years (if they have ever been sexually active) or that it remains important for older women. The respondents indicated that increasing awareness increased screening rates. This can be done in the practice by taking the opportunity to briefly mention to women just prior to their twentieth birthday that they will now need regular screening, using alerts to mention screening to women with incomplete screening histories and reiterating the need to continue screening up until age 70 years in older women.

“What would be ideal is if something goes out to young women [in a practice population] at the age of 19 years... to say ‘when you turn 20, we encourage you, as your practice, to talk to your Practice Nurse or talk to the team about your first cervical smear test.’ — CDHB

Free or low cost smears

There is a range of ways that women can access free or low-cost cervical screening services in New Zealand. The Ministry of Health and National Screening Unit (NSU) provide funding to regional-level providers and support for doctors and nurse around the country to train to become a smear taker and to receive continuing medical education to become a smear-taker. The majority of these programmes include funding for certain groups of women to receive free smears if they contact the regional provider directly or are referred through their General Practitioner. These free smears are usually reserved for the NSU high need group, which includes Māori, Pacific and Asian women aged 20 – 70 years and all women aged over 30 years who have never had a smear or who have not had a smear in last five years. These free smears are often offered via community-based clinics, run by NSCP nurses. In addition, some DHB programmes provide funding to allied healthcare providers, such as Family Planning clinics, to give free smears. For example, NCSP Canterbury Region, via Planning & Funding (CDHB), provides 1000 free smear vouchers, where women who meet the criteria are able to arrange a free smear appointment at a Family Planning clinic.



How can General Practice use regional-level screening programmes and community groups to increase screening?

The primary focus of cervical cancer screening should be to ensure that all New Zealand women have access to preventative health care, regardless of where they choose to receive this care. As one of the respondents put it:

“Be it that you’re at a practice, you’re a provider providing free clinics, you’re a family planning clinic or you’re a [regional level] screening programme... We want the focus to be on preventing cervical cancer.” — CDHB

Several of the respondents expressed that regional-level cervical screening programmes were not “in competition” with General Practice. The Christchurch DHB group pointed out that many women are uncomfortable being screened by their usual General Practitioner or Nurse and that the anonymity of a regional screening provider (where available) or family planning clinic was seen as a positive for some. In addition, the cost of a General Practice consultation for a smear was too expensive for some patients. This means that General Practice must either have a lower cost screening option for certain high need women, or, alternatively, make use of their regional provider and refer some groups of women to the free screening services that are offered over much of the country.

Support for general practice is widely available, from both the NSU and local groups. Practices may be able to access resources for organising “screening days” or hosting after hours/weekend clinics, or to help train Practice Nurses to become smear takers, reducing the cost to the practice of administering a smear test. In addition to support available from regional screening groups, grants to cover the cost of nurse training are available from the NSU.

 Contact your local PHO and DHB to find out what funding is available


“General Practice Facilitators are assigned to General Practices to provide support. The Facilitators support best practice and arrange for independent nurses to work in practices that do not have nurses.” — Hawke’s Bay DHB and PHO

“We also [provide] training, our contract is to provide two smear-taker updates a year, and clinical updates to smear-takers. As well as [training] new nurse smear-takers... we also provide education and presentations for training every quarter.” — CDHB

Linked to this was the idea that making use of allied care providers and other public health initiatives could increase the screening rate, while still being cost effective.

“In the future, we will be looking very closely at a cervical smear outreach service to work in conjunction with our already established immunisation outreach service. This would ensure we reached women who, for many reasons, do not want to come into the medical centre directly.” — KMC

“We are aiming to have Māori health providers affiliated with general practices” — Hawke’s Bay DHB and PHO

 The National Screening Unit provides support and resources to General Practice, as well as helping to organise CME and training for smear takers. They can be reached on 0800 729 729 or by visiting: www.nsu.govt.nz

“We all want to ensure a family is not robbed of a woman because she’s dying of cervical cancer, which we can prevent. We want women to have their choices... We want women to have their health.”

References

1. District Health Boards Shared Services (DHBSS). National summary of PHO performance as at 1 July 2012. DHBSS; 2012. Available from: www.dhbshareservices.health.nz (Accessed Sep, 2013).
2. National Screening Unit (NSU). Guidelines for cervical screening in New Zealand. NSU; 2008. Available from: www.nsu.govt.nz (Accessed Sep, 2013).
3. McLeod M, Cormack D, Harris R, et al. Achieving equitable outcomes for Māori women with cervical cancer in New Zealand: health provider views. *N Z Med J*. 2011;124(1334).
4. District Health Boards Shared Services (DHBSS). PHO Performance Programme. Indicator definitions for PHOs. Version 5.5. 2012. Available from: www.dhbshareservices.health.nz (Accessed Sep, 2013).
5. National Screening Unit (NSU). Final process and impact evaluation report 2007, Kahui Tautoko Consulting Ltd. Evaluation of the National Cervical Screening Programme and Breastscreen Aotearoa health promotion services. NSU; 2007. Available from: www.nsu.govt.nz (Accessed Sep, 2013).
6. National Screening Unit (NSU). National cervical screening programme - monitoring report 1 July - 31 December 2010. NSU; 2012. Available from: <http://www.nsu.govt.nz/health-professionals/1063.aspx> (Accessed Sept, 2013).
7. Darus C, Mueller J. Development and impact of Human Papillomavirus vaccines. *Clin Obstet Gynecol*. 2013;56(1):10–6.

Screening women aged under twenty years is not recommended

Between 2008 and 2010, 16 263 women aged under 20 years in New Zealand had a cervical smear sample taken.⁶ This is not recommended practice.

Screening should begin at age 20 years (in women who have been sexually active) and continue, usually every three years, through to age 70 years.² The recommendation to start screening at age 20 years and the appropriate frequency of screening is based on a cost/benefit and risk/benefit analysis. The recommendations use the age-related risk of cervical cancer in the population, and take into account the cost of screening plus the risk of harm from screening and consequential (potentially unnecessary) treatment, versus the potential benefits.²

An important factor in setting the minimum age for screening is the epidemiology of the Human Papillomavirus (HPV). More than 99% of the abnormalities that lead to cervical cancer are caused by HPV, and HPV is generally acquired in adolescence, at the time of commencement of sexual activity.⁷ Most HPV infections are asymptomatic and transient, lasting less than six months.⁸ In females, approximately 10% of infections become persistent, leading to atypical cell growth and eventually pre-malignant lesions in the genital tract, particularly on the cervix. The likelihood of an infection becoming persistent increases with age, due to increased exposure time, reduced level of cells returning to normal and reduced immune response to HPV.⁹

Screening must be initiated at a point that avoids the majority of transient HPV infections, as these infections may appear as abnormalities on a smear. Because of these transient infections, screening in younger women is strongly associated with false positive results and inappropriate further investigation and treatment.² This

can lead to worry and anxiety, withdrawal from future screening programmes and unnecessary biopsy. In contrast, cervical cancer is rare in women aged under 20 years.

The benefit of screening sexually active women aged under 20 years, does not outweigh the cost and potential adverse effects of screening. The National Screening Unit's stance is: "Unnecessary screening of women under 20 years wastes precious resources, diverts attention from women who could genuinely benefit from screening, and is unlikely to be of any benefit to these young women – in fact early and unnecessary screening can potentially cause them serious harm."²

What can we do for this age group?

The focus of cervical cancer prevention in younger women should be appropriate and timely use of the HPV vaccine. HPV vaccination in young women is effective and safe, and fully subsidised until their 20th birthday.

There is already clear evidence that the incidence of genital warts, caused by strains of HPV also included in the vaccine, is decreasing in New Zealand and in Australia.^{10, 11} It is likely that similar trends will be seen with cervical cancer over the long term, as the two strains of high-risk HPV that are included in the vaccine (types 16 and 18) cause 70% of all cervical cancer.¹²

In addition, advice on safer sexual practices and appropriate contraception (including barrier contraception) should be given to women in this age group, as this has a modest additive benefit (in addition to the other benefits of contraception) in preventing the incidence of HPV and ultimately cervical cancer.

8. World Health Organisation. Human papillomavirus (HPV). 2011. Available from: www.who.int/immunization/ (Accessed Sep, 2013).

9. Bodily J, Laimins LA. Persistence of human papillomavirus infection: keys to malignant progression. *Trends Microbiol.* 2011;19(1):33–9.

10. Oliphant J, Perkins N. Impact of the human papillomavirus (HPV) vaccine on genital wart diagnosis at Auckland Sexual Health Services. *NZ Med J.* 124(1339).

11. Read T, Hocking J, Chen M, et al. The near disappearance of genital warts in young women 4 years after commencing a national Human papillomavirus (HPV) vaccination programme. *Sex Transm Infect.* 2011;87(7):544–7.

12. Shepherd J, Frampton G, Harris P. Interventions for encouraging sexual behaviours intended to prevent cervical cancer. *Cochrane Database Syst Rev* 2011;(4):CD001035.