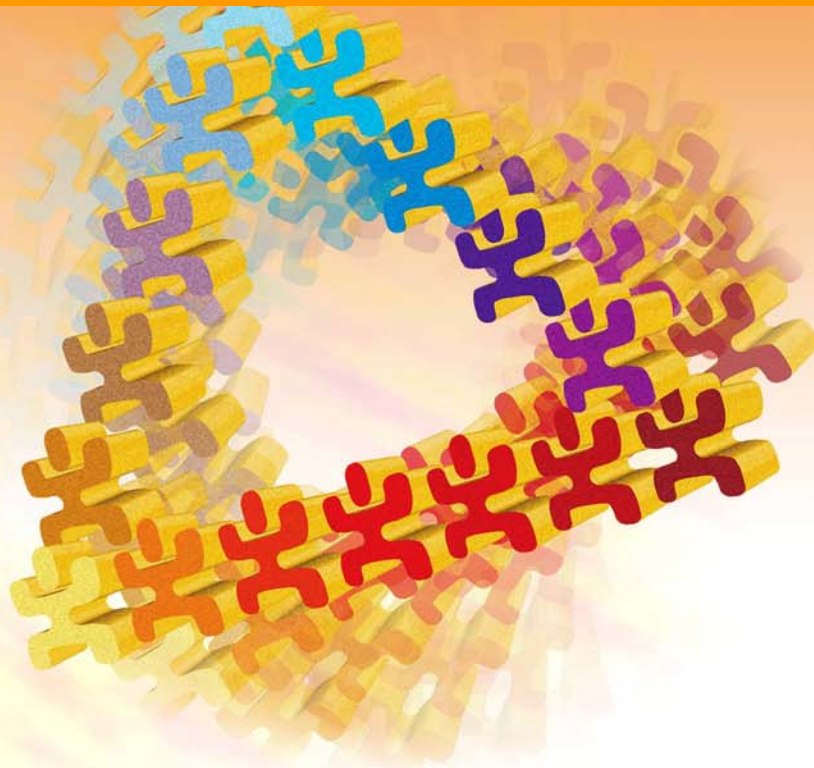




# NCD Management



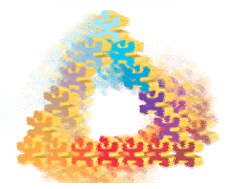
**Pan American  
Health  
Organization**



*Regional Office of the  
World Health Organization*

# CARMEN

Collaborative Action for Risk Factor Prevention & Effective Management of Non-communicable Diseases



# THIRD INTERNATIONAL CHRONIC DISEASE CONFERENCE 2011 CALGARY , ALBERTA, CANADA

Co-Hosted by



calgary health region



Public Health  
Agency of Canada



**Pan American  
Health  
Organization**

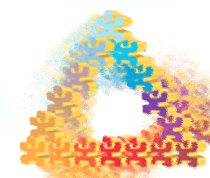


Regional Office of the  
World Health Organization



Health Canada    Santé  
Canada            Canada

Alberta







**World Diabetes Day**  
November 14

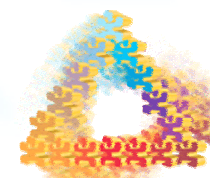
**Pan American Health Organization**  
Regional Office of the World Health Organization

**Understand Diabetes. Take Control.**

- Know the risks and warning signs
- Know how to respond, and who to turn to
- Know how to manage, and take control of it

**CARMEN**

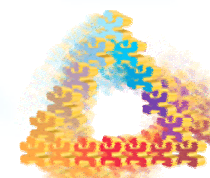
**world diabetes day**

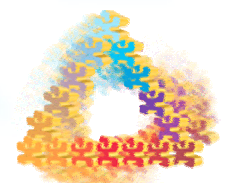
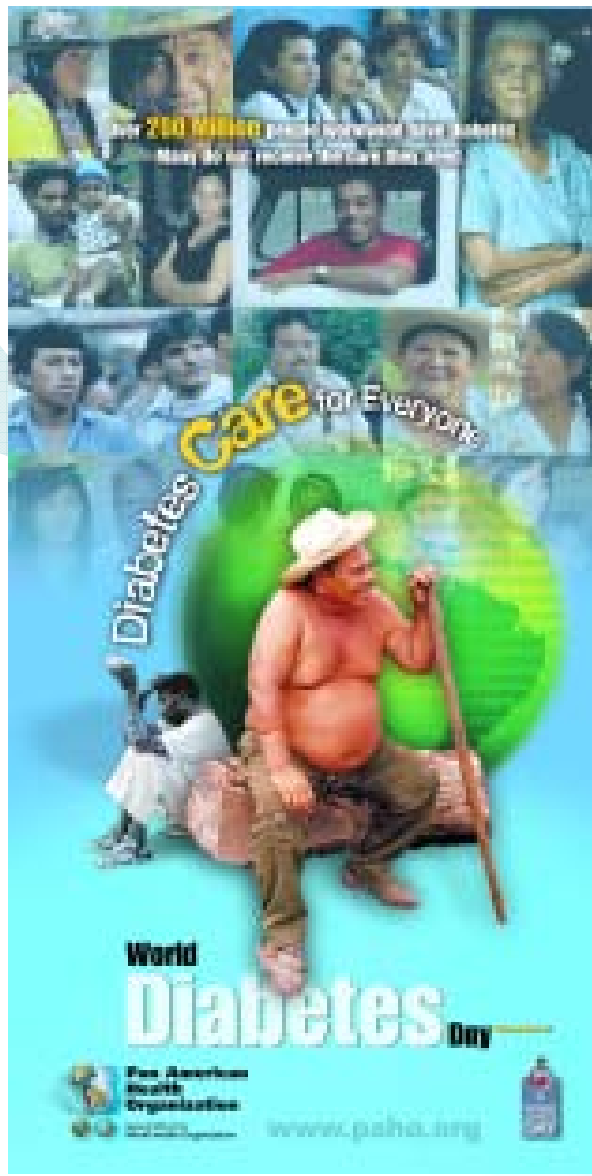


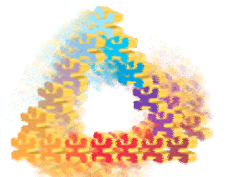


## Recommendations for Improving the Quality of Diabetes Care

|                | Component                     | Frequency            | Description   |
|----------------|-------------------------------|----------------------|---|
| MEDICAL VISITS | Blood Pressure                | Each visit           | <130/80mmHg   |
|                | Eye Exam                      | Annual               | Ophthalmologist/ Optometrist                              |
|                | Dental Exam                   | Every 6 months       | Teeth and gum exam  |
|                | Brief Foot Exam               | Each visit           | Remove shoes and socks                                    |
|                | Complete Foot Exam            | Annual               | Visit the podiatrist if high risk                         |
|                | Flu vaccine                   | Annual               | If available (optional)                                   |
| LABORATORY     | Hemoglobin A1c                | Every 3-6 months     | <6.5%   |
|                | Triglycerides                 | Annual               | <150 mg/ dl (1.7mmol/l)                                   |
|                | Cholesterol total             | Annual               | <200 mg / dl (5.0mmol/l)                                  |
|                | LDL Cholesterol               | Annual               | < 100 mg/ dl (<2.2mmol/l)                                 |
|                | HDL Cholesterol               | Annual               | >40mg/dl (> 1.0mmol/l) men;<br>>50mg/dl (1.1mmol/l) women |
|                | Proteinuria/ albuminuria      | Annual               | <30 µg/mg   |
| EDUCATION      | Treatment Goals               | Each visit           | Discuss with patient                                      |
|                | Self Blood Glucose Monitoring | Individualized       | Recommend based on patient's control goals                |
|                | Healthy Eating                | Each visit           | Recommend always  |
|                | Physical Activity             | 30', 5-7 times/ week | Recommend always if indicated                             |

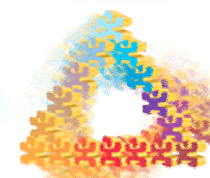






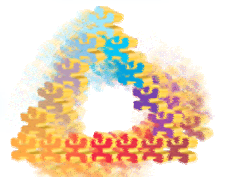


# The National Capacity for NCD Management Survey



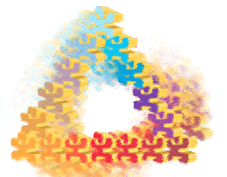
# National Capacity for NCD Management

- Questionnaire distributed by PAHO/WHO offices
- Answered by national NCD directors
- Response from 24 countries
- Questions included the existence of policy for coverage of medicines, guidelines, prices and list of essential medicines



## Medicines for diabetes and hypertension: mean commercial price per tablet and supported use by guidelines or list of essential medicines

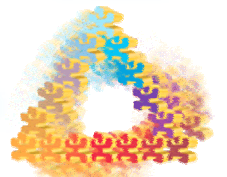
|                           | Price<br>US\$  | Guidelines<br>(%) | Listed<br>(%) |
|---------------------------|----------------|-------------------|---------------|
| <b>Insulin</b>            | <b>\$13.51</b> | <b>84.6</b>       | <b>96.2</b>   |
| <b>Aspirin</b>            | <b>\$0.05</b>  | <b>80.0</b>       | <b>88.5</b>   |
| <b>Metformin</b>          | <b>\$0.12</b>  | <b>84.6</b>       | <b>96.2</b>   |
| <b>Glibenclamide</b>      | <b>\$0.08</b>  | <b>84.6</b>       | <b>96.2</b>   |
| <b>Thiazide Diuretics</b> | <b>\$0.94</b>  | <b>84.6</b>       | <b>96.2</b>   |
| <b>ACE Inhibitors:</b>    | <b>\$0.16</b>  | <b>84.6</b>       | <b>92.3</b>   |
| <b>CaC Blockers</b>       | <b>\$0.94</b>  | <b>84.6</b>       | <b>80.0</b>   |
| <b>Beta Blockers</b>      | <b>\$0.13</b>  | <b>80.8</b>       | <b>84.6</b>   |
| <b>Statins</b>            | <b>\$0.60</b>  | <b>69.2</b>       | <b>69.2</b>   |



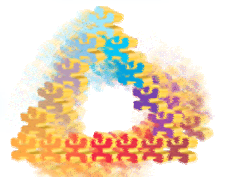
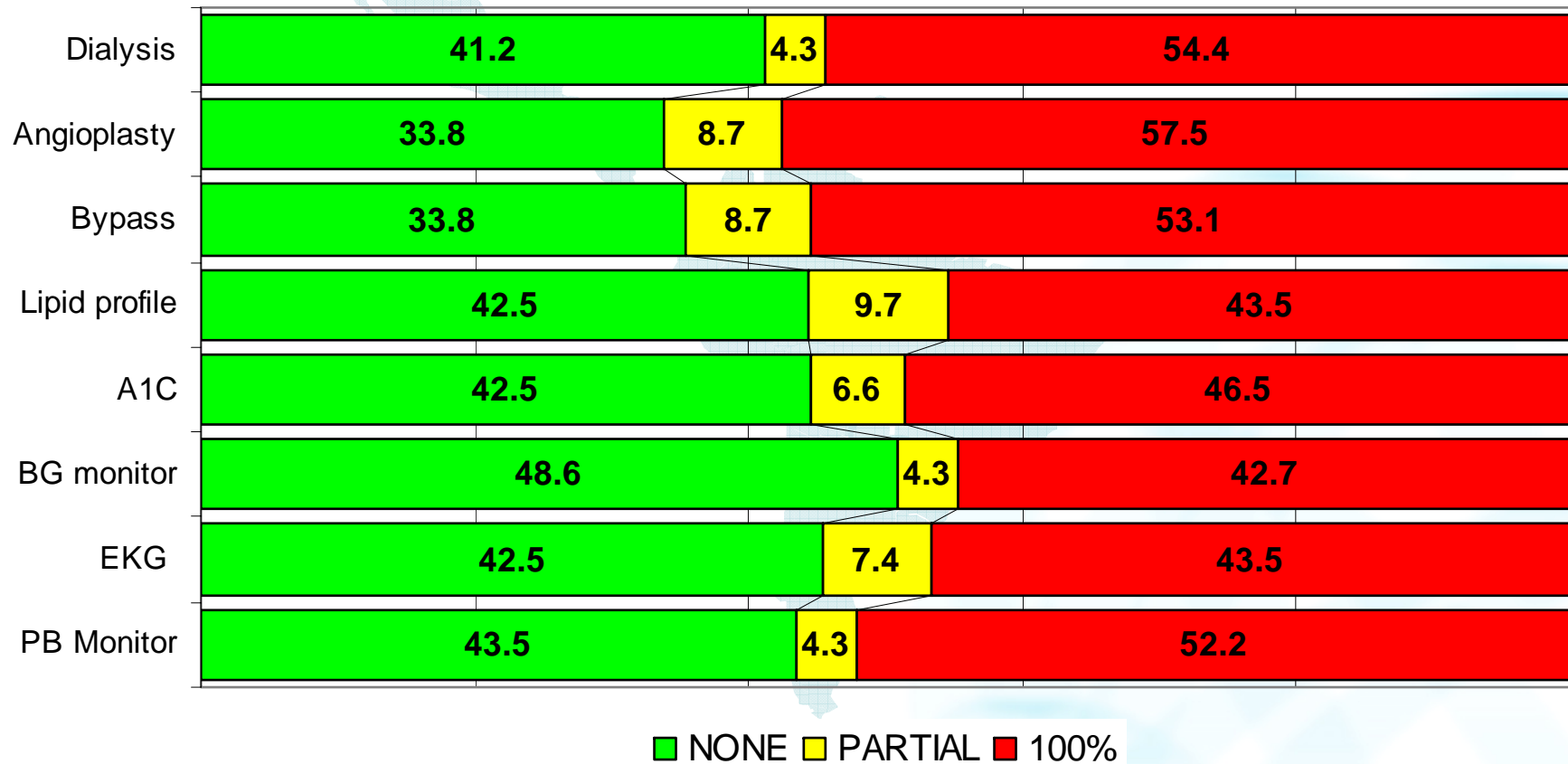


Procedures, and tests for the management of diabetes and hypertension: mean commercial price per tablet and supported use by guidelines and availability

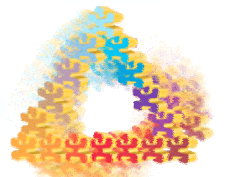
|               | Guidelines (%) | Available (%) | Price (US\$) |
|---------------|----------------|---------------|--------------|
| PB Monitor    | 69.2           | 84.6          | \$29.52      |
| EKG           | 76.9           | 92.3          | \$13.76      |
| BG monitor    | 80.8           | 84.6          | \$35.51      |
| A1C           | 80.8           | 88.5          | \$10.86      |
| Lipid profile | 76.9           | 88.5          | \$13.08      |
| Bypass        | 26.9           | 57.7          | \$5,346.84   |
| Angioplasty   | 38.5           | 53.8          | \$3,647.43   |
| Dialysis      | 69.2           | 84.6          | \$90.16      |



## Payment required to patients (%) for procedures, tests and treatments related to diabetes and hypertension



# The Central America Diabetes Initiative (CAMDI)





# The CAMDI Survey Sample

| Site         | Sample Size   | Surveyed      | % of Sample | Tested       | % of those Surveyed |
|--------------|---------------|---------------|-------------|--------------|---------------------|
| Belize*      | 2,635         | 2,439         | 93          | 1,622        | 67                  |
| S Jose       | 2,133         | 1,427         | 67          | 1,139        | 80                  |
| S Salvador   | 2,000         | 1,870         | 93          | 1,156        | 62                  |
| Guatemala C  | 1,700         | 1,397         | 82          | 966          | 69                  |
| Tegucigalpa  | 2,400         | 1,696         | 71          | 1,237        | 73                  |
| Managua      | 2,400         | 1,993         | 83          | 1,694        | 85                  |
| <b>TOTAL</b> | <b>13,138</b> | <b>10,822</b> | <b>82</b>   | <b>7,814</b> | <b>72</b>           |

