Child Immunization System

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Abstract –

We all are aware that children should receive their vaccinations at the appropriate times, but because of their busy schedules and the fact that some parents lack knowledge, many parents are clueless of this vaccination. so, our website's purpose is to bring or increase awareness among all the parents to ensure that all the infants receive their vaccinations on time. Based on each child's birth date and in keeping with the vaccination schedule, a generic system was proposed for the collection and storage of their medical records. It is suggested that a web application with the required privileges be made accessible to parents and doctors. The same is offered in an android-based mobile application due to the sharp rise in mobile usage. Parents are also constantly advised to get their children vaccinated on time until they are fully protected. In addition to eliminating the need to carry papers, capturing and preserving medical records in a shared database can aid in providing children with effective and high-quality care.

***Key Words*: Immunization, SMS, Vaccine, child, Remainder.**

1. INTRODUCTION

Vaccination is the use of antibiotic material (a vaccine) to stimulate a person's immune system to develop adaptive immunity to a pathogen. Vaccines can prevent or reduce morbidity from infection. Vaccination is the most effective method of preventing infectious diseases. Immunity spread by vaccination is largely responsible for the eradication of smallpox worldwide and the prevention of diseases such as polio, measles, and tetanus. Generally, the process of artificial induction of immunity works by "priming" the immune system with an "immunogen" in an attempt to protect against an infectious disease. Stimulating an immune response with an infectious agent is called immunization.

Immunization involves different ways of administering immunogens. Most vaccines are given by hypodermic injection because they are not reliably absorbed from the gut. Live polio, some typhoid, and some cholera vaccines are given orally to induce immunity in the gut. Vaccination

provides a lasting effect but usually takes several weeks to develop, while passive immunity (the transfer of antibodies) produces an immediate effect. Vaccines work by introducing foreign antigens to the immune system to trigger an immune response, but there are several ways to do this. Four main types are currently in clinical use. Most vaccines are administered via needle (injection), but some are given via mouth (orally) or nasal spray (nasally). Immunity (protection) from immunization is similar to immunity from disease, except instead of acquiring the disease, you get a vaccine.

In India, 2.7 crore children are born each year. An estimated 18.3 million children die before their fifth birthday. Every year, vaccine-preventable diseases kill 5 lakh children in India. Despite the high rate of child deaths from vaccine-preventable diseases, 30 percent of Indian children miss out on the benefits of full immunization every year. That is, approximately 8.9 million children nationwide either receive some vaccines or none. One out of every three children in India does not receive all the vaccines available under the UIP. Five percent of children in urban areas and eight percent in rural areas are deprived of immunization.

SMS Cell phones have become an integral part of the modern world, providing human connectivity in a way never before possible. While most cell phones are used for their original intent—making telephone calls wirelessly—these devices are also loaded with other features that are not always used or even ignored. Text messaging is a powerful tool in terms of communication, especially for mobile users. Short Message Service (SMS) enables the sending and receiving of messages between mobile phones. SMS does not limit anyone, regardless of whether they are high-end or low-end mobile phones, for as long as they can send and receive messages. So crating awareness through SMS is an effective way.

2. Problem

We know that children should be vaccinated at the right time but due to parents' busy schedule, illiteracy and lack of awareness about vaccination, many children miss out on vaccination. As a result, the baby does not develop

immunity, alternatively the baby may die, so awareness needs to be created among all parents so that all babies are vaccinated at the right time.

2.1. SOLUTION

Child immunization reminder and recall system is an effective way to identify children who need to be immunization and to contact health centers to get vaccinated. Reminder systems can work through a short message service. Everyone uses cellphones but not check their mails every day and some people don't use the internet unless they have to so SMS is the most effective way to spread awareness.

3. PROPOSED SYSTEM

The figure demonstrates how the child immunization system works. System admin can login using user name and password and after successful login, admin can perform various tasks like add, update and delete health center. Also, a doctor as a user can login to the system with a username and password after his account is created. Doctor tasks include: set location, add and manage workers, manage vaccine details, and generate reports.
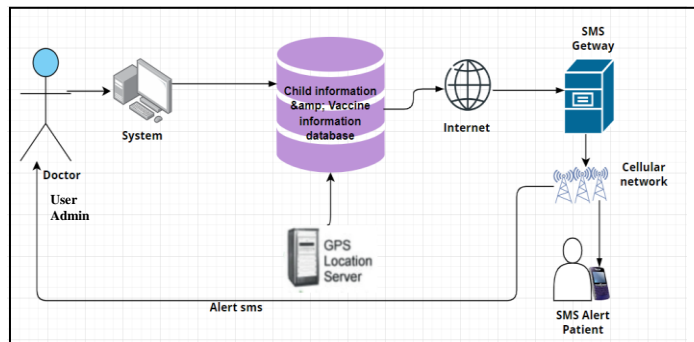
Worker is another user of this system. It uses MySQL software to keep the records in the database which is the best and easiest database to store the information. User filled details are stored in a database. User task include: register new born child, add vaccination, update child record, manage child status, delete child. After filling the database, the system sends an alert a day in advance to the patient's given contact number and alerts the doctor if the patient does not take the vaccine as per schedule.

3.1. WORKING

- **Working of Web-Application**
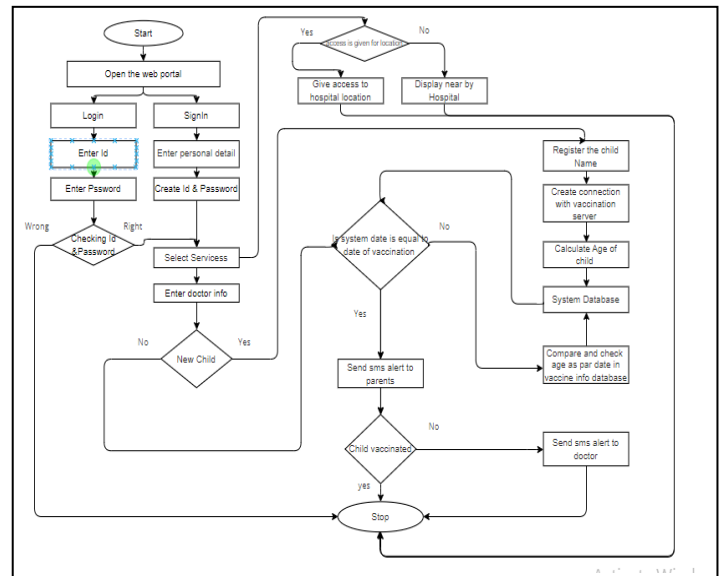
- First open the application on the user or administrator computer.

- Then if Doctors or workers are an existing user then login with their appropriate ID and password.

- If you are a new user then Sign in with entering your all details.

- After the login process the application dashboard will open where some options are provided for the user like system info, data entry, set location, child search, registration count and feedback form etc.

- Selecting data entry option user will go to the data entry page, here we provided some option for the user, the user can upload their personal data or fill the patient data using child registration option.

- If the child is a new child in the child registry, the user will open the registration form and enter all the required details after which it will create a connection with the vaccination schedule.

- And if the child is already registered, then fill the schedule form of completed vaccine dose.

- Then Logout from web portal.

- The automated system can compare and check the vaccine due date with the schedule and send reminder via text SMS to the patient's parent's

mobile number a day before, along with complete vaccine information and its pros and cons and with hospital location.

- In case of non-vaccination on the schedule date, the automated system send alert to doctor with complete details of the patient.

4. CONCLUSION

Therefore, we have made an effort to assist parents in receiving SMS messages and notifications that provide time-specific information regarding their child's vaccination appointment. A baby vaccination program may assist parents in making sure that their children receive their vaccinations on time. This will make it possible to immunize kids against infections and prevent the spread of disease. The scheduler offers a simple method for registering a newborn child as well as for updating, deleting, and searching any baby's information.

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