

## Project Completion Report

*(Narrative report (max. 5 pages) focusing on project design, results, impact and lessons learned. Due latest 6 months after project completion)*

<b>Project title</b>	Program for improving care of diabetics in Phnom Penh
<b>Project number</b>	WDF 05- 119
<b>Country</b>	Cambodia
<b>Partner(s)</b>	Mission Care Development Organisation ( MicaDO)
<b>Project period</b>	January 2006 - September 2009
<b>Project budget</b>	EUR : 189.280
<b>WDF contribution</b>	EUR : 107.700
<b>Prepared by</b>	Dr.Jacqueline Dicquemare
<b>Date of submission</b>	SEPTEMBER 2009

### 1. Summary: *(List key achievements, impact and lessons learned in bullet form.)*

#### Key Achievements

##### Training health care personnel:

- ✓ 20 physicians and 60 health care auxiliaries have been trained over 1900 hours
- ✓ 4 physicians + 4 nurses are now trainers
- ✓ All the teaching documents have been handed over to the doctors trained in files data processing

##### Improving access to medication for the poorest:

- ✓ 1,5 Millions U. Metformine + 1 Million U. Glibenclamide + 150.000 U. Furosemide and Captopril were bought at a very low price from IDA Foundation (Amsterdam) and sent. They have been sold at a price about 50% lower than in the chemistry of the city.
- ✓ 80% of the patients can buy it, according to the prescriptions
- ✓ About 20% i.e. people with the lowest incomes can have the drugs and the HbA1c test for free.

##### Diabetes education and awareness:

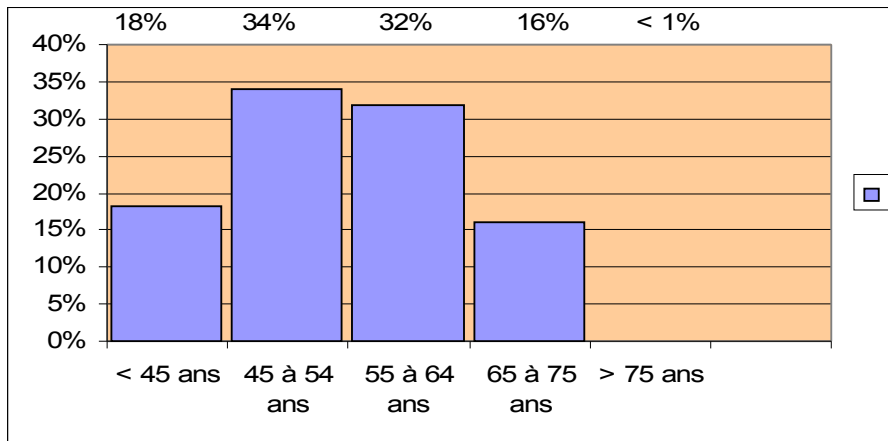
- ✓ 12 educational posters and 6 index cards of nutrition were created and printed to be shown and distributed in numerous copies.
- ✓ 4 articles were published in newspapers ( "Cambodia Daily", "Cambodge Soir", "K set" , "Courrier international")
- ✓ Collaboration for "Diabetes guidebook" – Peter Starr (IJF)
- ✓ 1 DVD animation was released in khmer language and can be seen every day on TV screen by all the people attended in Kossamak hospital diabetes department. It is also used by the staff of MoPoTsyo.
- ✓ The individual book handed to every patient contains 3 pages with images and information about the disease and its management.

#### Impact and lessons

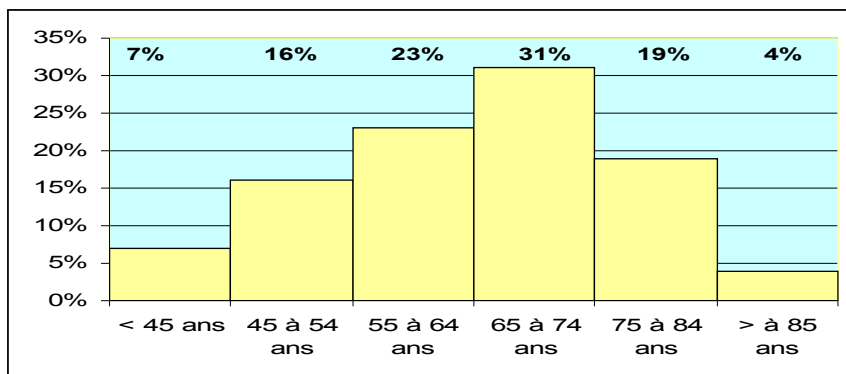
##### ✓ About diabetes pyramid

The population diabetes pyramid in Cambodia is impressive. At the opposite of developed countries, the majority of the patients are younger than 55.

- 16 % of the diabetic patients are more than 65 years old, they are 54 % in developed countries



cambodia



Developed countries

This phenomenon can be explained by the fact that the patients with diabetes in developed countries have a longer life expectation leading to longer duration of care and treatments.

To obtain the same results in developing countries, even with enormous efforts in terms of prevention, it is obvious that the costs of cares and treatments for Diabetes will increase considerably.

So, what is the solution for developing countries and poor populations?

#### ✓ Diabetes and High blood pressure

30% of our diabetic patients have high blood pressure, when in the literature; the prevalence in Asia is on average between 15 and 20%.

In developed countries (UKPDS) this prevalence is of 39%. The longest life expectation is also the main factor there.

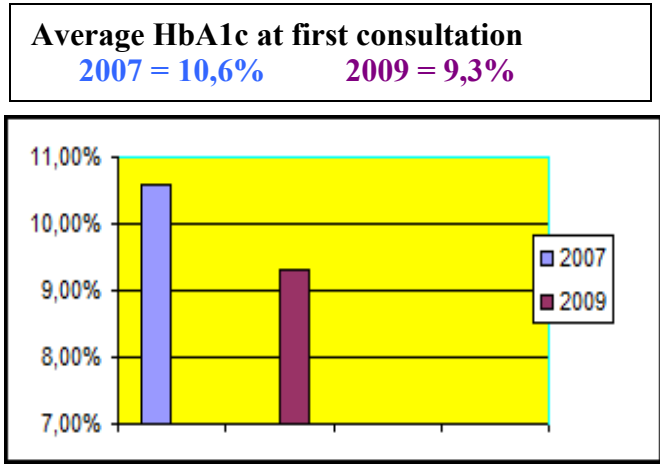
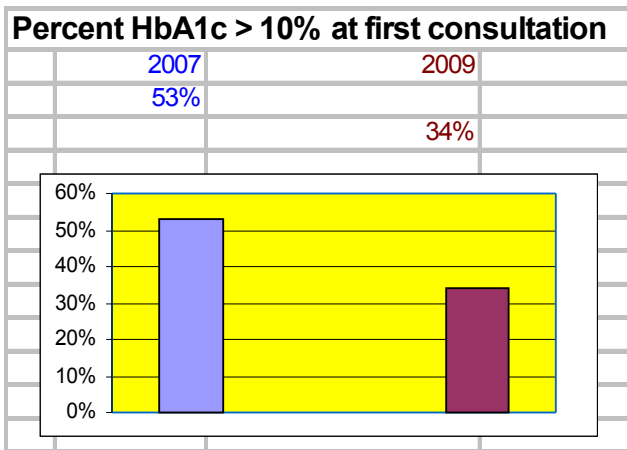
However this percentage is even higher in Maghreb in 2000 Pr. Nacer Chraïbi found 65% of diabetic people with high blood pressure.

#### ✓ Impact on lay population

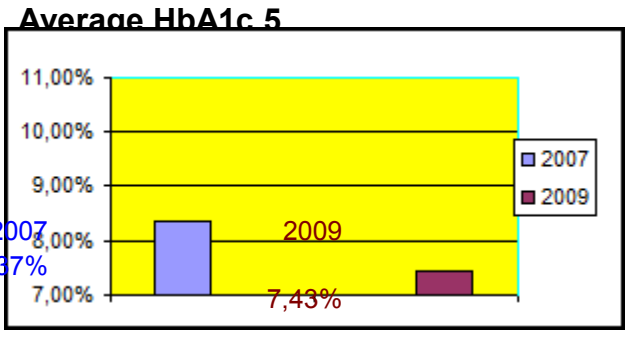
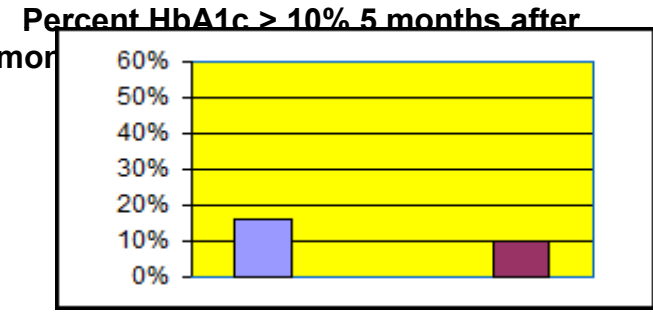
We estimate this impact by comparing the data of the patients coming for the first time in consultation between 2007 and 2009.

It is interesting to notice that, during the first consultation:

- In 2007, 53% of the patients had very strong imbalance (HbA1c superior to 10 %).
- In 2009, this ratio decreased to reach 34%.
- In 2007, the HbA1c average was 10,6%.
- In 2009, the HbA1c average was 9,3 %.



This decreasing in the initial HbA1c supposes that the diabetic population has already received the information, before even their coming at the Hospital, and that efforts have already been made.



This evolution shows that the advice delivered to the patients spreads widely among them and that many people benefit from it which is increasing the impact strikingly.

For several months, we have noticed a clear improvement with fewer and fewer patients with serious imbalance.

This is the same regarding the weight of the patients: during their first visit in 2007, 58 % had a BMI superior to 23, against 47 % in 2009.

More than 10 % already knew the noxious effect of being overweight and had taken it into account.

But after 5 or 6 consultations, this number of patients being overweight did not decrease.

The patients informed have already made some efforts and do not seem to maintain these efforts on a longer time, waiting for the results of the treatments.

Responding to our questionnaires, patients said that they have passed the information and the advice received at least to 10 or 15 persons of their environment.

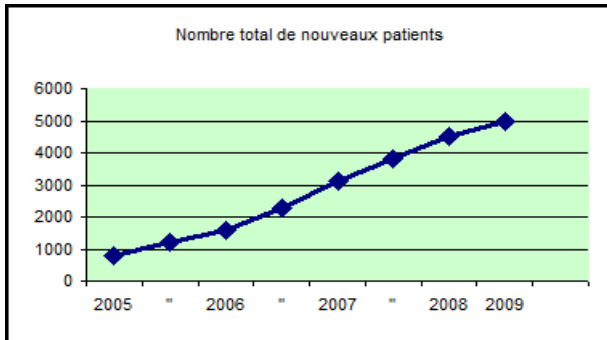
It means that more than 50.000 persons have been reached and explains that more than 50 % of the patients come from all the provinces of the country.

This mode of communication is undoubtedly, the one that reaches better the Khmer population. Messages from the authorities are often perceived as propaganda and few people read the press, even more within the population from modest condition.

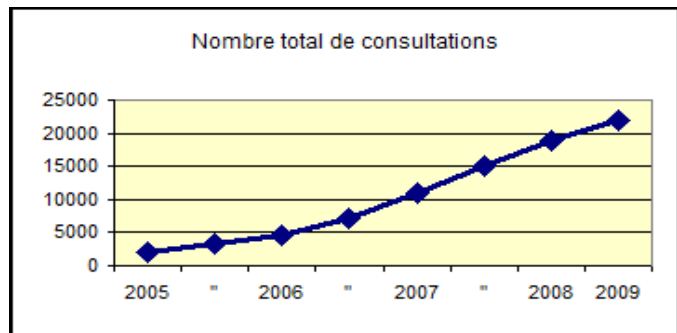
We noticed during the previous years that the sensitization on the cervix cancer screening could be made. More and more women, from all provinces and whatever their financial condition, wish to benefit from a cervical smear, despite the fact that no campaign of information has been made.

This regular increase in the number of patients coming allows us to note that this program responds to a real need and gives satisfaction to the patients.

**New patients**



**Total Consultations**



✓ **Above the average cost of consultation and prescriptions**

	Cost/1	N;Day	Cost	Riels	\$
Prescriptions					
2 glib	200	30	6000		
3 metf	600	30	18000		
2 blood glucose contrôle			3000		
1 consultation			6000		
				33000	8,25

What any patient expects is to be correctly cared at an accessible cost. We believe that in the scope of our project, patients have appreciated to be reached by trained professionals at a cost that 80 % of them can afford.

The monthly average cost for the patient was between 8 and 10 \$, during the period 2007 - 2008.

When, in November, the Direction of Hospital increased the prices, multiplying them by three, the number of patients coming for consultation decreased by 25%.

We talked many times with the Director and administrative staff of Kossamak on this issue and three months after the Director accepted to return to the prices of 2008 and the number of patients has increased again.

In Cambodia, more than in developed countries diabetes concerns mainly the active population: 84 % of the patients are between 20 and 64 years old.

A better balance of diabetes, proved by 2 points less over the averages of the HbA1c, allows to expect a decrease by, at least, 25 % of the complications.

Without complications the diabetic can work and improve his family resources. He will be able to subscribe for health micro insurance.

**2. Problem addressed by the project :** *(Briefly state the project background and objective(s))*

Cambodia has a great prevalence of diabetes. In 2005, the Ministry of Health wanted Preah Kossamak Hospital to become a reference centre for diabetes. The Hospital Director requested therefore the support of MicaDO.

After an initial analysis of the context and meetings with the medical staff we proposed the following program:

**Objectives:**

- ✓ **To improve Diabetes Care,**
- ✓ **To facilitate access to medication for the poorest,**
- ✓ **To raise awareness and education**

### **3. Project design**

*(Briefly state how the project sought to address the above mentioned problem.*

- ✓ By creating a specialized consultations department with trained physicians and nurses and the necessary equipments
- ✓ By supplying the service in generic medicines bought at very low price to be sold cheaper than on the local market and / or given for free to the poor patients.
- ✓ By training social educators of the local NGO (MoPoTsyo) and medical students of the University.
- ✓ By making studies and surveys increase the knowledge of the diabetes' particularities in Cambodia
- ✓ By creating education tools: books, posters, DVD
- ✓ By broadcasting the information and the data in the media and to authorities.

*Describe and explain changes, if any, made to the design during implementation, including reason(s)*

The modifications that were necessary in the course of the project result from the fast increase in the activities. They have implied:

- ✓ Moving to a bigger area and rehabilitating of places
- ✓ Rising the extra payments to the staff because of an increasing activity, consultations being made in the morning and afternoon
- ✓ Training the staff and giving consumables in the maternal health centres for detection of gravid and gestational diabetes
- ✓ Training the staff and giving consumables in rural health centres of the Kompong Speu province for poor diabetic people

*The appropriateness of design will depend on:*

- ✓ Collective interest aiming at more equality, justice
- ✓ Answers to the expectations and the needs of the public
- ✓ Qualitative transformation by the improvement in medical services and the delivery of glycaemia balance
- ✓ Durable acquisition of knowledge and competences
- ✓ Being aware of the situation thanks to membership, participation, motivation, empowerment
- ✓ Valorisation of the actors and the beneficiaries, training the peers and patients
- ✓ Documents and recommendations from Department of Preventive Medicine, Ministry of Health during these two last years
- ✓ Mobilization of the media about Diabetes (IJF). This journalistic training on the diabetes is extending at the moment over Vietnamese and Laotian groups with the participation of Dr.Sok Bunna
- ✓ The Centre for International Health at the University of Toronto which Kathleen Inglis is a member of. She is a PhD student and is doing volunteer work concerning diabetes education with diabetes education video. She is carrying out five educational sessions in the province of Kep the week of August 17th and she would like to use our DVD "video animation" in these sessions



#### 4. Fulfilment of project objective(s)

(State main results/impact achieved per objective. Where applicable, please include numerical information e.g. number of clinics established, number of people/patients reached, awareness activities conducted etc. If an objective was not achieved as planned, state reason. Add more rows if needed.)

Objective	Status	Results	Comments
1.Early diagnosis and quality care	<u>Done</u> - 30.000 blood glucose screening - 5.000 new diabetic patients among whom 75 % are regularly followed - 22.000 consultations	-1 reference service in diabetes was created in Phnom Penh; 2 centres of health were equipped and their staff trained in province. <u>At first</u> - About 30% with high blood pressure - 70% with neuropathy, including 5% with diabetic foot damages - 15% with nephropathy and 1% with kidney insufficiency - 1% with kidney insufficiency <u>After care</u> - 70% of the followed patients see their blood sugar rates decreasing.	The consultations were made by 4 physicians who benefited from 1 year initial training and a 3 year continual theoretical and practical training. The trainers were French specialists in Endocrinology-diabetology. These doctors and 8 other beneficiaries of the same training obtained the "Diabetes" DU delivered by the Faculty of Medicine of PP 50% of the patients come from provinces
	<u>Not done</u> Correctly screening of retinopathy	300 ophthalmologic examinations, but not by OPH specialists who do not know retinopathy	The patients were not referred to the specialist in ophthalmology who is in another hospital. The duration of the diabetes was not taken into account for the prescription of retina exam
2.Awareness and education	<u>Done</u>	After questionnaires to the patients, most of them broadcast their new knowledge to at least 10 other persons. By this way 50.000 persons have been reached. The directives on the diabetes emanating from health directions and the MoH reached 1400 doctors. The financial support to MoPoTsyo for the purchase of 15000 blood tests and 64000 urine tests 4 newspaper articles Leaflets, patient reports, posters, DVD	The patients themselves and their family broadcast the knowledge. The trained staff and peers to peers agents allow us to be optimistic on durability and multiplier effect.

3. Studies	<u>Done</u> *The rice IG *The co morbidity with viral diseases : hepatitis and HIV	Cambodian food includes 80% of white and washed rice without another nutriment. This increases too much the post prandial blood glucose. The co-morbidity with viral diseases is near 20% , it is 10% in lay population	
4. Access for the poorest	<u>Done</u> 1.000 patients i.e.20% of the total number, were attended for free	80% of the patients can buy drugs at low cost; For 20% of them exams and drugs were free	Regrettably there is risk that it will not be the same after the end of the project. The hospital wants to increase the cost recovery and to deliver free acts only for urgencies.

**5. Project impact :** *(State actual impact in diabetes care;*

The diabetic people feel the need of specialized consultations and well trained medical staff

The general population is better informed and broadcast their knowledge

The Health authorities and the Ministry consider the doctors trained as experts and allow them to participate in the decisions and projects.

The study on rice IG in relation to local cooking modalities has improved the nutritional advice

*key changes observed arising from project activities,*

The number of consultants coming from provinces is regularly increasing.

The slow but significant decrease in the obesities and overweight of the patients coming for the first consultation

The very big imbalance among these same first consultants is decreasing.

Two points less over the HbA1c averages among patients after 4 or 5 consultations allows to expect a decrease in the complications of at least 25 % in the target population of diabetics. But we didn't have enough time to study and to give evidence of it.

*. Assess impact against expenditure level.)*

When the Direction, contrary to what had been agreed on, multiplied by 3 the cost of the consultations and the medicines, the number of patients decreased by 25 %.

When, after 3 months, the Direction changed again their position to return to the former rates the number of consultants began to increase again.

This brings the evidence of the importance of the services' costs.

**Sustainability of the project** *Assess chances of long term sustainability of the project results. Explain why/why not sustainability is expected. Specify which institution will be responsible for continuation of activities.*

The results of the project will have a durable character as regards the sustainability of the service specialized in Diabetes in Kossamak Hospital, as this is the wish of the Ministry and of the Direction and because the trained staff remains present.

Also the diabetic patients by their faithfulness proved their satisfaction and insure the multiplier effect

But it is possible that the accessibility to cares and drugs for the poorest will be less sustainable at Kossamak Hospital, due to the new policies and financial directives of the government.

The excellent work of the peer educators will continue within the MoPoTsyo NGO.

But the medical consultations and the regularity of the prescribed treatments are indispensable. It is very important that the costs of care and drugs should remain accessible for all the population

Furthermore, the sensitization on the diabetes incited other private and public structures to invest into the same activities, and, if these establishments practice reasonable costs for the patients, more and more diabetic patients will benefit from it.

## **6. Lessons learned**

*(State key lessons learned during implementation. Include both positive and negative learning points, e.g. in hindsight, what – if anything - would you have done differently with regard to the project.)*

### **Positive learning points:**

1. It is necessary to take into account at the same time the two major problems that are:
  - ✓ - The insufficiency of knowledge and the lack of training of the medical staffs , particularly on the practical plan
  - ✓ - The poverty of the populations and the necessity for the patients to pay all the cares

The actions have to be concomitant in these 2 domains during the project.

2. The adaptation of the human and material resources to the increase of the demand has to be gradually made. We had to and we were able to increase our share by 10% in co-financing the project.
3. Broadcasting the knowledge in the lay public and sensitizing are especially made by the patients and their acquaintances because they are the first to benefit from it.

### **Negative learning points:**

- ✓ It is difficult at this stage to assess the consequences of the excessive appropriation by the partners and the orientation of the practices towards self-interest i.e.Excessive prescription of medicines under the pressure of the pharmaceutical laboratories, hesitation to refer the patient to another colleague of different discipline.
- ✓ The doctors' careers are strongly dependent on politics and not so much on the competences and the accomplished work. This often leads to a loss of motivation and dynamism.

#### **i. What are you the most pleased about in the project?**

- ✓ The feeling to have answered the needs
- ✓ The good relation and the collaboration with the doctors, the nurses, the peers and the students
- ✓ The satisfaction of the patients expressed by the acquired fame of the team
- ✓ A net improvement in the glucose balance for more than 60 % of the patients
- ✓ The recognition of the Health and university authorities
- ✓ The assurance of the sustainability of the service
- ✓ The good turnover and the complementarities of MD trainers of MicaDO

#### **ii. What are you the least pleased about in the project?**

- ✓ Insufficient activities for the patients with complications, very weak possibilities to act on the complications, due to the lack of complementary competencies and of financial resources.
- ✓ More and more financial demands from our partners to pay for the running costs that have no relations with the program
- ✓ More and more political interferences

### iii. Budget/Expenditure

*(List the main budget lines of the original budget. Describe and explain major budget revisions, if any. State final expenditure per budget line. Final audited accounts to be annexed when available)*

1°Progress	report	Periode		2°Progress	report	Periode		
January	2006 to	July 2008		August 2008	To August	2009		
Activity		Duration	Average/ month		Duration	Average/ month	increasing	Total Cs
Number of Cs	15 000	32 months	469	7000	12 months	583	24%	22 000

Over the last 12 months of our program the monthly average number of consultations has increased by 24 %, and so has the working time.

The incentives of the actors had to be increased by 24 % , together with 1 % bonus

This rise in the local expenses could be provided for by MicaDO's own funds

### iv. Checklist of deliverables

*(State documents delivered by the project as per project application section 4.C. Please also include other relevant publications made by the project. The stated documents should be annexed this report.)*

#### Project report

The 5000 patients who came for consultations at Kossamak Hospital , the 10 000 reached by the peer educators of MoPoTsyo, the 300 pregnant women reached in the Health centres and the 50 reached in the poor areas of provinces and their families were informed on the diabetes . ...  
With the multiplier effect more than 200 000 people are sensitized and informed

75% of the patients coming in Kossamak hospital are regularly followed and 65% of them improved their health status

4 MD of Kossamak and 12 students received the practical knowledge on the disease and were graduated with DU diabetes of the Faculty of Phnom Penh

The Ministry of Health received all the data related to this program and we have witnessed some changes in attitudes and initiatives like congresses, seminaries, guidelines....

#### Documents

- Copies of education materials
- Guidelines
- Posters
- Slides
- Models
- Photographs
- Published papers
- CD Rom and DVD « video » Education
- Results of Studies: Glycemic index and Khmer food, viral diseases

### v. Other relevant aspects/details, if any

*(E.g. other support received from other donor, government or institution showing catalytic effect of WDF funding)*

### vi. Comments/quotes

*(List relevant quotes/comments from e.g. beneficiaries, partners, project team, authorities)*

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**WDF Secretariat comments to the report:**

*(Internal comments to be inserted upon review of report. Include necessary action, if any)*

**WDF Board comments to the report:**

*(Internal comments to be inserted upon review of report. Include necessary action, if any)*