Case Study:
Centro Integral de Atención del Paciente con Diabetes
Highly successful adherence and implementation of ICHOM Set

Routine data collection and analysis of results performed efficiently to significantly improve the delivery of health care

Observable and measurable impact on patient’s quality of life, disease progression and satisfaction with care

Implementation of innovative and groundbreaking delivery of care model, consisting of a comprehensive approach to the patient, covering all clinical aspects of the disease to limit progression of disease and improve prognosis

Demonstrated cost-effectiveness of new model of care including ICHOM Set implementation

Model case study for successful implementation of Sets and of value-based healthcare within the public health sector
CAIPaDi - Instituto de Ciencias Médicas y Nutrición Salvador Zubirán

Centro de Atención Integral al Paciente con Diabetes - Center for Comprehensive Care of Patients with Diabetes

Diabetes-oriented center focused on wellbeing improvement and quality of life of patients living with diabetes through outcomes measurement and a value-based healthcare approach.

**Location:** Mexico City, Mexico

**Founded in:** 2013

**Type of organization:**
Public sector outpatient specialty care services

**Number of patients enrolled in past year:**
>3000 patients

**Clinical services:**
- Endocrinology
- Diabetes education
- Nutrition
- Physical activity
- Clinical psychology
- Dentistry - focus on periodontics
- Psychiatry
- Ophthalmology / Optometrist
- Foot care
- Enfermery

https://www.incmnsz.mx/opencms/contenido/departamentos/CAIPaDi/versionenglish.html

The CAIPaDi leadership & team

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Ophthalmologist

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Norma Sandra Sainos Muñoz
Administration

https://www.incmnsz.mx/open-cms/contenido/departamentos/CAIPaDi/versionenglish.html
Experience implementing ICHOM Sets

Family of Sets: Cardiometabolic Sets

Sets implemented: Diabetes

Data collection time: >5 years
Clinical pathway
Resource investment

<table>
<thead>
<tr>
<th>Healthcare Resource</th>
<th>1st Year</th>
<th>2nd year and plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAIPaDi Cost - per patient</td>
<td>1st Year</td>
<td>2nd year and plus</td>
</tr>
<tr>
<td>Total Cost (2019 USD) - per patient</td>
<td>$2,706</td>
<td>$582</td>
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</tbody>
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Each consultation represents approximately $559 USD per patient. The first year of treatment includes 4 visits, after which each visit becomes annual (unless more visits are necessary due to individual circumstances).

Cost-effectiveness of a self-management and comprehensive training intervention in patients with type 2 diabetes up to 5 years of diagnosis in a specialized hospital in Mexico City.
Summary of outcomes measured: PROMs

**Patient-Reported Outcomes**
- Psychosocial wellbeing
- Depression
- Diabetes distress

**Measures (PROMs)**
- WHO-5 (Well-Being Index)
  - 5 items
- Patient Health Questionnaire (PHQ-9)
  - 9 items
- Problem Areas in Diabetes (PAID)
  - 20 items

**Results**
- **HADd ≥8:** Anxiety and depression screening
  - At baseline: 30.4%  
  - 4 years on: 18.3%
- **MINI*:**
  - At baseline: 21.5%  
  - 4 years on: 12.8%
- **Average score**
  - At baseline: 38.9  
  - 4 years on: 14.8

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Cost-effectiveness of a self-management and comprehensive training intervention in patients with type 2 diabetes up to 5 years of diagnosis in a specialized hospital in Mexico City
**Clinical Reported Outcomes**

- **Survival**
- **Disease control**
- **Chronic complications**
- **Health services utilization**
- **Acute events**

**Measures (CROMs)**

- **Vital Status**

**Clinical Reported Outcomes**

- **Survival**

**Measures (CROMs)**

- **Vital Status**
  - Glycemic control (Fasting glucose and HbA1C)
  - Blood pressure control
  - Lipid profile control

**Results**

- Visit 2 (1 month): 1 death
- Visit 8 (4 years): 3 deaths
- HbA1c <7% visit #1: 37%
- HbA1c <7% visit #6: 59.3%
- BP 130/80 visit #1: 50.6%
- BP 130/80 visit #6: 68.7%
- LDL-c <100 visit #1: 34.3%
- LDL-c <100 visit #6: 59.3%
- US$ 7264 saved on complication-related treatments and management
- Amputations (total): 0
- Nephropathy (at 2 years, n=681): 0.3%
- Dialysis (total): 0
- Cardiovascular event (at 2 years, n=681): 0.3%
- Ketoacidosis/EHH (at 2 years, n=681): 0.1%
- Severe hypoglycemia (at 1 year, n=772): 0.9%

**Chronic complications**

- Treatment complications
- Nervous system complications
- Micro and macrovascular complications

**Health services utilization**

- Healthcare utilization (i.e. hospitalization & emergency room utilization)
- Financial barriers to treatment

**Acute events**

- Diabetic ketoacidosis
- Hyperglycemic hyperosmolar syndrome
- Hypoglycemia

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Cost-effectiveness of a self-management and comprehensive training intervention in patients with type 2 diabetes up to 5 years of diagnosis in a specialized hospital in Mexico City
Elements of success and lessons learned

1. Systematization of procedures - patients must always go through the same care pathway and all aspects of consultation must be covered by all professionals.

2. Have a structured approach to patient care and follow this structure while maintaining an individual approach to each patient.

3. Investing in electronic tools will make all aspects of implementation, as well as data collection and analysis, more feasible and practical.

4. Treat each patient in a comprehensive manner, the individualisation of patients within a standardized model is essential to achieve results in patients and enhance patients’ adherence to treatment.

5. Give mental health equal importance as other clinical aspects as it is key in a patient’s wellbeing.

6. Continuous analysis of data is essential for improvement of process and acknowledgement of real impact on patients’ overall well-being.
Challenges in implementing the Set

Achieving patient adherence to treatment: the healthcare team must ensure that the patient remains motivated and committed to the programme.

Achieving professionals’ adherence to the programme: institutional resources and infrastructure must ensure that the healthcare team remains committed to the programme.
References


- Implementación de indicadores ICHOM en CAIPaDi oct 2013- sep 2021

- Interviews with Dr. Sergio César Hernández Jiménez and Dr. Ana Cristina García Ulloa