Diabetes mellitus

A Grassroots Intervention

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Quality of Life

• Swings in blood
  – sugar levels
  – acid levels (ketones, lactate)

• Infections
  – bacterial and fungal

• Pain of
  – neuropathy
  – musculoskeletal

• Depression
LAY DIABETES FACILITATOR
Jamaica

Programme presented at World Expo 2000 in Hannover, Germany

Acclaimed:
‘A Solution of the Future for Chronic Diseases’
LAY DIABETES EDUCATION
(LAY DIABETES FACILITATORS TRAINING PROGRAM)

- **AIM**: TO TRAIN RESOURCE PERSONS IN COMMUNITIES TO ASSIST THOSE WITH DIABETES

- **SELECTION CRITERIA FOR PARTICIPANTS:**
  
  - MUST HAVE SECONDARY LEVEL EDUCATION
    (i.e. > SEVEN YEARS OF SCHOOL)
  
  - MUST BE A LEADING MEMBER OF THE COMMUNITY (50%)
  
  or

  - COMMUNITY HEALTH WORKERS (50%)
  
  - MOH/GOJ
LAY DIABETES EDUCATION CONT’D

- **TRAINING SITES**
  HEALTH CENTERS IN THE COMMUNITY

- **METHOD OF DELIVERY**
  LECTURERS TRAVEL TO THE RESPECTIVE LOCATION TO CONDUCT TRAINING SESSIONS
  LECTURERS:
  - PHYSICIAN
  - CHIROPODIST
  - NUTRITIONIST
  - DIABETES EDUCATOR (LAY PERSON)
LAY DIABETES FACILITATOR

EDUCATION METHODOLOGY CONT’D

- PRE-TEST
- LECTURES
  - PHYSICIAN - 1 HR
  - CHIROPODIST - 1 HR
  - NUTRITIONIST - 30-45 MINS
  - EDUCATION DEMONSTRATION WITH VISUAL AID (BODY-LINK) - 1HR

- POST TEST & COURSE EVALUATION

- CERTIFICATION by
  DIABETES ASSOCIATION & MINISTRY OF HEALTH (GOJ)
'each one teach one'
• The aim of the study:

To measure the effectiveness of resource persons trained in Diabetes Education as Lay Diabetes Facilitators, in changing the level of awareness and knowledge of the patients in their communities.
Population

A multistage sampling technique was the method used to select two categories of respondents for the evaluation.

- **Category 1** consisted of persons who had received training as lay diabetes facilitators.

- **Category 2** was comprised of patients who received counselling from the trained facilitators.
Diabetes Awareness in Category 2 (Patients)

Fig 4.1 Diabetes Awareness

Are you more aware of your diabetes than before?

- Yes
- No
Awareness of Facilities

- Yes: 96%
- No: 4%
## Mx in Past one Year

<table>
<thead>
<tr>
<th>Type of Checks</th>
<th>Examination Done (%)</th>
<th>Number Of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Eye</td>
<td>32.9</td>
<td>67.1</td>
</tr>
<tr>
<td>ECG</td>
<td>32.9</td>
<td>67.1</td>
</tr>
<tr>
<td>Blood sugar</td>
<td>82.9</td>
<td>17.1</td>
</tr>
<tr>
<td>Feet</td>
<td>57.3</td>
<td>47.7</td>
</tr>
</tbody>
</table>
Medical Checks done after intervention

- Lab Test
- Footcare
- ECG
- Eye check
### Main Challenges Faced by Patients

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>25</td>
<td>78.1</td>
</tr>
<tr>
<td>Access to medication</td>
<td>20</td>
<td>62.5</td>
</tr>
<tr>
<td>Dietary</td>
<td>18</td>
<td>56.3</td>
</tr>
<tr>
<td>Transportation</td>
<td>5</td>
<td>15.6</td>
</tr>
<tr>
<td>Education counseling</td>
<td>7</td>
<td>21.9</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>9.4</td>
</tr>
</tbody>
</table>
Challenges faced by Patients

Finance was the greatest challenge faced by patients

- Access Meds
- Access test supp
- diet
- lack of under
- Finance
- transport
- Bush remedy

Challenges faced by Patients

Finance was the greatest challenge faced by patients
## Patients’ Awareness of Resource Persons in Their Communities

<table>
<thead>
<tr>
<th>Question</th>
<th>PARISH</th>
<th>1yr</th>
<th>3yrs ….later</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you know resource persons in community</td>
<td><strong>Clarendon</strong> N=40</td>
<td>97.5%</td>
<td>83.3%</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>2.5%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Did you get assistance from them</td>
<td><strong>Westmoreland</strong> N=42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Yes</td>
<td></td>
<td>77.5%</td>
<td>59.5%</td>
</tr>
<tr>
<td>-No</td>
<td></td>
<td>22.5%</td>
<td>40.5%</td>
</tr>
<tr>
<td>Questions</td>
<td>Yes %</td>
<td>No %</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Are patients more knowledgeable re diabetes</td>
<td>93.8</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Are Patients taking better care of themselves</td>
<td>81.3</td>
<td>18.7</td>
<td></td>
</tr>
<tr>
<td>Are patients visiting clinics more frequently</td>
<td>87.5</td>
<td>12.6</td>
<td></td>
</tr>
</tbody>
</table>
A1c values dropped by an average of 0.6% 
In the first 6 months of follow up.

-Lurline Less 2008
<table>
<thead>
<tr>
<th>Groups</th>
<th>A1c %</th>
<th>Baseline</th>
<th>6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>intervention</td>
<td>7.9</td>
<td>7.3</td>
<td>8</td>
</tr>
<tr>
<td>control</td>
<td>8.6*</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Difference of A1c within intervention group of – 0.6%

* P < 0.001 between control and intervention
Most common problems were with eyes and poor glucose control.
Estimated National Cost of Diabetes 2000, (US$M)

Source: PAHO-DOTA IRDC Workshop, 2004
Burden of Diabetes Care

• An A1c reduction of 0.6% → 22.2% reduction in complications

• Cost associated with complications is due to 25% direct and 75% indirect
Theoretical Cost-Benefit Calculation

Total Annual Cost Savings from 0.6% reduction in A1c

U$37,962,000

Less Training costs

U$412,000

Benefit to country

US$37,550,000 per annum

Benefit to patient:

Reduced morbidity and mortality and improved quality of life
Diabetes Care - Regional Partnerships

- Diabetes Association of the Caribbean (DAC)
- International Diabetes Federation (IDF)
- Pan American Health Organization (PAHO)
- Declaration of the Americas on Diabetes (DOTA)