An Investigation into the Causes and Consequences of Poor Health Service Utilization and Clinic Follow up by Diabetic Patients at Dr. Mohan’s Diabetes Specialities Center (DMDSC) in Chennai, India

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BACKGROUND
- India is the home to the largest number of people with diabetes in the world.
- Hence, regular follow up of patients with diabetes is of paramount importance to decrease the number of diabetic complications

OBJECTIVE
- In spite of diabetes affecting even the lowest socio economic groups, there has been no related study so far addressing the reasons for irregular follow up
- The primary objective of this study is to identify the barriers that keep patients with diabetes from having routine and periodic follow up for diabetes management.

SELECTING THE TARGET POPULATION
- Overall patients registered in 2005 - 14589
- Patients registered at our Chennai Centre in 2005 - 12125
- Diabetic, alive patients in Chennai - 5467
- Patients who meet study criteria - 1420
- Excluded - 880
- Address / Phone verified - 480
- Randomly selected survey participants - 200
- Participants selected for HbA1c analysis - 80

RESULTS
Dependency on an attendant when coming to the clinic based on gender
- 57% of patients overall are dependent on an attendant (N=173)
- 79% of females (N=97)
- 39% of males (N=76)
- Pearson Chi Square = .000

WHAT ARE THE BARRIERS TO FOLLOW-UP?

SURVEY ADMINISTRATION
- Level of education (p = 0.022)
- 52.7% of the patients who have completed above 12th std said they were more likely to schedule an appointment.
- Service Levels (p = 0.009)
- 95% of the patients responded that they were happy with their services and hence were more likely to schedule an appointment.
- Wait Time (p = 0.005)
- For 31% of the patients the wait time was long and unexpected and for 43% it was long and expected.
- The shorter the wait time, patients are more likely to schedule on appointment.

WHICH VARIABLES CORRELATE WITH LIKELIHOOD TO SCHEDULE AN APPOINTMENT WITH DMDSC IN FUTURE?

RESEARCH QUESTIONS
- What are the economic, social, cultural, infrastructural, and other barriers that keep patients with confirmed diagnoses of diabetes from continuing clinical care?
- What are the health outcomes when individuals with diabetes do not maintain a regular schedule of clinical care?
- What are the perceived health and economic consequences when individuals with diabetes don’t maintain a regular schedule of clinical care?

Jan - Mar : Finalization of teams and project details by GHI
- Creation of Questionnaire
- IRB Process and CITI Certification
06/15 : Emory team arrives in Chennai
- Methodology finalized
06/15 - 07/17 : Survey administration and blood sample collection
07/12-23 : Analysis

RECOMMENDATIONS
- Extend home services.
- Reminder calls should inform them of what tests will be done and the related cost during their next appointment.
- Mark an appropriate expiration date on all prescription slips.
- Pre-scheduled appointments at the end of the days consultation if the patient is confirmed diabetic.

LIMITATION OF THE STUDY
- Could not contact all of the Chennai residents who met the inclusion/exclusion criteria.
- It is possible that sample was, on average, diagnosed with a less severe stage of diabetes and had less motivation to seek follow up care.
- The questionnaire was not sufficiently focused towards the health complication of patients with no regular follow up and their awareness through the diabietic lecture class.

CONCLUSION
- Based on the research data that we have gathered and analyzed, as well as from group discussions that the team has had, we have concluded that patients who had registered in 2005 and have never returned have no compelling reason to follow-up (Patients feel they are fine).
- Based on the results, this study will prove to be a certain raiser to identify the barriers for the follow up visits of patients and then to adopt improve methodologies to motivate such patients.

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DISCUSSION
PATIENTS’ PERSPECTIVE
- Patients have access to lower cost options (Local Doctors and Labs).
- Patients are not aware of required tests and presume subsequent visits will take the same time and money as the initial visit.
- Several patients have been taking the same medicines since registered at DMDSC in 2005.
- Follow-up appointments are not scheduled at the time of diagnosis.

IMPLEMENTATION
- Information on the follow up visit with test and cost to be given before patient leaves the centre.
- Calendars
- Expiry date on the prescription

IS THE HBA1C OF PATIENTS WHO HAVE FOLLOWED UP SINCE 2005 AT DMDSC SIGNIFICANTLY DIFFERENT THAN THOSE WHO HAVE NOT FOLLOWED UP YET?
Comparison of change in HbA1c between sample patients who have not followed up and control patients who have followed up.

IS THE HBA1C OF THE SAMPLE PATIENTS WHO HAVE GONE FOR A CHECK-UP IN THE PAST YEAR TO ANY OTHER DOCTOR / LAB SIGNIFICANTLY DIFFERENT THAN THOSE WHO HAD NOT YET?
- Executed via T-test: p = .032

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