

Student Name: Evans Adjei

Student Number: 2129820

Lecturer's Name: Md Nazmul Hasan

Module Code: LCHS4004

Name EvansAdjai

Student Id 2129820

Introduction

Most kids eventually contract chickenpox, a common and mild childhood disease.

It results in a rash of red, itchy areas that develop into blisters filled with fluid. They later produce scabs, which finally fall off, and crust over.

Some kids have just a few spots, whilst others may have them all over their bodies. The face, ears, scalp, underarms, chest, abdomen, and arms and legs are the areas where they seem to show up most frequently.

In order to try and ensure that healthy young children contract the disease at a younger, less risky age, chickenpox parties—social gatherings when healthy young children are purposefully exposed to children sick with the disease—are not uncommon.

After a person recovers from chickenpox, the virus still resides dormant in their body in the spinal cord's nerves and has the potential to reactivate later in life, resulting in shingles, also known as herpes zoster. In most cases, a single sensory nerve ganglion and the skin surface that the nerve supplies are both affected by the reactivated varicella virus as it moves down the nerves and causes excruciating pain and a rash.

Strategies used in the UK to measure chickenpox

According to new research to be presented at this year's European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) in Lisbon, Portugal, chickenpox causes £24 million in lost revenue and productivity per year in the UK, although the total cost is likely to be higher (23-26 April). Associate Professorial Research Fellow Raphael Wittenberg and colleagues at the London School of Economics and Political Science (LSE), UK, conducted the study.

More information is known about the direct medical costs of chickenpox in the UK than the indirect societal costs. It is crucial that policy choices for the prevention and treatment of health disorders consider both the direct and indirect costs of the conditions.

Even more contentious is the second justification for why the UK does not offer childhood vaccinations for chickenpox. The chance of shingles reactivation may be decreased,

according to some scientists, if adults who had the illness were exposed to children who had an active chickenpox infection.

The varicella-zoster virus, which causes chickenpox, is less likely to spread thanks to the chickenpox vaccine. It is not commonly administered on the NHS, but it is made available to those who are most at risk for contracting the virus, such as those who frequently interact with persons who have compromised immune systems and non-immune healthcare professionals.

For children and adults between the ages of one and 65, the immunization is also offered privately through the Boots Chickenpox Vaccination Service in a few Boots stores (other eligibility criteria apply).

Strategies used in the UK to monitor chicken pox

In the UK, adolescent varicella immunization is being examined as a way to protect vulnerable women from infection during pregnancy as well as a significant adult disease. Previous analyses concluded that childhood immunization and varicella prenatal screening were not cost-effective. The number of vaccine doses provided needlessly to people who have preexisting natural immunity is likely to affect how cost-effective a teenage varicella immunization program is in the UK. By specifically framing the context in terms of the implications for vaccination when we asked parents about their child's history of chickenpox, we were able to examine the validity of reported chickenpox history to determine vaccine eligibility. The teenagers' varicella antibodies were then tested to identify whether they had previously been exposed. In the best-case scenario, vaccinations may be administered to 68% of people with a negative medical history and 74% of people with a negative or unclear medical history. At worst, 81% of people with a negative medical history and 84% of people with a negative or unclear medical history would waste the vaccine. In order to calculate the likely cost-effectiveness of immunizing adolescents to avoid adult varicella illness, these statistics offer a reasonable range of estimations. We also estimate the percentage of teenagers (6–9%) who, if illness history were used to determine vaccine eligibility, would still be susceptible to varicella infection despite having a positive history of chickenpox. Due to the likelihood that the majority of the population will have a susceptibility, this group could make up a sizable share of all susceptibles in the population with a good history. These facts will assist in modeling projections of the disease burden after the introduction of a vaccine program based on the history of chickenpox. Immunocompromised susceptibles, who would not be eligible for a live attenuated vaccine but would be at higher risk of serious illness, would also be considered in the cost-effectiveness analysis.

Strategies used in the UK to control chickenpox

Fortunately, Varivax and Varilrix are two powerful varicella vaccines that are readily available. A weaker kind of the varicella virus is present in both vaccinations, which stimulates the production of antibodies by the immune system against actual illness. Although they may produce minor sickness symptoms after immunization, these attenuated viruses nonetheless offer protection from a full-blown chickenpox infection. The immunizations have a 95% success rate in preventing serious illness and an 80–85% success rate in preventing varicella.

Although vaccination against the chickenpox has been a part of US childhood immunization programs since 1995, the vaccine is not provided by the NHS in the UK due to ethical considerations that many people find to be debatable.

The Centers for Disease Control and Prevention (CDC) recommends that healthy individuals who have never experienced chickenpox or who have never received a vaccination receive the chickenpox vaccine in accordance with the following guidelines:⁵

Children should receive two doses, the first between the ages of 12 and 15 months and the second between the ages of 4 and 6.

Without proof of immunity, children aged 7 to 12 years should receive two doses spaced three months apart.

People aged 13 and older who have never had chickenpox or had the chickenpox vaccination should receive two doses, given four to eight weeks apart (only for adults born in 1980 or after). Although the majority of live vaccinations are proven to provide long-lasting protection, it is unknown how long the vaccine can protect against chickenpox. After 10 to 20 years following vaccination, some investigations found measurable levels of VZV antibodies in vaccinated individuals.

Dosage

The upper arm or thigh are the two places where the chickenpox vaccine is injected subcutaneously (under the skin). Depending on a person's age, several vaccine types and dosages are advised: 3

For the first dosage, children between the ages of 12 and 47 months often receive MMR and Varivax individually. Most frequently, MMRV is preferred for the second dose.

Varivax is administered in both doses to patients 13 years of age and older. This senior age group has not received approval for the MMRV vaccination.

The UK Academy of Pediatrics recommends that children be immunized with the varicella-zoster vaccine to prevent chickenpox usually after the age of 1. A second dose, typically given at about age 4 or 5, is needed for complete protection. The vaccine is also a protection for vulnerable people, such as non-immune women who plan to become pregnant. Some, such as those who are already pregnant, are not eligible to receive the chickenpox vaccine.