Guiding and supporting national quality improvement initiatives for diabetes in less well served parts of the world: a proof of concept project in the Caribbean

Caribbean: Antigua and Barbuda, Anguilla, Barbados, Belize, Grenada, Guyana, Jamaica, St. Lucia, Suriname and Trinidad and Tobago

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PROJECT PERIOD: July 2008- January 2011

PROJECT SUMMARY:

While acknowledging the scarcity of resources for diabetes care in less developed parts of the world there are interventions for the prevention of diabetes related complications which are both highly cost effective and feasible in such settings, including moderate blood glucose and blood pressure control and foot care. There is much evidence to show, however, that such interventions are at best poorly implemented. The overall goal of this initiative is to provide guidance and support to Ministries of Health and health care providers in less well served parts of the world in the design, implementation and evaluation of quality improvement initiatives for diabetes care.

The specific goal of the project described here is to achieve real and sustained improvements in diabetes care in 10 Caribbean countries. Three key personnel, including a health care planner and two providers of diabetes care, from each of these countries will be supported by a faculty of mentors (experts in different aspects of diabetes care and quality improvement initiatives) to design an intervention for improving diabetes care in their country. This team will train local clinics and coordinate the implementation and evaluation of interventions, all with continuing review and support from the faculty of mentors.

Resources are sought to support the process from intervention design to evaluation. Resources are not sought for the costs of the interventions themselves, which will be met from the health budgets of the countries concerned. Outcomes of this project will be quality of diabetes care improvement initiatives in 10 Caribbean countries and the development of materials and an approach to initiating and supporting quality improvement that will be used in other parts of the world.

BRIEF BACKGROUND AND JUSTIFICATION:

There is very good evidence that through the provision of good diabetes care and the empowerment of people with diabetes a substantial proportion of diabetes related complications are preventable. Many of the interventions to improve outcomes are highly cost effective. The widely known publication *Disease Control Priorities in Developing Countries (2nd Edition)* promotes moderate blood glucose control, moderate blood pressure control and good foot care as both feasible and potentially cost saving within low and middle income countries *(1)*. Interventions aimed at improved blood glucose control, blood pressure control and foot care can reduce complications of diabetes and the associated medical costs.

There is evidence from many settings, including the Caribbean *(2)*, that there remains substantial room for improvement in diabetes care. "Collaborative quality improvement" provides a tried and tested approach that involves the health care providers in developing and implementing changes to improve the quality of health care (3). For example, this model was applied and shown to result in improved diabetes control in an innovative project in primary health care in Veracruz, Mexico *(4)*. The project proposed here builds upon the commitment of the Caribbean countries who were part of the PAHO led Institutional Response to Diabetes in the Caribbean (IRDC) *(5)* which consisted of a series of three workshops and reviewed issues around quality of diabetes care and approaches to its improvement, and Belize, which is part of the PAHO led Central American Diabetes Initiative (CAMDI). This proposal is designed to provide practical guidance and ongoing support to the design, implementation and evaluation of quality improvement measures.

THE GOAL:

The goal of this project is to improve the quality of life of people with diabetes.

OBJECTIVE:

The objective of this project is:

- To achieve real and sustained improvements in the quality of diabetes care and outcomes in 10 Caribbean countries.

References

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(2) Pan American Health Organization. Final Report: Institutional Response to Diabetes and its Complications (IRDC): An Evaluation of the Quality of Diabetes Care. Available athttp://www.paho.org/English/AD/DPC/NC/dia-irdc-final-rpt.pdf Accessed on 4 April 2007.

(3) Epping-Jordan J E, Pruitt S D, Bengoa R, Wagner E H. Improving the quality of health care for chronic conditions. *Qual. Saf. Health Care* 2004;13;299-305.

(4) Pan American Health Organization. Veracruz Initiative for Diabetes Awareness (VIDA): Final Report. In press, 2007.

(5). Pan American Health Organization. III PAHO-DOTA Workshop on Quality of Diabetes Care. Final Report. Available at http://www.paho.org/English/AD/DPC/NC/dia-irdc-iiiworkshop.pdf Accessed on 4 April 2007.

PROJECT DESCRIPTION:

The participants:

Countries: Each country will identify the intervention areas.

Technical teams: There will be two technical teams- the national technical committee which will conduct the intervention. The key criterion is that the team will consist of people with sufficient authority to implement changes in diabetes care. The team will consist of a senior member of the Ministry of Health and two clinicians (doctors/nurses) with a strong interest in diabetes. The local teams will conduct the intervention in each participating center; the members of the local teams will be the Director/Coordinator of the health center, the health professionals with experience in diabetes, and people with diabetes.

People with diabetes: This is the target population.

Faculty of experts: experts will be selected from academic, NGOs and international institutions including WHO, the WHO Collaborating Centers (such as at the University of Newcastle, the Center for Continuing Health Professional Education in Diabetes at the University of Indiana Division of Continuing Medical Education and the Centers for Disease Control and Prevention (CDC) Division of Diabetes Translation), the Chronic Disease Research Center in Barbados, the University of the West Indies Mona Campus in Jamaica, the Caribbean Food and Nutrition Institute (CFNI), the Caribbean Epidemiology Centre (CAREC), PAHO/WHO WHO Collaborating, , and the University of Miami. The role of the faculty of experts will be to provide detailed guidance and support to each country in the design, implementation and evaluation of initiatives to improve diabetes care.

The suggested skills required for faculty are the following:

Knowledge and skills area	Suggested Individuals (institution)
Effectiveness and cost effectiveness of interventions for diabetes relevant to low and middle income countries	PAHO U of Newcastle
Collaborative improvement methodology (including evaluation of quality improvement initiatives)	PAHO CFNI
Diabetes education and lifestyle change	UWI U of Indiana Nutrition- CFNI
Clinical Care	Anselm Hennis (CDRC) U of Miami
Blood glucose control	CDC
Foot care	Owen Bernard
Blood pressure control	Anselm Hennis (CDRC)
Screening for and management of retinopathy and nephropathy	Anselm Hennis (CDRC) CDC
Clinical Information System	CAREC
Monitoring of the intervention	CDC
Public Health	Anselm Hennis (CDRC) CDC
Advocacy, community linkages	Diabetes association, civil society groups

ACTIVITIES:

I. Baseline assessment

Baseline national assessment of diabetes care

An assessment of national diabetes care will be undertaken within each country using questionnaires and checklists devised by the World Health Organization (National Capacity Survey for Chronic Diseases, focused on diabetes). These will provide an overview of key aspects of the health care system with respect to diabetes, using the Innovative Care for Chronic Conditions Framework devised by WHO. The person in charge of the national committee is responsible for carrying out this baseline assessment, with the technical support of PAHO.

Considering that WDF funded a project (WDF03-045) run by the Caribbean Food and Nutrition Institute to implement a Caribbean protocol for nutritional management of diabetes and hypertension, some questions will be incorporated into the baseline assessment to evaluate implementation of this protocol in the countries that participated in that project (Belize, Jamaica, Suriname, St. Vincent and the Grenadines). This will provide a link between the two projects and also provide an opportunity to identify any areas that need strengthening. CFNI, acting as a partner in the proposed project, can provide technical cooperation and expertise to strengthen the implementation of the nutrition protocol where needed. This supports the overall objective of the proposed project- to achieve real and sustained improvements in diabetes care in 10 Caribbean countries.

II. Training

Initial International Training workshop Each country will send three members of the national committee to a workshop where they will receive training and detailed instruction on the implementation of Collaborative Quality Improvement. This project will cover the expense for these international trainings which will cover:

a. Chronic care model
b. Breakthrough series methodology
c. Assessment of Chronic Illness Care (ACIC) tool
d. Panamerican Sentinel Surveillance tool used to determine the quality of care in the clinical setting, including a chart review, interviews, and cost analysis (Currently under review).

The workshop will also include a review of the evidence of effectiveness for diabetes care interventions. The experience of the VIDA project will be presented, as well as other experiences that demonstrate effective and cost-effective interventions.
Participants will also be introduced to the WHO-IDF website Diabetes Action Online, which aims to provide guidance and supporting materials to health care planners for the improvement of diabetes care. The initial workshop will be attended by 30 country participants (3 from each country) and Faculty members.

III. Baseline Assessment of Chronic Illness Care

The Assessment of Chronic Illness Care will be carried out for the national system of the countries and each of the participating health centers. The objective is to identify the weak areas of the chronic care model; it is these areas where the clinics will focus their interventions.

IV. Coordination and Preparation

The objectives of the coordination and preparation phase are to:

- Establish the national strategy to implement intervention

- Identify the local committees that will coordinate the intervention
- Prepare the agenda of the first learning session

V. Intervention

The intervention will take place in the countries; the process followed within each of the countries is as follows:

First Learning Session

During the first learning session, the national team will train the local teams in the collaborative methodology, including:

e. Chronic care model
f. Breakthrough series methodology
g. Assessment of Chronic Illness Care (ACIC) tool
h. Panamerican VICEN (tool used to determine the quality of care in the clinical setting, including a chart review, interviews, and cost analysis, currently under review)

During the first learning session, local teams will identify the area where they will focus the improvement activity. The participants will be assisted by an expert faculty to identify specific areas for quality improvement within their country. During this first session, teams will develop plans to implement and evaluate the chosen intervention to improve quality. Each intervention will be tailored to the needs and available resources of the local situation, and thus it is not possible to specify what each will be prior to this process. However, likely possibilities include the implementation of treatment guidelines, the development of patient education sessions, or improving access to particular clinical services, such as high quality foot care. A total of $5,000/ year will be provided to countries to support their respective implementation activities.

It is expected that at the end of the first session, the teams will have prepared their improvement plan to apply in the clinical setting, based on the collaborative methodology. The objectives of the first session are:

1. To increase the knowledge about the chronic care model with particular emphasis on the areas of: Clinical information system, decision support, delivery system design, and self management.
2. To describe the specific changes in the clinical information system, decision support, delivery system design, and self management that have already been tried in other experiences.
3. Discuss the Improvement model, including the change and the need for the PSDA cycles for each one of those.
4. Support the teams in the application of the model and the PDSA cycles, especially the first step (Plan-Do) for each one of the changes that is planned.
5. Describe the methodology of the report, the forms that will be used, and the expectations of the participants in relation to the reporting system.

First Action Period

The first action period is when the teams will follow the Quality Improvement Cycles of Plan-Do-Study-Act (PDSA) to implement changes, share information with each other and have the opportunity to contact the experts to clarify any concerns and receive technical assistance.

The local coordinator will start using the tools developed during the national training related to monitoring and evaluation of the intervention. The leader of the collaborative will begin to prepare the report which will be shared with other members of the local and national team. The

report will include the goals, performance measures, summaries of the PSDA cycles that have been carried out, monitoring forms and the self evaluation of achievements.

Together with the faculty members, the teams will prepare the second learning session.

Second Learning Session
During the second learning session, the teams will report on the activities, accomplishments, and experience during the first period. Importantly, this session is designed to deepen the knowledge of the teams in the components of the chronic care model, in particular the clinical information system, delivery system design, decision support, and self-management. This is an opportunity to disseminate results from projects and share best practices.

During this session, teams will identify more actions that can be tried and applied for each component of the model. The teams will learn how to use the cycles to speed up their improvement. The system of reporting will be reviewed in order to strengthen the process. The teams will prepare plans to test new changes, trying to incorporate more elements from the chronic care model.

Teams will also receive training from the faculty in special topics, such as foot care, patient education, etc.

The objectives of the second learning session are:
1. Promote the self-evaluation of the implementation of the chronic care model
2. Describe specific changes in the clinical information system, decision support, delivery system design, and self management support that have already been successfully implemented in the services.
3. Introduce the community component from the model.
4. Incorporate the presentations of the groups and collaboration through separate sessions
5. Describe ways to speed up the implementation of changes and improvement.
6. Introduce the concept of the dissemination of information.
7. Support the teams in the preparation of plans to add more changes from the model.
8. Strengthen the methodology of reporting and problem solving, in particular with each one of the teams.

Second Action Period
Similar to the first action period, teams will implement identified activities and hold regular meetings. Teams will identify the best quality improvement activities and develop those further. Teams will maintain contact with the experts and other team members.

Third Learning Session

The objectives of the Third Learning Sessions are:
1. To promote the self-evaluation of the implementation of the chronic care model
2. To make presentations of the measuring of the improvement, and of the specific changes that contributed to the improvements
3. Introduce the component of the model, organization of the care services.
4. Incorporate collaboration as much as possible to the presentations during the plenary.
5. Describe strategies of sustainability and dissemination of the improvement activities; share best practices
6. Support the teams in the development of plans for the testing and implementation of the components of the chronic care model.

Third Action Period

During the third action period, the teams will focus their attention on the implementation of the improvements in the care system. The teams will continue measuring their success and they can prepare a tool to measure the process of dissemination of the innovations throughout the health system. They will continue in contact with the experts and leaders, but at this point the teams themselves will have a more critical role in this period.

Final Event
During the final event, results will be disseminated; the success stories/ best practices will be shared; and the achievements reached by all the teams will be celebrated. The event is an opportunity to promote the chronic care model, including to the media. This event will facilitate the publicizing of the methodology as a cost-effective method for improving quality of diabetes care. In addition, countries with the potential for implementing a similar project will be invited to learn during this final workshop, with the hopes of initiating a quality improvement intervention in the future.

Throughout this process teams will be supported by members of the faculty. Contact will be maintained through email, phone, Sharepoint technology and Elluminate conferencing technology, but most importantly through regular visits to the country of one or more faculty members. A faculty visit will take place at least four stages of the project, ideally: to review the detailed plans for the project prior to the start of implementation; at the start of the implementation phase; at least once during the implementation phase; and to review the evaluation.

VI. Development of the web based resource Diabetes Action Online (ongoing throughout project)
This WHO web-based resource was established as part of the WDF-funded project Diabetes Action Now. It provides guidance and resources to support the development of diabetes care in low and middle income countries. It was developed initially with support from 12 diabetes experts. This resource will be further developed as part of this project. In such a way the resource will become better focused on supporting quality improvement initiatives. It may include tools and instructions for different steps of the quality improvement process or reports, educational materials, lessons learned or best practices from other countries/project sites, other materials that will be useful for country teams, or an interactive feature where experts and teams can communicate and interact throughout the process. WHO Geneva will contribute to at least 50% of the costs of maintaining the website (including personnel costs) but small additional funds are sought here for specific developments related to this project.
http://www.who.int/diabetesactiononline/en/ The PAHO website will be use an alternate resource in the case that the WHO Diabetes Action Now is unable to provide the required internet support.

VII. Monitoring and Evaluation (ongoing throughout project)
Monitoring of local interventions will take place in an ongoing manner; a national report will be prepared each year. One member of the faculty will travel to the countries periodically to provide technical assistance. A workshop focusing on evaluation of the Regional experience will take place in year 3 with the same teams who attended the initial planning workshop.

VIII. Analysis and Reporting
At the end of the project, the experience will be analyzed and a final report will be created. Plans for sustaining the improvements and continuing the monitoring of quality will be made.

Institutional framework
This project is led by the non-communicable diseases unit at the Pan American Health Organization (PAHO). Through PAHO, the interest of Ministries of Health of the Caribbean countries has been obtained in an informal manner. Upon approval of the project, PAHO will

formally review requests from countries to participate and will choose ten of the countries which demonstrate potential for success, including strong country teams and strong commitment from the Ministries to participate in the project.
The plans for the project have been developed in close partnership with the International Diabetes Federation, particularly with the IDF consultative section on diabetes education. The WHO Collaborating Centre for Training, Evaluation and Research in Diabetes at Newcastle University, UK, have been closely involved in the development of this work and will provide support to the project.

Expertise and partnership will also be sought from several institutions. The WHO Collaborating Centre for Training, Evaluation and Research in Diabetes at Newcastle University, UK, have been closely involved in the development of this work and will be invited to provide expertise to the project. In the Caribbean CFNI (Caribbean Food and Nutrition Institute) and CAREC (Caribbean Epidemiology Centre) will be brought into the project to offer technical assistance in topics of nutrition and epidemiology, respectively. These are specialized centers of the Pan American Health Organization that work with all countries in the Caribbean. In addition, the Chronic Disease Research Center in Barbados and the University of the West Indies Mona Campus in Jamaica will be brought into the project to offer technical assistance on specialized aspects of diabetes.
In addition, the University of Indiana Division of Continuing Medical Education, the University of Miami and the CDC division of diabetes disease translation will provide support to the project.

DESIGN AND TIME SCHEDULE:

This proposal is planned as a three year project.

Time schedule:

Activity	**Months**
Baseline assessment	1, 2, 3
Planning for international Training session	3, 4, 5
International Training Session	6
National assessment	6, 7
Coordination and preparation	8, 9, 10
First learning session	11
First period of action	12, 13, 14
Second learning session	15
Second action period	16, 17, 18
Third learning session	19
Third Action period	20, 21, 22
Final Event	23, 24, 25
International Event	27
Further analysis, reporting, publication	28-36

Resources
Thus the resources sought for this project are:

- Baseline Analysis National Capacity Survey (partial requested)
- International Workshop- Meeting room and equipment rental
- Travel and expenses for participants of the workshop (3 day workshop).

PAHO will support the cost of international activities related to the project
- Baseline Analysis (partial requested)
- Communications for the initial coordination
- In-country and on-site training and capacity building to support individual country projects
- Initiation of the intervention in each country. PAHO will provide $5,000/country/year for the implementation of activities/small changes that do not imply much cost
- Preparation of the learning Sessions and final event (4 per country)
- Final International Event (40 participants) PAHO will support the cost of participants to attend the meeting.
- International Workshop- Meeting room and equipment rental
- Analysis and reporting
- Website (partial request)
- Educational Materials, Guidelines Production, Manual Production

Resources that are not requested but will be incurred as part of this project include:

- The time of faculty of mentors in supporting the quality improvement initiatives (only travel and expenses will be covered)
- Preparation of the initial workshop, including preparation of materials
- Baseline Analysis National Capacity Survey (partial)
- Baseline Analysis (partial)
- Delivery of the quality improvement initiatives within each of the participating countries, production of educational or patient materials, blood testing of people with diabetes in participating clinics, time of personnel (in-kind contribution; estimated)
- Website (partial)
- Materials for initial course (materials provided by PAHO/WHO)

NATIONAL CONTEXT:

This proposal will take place in 10 English speaking Caribbean countries. The countries of the Caribbean face particular challenges in the delivery of diabetes care. Their small size often means that they lack the breadth of expertise needed for diabetes care, partly because people need to seek training in larger countries and do not always return. In addition, through a combination of genetic predisposition and unfavourable environmental factors they have particularly high levels of type 2 diabetes.

It is important to note that the Caribbean has the highest rates of diabetes in the Region of the Americas. PAHO is committed to providing technical assistance in the area of diabetes surveillance and management to countries of the Americas; taking into account the high rates of diabetes in the Caribbean, PAHO prioritizes this region in its delivery of technical assistance in diabetes.
Recent studies have shown the high diabetes prevalence rates in the Caribbean. For example, rates are as high as 20% in certain populations of the Caribbean, such as the adult black population in Barbados (Hennis A, Wu SY, Nemesure B, Li X, Leske MC, Barbados Eye Study Group. Diabetes in a Caribbean population: epidemiological profile and implications. Int J Epidemiol. 2002; 31(1): 234-239. The overall diabetes prevalence in Jamaica has been reported at 13.4% (Wilks R, Rotimi C, Bennett F, McFarlane-Anderson N, Kaufman JS, Anderson SG, et al. Diabetes in the Caribbean: results of a population survey from Spanish Town, Jamaica.

Diabet Med. 1999; 16(10): 875-883). Projections for the Caribbean indicate that in the year 2010, prevalence of diabetes in the Caribbean will reach 25% of the adult population (Jones D. Diabetes education: training trainers in the Caribbean. *Diabetes Voice* 2004; 49(1): 14-16).

This proposal builds on previous initiatives that some or all of the participating countries have been, or are, involved in.

Previous work within the participating countries includes the Institutional Response to Diabetes Care (IRDC) project (undertaken under the joint PAHO-IDF Declaration of the Americas). This involved 10 Caribbean countries in a series of three workshops and sought to review issues around the quality of diabetes care and approaches to its improvement. Three countries (Bahamas, Jamaica, and St Lucia) participated in an evaluation of clinical diabetes care called QUALIDIAB in 2003, through which more than half of the surveyed patients in participating health centers were found to have poor metabolic control (fasting blood glucose $\geq$ 8 mm/l or HbA1c $\geq$ 8%). In addition, most people with diabetes were found without an annual foot exam or nutrition or exercise advice. The current project seeks to build on the experience of IRDC by improving quality of care and also assessing the quality using a new instrument, VICEN (Currently under review), which is based on QUALIDIAB. All ten participating countries will evaluate the quality of care using VICEN (Currently under review).

Belize participates in the Central American Diabetes Initiative (CAMDI) which is focused on improving the quality of life of people with diabetes by improving the quality of diabetes care among people attending participating clinics and improving the surveillance of diabetes and other chronic conditions. Belize will implement the intervention much like other CAMDI countries (El Salvador, Honduras, Guatemala, and Nicaragua) are currently doing with WDF funds.

The project will also benefit from the recent involvement of most of the countries in the WDF funded project to finalise the Caribbean protocol for the nutritional management of diabetes. Another WDF funded project trained diabetes educators within the Caribbean.

The project proposed here builds upon and goes much further than the previous initiatives several important respects. In particular, it will teach participants approaches to identifying specific areas for improving diabetes care, and designing, implementing and evaluating interventions. It will teach a quality improvement methodology to do so, and crucially it will provide ongoing support after the first workshop. Finally it will establish a regional network of mentors to support further quality improvement initiatives within the Caribbean.

The Pan American Health Organization has experience in implementing the chronic care model methodology with success in Veracruz, Mexico and WDF currently funds a similar project geared at improving the quality of diabetes care in four Central American countries: El Salvador, Guatemala, Honduras, and Nicaragua. The proposed project will call on the expertise of the PI, Dr. Alberto Barceló, who was trained in the quality improvement methodology by the Institute for Healthcare improvement, then implemented the methodology with success in Veracruz and is currently implementing it in Central America.

In addition to the national context, this project relies on a very important subregional context. The subregion of the English speaking Caribbean has several political integration bodies such as CARICOM and the Caribbean Commission on Health and Development which recognize chronic noncommunicable diseases as a priority area of action given that they are registered among the first causes of death in the Caribbean. Especially important to note is that in November 2007 in Trinidad & Tobago, CARICOM will hold its first ever Summit of Heads of State on the topic of Chronic Disease, which evidences the political commitment in the Caribbean to address the growing burden of chronic disease.

SUSTAINABILITY:
Local ownership will be assured in two ways. Firstly, the participating Ministries of Health are doing so in the clear knowledge that they will receive support for designing, implementing and evaluating quality improvement initiatives, but that they will fund the content on the initiatives themselves. Secondly, a key objective is to support the quality improvement initiatives from expertise within the Caribbean, through the establishment of a Regional Network of Mentors.

Long term sustainability will be assured both regionally and for the replication of this project in other regions. Within the Caribbean, the project will have established a regional network of mentors to support the quality improvement initiatives. Through PAHO, funds will be sought to support and further expand this network for at least 3 years after the end to the project proposed here. The network will continue to provide support to the countries taking part, but will also be available to support quality improvement initiatives in additional countries too.

Internationally, it is intended to learn from this project and apply this approach in other regions. WHO and IDF will be responsible developing and taking this approach elsewhere. In the case that WHO participates, which is pending the allocation of resources, the Director of the WHO Collaborating Center at Newcastle will coordinate the input of both WHO Geneva and the International Diabetes Federation to its overall design. during the development of the project. The U of Newcastle would maintain close contact with the diabetes group at WHO Geneva and IDF Headquarters in Brussels and assist with the dissemination of lessons learned from this project to the development of quality improvement initiatives in other regions of the world. The project website will also be used to disseminate information to participant countries.

The proposed project directly supports the Regional Strategy and Plan of Action on an Integrated Approach to the Prevention and Control of Chronic Diseases, which was approved by all PAHO Member Countries during the 47th Directing Council in September 2006. The Strategy and Plan of Action call on Member Countries to build capacity and foster the development and improvement of competencies in the health work force to appropriately and effectively manage chronic disease prevention and control. It also calls on the Pan American Health Organization, as the Secretariat, to provide technical assistance to Member Countries in the development, strengthening, implementation, and evaluation of their chronic disease programs

WDF funded a project (WDF05-126) to conduct basic and advanced training courses for diabetes in the Caribbean. We can identify people who participated in that project in the participating countries and invite their expertise in diabetes education to the proposed project. In addition, in some countries, perhaps the person who was trained in diabetes education through the WDF 05-126 would be a good candidate to receive further training in the quality improvement methodology. This is left to the discretion of the Ministry of Health in each country but it is a suggestion that we will support.

INTENDED IMPACT:
The project will begin by training 30 individuals from 10 countries, with combined total populations of roughly 5.5 million people, in quality improvement methodology, and in the development of quality improvement initiatives for diabetes appropriate to their countries. The initiative developed by each country will involve health care staff and patients.

The 3 individuals will return to their countries and carry out the quality improvement intervention in a minimum of 3-4 clinics and with a minimum of 5 health workers each. This will facilitate the introduction of the quality improvement components (education, monitoring, and improvement of clinical care) into the national health care system. In addition, trained health care professionals will be used as resources to train others in their countries.

Participation of the chronic disease national director will ensure incorporation of major activities to the national health system. The training received during the international workshop will create capacity at the national level for quality improvement in diabetes prevention and control. In addition, the national technical committee, comprised of local experts, NGOs, people with diabetes, etc. will advocate for this program to continue in the countries.

The project website will be a source of information for health care professionals to obtain training materials, manuals for quality improvement, educational materials, and to share experiences as they implement the intervention in their centers.

Subregional institutions such as CAREC and CFNI, well recognized specialized institutions, will participate in the project by offering technical assistance. These institutions have a unique place in the Caribbean because they work with all countries and can reach all countries in the Caribbean.

As indicated above it isn't possible to state in advance exactly what each initiative will be, but it is reasonable to assume that within each country there will be 10s or possibly more than 100 of health care workers trained and the care of 1000s of patients improved. Although it is up to the countries to identify their initiatives, the chronic care model is developed around several aspects of diabetes care: Community linkages, self management support, delivery system design, decision support, and clinical information system. Therefore, the initiatives seek to improve diabetes care around these aspects. Some potential and recommended activities for each area are:

1. Community Linkages: work with local or national diabetes associations
2. Self management support: Establish: patient goals, diabetes education program, support groups, psychological support, tools, materials.
3. Delivery system design: create or improve the referral system, training in specialized care, review the registries,
4. Decision support: development and dissemination of guidelines, monitoring outcomes in patients
5. Clinical information system: Implementation of QUALIDIAB as a quality improvement measurement instrument, identification of the population with diabetes, tracking laboratory results, track adherence to treatment

Based on PAHO's experience in Mexico (VIDA project) and in Central America (with WDF06-171) we can recommend that the principal activities to be carried out are: development and implementation of evidence based guidelines, delivery of a diabetes education program, creation of patient support groups, and implementation of a clinical monitoring system. However during the first phases of the quality improvement intervention, country teams will identify their priority areas of action using the ACIC questionnaire.

CRITERIA FOR ASSESSMENT

The assessments of satisfactory progress on the project, and the time at which these assessments will be made are as follows:

1. Participating countries complete assessments of the national capacity for diabetes care prior to the international work shop.
2. Materials for the training session completed, training organised and run, by the end of the 6th month of the project.
3. Participating countries complete national assessment by end of month 7.
4. First Learning Session run by month 11
5. Second Learning Session run by month 15

6. Third Learning Session run by month 19.
7. Final Event run by month 25.
8. Final International meeting run by month 27.
9. Report and publication by month 36.

Indicators

The indicators on anticipated results will be selected by the national teams during the development of the project. Some potential indicators for quality of diabetes care are the proportion of patient's proportion of patients receiving foot education, foot examination, eye examination, nutritional education, etc. This has been incorporated to the proposal.

PROJECT DELIVERABLES:

The following will be available by the end of the project:

1. All the materials developed for the initial workshop. This will include training manuals and slides. These will be available for use elsewhere.
2. Final reports from each of the countries on the development, content, and success of each of the quality improvement initiative within those countries, including any materials that they developed.
3. The tools that will be developed during each period of action.
4. The project website further developed as part of this project), which will be hosted by PAHO will be freely available.
5. A full report on the whole project, which will include challenges, lessons learned and sustainability strategies.

There are two major risks to this project:

1. Sufficient, timely and continuing commitment of the Ministries of Health to the project, and to developing, implementing and evaluating quality improvement initiatives within their own countries. Commitment from the Ministries will be obtained and evidenced through a letter of commitment; therefore if governments change or personnel changes, there is evidence of the Ministry's commitment to the project.

2. The ability to secure the commitment of a regional faculty of mentors, and their sufficient, timely and continuing commitment to the project. In the past, PAHO and WHO have relied on experts in the field to contribute to various projects; as long as we can provide the travel and accommodation expenses for the experts, they usually agree to participate in our activities. In addition, the Region counts on a growing number of PAHO/WHO Collaborating Centres and partners in different aspects of diabetes, and these established partnerships can provide a sustainable source of faculty and experts in the field.