

Please note – This is an extract from a student’s response for one of three articles

The article is the Ministry of Health’s School consent form: *‘HPV Vaccine (Human Papillomavirus Vaccine) A vaccine to help prevent cervical cancer.’*

3 This article was written by the NZ Ministry of Health, the Government department responsible for improving, promoting and protecting the health of all New Zealanders.

The purpose of the article is to give sufficient information about the HPV virus to parents and year eight girls, in asking for their consent to immunise their child for free. While the consent form and other information are freely available to the general public, the intended audience is the year eight girls and their parents in New Zealand.

The information is mainly about the HPV virus and receiving the vaccine Gardasil. It explains the effectiveness of the immunisation and what else is needed after receiving the vaccination. It asks for consent whether or not to vaccinate the child.

One biological feature is, *“Cervical Cancer develops when HPV infections don't clear and cause abnormal cells to grow on the cervix. If these cells go undetected and untreated they can lead to cervical cancer.”* This is accurate, because when someone has sexual contact with someone who is a carrier of HPV, the HPV virus takes advantage of the 'transformation zone' in the cervix of the vagina where different types of cervical cells meet in a thin junction. Basal cells found close to the surface of the cervix are immature. The HPV virus invades these cells and reproduces within them. As the cells divide and mature into squamous cells, they rise to the surface and the infectious virus particles are released from the mature squamous cells, to then further invade more immature basal cells. If this process is allowed to continue over a long period of time, for example a decade, severe abnormalities can lead to cervical cancer.

1 During the process, the HPV virus goes through different stages. In mild abnormality, only a few cells are changed and sometimes clear up on their own. This can be checked in a regular Smear or Pap test. With a moderate abnormality, the affected cells are found throughout most of the surface lining on the cervix. This can also be picked up on regular Smear or Pap test and if caught early enough can be treated. With severe abnormality, cells progress to malignancy after the virus slips two key cancer causing genes into the DNA of the host. This is also picked up on a regular Smear or Pap test, but if not found early enough can cause death.

1 The consent form is making an accurate claim because they specifically state that, *“Cervical cancer develops when HPV infections don't clear.”* This true because only when the viral infection does not clear naturally is when it causes cervical cancer because of more abnormal cells forming, instead of just stating that you will get cervical cancer straight away after being exposed to the HPV virus. This would be making an inaccurate claim and providing false information to the public.

The consent form also states that, *“If these cells go undetected and untreated, they can lead to cervical cancer.”* This is accurate because you can prevent Cervical Cancer if you have regular Smear or Pap tests to make sure that there are no detected abnormalities, instead of stating, *“These cells will lead to Cervical Cancer.”* This would then be an inaccurate claim.

1 Another biological feature is, *“The vaccine causes the immune system to produce its own protection against four HPV types.”* This is accurate because the Gardasil vaccine is an

inactivated subunit vaccine. That means that it includes only the antigens that best stimulate the immune system. The antigen in the vaccine is the L1 major capsid protein of HPV, produced by using recombinant DNA technology. L1 proteins self-assemble into non-infectious, low risk units called virus-like particles (VLP). The antigens in the Gardasil vaccine stimulate the immune response to produce antibodies against it.

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The vested interest of this consent form is the government, through the Ministry of Health, to improve, promote and protect the health of all New Zealanders. They are offering the free vaccination because they want to help protect these girls from the four types of HPV infection that lead to most cervical cancers and genital warts. They are promoting this vaccination at a young age because they want to create community immunity to be able to protect most people from the HPV virus when they become sexually active.

The consent form it provides people with accurate information and easy to follow biology so that people understand both the risks and benefits of Gardasil. To prioritise aspects of the information of immunising year eight girls with Gardasil:

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Firstly, the information clearly explains, with reasons, why immunisation is important; that the HPV virus is a sexually transmitted virus and the consent is offering parents and their young daughters the option of free vaccination against it.

The information is important and could influence people's decisions of whether to let their child be vaccinated or not. This is because promoting Gardasil at a very young age may be thought of as unnecessary, especially as the exact period of protection is unknown. Parents of these year eight girls may want to immunise their daughters when they are older and more likely to be sexually active.

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Secondly, another aspect that could influence people's decisions on whether to vaccinate their child or not is how effective the immunisation is. The consent form says that the vaccine has been shown to be 95-100% effective in preventing infection from the four HPV types contained in the Gardasil vaccine. This information shows that the effectiveness of the vaccine is very high, and likely to influence parents to vaccinate their young daughters to make sure they are immunised before they become sexually active.

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These two aspects are the most important because you cannot catch the HPV virus until you are sexually active. The statistics matter on how effective the vaccine is because if the vaccine is not effective enough then why would you vaccinate yourself when the benefits do not outweigh the risks?

The overall impact of this consent form on parents and their year eight daughters is likely to be positive, based on the balance of the accuracy of biological features given in the information. The Ministry of Health is offering a free immunisation to prevent four HPV types in order to help prevent cervical cancer, genital cancers and genital warts. The impact on the individual is that if they become immunised with Gardasil, they will be immune for a substantial period of time which will benefit them and their future partners, and prevent cancers that may cause death.

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