



**Pan American  
Health  
Organization**



Regional Office of the  
World Health Organization



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PAHO/DPC/NCD/04.01  
Original: English

# Final Report:

## II PAHO-DOTA Workshop on Quality of Diabetes Care



**(Diabetes Research Institute/DRI, University of Miami, Miami, Florida,  
14–16 May 2003)**

*Coordinators*

Alberto Barceló, PAHO/WHO

Luigi Meneghini, Diabetes Research Institute (DRI)

### **Diabetes Initiative for the Americas (DIA)**

Noncommunicable Disease Unit  
PAHO/WHO

Disease Prevention and Control Area  
525 23<sup>rd</sup> Street, NW, Washington, DC 20037, USA

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## General Information

### Workshop Coordinators

Alberto Barceló, PAHO/WHO Washington DC  
Luigi Meneghini, Diabetes Research Institute, Miami, FL

### Venue

Diabetes Research Institute  
University of Miami  
1450 NW 10th Ave.  
Miami, Florida 3136

### Background

Diabetes care and education are among the most important aspects in the fight against diabetes. Improvement in diabetes control is linked to better quality of life and survival. One of the most important challenges for public health in the field of diabetes is to monitor quality of care with the aim of introducing measures to assure better outcomes. The available information suggests that diabetes care in Latin America and the Caribbean is sub-optimal.

The first DOTA Workshop on Quality of Diabetes Care was held on 11–12 March 2002 in Ocho Rios Jamaica with participation of Barbados, Bahamas, Trinidad & Tobago, Jamaica and St. Lucia. Participants agreed on implementing a diabetes care survey in health center using the data collection questionnaire discussed during the meeting.

### Objectives

- Review the status of quality care for people with diabetes in the Caribbean.
- Discuss the result of the evaluation of quality of care in Jamaica, St. Lucia and Bahamas.
- Review strategies to improve quality of care for people with diabetes.
- Define an action plan for improvement of quality of diabetes care in the Caribbean.

## Agenda

### Wednesday, 14 May 2003

08:30 – 09:00	Registration
09:00 – 09:15	Welcome and Introduction. Dr. Daniel Mintz, Scientist Director Emeritus, Diabetes Research Institute, University of Miami.
09:15 – 09:45	Workshop goals, purpose and methodology. Dr. Alberto Barceló, PAHO, Washington DC
09:45-10:15	Institutional Response to Diabetes. Project Overview. Dr. Alberto Barceló
10:15 – 10:45	Discussion / Q&A
10:45-11:15	Quality of Diabetes Care in the Caribbean. Report on the activities of the first year: Bahamas. Dr. Mortimer Moxley.
	11:15 – 11:45            Break
11:00 – 11:30	Quality of Diabetes Care in the Caribbean. Report on the activities of the first year: Jamaica. Mr. Owen Bernard.
11:30 –12:30	Quality of Diabetes Care in the Caribbean. Report on the activities of the first year: St. Lucia. Ms. Marlene Lawrence
	12:30- 14:00            Lunch
14:00-14:30	Quality of Diabetes Care in the Caribbean. Report on the activities of the first year: Trinidad & Tobago. Ms. Zobida Ragbirsingh
14:30 – 15:00	Quality of Diabetes Care in Montserrat. Dr. Colin Alert, Barbados
	15:30 – 15:45            Break
15:45 – 16:15	Diabetes in Aruba Ms. Sonja Kappel
16:15-16:45	Diabetes in Suriname Virginia Asin-Oostburg
17:00	Adjourn

### Thursday, 15 May 2003

09:00 – 09:40	Interventions to improve quality of care. Dr. Luigi Meneghini, Diabetes Research Institute, University of Miami.
09:40-1010	Foot Care. Dr. Andrew Boulton, Diabetes Research Institute, University of Miami School of Medicine.
10:10-10:30	Quality of Diabetes Care Improvement. Dr. Mike Engelgau, CDC
	10:15 --10:30            Break
10:30 – 11:00	Discussion/Q&A
11:00 – 11:30	Nutrition Interventions to improve Quality of Care, Godfrey Xuereb, CFNI, PAHO, Jamaica.
11:30 –12:30	Discussion/Q&A
	12:30 –14:00            Lunch
14:00 – 15:00	Clinical Information System: QUALIDIAB. Dr. Juan José Gagliardino, CENEXA, Argentina.
15:00 -17:00	Discussion/Q&A
17:00	Adjourn

### Friday, 16 May 2003

09:00-10:30	Focus Groups: Health Technology Assessment of Diabetes Care in the Caribbean. Dr. Rosario Talavera, PAHO, Washington DC
	10:30-10:45            Break
10:45-12:30	Planning for Quality of Diabetes Care Improvement. Godfrey Xuereb, CFNI-PAHO, Jamaica
	12:30-13:30            Lunch
13:30-15:30	Session continues
	15:30-15:45            Break
15:45-16:45	Session continue
16:45-17:30	Conclusions
17:30	Adjourn

## List of Participants

**Alert, Dr. Colin (Barbados)**

Board Member, Heart Foundation of Barbados  
Member of the Diabetes Association of Barbados  
Consultant, Family Physician  
[alert@inaccs.com.bb](mailto:alert@inaccs.com.bb)

**Asin-Oostburg, Ms. Virginia (Suriname)**

Ministry of Health, Suriname  
[fvirros@hotmail.com](mailto:fvirros@hotmail.com)  
Cell: (597) 880 0390

**Barcelo, Dr. Alberto (USA)**

Regional Advisor, PAHO  
[barceloa@paho.org](mailto:barceloa@paho.org)  
Phone: (202) 974-3589

**Bernard, Mr. Owen (Jamaica)**

Executive Director,  
Diabetes Association of Jamaica  
[owenbernard@emoquad.com](mailto:owenbernard@emoquad.com)  
Phone: (876) 927 9960; 876 - 9789881

**Boulton, Dr. Andrew (USA)**

Diabetes Research Institute  
University of Miami  
[ABoulton@med.miami.edu](mailto:ABoulton@med.miami.edu)

**De Cosio, Gerardo (Jamaica)**

PAHO Country Office in Jamaica  
[decosio@jam.paho.org](mailto:decosio@jam.paho.org)

**Engelgau, Dr. Michael (USA)**

Diabetes Translation  
Centers for Disease Control & Prevention (CDC)  
[mxe1@cdc.gov](mailto:mxe1@cdc.gov)

**Gagliardino, Dr. Juan José (Argentina)**

Director, CENEXA  
[gagliardino@infovia.com.ar](mailto:gagliardino@infovia.com.ar)  
Tel/fax: (+54-221) 423 6712

**Kappel, Ms. Sonja (Aruba)**

Ministry of Health, Aruba  
[sonjakappel@hotmail.com](mailto:sonjakappel@hotmail.com)  
Phone: 297 – 583 6457  
Fax: 297 – 5831104

**Lawrence, Ms. Marlene (St. Lucia),**

Diabetes and Hypertension,  
Association of St. Lucia  
[stluciadiabetic@candw.lc](mailto:stluciadiabetic@candw.lc)  
Phone: (758) 452 7693  
Fax: (758) 453 6688

**Maynard, Dr. Glenda (Barbados),**

Office of Caribbean Program Coordination,  
PAHO  
[maynardg@cpc.paho.org](mailto:maynardg@cpc.paho.org)  
Phone: (246) 426 3860 x 5026

**Meiners, Dra. Micheline (USA)**

Technical Officer, PAHO  
[meinersm@paho.org](mailto:meinersm@paho.org)  
Phone: (202) 974-3622

**Menegheni, Dr. Luigi (USA)**

Diabetes Research Institute  
University of Miami  
[LMeneghi@med.miami.edu](mailto:LMeneghi@med.miami.edu)

**Moxley, Dr. Mortimer (Bahamas)**

Ministry of Health, Bahamas  
[mgmoxey@hotmail.com](mailto:mgmoxey@hotmail.com)  
[mgmoxey@yahoo.com](mailto:mgmoxey@yahoo.com)  
Phone: (242) 324 0038, (242) 502 4717

**Ragbirsingh, Mrs. Zobida  
(Trinidad & Tobago)**

President  
Diabetes Association of Trinidad & Tobago  
[zobi\\_r@hotmail.com](mailto:zobi_r@hotmail.com)  
Phone: ( 868) 655-3704, (868) 662-2382  
Fax: (868) 662-2382

**Scavella, Ms. Judith (Bahamas)**

Ministry of Health, Bahamas

[judithscavella@yahoo.com](mailto:judithscavella@yahoo.com)

Phone: (242) 341 3676, (242) 502 4717

**Talavera, Dr. Rosario (USA)**

Consultant, PAHO

[talaverr@paho.org](mailto:talaverr@paho.org)

**Watson, Dr. Gina (Trinidad & Tobago),**

PAHO Country Office, Trinidad & Tobago

[watsongi@trt.paho.org](mailto:watsongi@trt.paho.org)

Phone: (868) 624 7524

Fax: (868) 624 4356

**Xuereb, Mr. Godfrey (Jamaica),**

Public Health Nutritionist

Caribbean Food & Nutrition Institute

(CFNI/PAHO)

[xuerebgo@cfni.paho.org](mailto:xuerebgo@cfni.paho.org)

Phone: (876) 927 1540

Fax: (876) 927 2657

**Regrets**

Jaime, Dr. Alina

National Epidemiologist

Ministry of Health, St. Lucia

[almontane@yahoo.com](mailto:almontane@yahoo.com)

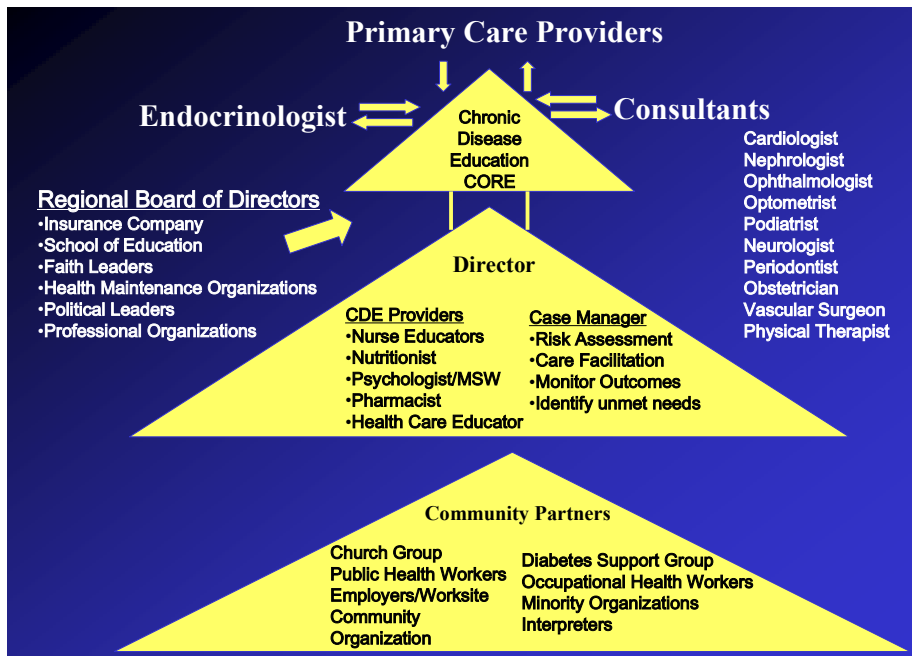
Phone: (758) 451-9039

Fax: (758) 451-9039

## Introduction

**Dr. Daniel H Mintz, MD**  
**Scientific Director Emeritus, Diabetes Research Institute**  
**Professor of Medicine, University of Miami School of Medicine**

Dr. Mintz presented on the organization of diabetes care and the importance of the interaction between different components of the team such as the endocrinologist and different consultants from various disciplines. Diabetes education is of great relevance in Dr. Mintz' model occupying a central position on the line of primary-care providers.

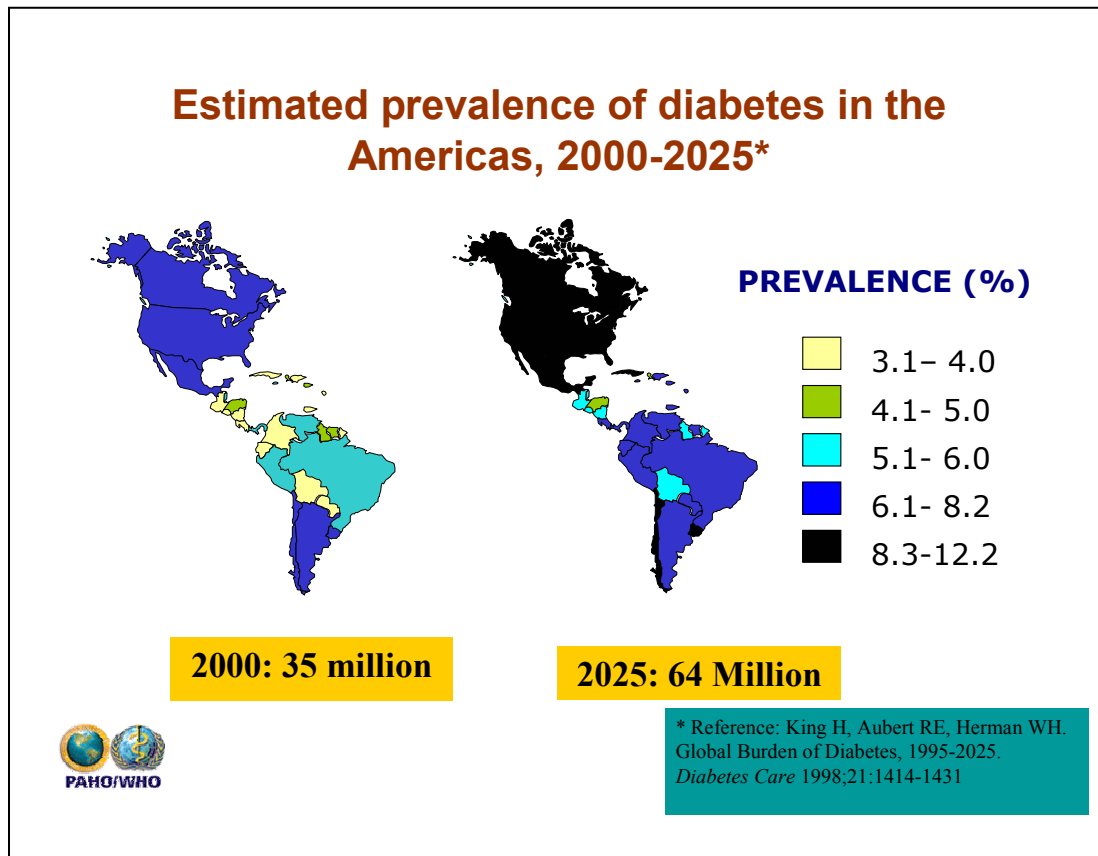




## Institutional Response to Diabetes and Its Complications

Dr. Alberto Barceló

Diabetes prevalence is increasing globally. In the Americas the forecast indicates that the prevalence will increase from 34 million in 2000 to 64 million in 2025. The most important increase is expected in developing countries.



In December of 1999, the Pan American Health Organization (PAHO) organized a regional workshop to strengthen collaboration among countries that work in the area of diabetes. One of the recommendations of this workshop was to monitor quality of diabetes care. Participants also felt that hypertension control is as important as glucose control for the diabetic population.

PAHO, the International Diabetes Federation (IDF) and representatives from the pharmaceutical industry created the Declaration of the Americas on Diabetes (DOTA) in 1996. During the past few years, DOTA has been involved in various initiatives in the region such as the strategic planning workshops in Barbados, Bolivia and Panama.

Studies such as the Diabetes Control & Complication Trial (DCCT) and the United Kingdom Prospective Diabetes Study (UKPDS) have shown that improving glycemic control can reduce the incidence of and mortality due to some diabetic complications.

In some Caribbean countries, guidelines for medical care for people with diabetes and hypertension were published in the past. However, there is very little or no information on the impact of these guidelines on the quality of the care provided care.

There are only a few examples of reports of evaluations of care for people with diabetes in Latin America and the Caribbean. Gulliford et al. evaluated a five-year intervention in diabetes care in Trinidad and Tobago that included dissemination of management guidelines and annual training workshops for healthcare staff.

Although it was found that process indicators such as the proportion of patients with foot or eye exams has increased, the proportion of persons with good metabolic control did not show any significant improvement.

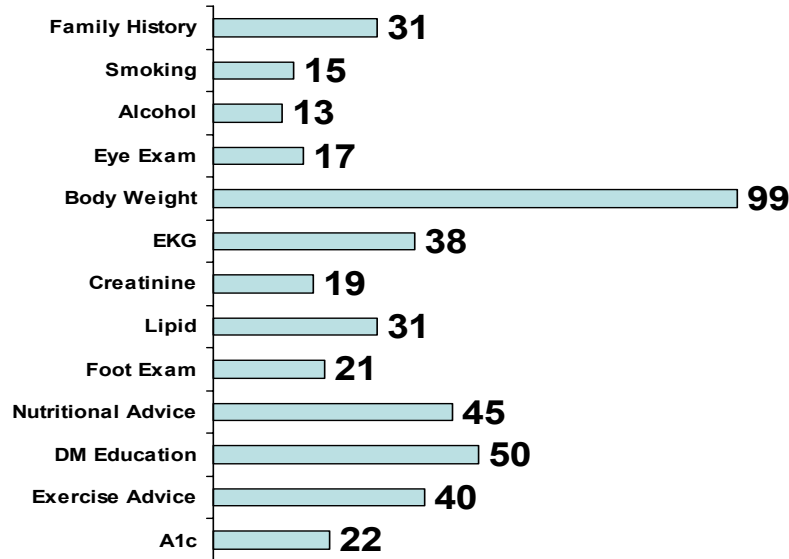
Inspired by the Diabcare project of Europe, the Declaration of the Americas on Diabetes (DOTA) implemented 'Qualidiab' in some Latin American countries. It evaluates the glycemic control and quality of diabetes care in general. The first analysis of Qualidiab included data from 1,368 patients from centers in Argentina, Brazil, Colombia, Chile, Paraguay and Venezuela. Results showed that 29% had HbA1c above 10 mg/dl, 8% were found to have blood pressure higher than 160/95 mm Hg, 44% had a dilated eye exam and 63% had had their feet examined during the last one year. Among the complications, 3% of patients were reported blindness, 1.7% had stroke, 2.1% had experienced a myocardial infarction, 0.8% had renal failure and 5.5% had a lower extremity amputation.

The Health Ministry of Chile conducted an evaluation of care using the Qualidiab questionnaire in about 8,100 patients, which however provided a different scenario. Only 12% of patients had a Glycated Hemoglobin (HbA1c) test while 82% had a fasting blood glucose test. A total of 71% of those using blood glucose and 18% of those with HbA1c values had poor control (fasting glucose >140 mg%, HbA1c >10 %). Although Qualidiab is a good start for measuring quality of care in the region, there are serious concerns regarding methodological aspects of the study, such as selection of centers, patient sampling procedures and definitions of the measured events.

## Jamaica

Dr. Owen Bernard

### Recorded Information (n=297)



### Summary

- Poor data recording of family history of diabetes, smoking, drinking, and other lifestyles.
- Lack of information on medical history for type of patients (new/old), complications, previous hospital admission, etc. is needed.
- Diabetes exams (eye, dental, foot, renal, cholesterol, etc.) are poorly recorded.
- Lack of resources for self-patient glucose testing.

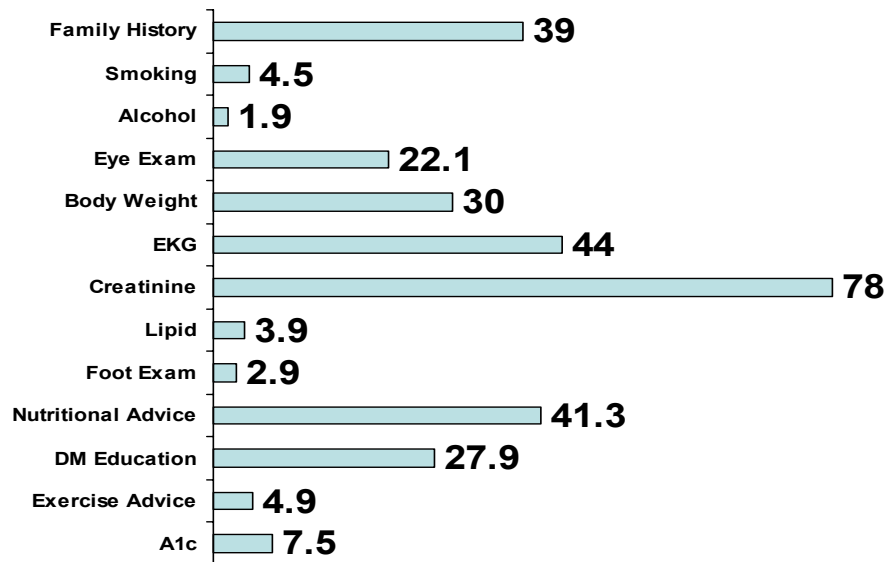
### Recommendations

- Study methodology needs to be reviewed.
- Standards for FBG and A1c to be reviewed.
- The recording of information needs to be improved.
- More emphasis needs to be placed on routine exams.
- Other information needs to be included such as admissions, complications, type of patient (new/old), how long they have had diabetes.
- Information on compliance needed.
- Design a front sheet for recording basic patient information

## St. Lucia

Ms. Marlene Lawrence

### Recorded Information (n=147)



### Summary

- Outpatient clinics do not keep patient records.
- There is a health care system in place that keeps a list of people under care in each clinic.
- Most admissions in participating hospitals were not coded.
- Hospital records do not contain most of the information needed for evaluation of quality of diabetes care.
- Only 27% of cases were documented to have diabetes education.
- Only 2.9% of cases had documented foot exam.

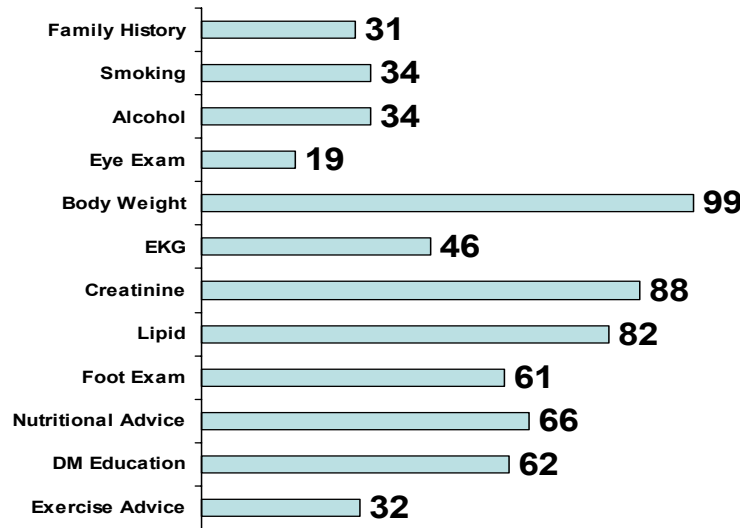
### Recommendations

- Clinical records in participant hospital must be improved.
- Health system should incorporate patient records for outpatient clinics.
- Patient would benefit from interventions aiming to improve quality of care for people with diabetes.

## Bahamas

Dr. Mortimer Moxley

### Recorded Information (n=109)



### Summary

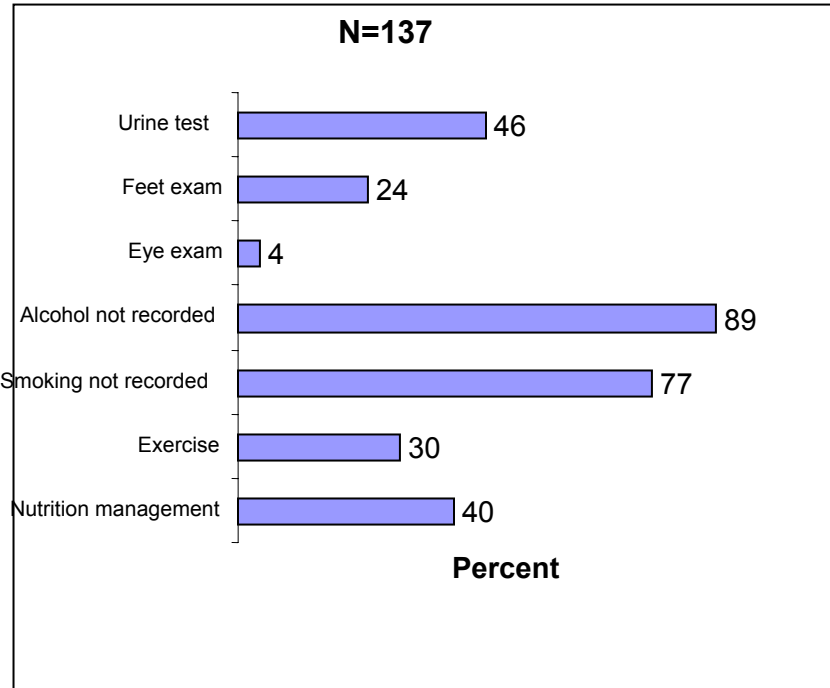
- The four large community based polyclinics in each quadrant of the island of New Providence at which diabetes care is given were selected as the sites for the study.
- Patients' height is not recorded and therefore BMI can not be calculated.
- There are still a big proportion of patients that do not receive foot exam, nutritional advice, diabetes education and exercise counseling.

### Recommendations

Although in some ways indicators showed to be better in Bahamas than in other sites, patients' health would benefit from a quality of diabetes care improvement program in collaboration with other Caribbean islands.

## Montserrat

Dr. Colin Alert



This audit showed that there are significant gaps in the delivery of primary health care for people with diabetes in Montserrat. It demonstrated major deficiencies in the quality of services offered to people with diabetes.

The quality of diabetes care has proven to be:

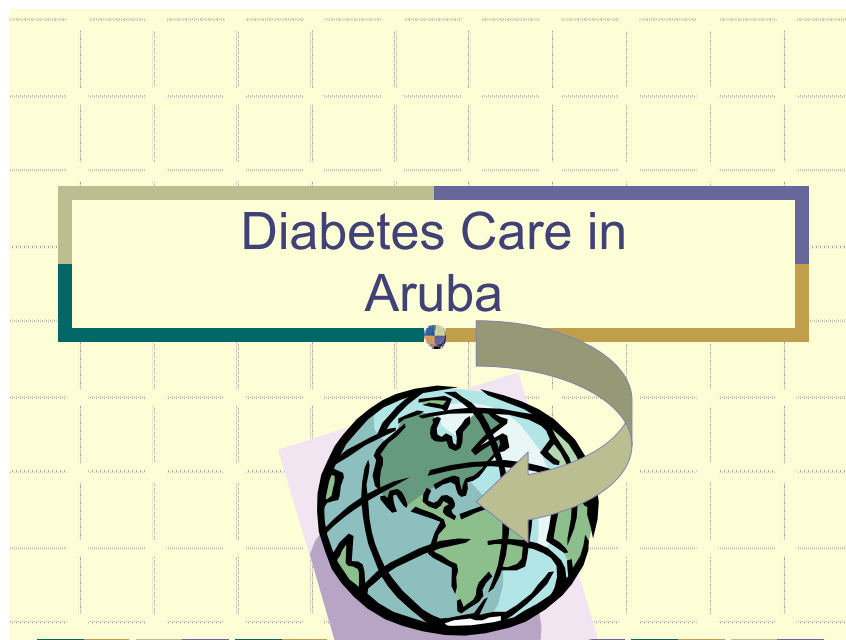
- Poor, in all islands studied, over last decade.
- Yet, no effort to modify this situation.
- Primary care needs to be organized for this task.
- Lack of specific local coordinating agency/agent to take responsibility for diabetes care "Denial" of seriousness of situation.
- Prevention (primary, secondary) not practiced.
- No evidence of systematic diabetes education.
- No commitment to periodic audit, follow-up.
- No desire to learn from experiences of neighbors

In the Caribbean, diabetes education is absent, diabetes care is sub-optimal.

**The result:** diabetes is "a state of premature death complicated by hyperglycemia" (Miles Fisher, 1988).

## Aruba

Dr. Sonja Kappel



With a population of 100.000 inhabitants, Aruba is not an exception when it comes to the diabetes problem. Due to the small community, everyone knows someone who has diabetes. Or you will encounter those with diabetes anywhere, either themselves making remarks as "I have a little bit sugar"; "I got sugar from eating too much sweets". Or usually you do know someone who has more severe complications of diabetes (such as an amputated toe, foot or limb, bad eyesight or the necessity to dialysis).

Just to mention Curacao, our next-door neighbor island of the Netherlands Antilles also has similar problem with diabetes.

Obesity is a problem among the entire population caused by an inappropriate lifestyle (poor eating habits and a low physical activity pattern).

Several sources supplied with data concerning Diabetes Mellitus:

### **Data, Census**

- Central Bureau of Statistics (the census takes place every 10 years, the latest in 2000).
- Total population = 4.5% (self-report), 60% ♀, 27% of the age group 64 and more has DM.

### **Data, Public Health Department (PHD)**

- Public Health Department Epidemiology and Research Division (Health Investigation 1991, 2001)
- Overweight + dm
- DM contributes with 6.6% of all dead cases in Aruba (2001)
- 13.2% of those of 20 years and older have blood sugar level ↑ and 9.6% are glucose intolerant (especially in the case of the elderly (42% blood sugar level ↑ and 13% are glucose intolerant)

### **Data, Home Care Service (HCS) (White and Yellow Cross)**

- Survey 2002
- Clients want to be checked every 3 months during the general health test, monitored by the diabetes nurse on a regular basis.
- Informed of DM and other chronic diseases in the media and with written material (flyer and booklet).

### **Conclusion**

- Aruba needs to and can give better diabetes care.
- An approach that is clear-cut in diabetes care is essential.

### **Short-Term Goals**

Reach a consensus in care; a diabetes network will accelerate the process (protocol). All diabetes partners (DPH; Hospital; Home Service Care; Elderly home; the vocational school; Aruba Diabetic Foundation; Association of dietitians and nutritionists; Aruba Diabetes Foundation and Department of Social affairs) signed an agreement to work together on the development of better care for people with diabetes.

It is important to deal with the scattered Care on a short-term base. Hereby a great part of the problems can be solved at organizational level. Besides it will be possible to review what kind of Diabetes Care is needed. At the same time a view of the extent of the demand and the need of information by diabetes in Aruba can be achieved.

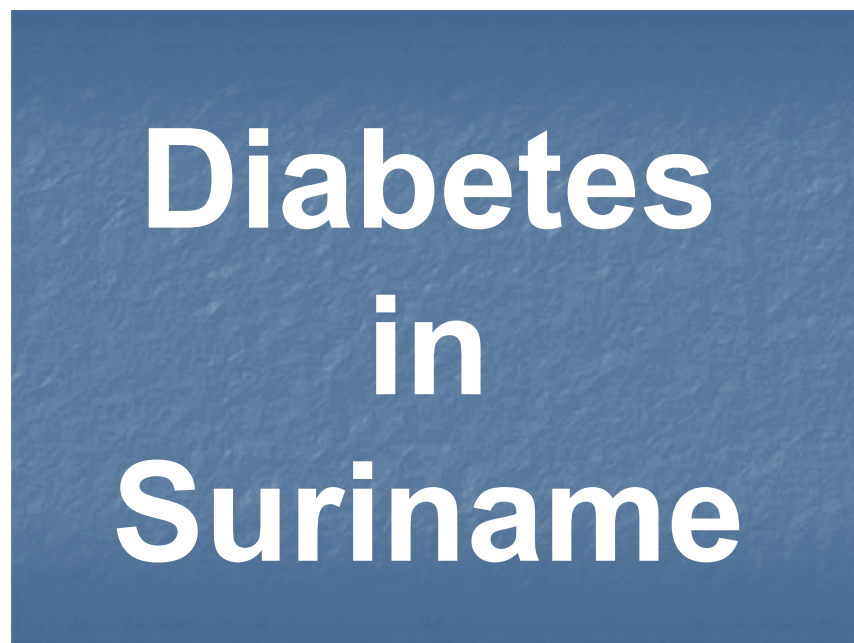
### **Long-Term Goals**

- Monitor care (through the diabetes network).
- Place diabetes caregivers in more work settings as proposed.
- Issue diabetes passport containing the necessary information for the diabetic person.



## Suriname

Dr. Virginia Asin-Oostburg



**General Policy on NCDs:** Policy document, June 2002

### Priority Areas in NCD Program

- Hypertension
- Diabetes
- Cardiovascular risk factors: obesity, smoking

### Mortality Data: 10 Main Causes of Death in 2000

- |   |     |
|---|-----|
| • Cardiovascular disease including hypertension | 18% |
| • Cerebro-vascular accidents                    | 11% |
| • Accidents and trauma                          | 10% |
| • Malign neoplasm                               | 8%  |
| • Gastro intestinal diseases                    | 7%  |
| • Diseases originating in the perinatal period  | 5%  |
| • Diabetes mellitus                             | 4%  |
| • Acute respiratory infections                  | 3%  |
| • Diseases of the urinary tract                 | 3%  |
| • HIV/AIDS                                      | 3%  |

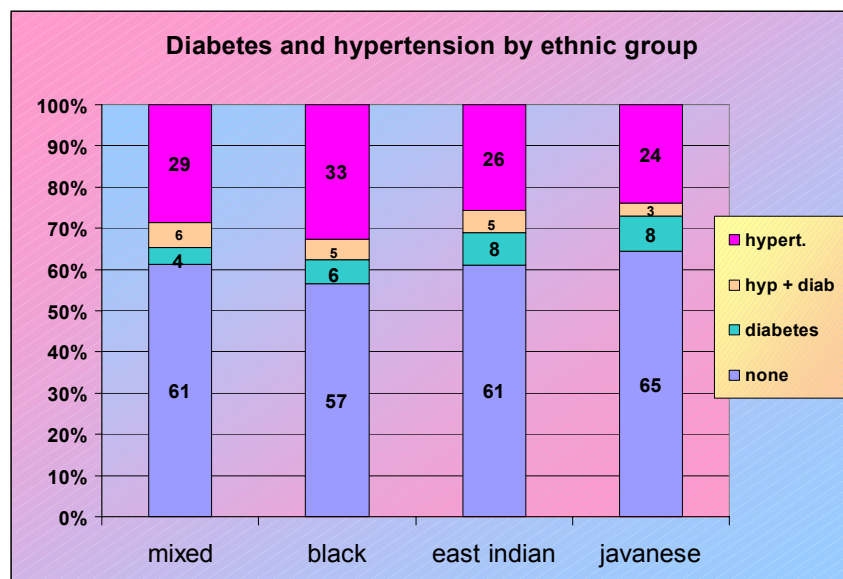
### Morbidity Data 2

*Primary Health Care:* Source: Regional Health Services 2000 year report

*Diabetes Care:* 15,750 consultations (> half are women) 10% of total number of consultations

*Hypertension Care:* 23,352 consultations 15% of total number of consultations

## Preliminary Results of Cardiovascular Risk Factors Survey in Different Ethnic Groups



### Highlights of the Survey

- Hypertension most prevalent in Blacks.
- No statistical significant difference in the combination of hypertension and diabetes between the ethnic groups.
- Cholesterol levels significantly higher in South East Asians (Javanese, and East Indians)
- The combination HT + DM + Chol significantly more prevalent in South East Asians.

### Diabetes Control and Prevention Activities in Suriname

#### *Current Partner Organizations*

- Bureau of Public Health: strategies, policies and alliances, data management (surveillance, surveys).
- PAHO: technical and financial support and networking.
- Foundation for Diabetes Education: patient support.
- Movement for Healthy Suriname: research on the risk factors
- Rotary: health awareness

#### *Priority areas for Diabetes Care, Control and Prevention Program*

- Improvement and expansion of data collection, and analysis on risk factors, morbidity, mortality, and care indicators.
- Capacity-building: protocol development, workshops and training of health workers
- Improvement of diabetes care at primary health-care level.
- Alliances: medical and para-medical sector, NGO's, media, community organizations.

## Intervention to Improve Quality of Care

Dr. Luigi Meneghini, Diabetes Research Institute

**Interventions to Improve  
Quality of Care**

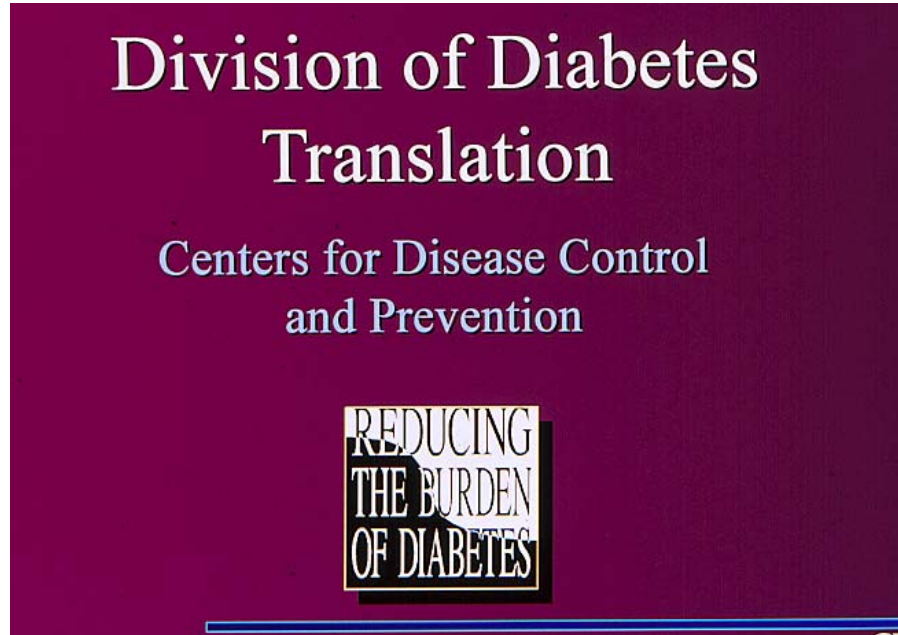


**Luigi Meneghini, M.D., M.B.A.**  
**University of Miami School of Medicine**

As the first presentation given during the second day of the Workshop, Dr. Meneghini's presentation focused on the burden of diabetes. He reviewed the importance of metabolic goals to reduce the burden and the importance of improving diabetes control. He also described a model for intensive insulin therapy at the primary-care level.

## Quality of Diabetes Care Improvement

Dr. Michael Engelgau, Center for Disease Control (CDC)



Dr. Engelgau's presentation focused on the quality of diabetes care around the world.

### **US National Diabetes Quality Improvement Alliance & Its Accountability Indicators**

#### *Accountability Indicators*

- %  $\geq 1$  HbA1c test/year
- % patients with HbA1c  $>9.0\%$
- % annual eye exam (low, high risk)
- % annual foot exam
- % nephropathy assessment (microalb) in last year
- % lipid profile in last year
- % LDL  $<130$  mg/dl
- % BP  $<140/90$
- % smoking status ascertained each year

## Nutrition Interventions to Improve Quality of Care

Dr. Godfrey Xuereb



### Nutrition Interventions to Improve Quality of Care

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Godfrey C. Xuereb  
*Public Health Nutritionist*

Caribbean Food & Nutrition Institute

*Specialised Centre of the*



*Pan American Health Organisation / World Health Organisation*



Nutrition is accepted as a cornerstone of diabetes management and MNT is a medically necessary and cost-effective way of managing diabetes.

#### **Medical Nutrition-Therapy Principals**

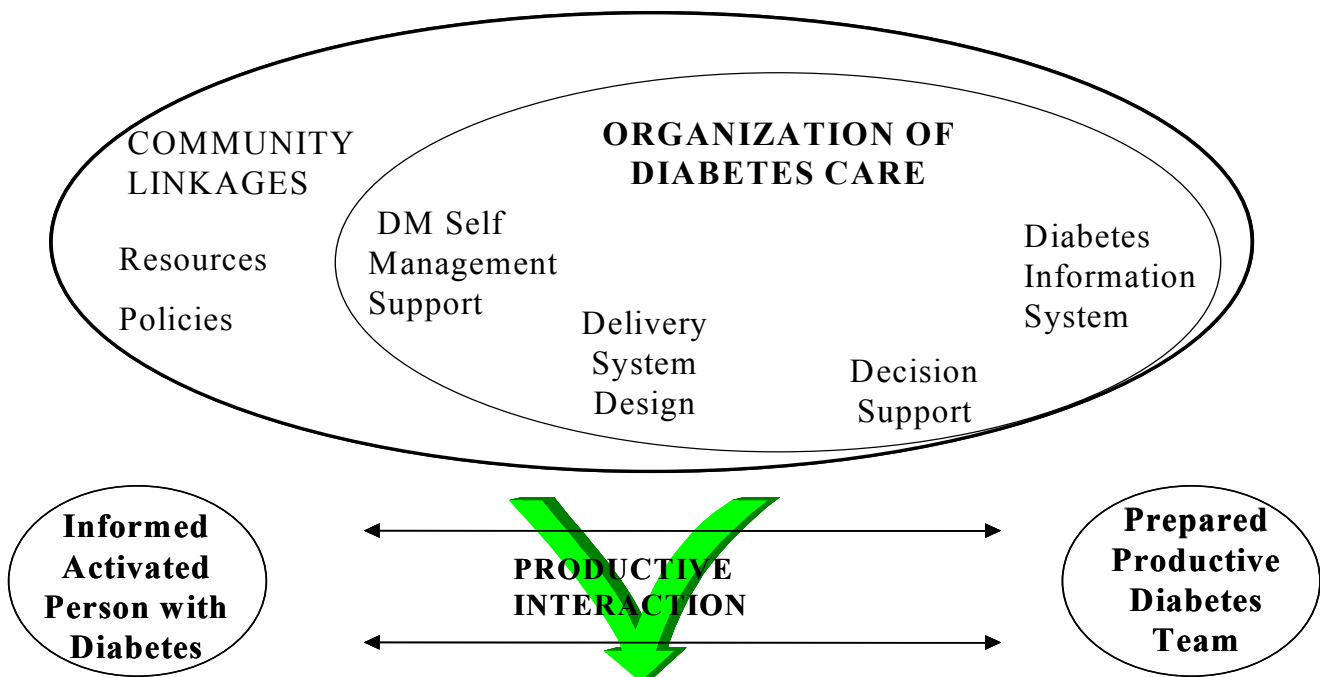
- Maintenance of near-normal blood glucose levels
- Achievement of optimum lipid levels
- Maintenance of attainment of reasonable weight

## Focus Groups: Health-Technology Assessment of Diabetes Care in the Caribbean

**Dr. Rosario Talavera**

The third day of the Workshop began with Dr. Talavera's presentation on the chronic-care model, which calls attention to the need for systems change if patient outcomes are to be improved. These system changes are ultimately intended to bring about the development of informed, activated patients and prepared, proactive practice teams. Productive interactions between activated patients and prepared practice teams increase the likelihood of optimal functional and clinical outcomes (see Figure).

### THE DIABETES CARE MODEL



### BETTER HEALTH FOR PEOPLE WITH DIABETES

In this model, there are six focal areas for improving chronic care:

- 1. Health System: Organization of Care:** Health-care systems can create an environment in which organized efforts to improve health care for chronic illness take hold and flourish. Critical elements include a coherent approach to system improvement, leadership committed to and responsible for improving clinical outcomes, and incentives to providers and patients to improve care and adhere to guidelines (including non-financial incentives such as recognition and status).
- 2. Community: Resources and Policies:** The performance of health care systems can be improved if linkages are made to community resources relevant to effective diabetes care. These linkages may be made through resource directories, referral paths and joint programs. Community resources that support care for diabetes, including both governmental programs and programs of community-based voluntary organizations, are needed to augment health care services, but health care organizations are often poorly organized to make use of existing community programs or to stimulate their development.
- 3a. Self-Management Support:** Effective self-management support helps patients and families cope with the challenges of living with and caring for chronic conditions in ways that minimize complications, symptoms and disability. Successful self-management programs rely on a collaborative process between patients and providers to define problems, set priorities, establish goals, create treatment plans and solve problems along the way. The availability of evidence-based educational skills training and psychosocial support interventions are key components of a delivery systems self-management support structure.
- 3b. Decision Support:** Effective chronic illness care programs operate in accord with explicit guidelines or protocols, preferably evidence-based guidelines, whose implementation is embedded in routine practice supported by reminders, effective provider education, and appropriate input and collaborative support from relevant medical specialties.
- 3c. Delivery-System Design:** Effective chronic illness care requires more than simply adding additional interventions to an existing system focused on acute care. Rather, it necessitates basic changes in delivery system design. Effective diabetes care often requires clear delegation of roles and responsibilities from the physician to other professionals who are full part of the caring team (e.g. nurses, health educators) and who have the knowledge and time to carry out the range of tasks required to manage complex chronic conditions. Effective diabetes care also implies the use of planned visits, continuity of care and regular follow-up.
- 3d. Clinical Information Systems:** Timely information about individual patients, and populations of patients, with diabetes is a critical feature of effective programs, especially those that employ population-based approaches. The first step is to establish a disease registry for individual practices, which includes information about the performance of important elements of care. Health care teams that have access to a registry can call in patients with specific needs and deliver planned care, can receive feedback on their performance, and can implement reminder systems. The model has been successfully used to improve care of chronic conditions such as diabetes, asthma, congestive heart failure, depression and geriatrics in more than 300 health care organizations in USA.

## Focus Groups: Results

### Priority Selection

During the exercise, country officials were able to choose the priorities for future development. Although community linkages ranked high in most countries' assessments, three countries (Aruba, Jamaica and Trinidad & Tobago) out of seven countries selected it as a priority. Self-management support in terms of educational programs, food care and nutrition management was selected by Barbados and St. Lucia. While Bahamas selected decision support as the focus of future projects.

Country	Primary Activity
Aruba	Community Linkages
Bahamas	Decision Support
Barbados	Self-Management Support
Jamaica	Community Linkages
Santa Lucia	Self-Management Support
Suriname	Delivery System
Trinidad and Tobago	Community Linkages

When ranking activities, a viable information system was selected as the top priority. Participants felt that a clinical information system was needed to support other components included in the model. In a previous session the QUALIDIAB was shown as a practical system to monitor health care for people with diabetes. So implementation of a monitoring system can be considered under way.

The organization of health care is the product of legislation and policies. In most countries the health system are not designed for chronic care. This means that most patients are seen when they feel ill. This delivery system is not adequate for people with diabetes. In some countries evidence based guideline support the delivery of continuous care for people with diabetes. This means that planned visits and regular follow-up are not happening.

Clinical guidelines are an important component of diabetes care. However, the existences of clinical guidelines in a given country do not guarantee their use. Clinical guideline should be based in evidences, be adequately implemented and monitored.

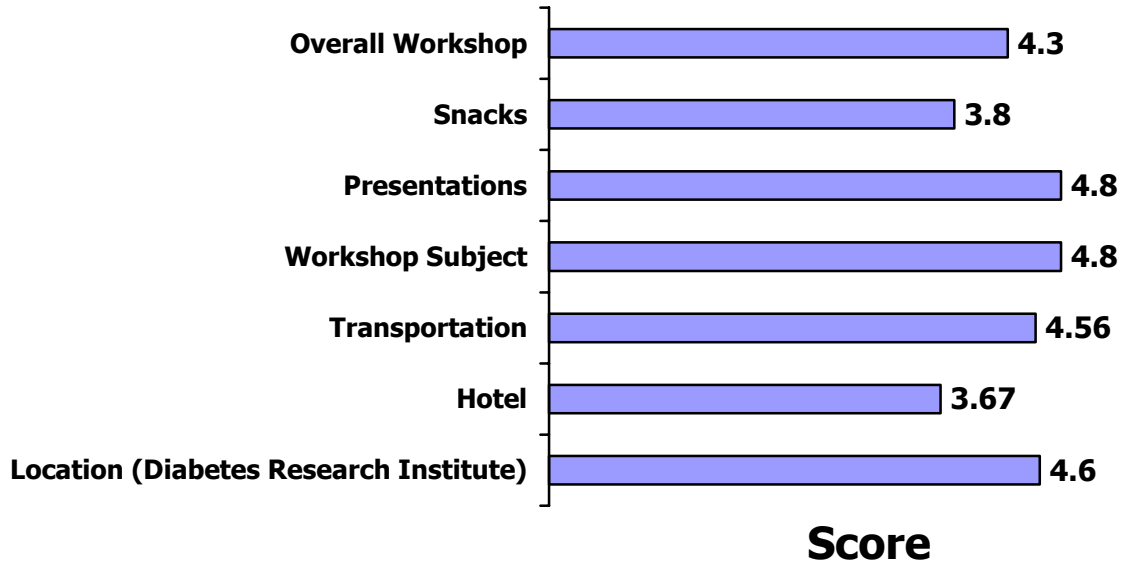
Self-management diabetes education programs should be structured following recognized standards. The Declaration of the Americas on Diabetes has defined standards and norms to implement education programs. The International Diabetes Federation published recently the diabetes education curricula that can be followed to identify themes to be included in a regular educational program. One essential component of a regular diabetes education program is the evaluation. Only few diabetes education programs in the Americas have been adequately evaluated. There are questionnaires to evaluate individually the effectiveness of educational programs.



<b>Activities</b>	<b>Ranking</b>
Information System	10
Delivery System	9
Decision Support	6
Self-Management	6
Health Organization	1
Community Linkages	0

**Proposed Pilot Sites for Phase II:** Bahamas, Jamaica, Santa Lucia

## Participants' Evaluation



Overall, participants considered the workshop to be useful. Despite limitations of the final exercise participants commented in the adequacy of the ACIC questionnaire for the identification of priorities within countries. This was the opinion of the Suriname representative that was the only one that conducted the exercise at the national level as recommended by the document. Technical aspects such as workshop subject, the presentations and the location (Diabetes Research Institute) were among the top rated aspects of the workshop.

## **Annex 1: Health-Technology Assessment Exercise**

### **Exercise Instructions**

Taking into account the previous outline of the components of the Chronic Care Model (adapted to Diabetes) please complete the attached questionnaire. You can have it completed by a group of people working in health services or at public health settings; In this case scores for each items should be agreed upon by the group. The questionnaire can also be completed by individuals by themselves; in this case an average of score should be produced for each item. Officials from each country should bring to the workshop the final scores to be discussed. If you find this interesting, please prepare a presentation with the information gathered during this exercise in your country. You can illustrate and support your presentation with data and references from published or unpublished documents on the subject.

## HTA of Diabetes Health Promotion and Prevention

## Assessment of Chronic Illness Care, Version III

**Part 1: Organization of the Health-Care Delivery System:** Chronic illness management programs can be more effective if the overall system (organization) in which care is provided is oriented and led in a manner that allows for a focus on chronic illness care.

Components	Level D	Level C	Level B	Level A
<b>Overall Organizational Leadership in Diabetes Care</b>	...does not exist or there is a little interest	...is reflected in vision statements and business plans, but no resources are specifically earmarked to execute the work.	...is reflected by senior leadership and specific dedicated resources (dollars and personnel).	...is part of the system's long term planning strategy, receive necessary resources, and specific people are held accountable.
<b>Score</b>	0 1 2	3 4 5	6 7 8	9 10 11
<b>Organizational Goals for Diabetes Care</b>	...do not exist	...exist but are not actively reviewed.	...are measurable and reviewed.	...are measurable, reviewed routinely, and incorporated into plans for improvement.
<b>Score</b>	0 1 2	3 4 5	6 7 8	9 10 11
<b>Improvement Strategy for Diabetes Care</b>	...is ad hoc and not organized or supported consistently.	...utilizes ad hoc approaches for targeted problems as they emerge.	...utilizes a proven improvement strategy for targeted problems.	...includes a proven improvement strategy and uses it proactively in meeting organizational goals.
<b>Score</b>	0 1 2	3 4 5	6 7 8	9 10 11
<b>Incentives and Regulations for Diabetes Care</b>	...are not used to influence clinical performance goals.	...are used to influence utilization and costs of chronic illness care.	...are used to support patient care goals.	...are used to motivate and empower providers to support patient care goals.
<b>Score</b>	0 1 2	3 4 5	6 7 8	9 10 11
<b>Senior Leaders</b>	...discourage enrollment of the chronically ill.	...do not make improvements to chronic illness care a priority.	...encourage improvement efforts in chronic care.	...visibly participate in improvement efforts in chronic care.
<b>Score</b>	0 1 2	3 4 5	6 7 8	9 10 11
<b>Benefits</b>	...discourage patient self-management or system changes.	...neither encourages nor discourages patient self-management or system changes.	...encourage patient self-management or system changes.	...are specifically designed to promote better chronic illness care.
<b>Score</b>	0 1 2	3 4 5	6 7 8	9 10 11

**Total Health Care Organization Score** \_\_\_\_\_

**Average Score (Health Care Organization Score/6)** \_\_\_\_\_

**Part 2: Community Linkages:** Linkages between the health delivery system (or provider practice) and community resources play important roles in the management of chronic illness.

Components	Level D	Level C	Level B	Level A
<b>Linking Patients to Outside Resources</b>	...is not done systematically	...is limited to a list of identified community resources in an accessible format.	...is accomplished through a designated staff person or resource responsible for ensuring providers and patients make maximum use of community resources.	...is accomplished through active coordination between the health system, community service agencies, and patients.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Partnerships with Community Organizations such as diabetes association, etc.</b>	...do not exist.	...are being considered but have not yet been implemented.	...are formed to develop supportive programs and policies.	...are actively sought to develop formal supportive programs and policies across the entire system.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Regional Health Plans</b>	...do not coordinate diabetes guidelines, measures, or care resources at the practice level.	...would consider some degree of coordination of guidelines, measures, or care resources at the practice level but have not yet implemented changes.	...currently coordinate guidelines, measures, or care resources in one or two chronic illness areas.	...currently coordinate chronic illness guidelines, measures and resources at the practice level for most chronic illnesses.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11

**Total Community Linkages Score** \_\_\_\_\_

**Average Score (Community Linkages Score/3)** \_\_\_\_\_

**Part 3: Practice Level:** Several components that manifest themselves at the level of the individual provider practice (e.g., individual clinic) have been shown to improve chronic illness care. These characteristics fall into general areas of self-management support, and delivery system design issues that directly affect the practice, decision support, and clinical information systems.

**Part 3a: Self-Management Support:** Effective self-management support can help patients and families cope with the challenges of living with and treating chronic illness and reduce complications and symptoms.

Components	Level D	Level C	Level B	Level A
<b>Assessment and Documentation of Diabetes Self-Management Needs and Activities</b>	...are not done.	...are expected.	...are completed in a standardized manner.	...are regularly assessed and recorded in standardized form linked to a treatment plan available to practice and patients.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Diabetes Self-Management Support</b>	...is limited to the distribution of information (pamphlets, booklets).	...is available by referral to self-management classes or educators.	...is provided by trained clinical educators who are designated to do self-management support, affiliated with each practice, and see patients on referral.	...is provided by clinical educators affiliated with each practice, trained in patient empowerment and problem-solving methodologies, and see most patients with chronic illness.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Addressing Concerns of Patients and Families</b>	...is not consistently done.	...is provided for specific patient and families through referral.	...is encouraged and peer support, groups, and mentoring programs are available.	...is an integral part of care and includes systematic assessment and routine involvement in peer support, groups or mentoring programs.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Effective Behavior Change Interventions and Peer Support</b>	...are not available.	...are limited to the distribution of pamphlets, booklets, or other written information.	...are available only by referral to specialized centers staffed by trained personnel.	...are readily available and an integral part of routine care.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11

**Total Self-Management Score** \_\_\_\_\_

**Average Score (Self-Management Score/4)** \_\_\_\_\_

**Part 3b: Decision Support:** Effective chronic illness management programs assure that providers have access to evidence-based information necessary to care for patients-decision support. This includes evidence-based practice guidelines or protocols, specialty consultation, provider education, and activating patients to make provider teams aware of effective therapies..

Components	Level D	Level C	Level B	Level A
<b>Evidence-Based Diabetes Guidelines</b>	...are not available.	...are available but are not integrated into care delivery.	...are available and supported by provider education.	...are available, supported by provider education, and integrated into care through reminders and other proven provider behavior change methods.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Involvement of Specialists in Improving Diabetes Care</b>	...is primarily through traditional referral.	...is achieved through specialist leadership to enhance the capacity of the overall system to routinely implement guidelines.	...includes specialist leadership and designated specialists who provide primary care team training.	...includes specialist leadership and specialist involvement in improving the care of primary care patients.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Provider Education for Diabetes Care</b>	...is provided sporadically.	...is provided systematically through traditional methods.	...is provided using optimal methods (e.g. academic detailing).	...includes training all practice teams in chronic illness care methods such as population-based management, and self-management support.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Informing Diabetic Patients About Guidelines</b>	...is not done.	...happens on request or through system publications.	...is done through specific patient education materials for each guideline.	...includes specific materials developed for patients, which describe their role in achieving guideline adherence.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11

**Total Decision Support Score** \_\_\_\_\_

**Average Score (Decision Support Score/4)** \_\_\_\_\_

**Part 3c: Delivery System Design.** Evidence suggests that effective chronic illness management involves more than simply adding additional interventions to a current system focused on acute care. It may necessitate changes to the organization of practice that impact provision of care.

Components	Level D	Level C	Level B	Level A
<b>Practice Team Functioning</b>	...is not addressed.	...is addressed by assuring the availability of individuals with appropriate training in key elements of chronic illness care.	...is assured by regular team meetings to address guidelines, roles and accountability, and problems in chronic illness care.	...is assured by teams who meet regularly and have clearly defined roles including patient self-management education, proactive follow-up, and resource coordination and other skills in chronic illness care.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Practice Team Leadership</b>	...is not recognized locally or by the system.	...is assumed by the organization to reside in specific organizational roles.	...is assured by the appointment of a team leader but the role in chronic illness is not defined.	...is guaranteed by the appointment of a team leader who assures that roles and responsibilities for chronic illness care are clearly defined.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Appointment System</b>	...can be used to schedule acute care visits, follow-up and preventive visits.	...assures scheduled follow-up with chronically ill patients.	...are flexible and can accommodate innovations such as customized visit length or group visits.	...includes organization of care that facilitates the patient seeing multiple providers in a single visit.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Follow-up</b>	...is scheduled by patients or providers in an ad hoc fashion.	...is scheduled by the practice in accordance with guidelines.	...is assured by the practice team by monitoring patient utilization.	...is customized to patient needs, varies in intensity and methodology (phone, in person, email) and assures guideline follow-up.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Planned Visits for Diabetes Care</b>	...are not used.	...are occasionally used for complicated patients.	...is an option for interested patients.	...are used for all patients and include regular assessment, preventive interventions and attention to self-management support.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Continuity of Diabetes Care</b>	...is not a priority.	...depends on written communication between primary care providers and specialists, case managers, or disease management companies.	...between primary care providers and specialists and other relevant providers is a priority but not implemented systematically.	...is a high priority and all chronic disease interventions include active coordination between primary care, specialists and other relevant groups.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11

**Total Delivery System Design Score** \_\_\_\_\_

**Average Score (Delivery System Design Score/6)** \_\_\_\_\_



**Part 3d: Clinical Information Systems:** Timely, useful information about individual patients and populations of patients with chronic conditions is a critical feature of effective programs, especially those that use population-based approaches.

Components	Level D	Level C	Level B	Level A
<b>Registry (list of patients with diabetes)</b>	...is not available.	...includes name, diagnosis, contact information, and date of last contact either on paper or in a computer database.	...allows queries to sort sub-populations by clinical priorities.	...is tied to guidelines, which provide prompts and reminders about needed services.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Reminders to Providers</b>	...are not available.	...include general notification of the existence of a chronic illness, but does not describe needed services at time of encounter.	...includes indications of needed service for populations of patients through periodic reporting.	...includes specific information for the team about guideline adherence at the time of individual patient encounters.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Feedback</b>	...is not available or is non-specific to the team.	...is provided at infrequent intervals and is delivered impersonally.	...occurs at frequent enough intervals to monitor performance and is specific to the team's population.	...is timely, specific to the team, routine and personally delivered by a respected opinion leader to improve team performance.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Information about Relevant Subgroups of Patients Needing Services</b>	...is not available.	...can only be obtained with special efforts or additional programming.	...can be obtained upon request but is not routinely available.	...is provided routinely to providers to help them deliver planned care.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11
<b>Patient Treatment Plans</b>	...are not expected.	...are achieved through a standardized approach.	...are established collaboratively and include self-management as well as clinical goals.	...are established collaborative and include self-management as well as clinical management. Follow-up occurs and guides care at every point of service.
<b>Score</b>	0      1      2	3      4      5	6      7      8	9      10      11

**Total Clinical Information Systems Score** \_\_\_\_\_ **Average Score (Clinical Information Systems Score/5)** \_\_\_\_\_