

PRELIMINARY REPORT: MY CARE TEAM WEB-BASED  
DIABETES CONTROL

*Assessing the feasibility of a Diabetes telemedicine initiative at the Osborne  
Family Health Center*

Our Lady of Lourdes Medical Center:  
Center for Public Health

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**Abstract:**

Our Lady of Lourdes Medical Center (OLLMC), in order to better serve the community of Camden, has partnered with Georgetown University in an attempt to provide diabetic patients with the ability to monitor their own blood glucose levels from home. Previous studies done at Georgetown University have shown that the use of on-line software, MyCare Team, has reduced the Hemoglobin A1c levels, blood pressure, and lipids in patients with poorly controlled diabetes. This software allows patients to upload glucose readings and doctors to adjust medication and behavioral regimens based on this information. Nevertheless, these tests were administered in affluent areas where most patients could afford medication and had the means to control his or her diabetes. According to current data, Camden, New Jersey is the poorest small city in America with a 44% poverty rate. OLLMC provides care for many diabetics who cannot easily afford the medications for diabetes, or who lack the will to properly control the disease. It is for this reason that the Center for Public Health at OLLMC was approached by Georgetown University's head of telemedicine, Betty Levine.

After several teleconferences with Betty, members and students at the Center of Public Health have begun to take the necessary steps towards launching this project by January 2009. The plan is to provide patients with the necessary equipment to upload their blood glucose levels on a computer and submit them to doctors and nurses working in the Osborne Family Health Center. The health care providers would then be able to respond to patients by e-mail or telephone in order to provide proper diabetes care. As of now, surveys have been administered at Osborne to determine the feasibility of the project. These results have been analyzed, but will continue until December 2008. The overall goal of this project is to provide diabetic patients with the care they need, while reducing the number of hospital and clinical visits and the costs associated with them.

**Methodology of Data Collection:**

We designed an initial survey to determine the feasibility of our study within the population of clients at the Osborne Family Health Center, which has a sliding payment scale and primarily serves poor and underserved residents of Camden. We were most interested in seeing whether clients knew how to use computers and access the internet. We also asked clients to name their primary language, because the software is only available in English. We looked to Georgetown's protocol as a guide in developing this survey. To distribute the survey, students spent many hours in the Osborne clinic and were notified when a diabetic patient was being seen. After the appointment, students administered the survey to the client and explained that the survey would be underway in the following year. Data was compiled into a spreadsheet for further analysis.

**Data Analysis:**

The first thing we noticed upon data analysis was that almost 41% of patients spoke Spanish as their primary language and the majority required translation to be able to accurately fill out the survey. In addition, almost 52% of patients surveyed were

Hispanic. The data also revealed that the average patient surveyed had diabetes for about 9.3 years. In addition, only one respondent had diabetes for less than a year. On a scale of one to 10 (10 being the most motivated), the respondents ranked their motivation level to control their diabetes at a 6.8 on average. Patients were asked to name the type of glucometer they use and the following were named: Bayer, One Touch Ultra, Contour, Freestlye, and Liberty.

Patients were then asked a series of questions about their computer usage and internet availability. On a scale of one to 10 (10 being the most comfortable), the respondents ranked their comfort level of using computers at a 4. However, 48.15% patients ranked their comfort level at a 1. Almost 41% of respondents indicated that they have internet access at home. Nevertheless, about 44% said that they do not have any internet access. See Appendix for full data analysis.

### **Conclusions/ Future Directions:**

Due to a relatively low number of survey respondents, it is recommended that more surveys be distributed if it is possible. However, from the data that we have collected, we have found that there is a potential language barrier and therefore the software should be made available in Spanish as well as English. In addition, this would mean that the clinician who is reviewing the data must be bilingual as well. The survey should be translated into Spanish as well if it continues to be given to patients.

While a large percentage of respondents were not comfortable using computers, the majority of these patients listed family members or friends who would be willing to assist them in using a computer. In addition, many patients do not have internet access therefore Lourdes could explore the possibility of placing uploading stations in Osborne or elsewhere in the community.

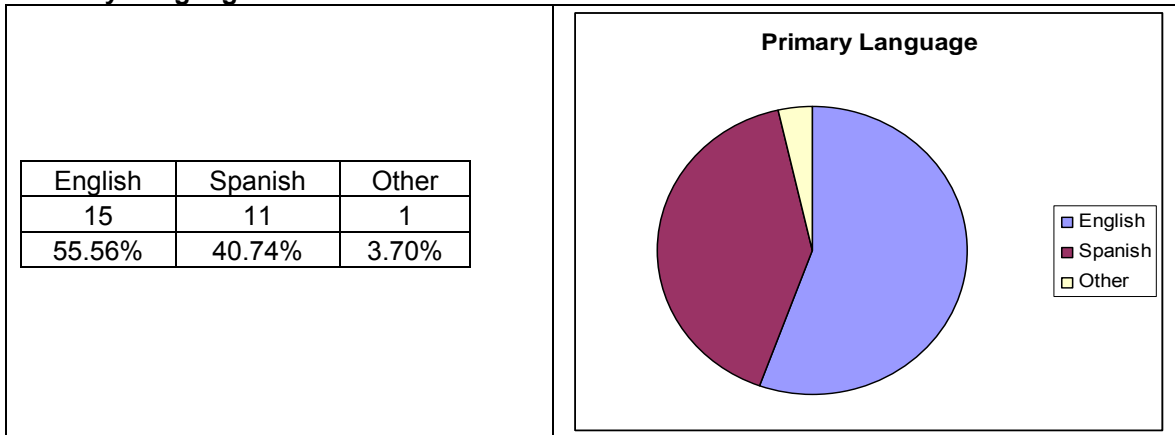
The data from our preliminary survey has indicated that the study is possible although it will require creative solutions to overcome the barriers of language and limited computer access and knowledge.

**Appendix: Preliminary Diabetes Survey Data**

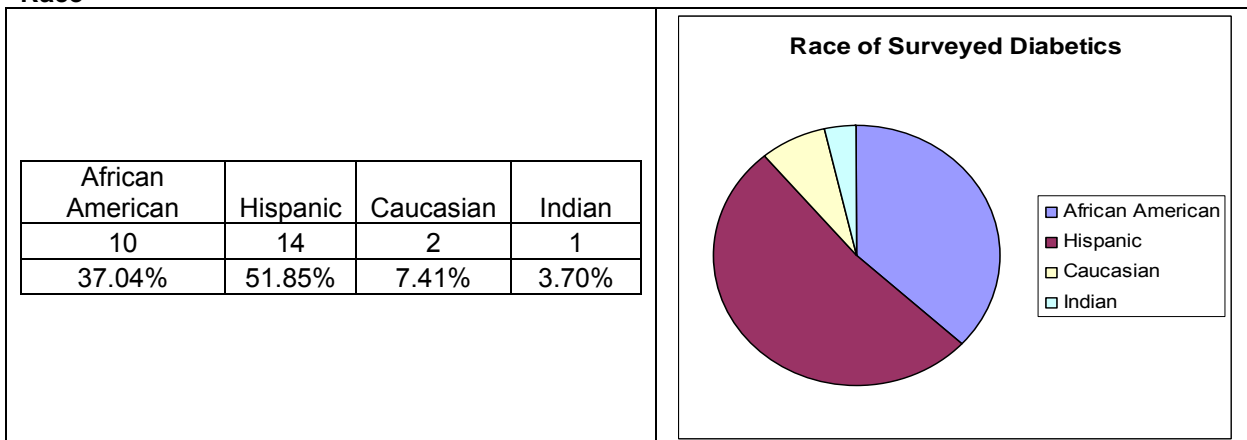
**Gender**

	Male	Female
	13	14
	48.15%	51.85%

**Primary Language**



**Race**



**Years with Diabetes**

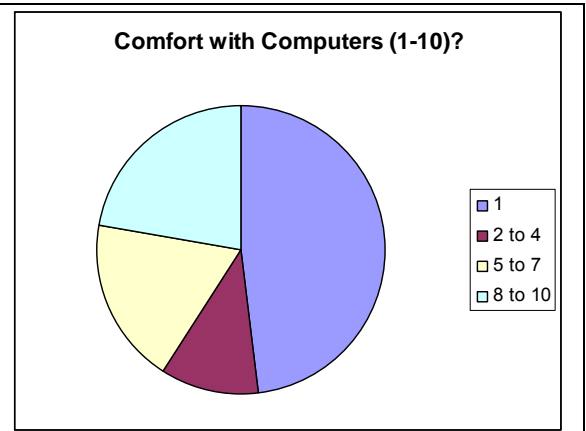
≤1	2 to 5	6 to 10	11 to 15	16 to 25	Avg.
1	10	5	6	5	
3.70%	37.04%	18.52%	22.22%	18.52%	9.3

**Motivation to control Diabetes 1-10?**

1 to 3	4 to 6	7 to 10	Avg.
2	10	13	
8.00%	40.00%	52.00%	6.8

**Comfort with computers 1-10?**

1	2 to 4	5 to 7	8 to 10	Avg.
13	3	5	6	
48.15%	11.11%	18.52%	22.22%	4



**Types of Treatment**

Oral	Insulin	Diet	Exercise
19	15	10	9

**Postponed or went without treatment?**

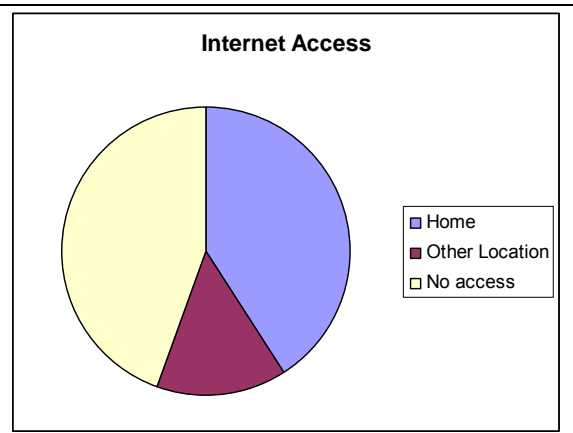
Yes	No	Did not understand
10	14	3
41.67%	58.33%	

**Have health insurance?**

Yes	No	
18	9	
66.67%	33.33%	4 reported Charity Care

**Internet Access**

Home	Other Location	No access
11	4	12
40.74%	14.81%	44.44%



**Landline**

Yes	No
20	7
74.07%	25.93%

**Types of Glucometer**

2 Bayer
3 One Touch Ultra
4 Contour
2 Freestyle
1 Liberty