

A Survey on “Easeasha App For Asha Workers”

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Abstract- Maternal immunization and child immunization has the potential to reduce the burden of infectious diseases in the pregnant woman and her infant. This immunization is increased by vaccination. Developing a platform or website or app for applying of vaccines for pregnant women and children which is sensitive of local and national cultural, epidemiological, behavioral and societal factors will enable a smooth transition and high uptake for new vaccines currently in development for them and this work smoothly carried out by ASHA workers. EASEASHA is going to reduce the workload on ASHA worker and beneficial for parents to maintain their child’s vaccination record along with pregnant women to get updated with their pregnancy vaccinations. It also gives alerts about upcoming vaccination. The main objective of this app is to maintain the all pregnancy and children (under 14 yrs) record centrally. EASEASHA follows client - server architecture.

Keywords- Immunization, vaccination, ASHA worker, client-server architecture.

I. INTRODUCTION

Immunizations can save your child’s life. Because of advances in medical science, your child can be protected against more diseases than ever before. Some diseases that once injured or killed thousands of children, have been eliminated completely and others are close to extinction—primarily due to safe and effective vaccines. Polio is one example of the great impact that vaccines have had in the United States. Polio was once America’s most-feared disease, causing death and paralysis across the country, but today, thanks to vaccination, there are no reports of polio in the United States.

Vaccination is very safe and effective. Vaccines are only given to children after a long and careful review by scientists, doctors, and healthcare professionals. Vaccines will involve some discomfort and may cause pain, redness, or tenderness at the site of injection but this is minimal compared to the pain, discomfort, and trauma of the diseases these vaccines prevent. Serious side effects following vaccination, such as severe allergic reaction, are very rare. The disease-prevention benefits of getting vaccines are much greater than the possible side effects for almost all children.

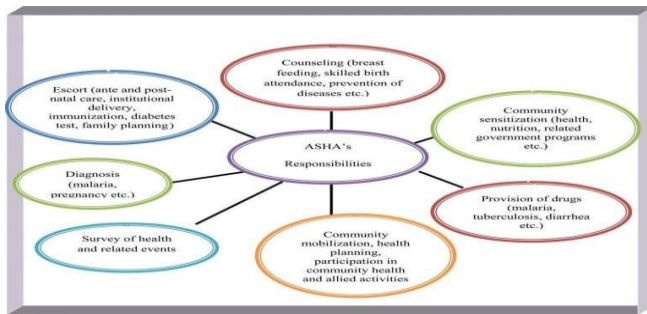
Immunization protects others you care about. Children in the U.S. still get vaccine-preventable diseases. In fact, we have seen resurgences of measles and whooping cough (pertussis) over the past few years. Since 2010, there have been between 10,000 and 50,000 cases of whooping cough each year in the United States and about 10 to 20 babies, many of which were too young to be fully vaccinated, died each year. While some babies are too young to be protected by vaccination, others may not be able to receive certain vaccinations due to severe allergies, weakened immune systems from conditions like leukemia, or other reasons. To help keep them safe, it is important that you and your children who are able to get vaccinated are fully immunized. This not only protects your family, but also helps prevent the spread of these diseases to your friends and loved ones.

Immunizations can save your family time and money. A child with a vaccine-preventable disease can be denied attendance at schools or child care facilities. Some vaccine-preventable diseases can result in prolonged disabilities and can take a financial toll because of lost time at work, medical bills or long-term disability care. In contrast, getting vaccinated against these diseases is a good investment and usually covered by insurance. The Vaccines for Children program is a federally funded program that provides vaccines at no cost to children from low-income families.

Immunization protects future generations. Vaccines have reduced and, in some cases, eliminated many diseases that killed or severely disabled people just a few generations ago. For example, smallpox vaccination eradicated that disease worldwide. Your children don’t have to get smallpox shots anymore because the disease no longer exists. By vaccinating children against rubella (German measles), the risk that pregnant women will pass this virus on to their fetus or newborn has been dramatically decreased, and birth defects associated with that virus no longer are seen in the United States. If we continue vaccinating now, and vaccinating completely, parents in the future may be able to trust that some diseases of today will no longer be around to harm their children in the future.

Role of ASHA workers:

ASHA plays very important role in rural health. The main roles played by ASHA workers are described in following image :



Vaccine	BEFORE pregnancy	DURING pregnancy	AFTER pregnancy
Hepatitis A (HepA)		If indicated	
Hepatitis B (HepB)		If indicated	
Human Papillomavirus (HPV)	Age 9 through 26 years	Contraindicated	Age 9 through 26 years
Influenza (IIV)		1 dose annually	
Influenza (LAIV)	Avoid conception for 4 weeks	Contraindicated	Avoid conception for 4 weeks
Measles, Mumps, Rubella (MMR)	Avoid conception for 4 weeks	Contraindicated	Give immediately postpartum if susceptible to rubella
Meningococcal (MCV4)		If indicated	
Pneumococcal (PPSV / PCV)		If indicated	
Tetanus, Diphtheria, Pertussis (Tdap)	If never given previously	During each pregnancy between 27 and 36 weeks	Give immediately postpartum if not given during pregnancy
Tetanus, Diphtheria (Td)		If indicated	
Varicella (VAR)	Avoid conception for 4 weeks	Contraindicated	Give immediately postpartum if susceptible

II. LITERATURE REVIEW

Vaccination schedule for children:

The schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2005, for children through age 18 years. Any not contraindicated and approved by the Food and dose not administered at the recommended age should be administered at any subsequent series. Providers should consult the respective ACH visit when indicated and feasible. Indicates age groups that warrant special effort to Clinically significant adverse events that follows immunization.

The decision of parents involving childhood immunizations affect not just the overall administration rate and compliance, but also in potentially minimizing errors related to it. Among the biggest contributors to parents' decision-making are their practices and the general knowledge they have about immunizations. This research aimed to conduct a review of related literature involving the parental barriers that affect their decisions towards childhood immunizations.

Parental Reasons for Refusing Immunization:

Vaccine refusal is defined as a delay in acceptance or refusal of vaccines, despite the availability of vaccination services. According to the World Health Organization (WHO), approximately 1 in 5 children each year did not receive routine life-saving immunizations globally, and 1.5 million children died of diseases that could have been prevented by vaccines.

Recommended Childhood and Adolescent Immunization Schedule UNITED STATES • 2006

Parental Reasons for Defaulting Immunization:

Immunization is the main health intervention tool used to reduce child mortality. In fact, one-quarter of the cases that contributed to the under-five mortality rate in 2002 was attributable to vaccine-preventable diseases (Clements et al, 2008). Low rates of immunization not only leave many young children at risk for various serious vaccine-preventable diseases but also serve as an indicator of inadequacies in receiving other preventive healthcare services (Brenner et al,2001). Because of the importance of immunization, it is crucial that the implementation of the program against vaccine-preventable diseases is monitored very closely. A survey was conducted by Aregawi et al (2017) in the LaelayAdiabo District, North Ethiopia to identify the existence of immunization cases and controls. It focused on 270 children aged 9 to 23 months old, with90 cases orchildren who missed at least one dose of the recommended vaccineand 180 controls, or those who received all the recommended

Pregnancy Vaccination :

Recommended Pregnancy Vaccines with their preferred time to take is mentioned in below chart :

vaccines. These children were chosen from 11 kebeles (the smallest administrative unit) via a simple random sampling technique. Data were collected from the children’s mothers or caregivers using a structured pretested questionnaire which had a response rate of 100%. Of these, 32 mothers of cases (35%), and 44 controls (24.4%) were between the ages of 25–29 years. The mean ages of the respondents were 27.93(±6.13) years old among cases and 28.04(±3.81) years old among controls. The majority of respondents, specifically 66 mothers of cases (73.3%) and 112 mothers of controls (62.2%), were found to be illiterate. 78 mothers of cases (86.7%) and 160 controls (88.9%) were currently part of Women’s Development Groups, while 85 mothers of cases (94.4%) and 167 controls (92.8%) were housewives. Also, 36 (40%) households of cases and 55 controls (30.6%) had an average family monthly income of less than 22 US dollars. Household visits by health extension workers are seen as important mediums for disseminating information to mothers and increasing their knowledge of child immunization.

III. METHODOLOGY

ASHAs were very functional with regard to antenatal and intranatal care service provision, such as counselling support and escort service. At least 60% (689/1,141) of women who had reported an institutional delivery attributed it to being a result of the motivation by the ASHA in their community. There was variability in the type of postnatal care services offered by the ASHA: some activities, such as advice on breastfeeding (83.6%) and home-visits to see the puerperal mother (72.4%), were reasonably high while, on the other hand, service provision on others, such as advice on danger sign management (14.9%), contraceptive-use (21.2%), and maternal nutrition (58.4%), remained low. Counselling by ASHAs on early initiation of breastfeeding (83.5%) and immunization at birth (84.2%) was reported to be high by the mothers.

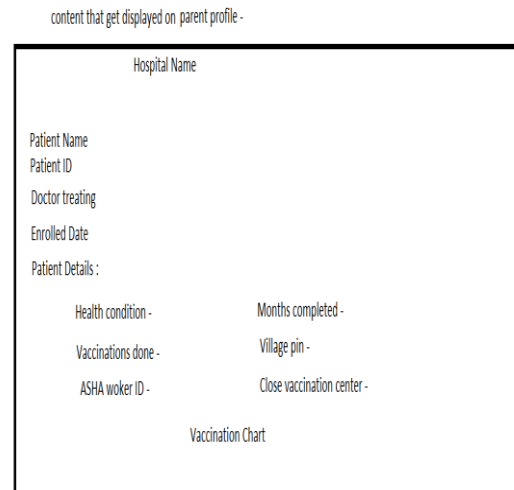
Less than 10% of mothers reported giving prelacteal feeds. Only 40% of babies were started on complementary feeding at 6 months of age; about 15% were started prematurely (<5 months), and 45% were delayed (>6 months). In a vast majority (94.5%) of the children, immunization services were facilitated by the ASHA. A large proportion of mothers reportedly sought ASHA’s support for childhood illnesses, like acute diarrhoea (71%) and acute respiratory illness (52.5%). Only about half the children with diarrhoea, however, received ORS (49.8%) from the ASHA, and half of the children with ARI received any care/advice (52.2%) from ASHA.

IV. SYSTEM MODULES

Module 1 :

The first module is for parent or pregnant ladies, where they can view their own profile. The profile includes the details about vaccinations done and upcoming vaccination schedule.

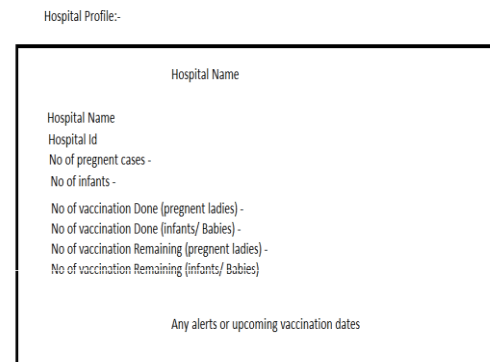
module 1 - Parent / Pregnant Ladies



Module 2 :

The second module is for Hospital, where they can view their own hospital profile. The profile includes the details about pregnant cases, infants along with the stats of vaccinations.

Module 2 : Hospital



Module 3 :

The third module is for ASHA workers, where they can view their own profile. The profile includes the details about, respective village or areas, vaccinations done and upcoming vaccination schedule.

Module 3 : ASHA worker

ASHA worker profile -

ASHA worker details :

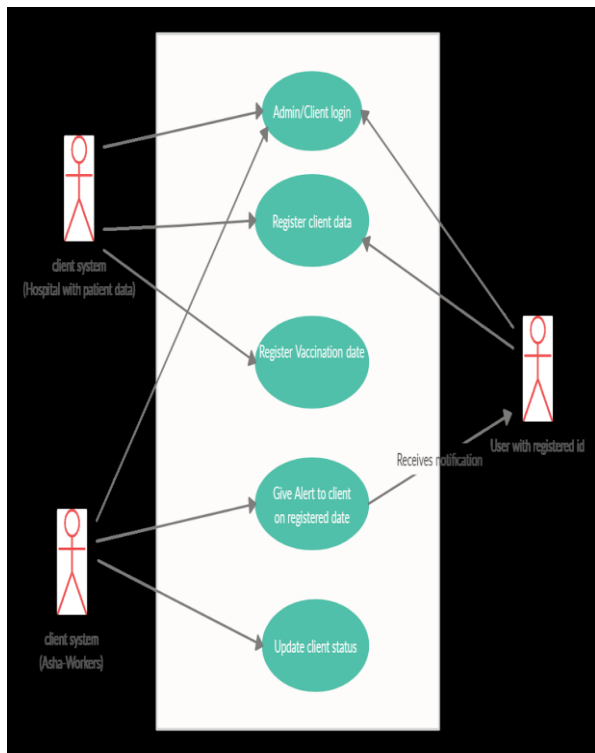
ASHA worker Name -	Village Name -
ASHA worker ID -	Currently working village pin/ID -
Village ID/ pin -	Currently working village name -
Pregnent cases number -	
Infant numbers -	

vaccination Details :

No of infants/babies vaccinated -
No of pregnant ladies vaccinated -
No of infants/babies not vaccinated -
No of pregnant ladies not vaccinated -

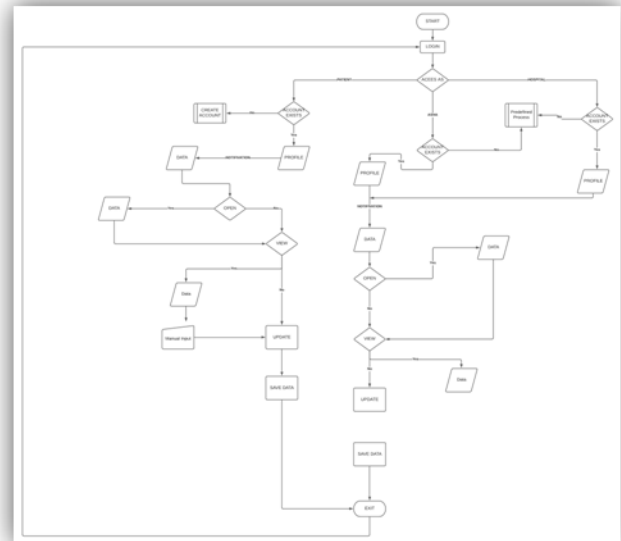
V. SYSTEM SETUP

The proposed system use case is defined below which will actually show the actor and system of the model.



VI. SYSTEM FLOWCHART

The following flowchart defines the way of working of our proposed system:



VII. CONCLUSION

Thus ASHA workers provide us with a lot of facilities and save our work as well as take care of children. So it becomes our responsibility to make their work somewhat easy because after all they all do for the nation and nation’s future. But while doing such a kind task they face many problems like they have to go to every citizen's home in a particular area or village and have to ask questions and if there is no one in home then also they have to come once again. So to minimize the pain of Asha workers we found a solution for them especially for rural areas so that every child should get vaccine as well as Asha workers don’t need to face problems.

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