



INTERNATIONAL JOURNAL OF ADVANCE RESEARCH, IDEAS AND INNOVATIONS IN TECHNOLOGY

ISSN: 2454-132X

Impact factor: 4.295

(Volume 4, Issue 3)

Available online at: www.ijariit.com

Improvisation in rural health using technology

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ABSTRACT

Rural Health is an integral part of the health system in India. The Improvisation in Rural Health Using Technology is the system which is responsible to maintain the health information and its statistics in rural areas. As there are many campaigns hospitals have a various amount of health data on day to day basis. Certain camps are arranged by the government, private hospitals, this system will perform analysis on those data. Such analysis on day to day basis will help to diagnose and find new symptoms amongst the people as well as diseases prone area, henceforth this system will help to the eradication of diseases in rural part. This system allows two type of logins 'Hospital' login for every hospital in villages as well as 'Grampanchayat' login where data from health campaign gets collected and one authorized user of the village is responsible to upload the data into the system. The charts and reports will be generated by the system after analyzing the data entered into it. These reports will be kept in the database for future analysis. The architecture of the system is like, hospital's data is maintained on their database side along with its copy is stored at server side for analysis, same happens for Grampanchayat side system. The server is capable of analyzing and processing data, storing reports. This will increase the reliability as well as reduce efforts of manual report generation and analysis.

Keywords: EHRP, Electronic health report of patients, Grampanchayat, Taluka, Mahanagarpalika

1. INTRODUCTION

India is country where widely population stays in rural part. Health concern and development regarding health is more in urban as compared to a rural area. There are many things and facility yet to reach to village level. There are various health problems in the rural area which cannot be ignored.

There are lack of medical facilities, lack of awareness about diseases and basic health information, issues. Various health campaign and surveys organized by Government, hospitals but there is lack of data maintenance and analysis on it. So there is need to take a step and analyze issues, discovering disease prone areas along with the necessary solution to resolve it.

This system gives authority to gram panchayat person as well as hospital person to give data to the system and maintain the data in the database as well as on server side. At gram panchayat, the

level end user needs to collect all campaign data and feed to the system and on the hospital side, all patients data are given to system timely. The data include patient's health data along with location details of a hospital or of the campaign held in the respective village.

The system will analyze the data from various sites, hospitals and generate the reports and prediction on basis of analysis performed on data. The result generated will send to next level in case of any suspicious outcome arise, which will help the higher authority to take certain action if needed. The regular generation of data on hospital side will help us to keep track of patients health as well as easy to detect suspicious symptoms at patient side. This tracking of records will help to take necessary actions in the rural area.

2. LITERATURE REVIEW

India is country of villages. According to 2011 census of India, there are 640867 villages in the country. [1]By referring those facts we can conclude that there are fewer advanced facilities of health available in the rural area. There is lack of hygiene which is the root cause of many diseases. Lack of advance facility, awareness, preventive measures causes people in the village to suffer more. Our government taking steps to increase awareness about sanitation, building toilets etc, but one can't ignore various facts which are still there in rural health. The myth about the village is happier life and less affected life with diseases. There are still people struggling with basic needs regarding health and sanitization, one should look up at those things.

2.1 Observation

The few facts need to be considered, which are as: Diseases cause due to Anaemia, low blood count, lack of immunity, malnutrition, low BMR [5]

- Around 55% of women in a country suffering from anemia, low blood count[9]
- Only 69.5% of children received full immunization[9]
- 44.7% girls aged between 15 to 18 have low BMR

Most common commutable diseases in India are: Dengue, Malaria, Typhoid, Jaundice, Diarrheal Diseases, Tuberculosis[6]

- Communicable and nutritional disease cause 29.41% of deaths.

Common noncommunicable diseases are respiratory diseases, malignant and another neoplasm (cancer).

2.2 Interpretation

Majorly diseases are causing due to

1. Lack of Nutrition, Facilities, Awareness
2. Lack of Hygiene
3. Different rural part of the country is suffering from various types of diseases.
4. Health program doesn't show current situation of health in particular area.
5. Healthcare ministry show reports either state wise, district wise but no statistical data rural area wise.
6. Success and efficiency of health campaign or programs are questionable due to the gap in implementation
7. To understand and analyze rural health situation one need to have effective and reliable reports.
8. An effective system which gives reports and prediction would help to improvise rural health situation.
9. To reach up to them, one should have concrete plan to execute which will provide them with good facilities along with awareness about few health regarding things.

3. WORKING OF SYSTEM

The System is responsible to hold all data obtaining from Health Campaign as well as from Hospitals in a rural area. The system has two components one is Grampanchayat level system and another one is Hospital system, the data from both sides collaborate and store on the server. A single login is provided to Grampanchayat level as well as per hospital level. The authorized user is responsible for entering data into the system. Figure 1 gives detail information about the system's working.

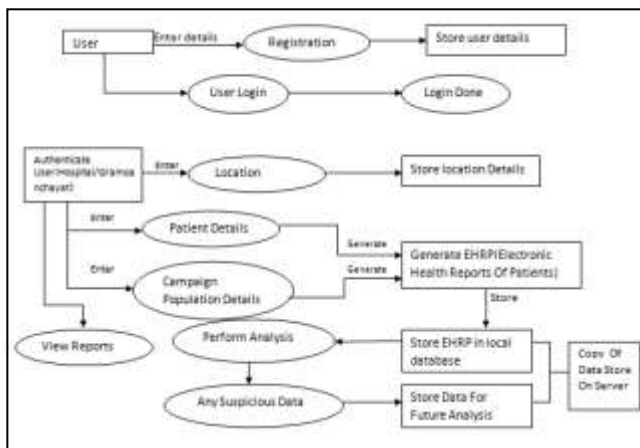


Fig. 1: Working of system

At Grampanchayat level end user will communicate with the team who has taken the campaign in the village.

The end user will collect all the information from the team and feed the data into the system. In a system, the unique identification number will be generated for each campaign held in the village.

The data entered into the system and gets stored in the local database, a copy of the same every time gets stored on the server for further analysis and processing as well as for future predictions.

The end user will fill the data of campaign with details like population, observant count, diseases etc. On data received, the analysis is been done, charts reports get created. This system will help to eradicate diseases from the rural part and one can easily identify diseases prone area through the outcome of the system. The Campaign data will give us the data to identify suspicious symptoms if occurs along with that one can perform analysis by considering data as a sample set.

On the other side of the system i.e. Hospital side, every hospital has a login to the system, authenticate the user from hospital end will be logged into the system. That person is responsible for the collecting patient's data and upload it into the system. The end user will create the EHRP (Electronic Health Report of Patients) for each patient to keep track of the each patient's health and store in the database for analysis purpose. EHRP will help the user to easily identify the symptoms as well as health diseases caused till today's date.

The results get from the system will help us to identify newly found symptoms, and eradication of new harmful diseases will be easy at an initial level only. If any suspicious characteristics found in person during a checkup or any examination then record of it gets stored in the local database and if majority people suffering from particular diseases in particular location then such cases reports, results of these will be sent from one level to upper level. This will help the higher level committee to take a stand in order to eradicate the diseases occur at that instance.

4. INFORMATION TRANSFER

This system consists of a lot of information about the health of patients and various campaign data too. The hospital's data gets a store at local database and a copy gets a store at the server side. The data analysis is done and gets stored in the database.

During analysis, any suspicious data or information found then result of it send from lower level to next level. The information flow from gram panchayat to taluka to Mahanagar Palika then to state level and at the end, it will go to ministry level. This will help to take necessary actions against newly formed diseases immediately henceforth it will help to eradicate diseases from a rural part of the country.

The database of hospitals are linked with the server, constant analysis has to do over there which will help government and hospitals to conduct campaign or extra medication at the particular area for particular diseases. The proper information flows help to take an effective step in the eradication of diseases.

This information transfer plays an important role to take any steps regarding suspicious symptoms or habits.

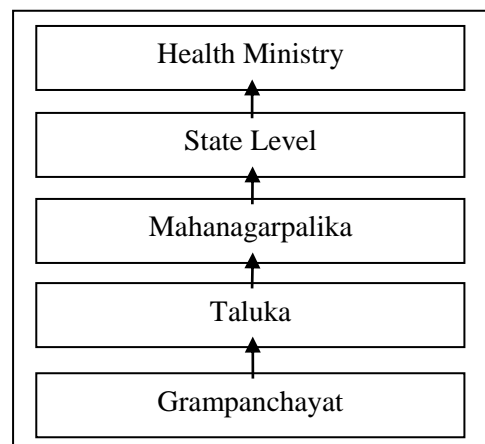


Fig. 2: Information transfer

5. SUGGESTION

Once the analyzed data obtained then next step is to take actions to resolve particular issue occurred. The solution should be effective and convenient to adapt.

Efficient and effective actions provide a permanent solution to the issue. Following things need to perform in order to complete eradication of diseases from rural part:

1. The campaigns of awareness should be organized more by Government and NGOs.
2. Sanitization awareness should be spread more in all areas.
3. Advance medication must be provided to rural areas.
4. Importance of complete nutrition should be given at school level.
5. Awareness about cleanness and hygiene and other medical related things should be given.
6. Vaccination camps should be arranged timely.
7. Advance medication information should be spread via small camps in small parts of the rural area to make them aware.

6. CONCLUSION

India is having more number of villages. The population over there is a victim of the diseases due to lack of hygiene, awareness, cleanses and lack of medication reach out towards them. The problem faced by rural communities due to the isolation of them and less frequent medication given to them. Henceforth, they need one system which helps them to come out of it. The system will analyze the suspicious habits, symptoms found in the population along with diseases prone area in rural part. This system is a way to address the problems in the rural area. This system takes care of the records of patients and does analysis over it. This system will make the health of people

healthier from grass root level. The main aim of the system is the eradication of diseases from the rural area completely.

7. ACKNOWLEDGMENT

The idea of 'Improvisation Of Rural Health Using Technology' being proposed as research paper was only possible by the endless support received from colleagues, professor, Special thanks to MCA, VISIT Chembur for their acceptance and assistance through the duration of the research. All support received is appreciated without which research would have been difficult. However, any errors and mistakes belong to the author should not affect the reputation of the respective institute.

8. REFERENCES

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