A Survey of Diabetes Self-Management Practices among Return-Patients of Mbarara Regional Referral Hospital Diabetes Clinic

Allen Hoang, MS-IV
National Medical Fellows, Inc, USA
Mbarara University of Science and Technology
allenphoang@gmail.com
Introduction

- Diabetes is on the rise in Uganda
- There is a large burden on healthcare by communicable diseases
- Cost-effective system of DM management is necessary to optimally meet the needs of diabetics
• Self-management is a model fit for chronic disease management

• SM requires care delegated to three cores:
  ▫ Medical and behavioral
  ▫ Role management
  ▫ Emotional management

• Self-Efficacy
Methods

- 20-item questionnaire
  - Knowledge, perceived self-efficacy, resources
- Interpreted, administered by interpreter
- Descriptive analysis
- Diabetes Clinic (4 days, 7/4, 14/4, 21/4, 28/4)
- Consent
- Demographics
- Chart Review
  - FBS, Weight, BP
Objectives

Descriptive Analysis:

1. Average fasting blood glucose
2. Patient’ practical knowledge of DM
3. Patient’s perceived burden of DSM
4. Perceived adequacy of health care providers in SM
5. Sources of DM education
6. Sources of emotional support
7. Self-efficacy in obtaining education/emotional support
Results - Demographics

• N=50
• Age
  ▫ Range 16-80yrs
  ▫ Mean 52.9yrs (SD +/- 15.0yrs)
  ▫ Median 52.5yrs
• Gender: Male 10%, Female 90%
• Marital Status:
  ▫ 46% married
  ▫ 38% widowed
  ▫ 12% single
  ▫ 4% separated/divorced
Results - Demographics

- Religion
  - 46% Protestant
  - 36% Catholic
  - 18% Muslim

- Tribes
  - 72% Myankore
  - 8% Bugandan
  - 6% Mukigi
  - 4% Tutsi
  - 2% Nubian
  - 2% Omunyankore
Languages Spoken (%)

- Ryankore, 98%
- Luganda, 36%
- Swahili, 8%
- English, 28%
- Other, 8%
Education Level

- None: 28%
- Primary: 40%
- Secondary: 20%
- Beyond: 12%
Occupation

- Agriculture: 58%
- Business: 22%
- Health: 4%
- Govt: 4%
- Student: 2%
- Transportation: 2%
- DNR: 2%
- Unemployed: 2%
- Educ: 4%
Disease Snapshot: Average FBS

<table>
<thead>
<tr>
<th></th>
<th>mmol/L</th>
<th>SD (mmol/L)</th>
<th>mg/dL</th>
<th>SD (mg/dL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBS (omit random,2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall (46) mean</td>
<td>11.24</td>
<td>7.44</td>
<td>202.59</td>
<td>134.05</td>
</tr>
<tr>
<td>Overall (46) median</td>
<td>8.80</td>
<td></td>
<td>158.56</td>
<td></td>
</tr>
<tr>
<td>Type I (4) mean</td>
<td>20.40</td>
<td>15.15</td>
<td>367.57</td>
<td>272.91</td>
</tr>
<tr>
<td>Type I (4) median</td>
<td>18.55</td>
<td></td>
<td>334.23</td>
<td></td>
</tr>
<tr>
<td>Non-Type-I (42) mean</td>
<td>10.37</td>
<td>5.92</td>
<td>186.87</td>
<td>106.61</td>
</tr>
<tr>
<td>Non-Type-I (42) median</td>
<td>8.55</td>
<td></td>
<td>154.05</td>
<td></td>
</tr>
</tbody>
</table>
Disease Snapshot (cont’d)

- Mean length of time from DM diagnosis:
  - 5.9 years, (SD +/- 5.1 yrs)

- Blood pressure
  - Mean systolic: 131.2 mmHg (SD +/- 22.4 mmHg)
  - Mean diastolic: 76.3 mmHg (SD +/- 10.5 mmHg)
  - MAP mean: 94.6 mmHg (SD +/- 12.5 mmHg)

- Weight
  - Mean 69.0 kg
  - Height not consistently available in charts
Reported self-management

- 92% constantly manage their own diabetes
- 8% is dependent on a someone else in the same household
Questionnaire Responses
Results and Discussion
2. What do you believe is wrong in diabetes? (% chosen)

- Blood pressure is too high (22%)
- Weak heart (12%)
- High blood sugar (34%)
- High cholesterol (6%)
- Viral infection (26%)

a. Blood pressure is too high
b. Weak heart
c. High blood sugar
d. High cholesterol
e. Viral infection
3. What are the serious complications of DM? (more than one)

- a. Nerve damage
- b. Pneumonia
- c. Vision problems
- d. Foot ulcers
- e. Mental retardation
- f. Senility
- g. Heart attack
- h. Stroke
- i. Fever
- j. HIV
Role Management Questions

6. Have you changed your diet in any way since your diagnosis of DM?
   ▫ Significantly (94%)/ Minor changes (4%)/ No change (2%)

7. Have you increased your physical activity in any way in order to promote health since being diagnosed with DM?
   ▫ Significantly (4%)/ Minor changes (72%)/ No change (24%)

8. Have you given up or reduced usage of the following since your diagnosis of DM?
   a) Smoking (16%) (44% of smokers/drinkers)
   b) Chewing tobacco (4%) (9% of smokers/drinkers)
   c) Alcohol (34%) (77% of smokers/drinkers)
   d) Not Applicable (I didn’t do any of the above) (56%)
5. Do you think it is important for a diabetic patient to have a particular diet?

- 100% Yes
- 0% No
- 0% Not sure
9. Which would raise your blood sugar the fastest?

a. Beans  
b. Ghee  
c. Orange fruit  
d. Goat
10. Which of these dishes would be best to prevent a rise in blood glucose?

a. Plantain
b. Beans
d. Maize flour
e. Rice
11. What is one specific goal of medical therapy for DM?

a) Raise blood glucose  
b) Having the lowest possible blood glucose  
c) Lowering blood pressure  
d) Reducing fasting blood glucose  
e) Losing weight  
f) Reducing salt concentration
13. Who has ever given you any education on DM? (more than one)

- a) Diabetic educator
- b) Nurse
- c) Physician
- d) Medical students
- e) Faith healer
- f) Other diabetic patients
- g) Non-medical govt worker
- h) Church
- i) Relative/friend
- j) Other: ____________

Bar chart showing the distribution of responses:

- Diabetic educator: 100
- Nurse: 92
- Physician: 20
- Medical students: 10
- Faith healer: 2
- Other diabetic patients: 2
- Non-medical govt worker: 0
- Church: 0
- Relative/friend: 0
- Other: 0
15. Who is your closest advisor when it comes to decisions concerning your DM? (only one)

- [C] Physician (98%)
- [A] Diabetic educator
- [B] Nurse (2%)
- [D] Medical students
- [E] Faith healer
- [F] Other diabetic patients
- [G] Non-medical govt worker
- [H] Church
- [I] Relative/friend
- [J] Other:
Questions about professional health care community, motivation to learn

16. Do you believe that your DM could benefit by interacting more with your physicians, nurses?
   - **Yes (100%)** / No / Not sure / Decline to Answer

17. Do you often feel that you desire more information than you receive about your DM?
   - **Yes (100%)** / No / Not Sure / Decline to Answer
Emotional Management

18. Do you feel that DM has made you emotionally a different person?
   ▫ **Yes (91.8%)**/ No (8%) / Not sure / Did not Answer (2%)
19. Have you received any emotional support from the following? (circle all that apply)

- a. Diabetic educator (0%)
- b. Nurse (90%)
- c. Physician (98%)
- d. Medical students (28%)
- e. Faith healer (0%)
- f. Other diabetic patients (40%)
- g. Non-medical government worker (2%)
- h. Church (14%)
- i. Relative/friend (78%)
- j. Other: ____________ (0%)
Self-efficacy

14. How confident are you that you can get answers to your questions when you need it?
   - Very confident (94%)/ Somewhat confident (4%)/ Not confident (2%)

20. How confident are you that you will seek and get the emotional support when you need it?
   - Very confident (96%)/ Somewhat confident (2%)/ Not confident (2%)
Conclusions

• Follow-up patients at MRRH DM clinic:
  ▫ report a high level of self-management
  ▫ have a suboptimal understanding of DM pathology
  ▫ report that DM has caused a change in their lifestyle
  ▫ have suboptimal practical knowledge of DM
  ▫ report their most significant source for DM education is the medical community
  ▫ desire more DM education and interaction with medical community
  ▫ report being an emotionally different person due to DM
  ▫ feel confident in their ability to obtain education and support
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Email: allenphoang@gmail.com