KIDDOGUARD-

Child Vaccination

Management System

Submitted By: Scrum Master:

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ABSTRACT

Child Vaccine Management System (CVMS) is a sophisticated software solution designed to optimize the process of vaccine distribution and monitoring for children. This system addresses the critical need for effective vaccine management, ensuring that infants and young children receive timely vaccinations, ultimately contributing to the reduction of vaccine-preventable diseases and their associated morbidity and mortality.

The Child vaccine management system encompasses a range of features that streamline the entire vaccine management lifecycle, from procurement and storage to distribution and tracking. The system incorporates advanced technologies such as real-time data analytics, secure data storage, and user-friendly interfaces to enhance efficiency and accuracy in managing child vaccinations.

Module-wise Functionalities

Admin:

- **User Management**: Create, manage, and deactivate user accounts for parents, hospitals, doctors, and healthcare providers.
- Details of all child.
- Date and time of upcoming vaccination.
- **Reporting**: Generate reports on vaccination coverage, system usage, and other relevant data.
- **Availability**: List of vaccines that are available or not.
- **Approval/reject request**: Request from parent.
- **Hospital facility**: Add, update and delete hospitals.
- **List of Hospitals and Booking details**.
- **System Maintenance**: Oversee updates, upgrades, and technical support for the system.

Parent:

- **User Registration**: Create and manage their own account with relevant information about their children.
- **Vaccination Schedule**: View a personalized vaccination schedule for their child, based on age and vaccine recommendations.
- **Appointment Scheduling**: Schedule vaccination appointments for their child at a chosen hospital or clinic.
- **Notifications**: Receive automated reminders for upcoming vaccinations and appointments.
- **Vaccination Records**: Access and view their child's vaccination history and records(EHR).
- **Communication**: Contact healthcare providers, request information, and communicate about vaccination-related matters.
- **Update Information**: Update personal and child information, such as allergies or medical conditions.

Hospital:

- **User Management**: Manage accounts for doctors and healthcare providers associated with the hospital.
- **Vaccine Inventory**: Manage the inventory of vaccines available at the hospital, including procurement, storage, and tracking.
- **Appointment Management**: view the appointments and decide whether to confirm, reschedule or cancel it.
- **Vaccine Administration**: Record vaccine administration details, such as type, dosage, and date, for each child.
- **Reporting**: update the status whether the child is vaccinated or not. Generate reports on vaccine usage, vaccine wastage, and clinic utilization.

Doctor:

- **Registration and login for doctors.**
- **Vaccination Administration**: Administer vaccines to children based on the recommended schedule and update medical records.
- **Patient Data Entry**: Input and update patient information, including vaccination history, allergies, and medical conditions.
- **Adverse Event Reporting**: Report and document any adverse reactions or events following vaccination.
- **Communication**: Interact with parents and guardians to provide vaccine-related information, address concerns, and answer questions.
- **Vaccination Counselling**: Explain the importance of vaccines and discuss potential benefits and risks with parents.

Healthcare Provider:

- **Vaccination Administration**: Administer vaccines to children based on the recommended schedule.
- **Patient Data Entry:** Input and update patient information, including vaccination history, allergies, and medical conditions.
- **Communication:** Interact with parents and guardians to provide vaccine-related information, address concerns, and answer questions.
- **Vaccination Distribution**: Distribute the vaccine and generate report for vaccine distribution.

Mini Project

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Main Project

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Additional technologies

- ## AI and ML
- **Sentiment Analysis and Feedback**: Use sentiment analysis on patient feedback and reviews to assess parents' perceptions of the vaccination process. This can help hospitals and clinics improve their services and address concerns.
- **Automated Adverse Event Detection**: Develop ML algorithms that can automatically identify potential adverse events based on patient data and reported symptoms, helping healthcare providers quickly detect and respond to issues.
- **Chatbots**

Software Specification

- Frontend : React
- Backend: Python Django

REFERENCES

- **https://kiddohealth.in/**
- **https://www.cdc.gov/vaccines/parents/index.html**