A REPORT

Diab Info: A mobile health application
for diabetes literacy, risk management and access to healthcare services

2015-16

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Preface

The MAMTA Health Institute for Mother and Child continues to strive for excellence in its work for improving the health of the most in need population across the country and in different other low resource settings across Southeast Asia and Africa. This particular effort is to improve the reach and access to services for the difficult to reach population using mHealth technology.
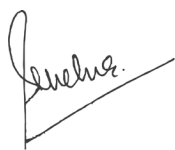
The use of mobile and wireless technologies to support the achievement of health objectives has the potential to transform the face of health service delivery across the globe. A powerful combination of factors is driving this change. These include rapid advances in mobile technologies and applications, a rise in new opportunities for the integration of mobile health into existing health services, and the continued growth in coverage of mobile cellular networks. Leading telecom operators are beginning to offer 3G and 4G services at affordable prices. These factors are likely to both spur data usage and drive the adoption of mHealth services. The Census, 2011 suggests that 69% of Indian households have a mobile phone with the scope of further growth. The global mobile consumer report (2013), indicate that feature phones have far more penetration than smartphones across all age segments in India – the broader trend suggests that smartphone adoption will likely continue to rise as younger consumers age.

The diabetic menace in India is growing alarmingly with more than 65.1million people with the disease. To address the uprising burden of diabetes, it is needed to have a continuum of care model which provides a framework for the delivery of optimum health care to population groups that is evidence based, comprehensive, and patient-centered. Timely actions can prevent severe and costly complications of diabetes. Hence, early detection and prevention plays a key role to halt the growth of the disease.

We feel mHealth solutions can play an important role in improving primary prevention of diabetes by breaking the 'iron triangle' of access, quality and cost. Given the epidemic and effective strategies for using mHealth in addressing the disease burden, MAMTA Health Institute for Mother and Child with support of Bristol-Myers Squibb Foundation took initiative to design mHealth application for diabetes and related services. The content of the application is developed using a participatory approach with potential end users and other stakeholders of Solan and Shimla districts of Himachal Pradesh. In order to ensure reach to the right target beneficiaries, promotional activities were organised to demonstrate the use of application. At the end, household survey was done to assess the user's prospective and experience with the application. Our learning reveals critical opportunities through this medium for improved access to preventive education to diabetic.

We hope that findings of this initiative stimulate further dialogue on how to improve access to chronic disease prevention using technology for the difficult to reach and underserved population within the country and help to integrate the mHealth technology in the National response.

Sincerely,

Dr. Sunil Mehra
Executive Director
MAMTA Health Institute for Mother and Child, India

Contents

Introduction

There is unprecedented advance in the technologies that underlie mobile phones. Approximately 75% of adults worldwide have access to mobile phone[1]. Three-quarters of the world's mobile phone subscribers live in low and middle income countries (LMICs). In India mobile subscriber base grew by 7% in 2015, with scope for future growth[2]. Likewise, about 30% increase in population penetration of internet users from the year 2000 to 2015 has been observed in the country, which is 23.1% of the total users in Asia[3]. Ninety-four per cent of users access the internet through their mobile phones in urban India[4]. The statistics signifies that mobile phones have widespread penetration not only in terms of increase in number of users but, increase in quality of use too.

In the last decade or so, the mobile phone is increasingly being used in social and economic sector. The mobile phone in the public health system is relatively a new phenomenon, particularly the use of mobile health (mHealth)[5]. In its simple sense of the term, mHealth is providing health services (health literacy, health awareness, telemedicine, etc.) in the hands of each individual when it is required the most. The mHealth is likely to improve health care service delivery and self-care support for patients. Globally, the types of mHealth initiatives most frequently reported are health call centers/healthcare telephone help-lines (59%), emergency toll-free telephone services (55%), emergencies (54%), and mobile telemedicine (49%)[6]. Prior research suggests that mHealth services are feasible and acceptable in many low-resource areas. A number of studies have examined the impact of mHealth technology on communicable diseases and maternal and child health care services in these settings[7]. However, in the area of non-communicable disease (NCD) and risk factor management, most of the research on the use of mobile technology has originated from developed countries, unliying the fact that there is more rigorous research is required in LMICs[8-9].

Diabetes mellitus (DM) is growing alarmingly in India, having more than 65.1 million people with the disease, compared to 50.8 million in 2010. It is predicted that by 2030, DM may afflict up to 79.4 million people in India[10]. The current expenditure on diabetes treatment in India is approximately INR 6,000 person/annum whereas; the cost of treatment of one complication of diabetes, e.g. treating the diabetic foot is around INR 10,000-30,000 per treatment[11]. If the chronic condition not managed effectively, it can lead to severe and costly complications, including cardiovascular disease and renal failure. Therefore, self-management plays a key role in diabetes. However, managing the condition on a daily basis and throughout different stages of life can be very challenging. Given the reach of mobile networks and connected services with a key role of internet in enabling access to services and data, mHealth solutions can play an important role in improving primary prevention of diabetes. In addition, it can support sustainable healthcare systems by offering means of continuous monitoring and analysis in relation to disease trends[12-13]. Recent evidence indicates that Government is expressing interest in mHealth as a complementary strategy to strengthen health systems and achieve the health-related Millennium Development Goals (MDGs) in LMICs[14].

Given the epidemic and effective strategies for using mHealth in addressing the disease burden, MAMTA Health Institute for Mother and Child with support of Bristol-Myers Squibb Foundation, took initiative to design the mHealth application for diabetes and related services in two districts of Himachal Pradesh namely, Shimla and Solan, a hilly terrain of India. The project has evaluated experiences of users to guide the future implementation of similar nature of intervention. It is expected that the mHealth application would help in increasing diabetes literacy and access to services using.

Approach »»

A systematic approach has been planned in five steps, as depicted in the Figure 1. However, as per the mandate of the report the implementation has completed four steps, as follows:

Step 1: Assess the acceptability of mHealth application in the community

Step 2: Development of content and design of mHealth application

Step 3: Conduct promotional activities

Step 4: Assess installation and rating of Diab Info

We have started with assessment of the realities including favourable environment in the selected project districts to implement the mHealth intervention. Based on the results of the assessment, we have developed 'Diab Info', a mobile health application to address the diabetes related issues. The designing of the application has also utilised other similar experiences used elsewhere. Once the mobile application was developed, we introduced the application for general use. To intensify the use of the application, we have undertaken several promotion activities with various stakeholders as well as the potential target groups. Finally, we conducted a survey of beneficiaries of the Diab Info to assess their experience

Figure 1. Approach for the implementation of the project

of using the application. Subsequently, we wanted to conduct effectiveness study and possibilities of scale-up of the application within the health system, because of paucity of resources we could not do the same.

The section below describes all steps in detail:

Step 1: Assessment of the acceptance of mHealth application in the community

This study aims to determine various perceptions influencing the behavioural intention to accept mHealth application for 'diabetes literacy', 'risk management' and 'access to healthcare services' by users and non-users of mobile. In addition, we have explored association of the factors (benefit and service-risk) with individual's socio-demographic variables in order to understand its influence on acceptance of mHealth application. A cross sectional quantitative household survey has been undertaken among 834 men and women in the age group of 10-44 years in selected districts of Himachal Pradesh, of which 133 are mobile non-users and 701 are users. The Data collection has been carried out during June 2015 to August 2015 by a trained team of research investigators (Annexure D). Before initiating the data collection, mapping and listing operation was done to ensure that all households in the Primary Sampling Unit (village and

urban ward) are covered by the list. Guided by the UTAUT model (Figure 2), we carried out multinomial and binary logit model to determine the perceived factors influencing mHealth application acceptance by those who has and has not experienced the application.

The result indicates that if the mobile application content is in the 'video form' rather than the 'text form' then, the relative probability of acceptance of application increases significantly. Further, the acceptance increase many folds, if the application is popularized through 'social media' compare to 'community meetings' followed by 'electronic and print media'. Furthermore, it has been found that higher age group people (26-44 years) would like to use the application more than the younger age group (10-25 years), if the information provided is about 'availability of services' rather than 'sign and symptoms'. Likewise, the odds of perceive acceptance by urban residents would increase (by a factor 1.83) for mHealth application containing information related to 'availability of services' rather than 'sign and symptoms' compared to rural residents.

Study participants perceive that the urban residents has higher chance of acceptance of free mHealth application than the rural residents (AOR 1.24, p<0.01). However, it was found that higher educated people are less likely than lower educated to accept free application (AOR 0.56, p<0.01). Similarly, the acceptance of mobile application for seeking appointment with doctor is less likely to be perceived by higher educated population than relatively lower educated ones (AOR 0.68, p<0.01).

Despite concerns that the feasibility of mHealth interventions may be severely compromised in rural and hilly areas of India, very favourable conditions are found with respect to mobile network and access to mobile phones for successful intervention in the project sites. Study concludes that four socio-demographic factors, i.e., age, place of residence, education and employment status significantly influence the technology acceptance for diabetes related information and services.

During this stage of the project, we also conducted some qualitative interviews with various stakeholders (e.g. school principals, representatives of frontline functionaries, adolescent) in both the project districts, and following key points emerged from the interactions:

- Instead of focusing on diabetes literacy only, other features, viz., self-risk assessment of diabetes, tracking of behavioural indicators (e.g. HbA1C, physical activity etc.) should be included in the mHealth application.
- The application content should be in the mix format, i.e., text, picture and video.
- The mobile application should be made available online as well as offline.
- Language of the application content should be in English and Hindi both.
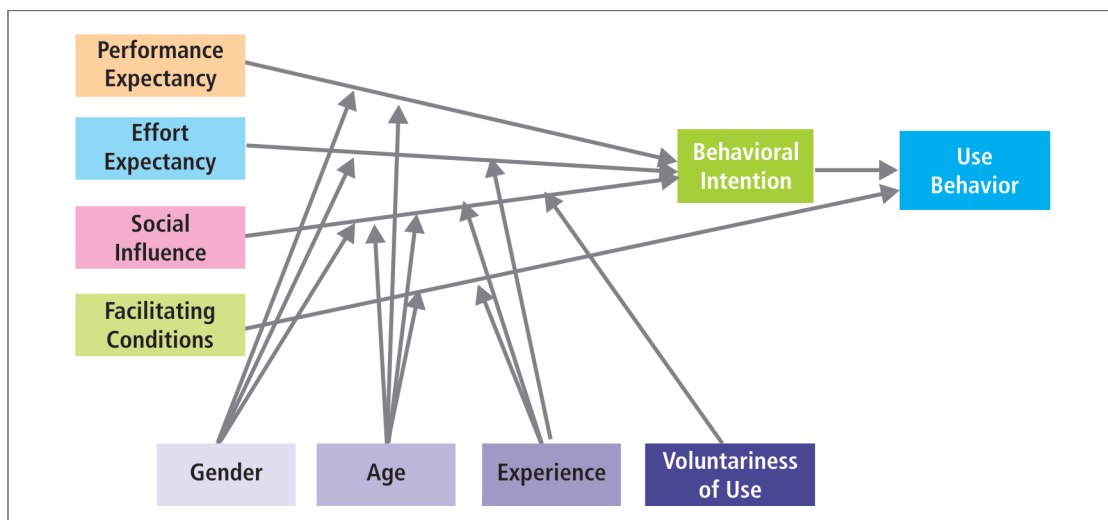
Figure 2: Model for assessment (UTAUT Model)

Step 2: Development of content and design of mHealth application

Based on the learning from the assessment (step-1), Diab Info application has been developed using android platform and comprise of multiple screens with pictograms to impart knowledge about diabetes. The application comprise of three features, viz. "Diabetes literacy", "Am I at risk" and "Goal tracker". The application content is bi-lingual (English and Hindi) with audio and video interface (approximately 20 screens with options of handling user input and queries). This application allows user to have access to various options, which enable to get the basic information and risk factors pertaining to diabetes using various pictograms and screens. The application is available free of cost at Google Play Store to download under the name "Diab Info". The user's guideline for Diab Info is given in Box 1 and a few of the screens of the application are displayed in Figure 3a.

Home Screen   Menu Screen   Information about Diabetes

Goal Tracker   Blood Sugar Tracking   Tracking Results
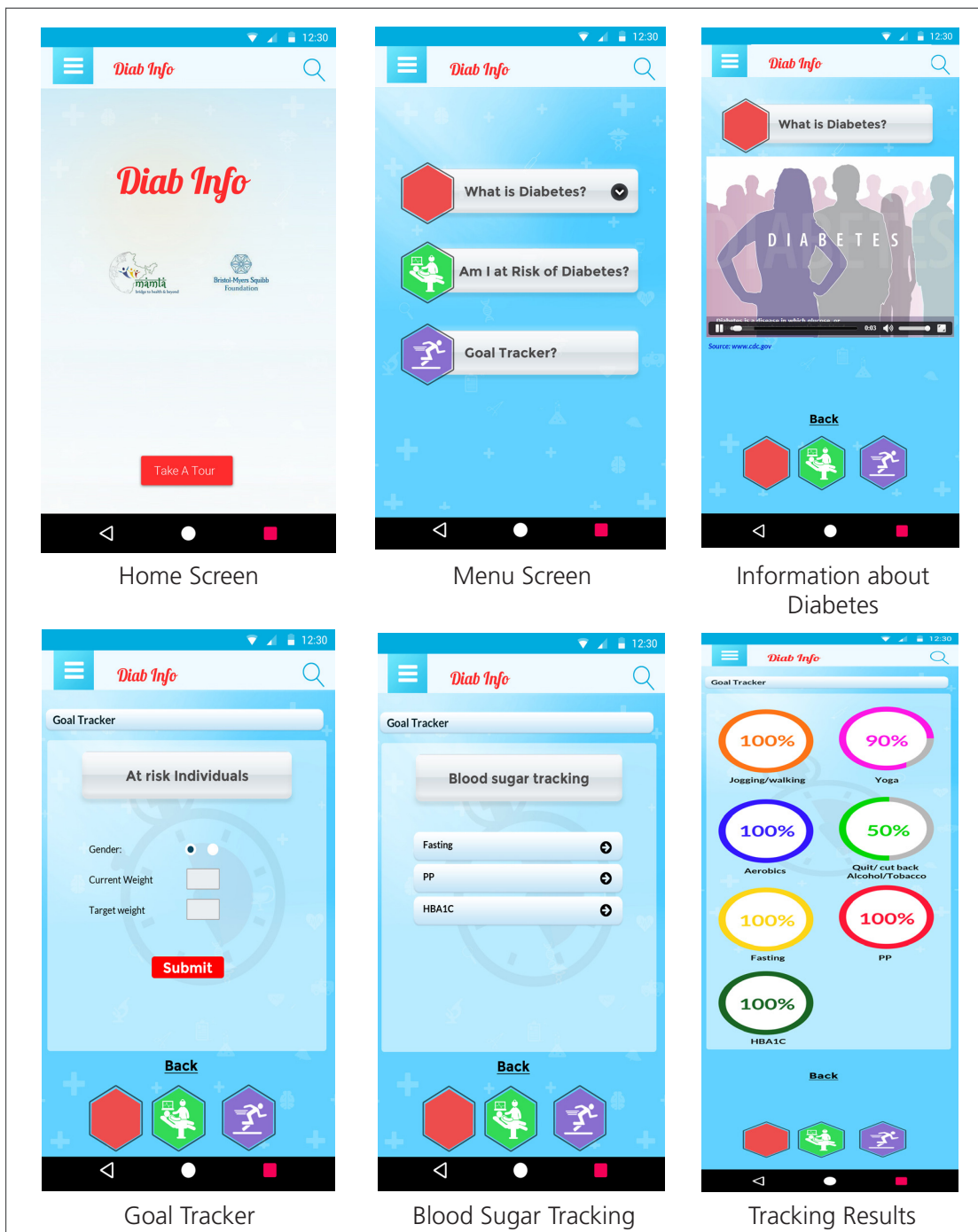
Figure 3a: Content of the mobile application

Box 1: Diab Info Guidelines for Users

✤ **Diab Info can be accessed through either internet or bluetooth or other transferable mediums like Google drive, share-it, data cable, etc.**
If accessed through internet connectivity:

- Click on the Play Store icon on your mobile phone and search for Diab Info application.

- The Diab Info application icon appears. Then, click on the "install" button to install the application. On successful installation of the Diab Info, a Diab Info icon appears on the mobile screen.

- Click on the Diab Info icon; subsequently, Diab Info "home screen" displays.

If accessed through other transferrable medium:

- Click on the Diab Info icon appeared on the mobile screen, subsequently the "home screen" displays.

✤ **The Home screen of the Diab Info contains two key icons:**

- At the top left hand, there is a "Three line icon" which allows the user to set the language (either English or Hindi). The icon also allows the user to go directly to any of the features within the Diab Info.

- At the bottom of the screen, there is a "Take a tour" icon which allows the user to understand and visit the Diab Info application step by step. Clicking on the icon takes the user to the "Menu screen" of the application.

✤ **The Menu Screen has three features. The user can select any of the three:**

(a) "What is Diabetes?": which provides sign, symptom and risk factors of diabetes to the user, using various textual, pictorial and video forms. By clicking on the "What is diabetes", following sub-links appears on the screen

- ♦ What are Symptoms?
- ♦ What are the risk factors?
- ♦ How does physical activity influence the risk?
- ♦ How can one increase physical activity in smart manner?
- ♦ How does diet intake influence the risk of diabetes?
- ♦ How one can improve diet intake?
- ♦ How does tobacco and alcohol use influence the risk of diabetes?

Once clicking on any of the above link, opens a new window opens which provide information about each concerned link.

(b) "Am I at risk of Diabetes?": The option can be assessed by clicking on the concerned link from the bottom of the screen or by clicking the "Three line icon". The link makes the Diab Info a unique application because it tells the individual that whether he/she is at risk of diabetes or not. For Instance, to know an individual's diabetic status, he/she has to click at the icon "Am I at risk of diabetes". The individual has to answer simple multiple type questions in the same mobile by clicking each of the response. The questions asked are given in Figure 3b below:

Based on the responses of the user, the Diab Info calculates the users risk of diabetes and provide relevant link for preventive measures and Goal Tracking

(c) "Goal Tracker": The icon aims to help users in tracking individual's behavior. It contains two elements for tracking; one is for 'At Risk Individuals' and other one is for 'Patient having high blood sugar'.

To use this feature of Diab Info, the user is asked to provide input such as gender, current weight, target weight, current blood sugar levels (fasting, postprandial, HbA1C). Based on the inputs filled in the application, Diab Info provides result reports of various goals set by the user.

Figure 3b: Diab Info Screen: "Am I at Risk of Diabetes?"

Step 3: Conduct promotional activities

In order to reach out the "right" target beneficiaries for the Diab Info, we used promotional activities as the core strategy for the project. The promotional activities have been carried out in various forms, like community meeting, canopy based promotion, pamphlets and orientation of potential users (Figure 4-8). During the process, feedback from each target users has been collected too.

The methods followed to conduct the promotional activities are as follows:

3.1: Mapping and Listing

We have conducted mapping and listing exercise of target beneficiaries, viz., heathcare providers (public and private), schools and colleges, clusters of villages and urban wards. The purpose of the exercise is to create a database for systematic planning to conduct promotional activities.

In total, 91 clinics and hospitals and 6 diagnostic centers and laboratories that are dealing with diabetes and related morbidities agreed to be the part of the project. In addition, about 24 schools and 20 colleges have been identified for conducting meetings to finalize the date and time for interactions and promotions of application. The list of health facilities and schools and colleges where promotional activities where undertaken, are enclosed in Annexure A and B. The following locations have been identified as major activity thrust areas to reach the beneficiary, viz., Kasumpti, Tuttu, Chailli and Dhanda in Shimla district (Map 1) and Basal, Ward 3, Ward 13 and Anji in Solan district (Map 2).
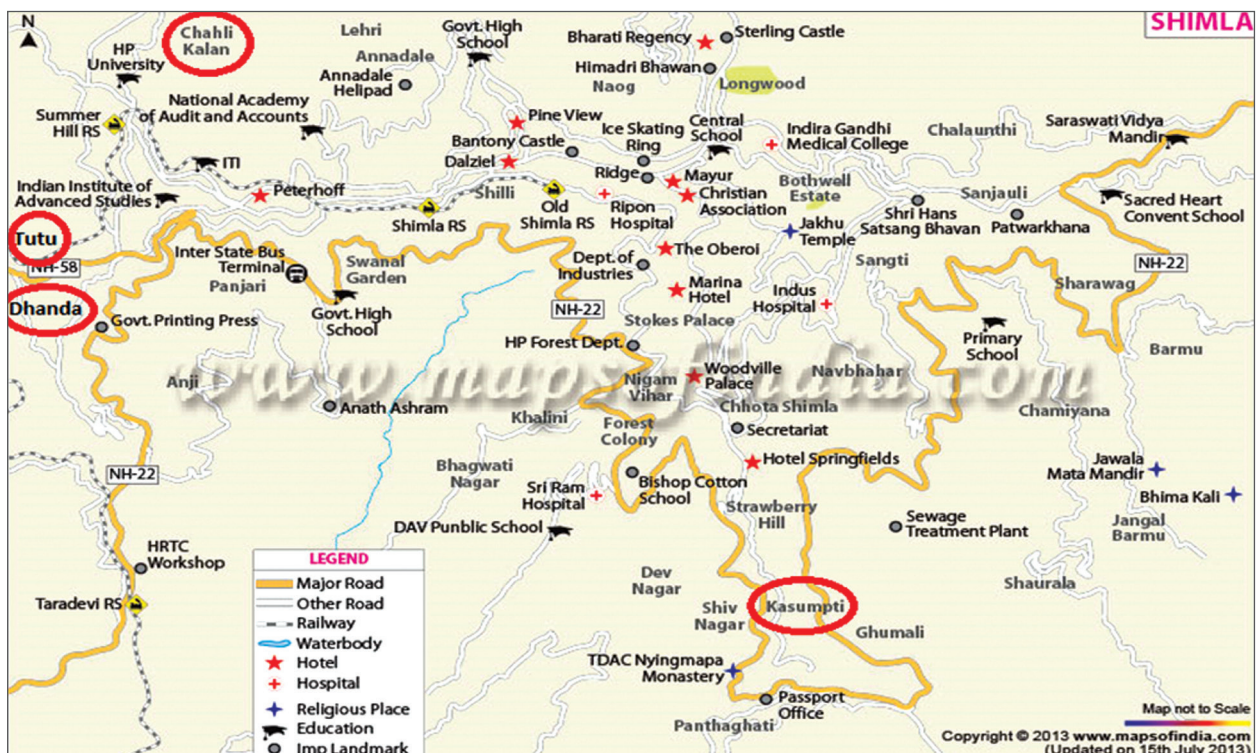
Map1: Shimla district, Himachal Pradesh

Map 2: Solan district, Himachal Pradesh

3.2: Community mobilisation

The following major activities have been undertaken in Shimla and Solan districts to mobilise the community:

(a) Key multi-stakeholders meetings with representative of Nehru Yuva Kendra (NYK), Counsellors of wards, Pradhans, Ward representative, school principle, teacher etc.

(b) Orientation workshop with healthcare providers of public and private health facilities.

(c) Camps in schools and colleges.

(d) Meetings in the community setting using the canopy based camp approach in various premium locations (Box 2).

We follow uniform pattern of promotion of Diab Info while conducting any of the above activities. Firstly, after getting permission from the civic agencies and other authorised officials, we finalised date and venue for organising the above mentioned activities. During the day of the event, we set up the canopy with Diabetes Educator to interact and apprise young population to use the

> **Box 2: Places for setting up the canopy**
>
> | Shimla | Solan |
> |---|---|
> | • Mall Road | • Kumar Hatti |
> | • HP University Campus | • Near Bus Stand |
> | • Sanjoli | • Mall Road |
> | • IGMC Campus | |
> | • BCS | |
> | • Chota Shimla | |

Figure 4: Promotional activity using Canopy

Diab Info as a self-empowerment tool (Figure 4). The demonstration of application has been given by a team of professional including Public Health expert and Information Technology professional. The Team also made an effort to support enabling users to download Diab Info and start using it. After demonstration of the application, a feedback has been collected from the participants. In addition, pamphlets explaining Diab Info have been distributed. As a part of the community mobilisation activity, we have used print media to spread information about diabetes and Diab Info as well (Annexure C).

> **Some glimpses on the participant's feedback received during the demonstration of Diab Info:**
>
> *……………… Diab Info is very useful and informative in providing information regarding diabetes to patients.*
>
> **Student, Shivalik Nursing College, Shimla**
>
> *……………. Diab Info is a very useful and informative application for each and every age group. However, this application sometimes takes a lot of time to download. More researches should be done in this field according to adhayatam/vedic culture. Such informative applications need to be developed for other diseases also.*
>
> **Male, Social Worker, Solan**

Figure 5: Play by Shiv Cultural Troupe, Dhami, Shimla

Figure 6: Interaction with the general people in one of the busy Street, Solan

Figure 7: Feedback form collection post promotional activities, Shimla

Figure 8: Orientation workshop of health care professional, Shimla

Step 4: Assessment of installation and rating of Diab Info

From February 2016 to May 2016, the Diab Info application has been installed (offline and online) in 467 devices including 227 downloads from the Google Play Store (Figure 9). The cumulative average rating of application for the same period is 4.56 on a scale of 5 as given by users (Figure 10).
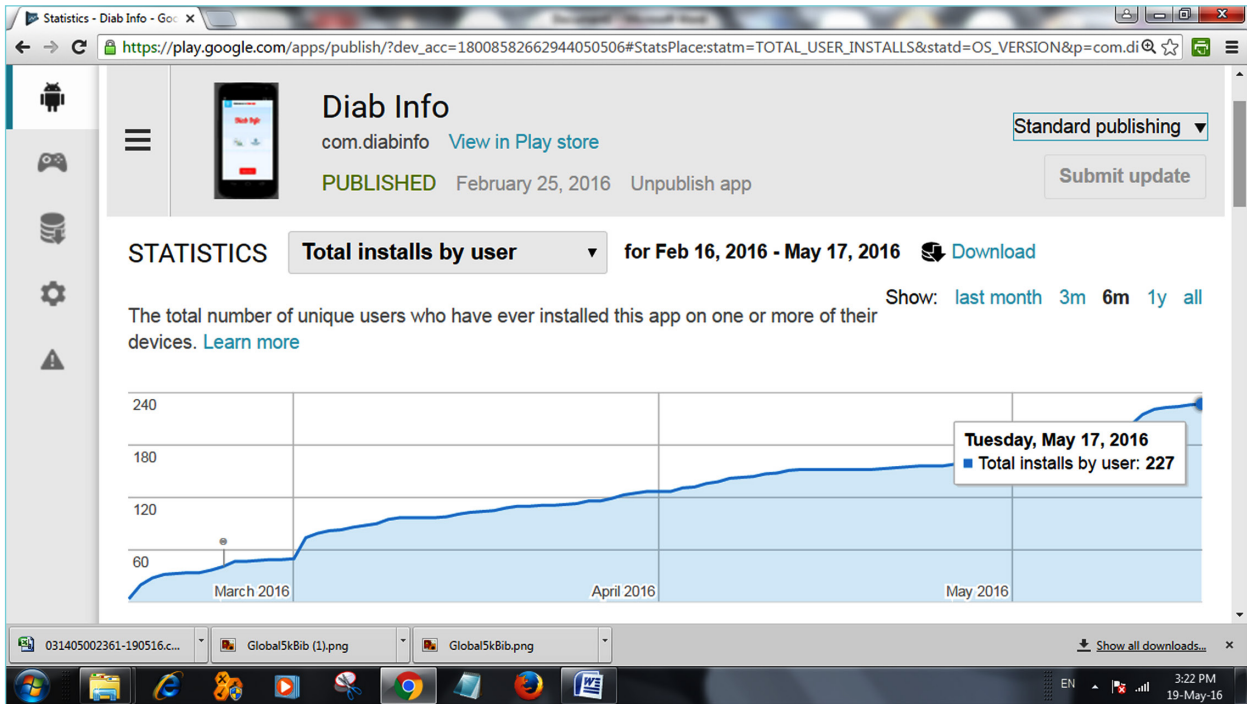
Figure 9: Total installation of Diab Info by users from February 2016- May 2016 (source: Google Play Store)

Figure 10: Cumulative average rating of Diab Info by users from February 2016- May 2016 (source: Google Play Store)

Assessment- user's perspective and experience ⟫

A cross-sectional household survey of the intended and actual beneficiaries was conducted in order to understand their perception and experience of the application use. We collected information from 500 beneficiaries each in Shimla and Solan district of Himachal Pradesh.

Socio-demographic profile of the respondent

In Shimla and Solan, there are 433 and 412 respondents respectively. Most of the respondents in both the places are in the age group of 35–44 years. Younger respondents in the age group 15-24 are 22% in both the places. There are more male participants than the female participants in both Shimla and Solan. In Shimla, more than three fourth respondents have received degrees above matriculation whereas; in Solan, 66% participants received above matriculation degrees. About 66% and 70% respondents are married in Shimla and Solan districts respectively. It is found that majority of the respondents are unemployed. The average family income is found to be INR 19,690 for all study participants. In Shimla, the distribution of below average and above average is almost equal. But, in Solan, the distribution of family income is more skewed in favour of families whose income is below average. There are about 27% families whose income is more than above average in Solan (Table 1).

Table 1: Socio-demographic profile of the study participants

Background characteristics	Shimla		Solan		Total
	n	*%*	*n*	*%*	*%*
Age groups (in years)					
15-24	97	22.4	98	23.08	23.0
25-34	145	33.5	160	36.09	35.9
35–44	191	44.1	154	40.83	41.1
Sex					
Male	268	61.8	240	57.83	59.6
Female	166	38.3	175	42.17	40.4
Education status					
Matriculation	97	22.7	135	33.92	28.4
Above matriculation	330	77.3	263	66.08	71.6
Marital status					
Never married	143	33.6	120	29.56	31.6
Married	283	66.4	286	70.44	68.4
Employment status					
Employed	257	59.9	221	55.25	57.4
Unemployed	172	40.1	179	44.75	42.6
Family income					
Below INR 19,690	206	49.1	291	72.75	60.8
Above INR19,690	214	51.0	109	27.25	39.2

In our sample survey, there is almost universal availability of mobile phone in both the intervention districts (95.9%[1]). However, of the total mobile users more than 60% use android mobile whereas; one third (33.2%) use simple or basic phone. During the survey, information was sought about use of internet and any mobile application by the user or any family member of the user. It is found that more than half of the users regularly use internet on the other hand, more than one-fifth never used internet in their mobile phones. When asked about use of any mobile application, 46% users have replied that either they or their family members are using any mobile application regularly. About 30% respondents or their family members have never used any mobile application. It should be made lucid that these responses are sought with the presumption that those who have used the internet or any mobile application will better apprehend the Diab Info application (Figure 11).
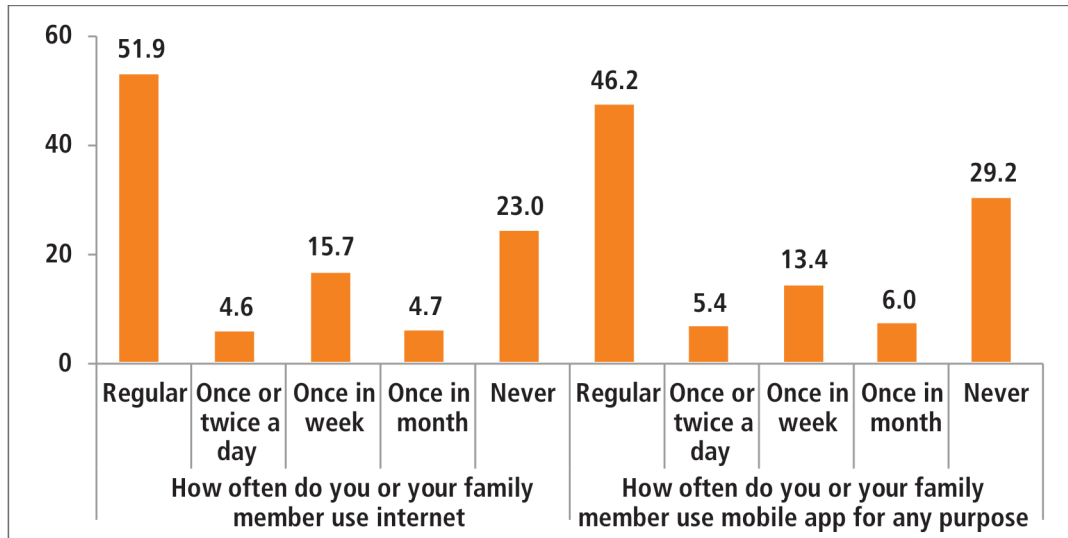
Figure 11: Percent distribution of internet and any mobile application user

Perception of users about benefits of Diab Info

The perception of the user is important not only to materialise widespread use of the Diab Info application but, also to incorporate the application in the existing health system. It is found that for the behaviour change like daily physical activities and diet control, the Diab Info application is very helpful because, about half of the respondents have given affirmative answers about these two items of the application. In the case of early detection and symptoms of diabetes, more than 56% respondents replied that the application will benefit the user for the very cause. It appears that about half of the respondents believe that the Diab Info application will benefit in maintaining a healthy life style. However, nearly 11% respondents find the 'medicine reminder', as a benefit of the Diab Info (Figure 12).
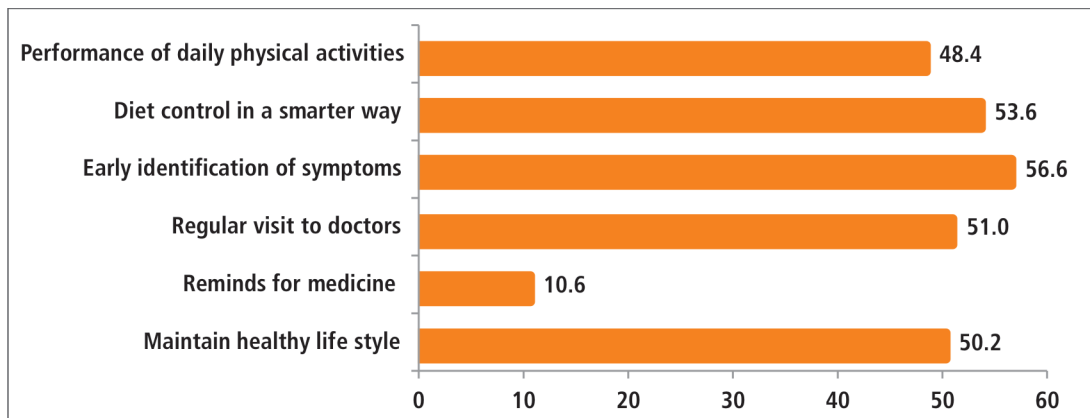
Figure 12: Percent distribution of respondent's perception about benefits of Diab Info

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[1]*Mobile phone use by atleast one person in the family*

Degree of ease associated with Diab Info

Considering the diverse nature of population of Himachal Pradesh, it is important that various sections of the application have to be easy to operate and user friendly. Therefore, we have enquired the degree of ease associated with the Diab Info use pertaining to its various features (Figure 13). Result shows that more than half of the respondents have found that the feature on 'preventive measures' in the application is easy to understand. About 45% individual have found that the application makes the individual easy to understand about management of the disease.

Furthermore, nearly half of the respondent has replied that the section, "Am I at risk" is easy to follow. "Am I at risk" is unique section in the Diab Info application in which an individual can detect his/her diabetic status. In the same way, Goal tracker is also a unique section in the Diab info application. In the Goal tracker an individual can set his/her goal regarding eating habits, physical exercise and blood sugar level. The application will remind the individual at the set time and date to do the activity. Little less than half of the respondents have found that "Goal Tracker" is easy to operate.
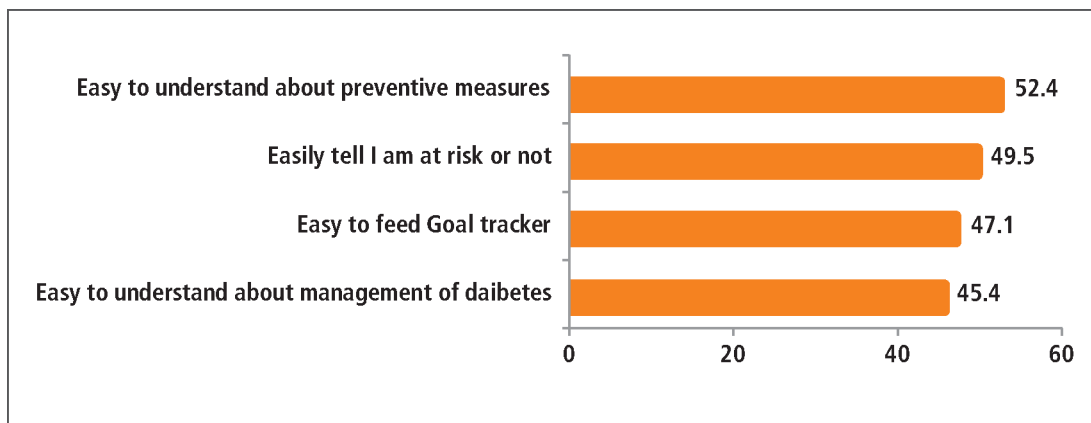
Figure 13: Percent distribution of respondent's opinion about ease associated with the Diab Info

Experience of using Diab Info and Intend to use in the future

To assess the performance of the Diab Info application, we have asked to each individual about their experience regarding specific components of the application. Each respondent were requested to rate the components of Diab Info application on the scale of one-to-three; as star 1 (*), star 2 (**), star 3 (***). Here, star 1 represents best rating followed by star 2 and star 3. Based on the responses, it is found that one third of the respondents have given the "video content", "Am I at risk", and "Goal Tracker" as star one. About half of the respondents have given each specific component as star two. Therefore, it can be concluded that more than half of the individual have accepted the specific components of the application (Figure 14).

Besides, we have enquired about the future intention to use the Diab Info application by the users. It is also taken as a proxy indicator for the acceptance of the application. Interestingly, more than half of the individual have replied affirmatively to use the Diab Info in future.
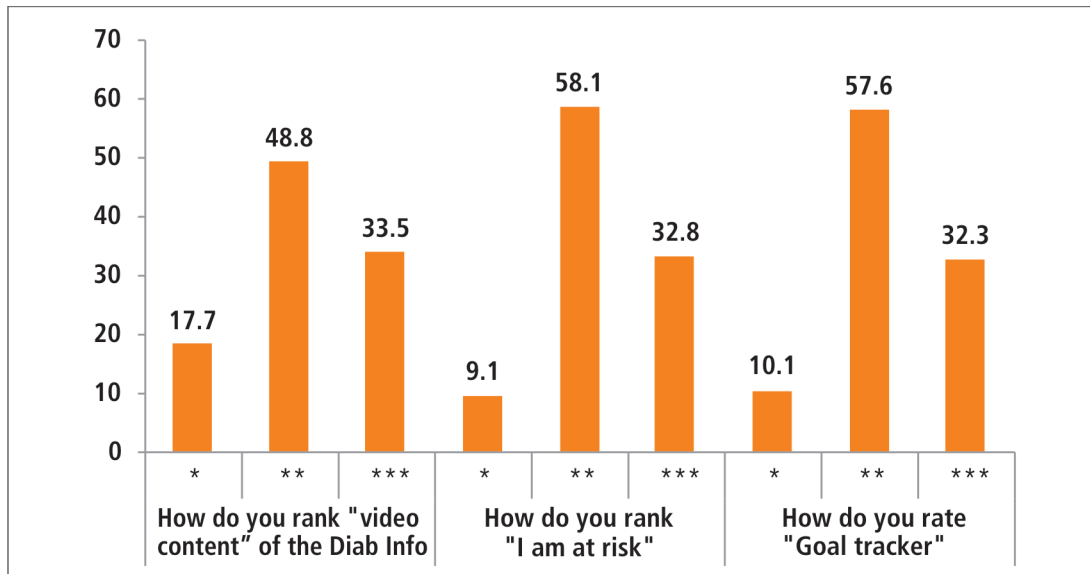
Figure 14: Rank given by the respondents to specific components of the Diab Info

Challenges and Lessons Learnt

Although the Diab Info application is being received in quite an enthusiastic manner by the end users, there are also a few challenges being faced in the implementation of the application, as listed below:

- The biggest challenge is in terms of online connectivity for downloading the Diab Info application. At several places the users are not able to download the Diab Info application from Google Pay Store due to slow internet connectivity. In such instances, we have to install the application by transferring from the computer to the User Phone.

- Users are also being oriented to use the Goal tracker to track their daily activities, which a number of users are finding little difficult to use and monitor.

- It has been observed that we need to do advertisements by mode of media, i.e., newspapers, radio, pamphlets etc. about the promotional event so that maximum people can gather for demonstration on the designated day.

- For optimum utilization of the opportunity as a comprehensive approach, the promotional activities should not be organized as a standalone event. The event should be rather combined by a free checkup of diabetes including screening of diabetes by the healthcare providers and advice on use of Diab Info application in avoiding or managing diabetes.

Conclusions

This study puts forward some evidence on our mHealth initiatives in hilly region of India and their potentials as an empowerment tool for self-management of diabetes. The success of the project is dependent on creating a large user base in the target segment and modifying the program content/flow based on user inputs and requirements. In addition, demonstration of the Diab Info by a Techno Commercial Project Manager and a field level Diab Info Educator added significant value in convincing the enabling users. Our present analysis brings us to the conclusion that there is potential viability of mHealth initiatives even in the hilly region of the country. However, it is too early to assess the effectiveness of the application in the given context.

The growing interest of the private sector in this area indicates a strong inclination for significant expansion of such initiatives. However, it is yet not clear how mHealth will be integrated into the existing health system given the dearth of reliable evidence. Based on what is available, the most urgent area for research will be on how the involvement of public sector will help in generating evidence on the most effective means of integrating mHealth into health systems. With the current political mandate of Digital India, a logical step forward for the government would be to become the steward of mHealth and support the link between technology and health in this country. We recommend future in-depth studies with scale-up plan on these initiatives which would guide for health system integration which has not been possible in the current design.

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ANNEXURE – A

List of key health facilities in Shimla and Solan

Shimla

1. Shri Ram Medical Center
2. Indus Hospital
3. Vidya Clinic & Diagnostic Center
4. Shimla Sanitarium And Hospital
5. Maria Medical & Diagnostic Center
6. Puri Medical Center
7. Dr. Suman Heart Center
8. The Clinic Sky View Building
9. Dr. Jagat Ram Dental And Skin Care Center
10. Prince Eye Care
11. Nirmal Clinic
12. City Clinic And Physiotherapy Center
13. Health Care Clinic
14. Pal Clinic
15. Sumeha Clinic
16. Sai Opticals
17. Goel Eye Clinic
18. Jain Clinic
19. Shyam Medical
20. Kirpa Ram Sud's Clinic
21. Shimla Bone and Joint Center
22. Prabhudas Clinic and Nursing Home
23. Arya Medical Center
24. Tara Hospital
25. Sarin Skin And Dental Care Centre
26. Eye Care(Dignostic Center)
27. Patient Care Clinic
28. Panchayat Bhawan
29. A.L.Sachdeva Clinic
30. Aastha Hospital and Pediatrics Center
31. Aayu Medical Clinic
32. Sai Clinic
33. Shri Ram Hospital
34. Grewal Eye Institute
35. Tanzen Hospital

Solan

1. Dr. Singla Ortho Hospital
2. Navjeevan Nursing Home
3. City Hospital
4. Sai Sanjivni Hospital
5. Shiva Hospital
6. New Rishi Medical Center
7. Him Medicare Center
8. Prashar Nursing Home
9. Prashar Clinic
10. Solan Nursing Home
11. Bansal Orthopadic Center
12. Ultimate Skin and Care Center
13. Kapoor's Nursing Home
14. J.P. Hospital & Pardiatric Center
15. Bhardwaj Hospital
16. Gupta Hospital
17. Ace Medi Centre
18. Sidhant Nursing Home

ANNEXURE – B

List of selected schools and colleges in Shimla and Solan

Schools in Shimla

1. Govt. S.S. School Portmore
2. Shimla Public School Khalini
3. Rajhana Govt. School
4. Govt. Kasumpti School
5. Govt. Sanjoli School
6. Govt. Tutu School
7. Govt. S.S. School Lal Pani
8. DAV New
9. S.D. School
10. Center Edward School
11. St. Thomas School

Schools in Solan

1. Govt. G.S.S. School Mall Road
2. Govt. B.S.S. School Tank Road
3. St. Lukes
4. D.A.V. School
5. Vivekanand Public School Sadhupul
6. Guru Kul Public School
7. Pine Grove School
8. St. Mary Convent School Kasauli
9. Govt. S.S. School Rajgarh

Colleges/ Universities in Shimla

1. R.K.M.V. College
2. Coat Shera College
3. Excellence College
4. Shivalik Nursing College
5. University Campus
6. A.P.G. University Campus
7. Bells University Campus
8. St. Bede's College
9. Shimla Nursing College
10. Modern Nursing College
11. Sanskrit College Shimla

Colleges and Universities in Solan

1. Govt. College
2. S.H.M.C Kumarhatti
3. Green Hills Engg. College
4. L.R. Verma College
5. Sholini University
6. Bahara University Vakna Ghat
7. J.P. University Vakna Ghat
8. Manav Bharti University
9. Maharishi Markandeshwar Medical College
10. Sanjivni Nursing College
11. Solan Nursing College Rajgarh Road
12. J.B.T College
13. B.ED College Solan

ANNEXURE – C

Some of the media coverage

मधुमेह की बीमारी पर लोगों को टिप्स

सोलन – ममता हैल्थ सामाजिक संस्था द्वारा शुक्रवार को होटल पैरागॉन में मधुमेह पर एकदिवसीय कार्यशाला का आयोजन किया गया। इस कार्यक्रम में सोलन के अलग–अलग नर्सिंग कालेज की छात्राओं, आंगनबाड़ी कार्यकताओं व स्थानीय लोगों ने भाग लिया। इस कार्यशाला में लोगों को मधुमेह की बीमारी के बारे में जानकारी दी गई व इस बीमारी से किस तरह बचाव किया जाता है, इस बारे में लोगों को बताया गया। कार्यक्रम के दौरान सामाजिक संस्था की जिला समवन्यक डा. इंद्रा ने बताया कि संस्था द्वारा मधुमेह पर पिछले वर्ष एक प्रोजेक्ट शुरू किया गया था, जिसमें सोलन व शिमला में मधुमेह की बीमारी पर लोगों को जानकारी दी गई। कार्यशाला में डा. एमएल खान द्वारा लोगों को मधुमेह के बारे में बताया गया व इससे बचने के लिए लोगों जानकारी दी गई, वहीं प्रणव थिएटर बियांड थिएटर के कलाकारों द्वारा इस कार्यशाला में मधुमेह पर दादी की कहानी नुक्कड़ नाटक भी प्रस्तुत किया गया।

मधुमेह रोग से निजात को डाइब इनफो

Written on 05/13/2016 at 22:48
Himachal Abhi abhi

सोलन। हिमाचल प्रदेश के लोगों को मधुमेह रोग से निजात दिलाने के लिए देश की ममता हैल्थ इंस्टीच्यूट फॉर मदर एंड चाइल्ड संस्था द्वारा डाइब इनफो नाम से एप्लीकेशन आरंभ की गई है। इसके लिए संस्था के अधिकारीगण प्रदेश के हर जिला में कार्यशाला आयोजित कर लोगों को जागरूक करने का कार्य कर रहे हैं। इसी कड़ी में सोलन के एक निजी होटल में संस्था द्वारा मधुमेह रोग पर जागरूकता कार्यशाला का आयोजन किया गया। इसमें सोलन शहर के विभिन्न संस्थानों के अधिकारियों व विद्यार्थियों सहित अन्य लोगों ने भाग लिया। कार्यशाला में ममता हैल्थ इंस्टीच्यूट फॉर मदर एंड चाइल्ड संस्था के राज्य प्रभारी डॉ गौरव सेठी, जिला प्रभारी इंद्रा पठानिया, शिमला जिला प्रभारी डॉ रेखा सहित अन्य अधिकारियों ने प्रोजेक्टर के माध्यम से उपस्थितजनों को मधुमेह पर गहन शोध कर बीमारी से कैसे बचाओ किया जाए। इसके लिए एप्लीकेशन के द्वारा पूर्ण जानकारी दी गई। संस्था के राज्य प्रभारी डॉ गौरव सेठी ने कहा कि मधुमेह की बीमारी देश और प्रदेश में प्रतिदिन बढ़ती जा रही है। इसी के लिए संस्था द्वारा प्रदेश के लोगों को बीमारी किन कारणों से होती है और इसके बचाओ के लिए जागरूक किया जा रहा है। इसके लिए संस्था ने हेल्पलाइन नंबर भी जारी किया है।

शुरुआत : ममता हेल्थ इंस्टीट्यूट फॉर मदर एंड चाइल्ड ने शुरू किया डाइब इनफ्रे मोबाइल एप

मोबाइल एप रखेगा आपको शुगर से दूर

राज्य ब्यूरो, शिमला : अब मोबाइल एप आपके शरीर में शुगर के स्तर का पता लगाएगा। 'डाइब इनफो' ऐसी एप्लीकेशन जिसे मोबाइल पर डाउनलोड करके आप स्वस्थ जीवनशैली जी सकते हैं, जिसमें रिस्क फैक्टर के अतिरिक्त शुगर है या नहीं लेकिन इस बीमारी से खुद को कैसे बचाकर रखें पूरी जानकारी मिलती रहेगी। यदि शुगर है तो भी उसका स्तर हर माह कितना बढ़ा व कम हुआ, इसकी जानकारी भी मोबाइल एप पर मिलेगी।

ममता हेल्थ इंस्टीट्यूट फॉर मदर एंड चाइल्ड ने डाइब इनफो नाम से एप्लीकेशन शुरू की है। यह स्वयंसेवी संस्था विशेषतौर पर शुगर व उच्च रक्तचाप पर शिमला में काम कर रही है। इसके ताजा सर्वे के मुताबिक शिमला में चार फीसद लोग शुगर की गिरफ्त में हैं, जबकि 29 प्रतिशत लोग उच्च रक्तचाप की चपेट में हैं। दिल्ली बेस्ड इस संस्था ने शिमला के टुटू, ढैंडा, चायली व कसुम्पटी आदि क्षेत्रों में आठ सौ से अधिक लोगों से प्रश्नावली भी भरवाई है। इसके माध्यम से जाना है कि लोग शुगर व मधुमेह को लेकर कितने जागरूक हैं और कितने लोग नियमित अपना चेकअप

स्वास्थ्य केंद्रों पर करवा रहे हैं। प्रोजेक्ट के राज्य को-ऑर्डिनेटर डॉ. गौरव व जिला को-ऑर्डिनेटर डॉ. रेखा ने बताया कि संस्था ने हेल्पलाइन नंबर 8010873000 भी जारी किया है।

इसके माध्यम से लोगों को निजी अस्पताल व क्लीनिक के बारे में जानकारी मिलती है। मधुमेह से लोगों को जागरूक करवाने का यह

प्रोजेक्ट जुलाई 2015 में शुरू हुआ था। वीरवार को शिमला में मोबाइल एप के बारे में जानकारी देने के लिए संस्था ने कार्यशाला आयोजित की। इसमें शिवालिक नर्सिंग कॉलेज की छात्राओं के अतिरिक्त एपीएस खलीणी स्कूल के छात्रों ने भाग लिया। आचार्य डॉ. महेंद्र शर्मा, बलविंद्र निक्का व नीलम विशेष तौर पर मौजूद रहे।

प्ले स्टोर में जाकर डाउनलोड करें एप

किसी भी एंड्रॉयड मोबाइल के प्ले स्टोर में जाकर डाइब इनफो खुद डाउनलोड कर सकते हैं। संस्था के आईटी पार्टनर अंकुर रोहेला ने बताया कि डाइब इंफ्रे टाइप करने से कॉपी राइट ममता प्रीपेयर्ड बाय अंकुर लिखा आएगा। इससे पहचान हो जाएगी कि ये संस्था की ही एप है। इसके बाद ये एप्लीकेशन काम शुरू कर देगी। मशोबरा व ठियोग ब्लॉक में संस्था ने उच्च रक्तचाप व शुगर के संबंध में जागरूकता अभियान चलाया है। इसमें लिए 15 से 70 वर्ष आयु के बीच के बच्चों व बुजुर्गों से फीडबैक लिया जा रहा है। जानकरी जुटाई जा रही है कि कौन एल्कोहल, तंबाकू व अन्य नशीले पदार्थ का सेवन कर रहा है। इसके बाद प्रदेश के अन्य जिलों में भी इस तरह की मुहिम शुरू की जाएगी और सर्वे रिपोर्ट रिलीज होगी। इन दो ब्लॉक में सात जून तक यह अभियान चलेगा।

शिमला में वीरवार को नाटक के माध्यम से मधुमेह के खिलाफ लोगों को जागरूक किया गया।

CHANDIGARH • FRIDAY • 13.5.2016

मधुमेह के रोगियों को मोबाइल एप्स से मिलेगी जानकारी

'ममता' ने उठाया जागरूक करने का बीड़ा

शिमला, 12 मई (जय): देश में मधुमेह की बीमारी प्रतिदिन बढ़ती जा रही है। हिमाचल के लाखों लोग इस बीमारी से प्रस्त हैं। इस बीमारी की चपेट में बड़े ही नहीं बल्कि बच्चे भी आने लगे हैं जोकि एक चिंता का विषय है। यह बीमारी किन कारणों से होती है और इससे कैसे बचा जा सकता है, इसके लिए देश की जारी-भानी संस्था ममता हेल्थ इंस्टीट्यूट फॉर मदर एंड चाइल्ड ने डाइब इनफो नाम से एप्लीकेशन शुरू की है।

संस्था ने मधुमेह पर गहन शोध कर बीमारी से कैसे बचा जाए, इसके मोबाइल एप के माध्यम से पूरी जानकारी दी है। दिल्ली बेस्ड इस संस्था ने शिमला के टुटू, ढैंडा, चायली, कसुम्पटी व डली आदि क्षेत्रों में ९०० से अधिक

लोगों से प्रश्नावली करवाई है। इसके माध्यम से जाना है कि लोग मधुमेह को लेकर कितने जागरूक हैं और कितने लोग नियमित अपना चेकअप स्वास्थ्य केंद्रों में करवा रहे हैं। इस प्रोजेक्ट के अन्य को-ऑर्डिनेटर डा. गौरव व जिला को-ऑर्डिनेटर डा. रेखा ने बताया कि संस्था ने अपना हेल्पलाइन नंबर भी जारी किया है। इसके माध्यम से लोगों को निजी अस्पताल व क्लीनिक बारे

मधुमेह से लोगों को जागरूक करवाने का यह प्रोजेक्ट जुलाई 2015 में शुरू हुआ था। मोबाइल एप्स शुरू करने के पहले पर-पर लोगों से बात कर प्रश्नावली करवाई गई थी। मधुमेह को वीरवार को शिमला में मोबाइल एप बारे विस्तृत जानकारी देने के लिए संस्था ने कार्यशाला का आयोजन किया। इसमें शिवालिक नर्सिंग कॉलेज की छात्राओं के अतिरिक्त ए.पी.एस. खलीणी स्कूल के छात्रों ने भाग लिया। विशेष तौर पर आचार्य डा. महेंद्र शर्मा, बलविंद्र निक्का व नीलम मौजूद रहे।

शिमला : होली-डे होम में ममता संस्था द्वारा आयोजित कार्यक्रम के दौरान संबोधित करती वक्ता व उपस्थित प्रतिभागी।

नाटकों के जरिए बताए बचाव के तरीके

एप्लीकेशन के साथ ही संस्था द्वारा जगह-जगह पर नुक्कड़ नाटक प्राय: लोगों को प्रदेश के रिहायशी क्षेत्रों में जाकर जागरूक किया जा रहा है। संस्था की जिला को-ऑर्डिनेटर डा. रेखा ने बताया कि लोगों को इस बीमारी से नाटकों के जरिए जागरूकी दी जा रही है। उन्होंने कहा कि लगातार बढ़ रही बद रही अवस्था से लोगों में यह बीमारी फैलती जा रही है और इससे बचने के लिए संस्था द्वारा लगातार प्रयास किए जा रहे हैं।

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ANNEXURE – D

Project Team

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