Scaling Up interventions to improve management and control of hypertension and diabetes in primary care settings: the context matters

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Two examples of implementation research projects to prevent and control CVD in Argentina

- A comprehensive strategy of hypertension control in Argentina
- Strengthening Diabetes Care for Underserved in Corrientes
About these studies..

- Both studies were conducted in partnership with the National MoH, which participated in the design and implementation.
- Both studies have been set up as “potentially scalable” since its concept and design
- Were built upon existent programs and strategies implemented at national or subnational levels with more or less success.
- Policy makers and key stakeholders were involved and committed at national and local levels
- Process measures have been analyzed to evaluate implementation as well as understanding change process
- Cost-Effectiveness of the intervention program have been estimated along the studies
A Cluster Randomized Trial of a Comprehensive Approach for Hypertension Control in Low-income Patients in Argentina

Tulane University School of Public Health and Tropical Medicine, New Orleans, LA
Institute for Clinical Effectiveness and Health Policy, Buenos Aires, Argentina
Objectives

• The primary objective is to test whether implementation of an 18-month comprehensive intervention program will lower systolic BP and diastolic BP among uncontrolled hypertensive patients compared with usual care.

• The secondary objective is to test whether the comprehensive intervention program will improve hypertension control among uncontrolled hypertensive patients.
18 Eligible Public Primary Care Clinics Selected

18 Clinics Randomized
(1,954 eligible participants)

9 Clinics randomized to intervention
(970 participants)

942 Ps included in primary analysis
(median 106 ps per clinic)
28 Ps excluded from primary analysis
due to lack of follow-up data

9 Clinics randomized to usual care
(984 participants)

972 Ps included in primary analysis
(median 117 ps per clinic)
12 Ps excluded from primary analysis
due to lack of follow-up data
Comprehensive Intervention

On line & On site:
1- Stepped-care BP management based on hypertension guidelines
2- BP Audit & Feedback

Monthly/Bimonthly home visits:
1- Home BP monitoring
2- Medication adherence
3- Lifestyle modification

Weekly individualized text messages to promote lifestyle modification and medication adherence

CHWs

Complex Intervention

Physician’s training

SMS
Effect of Intervention on the Primary Outcome: Systolic Blood Pressure

<table>
<thead>
<tr>
<th></th>
<th>Mean Systolic BP Reductions from Baseline (95% CI)</th>
<th>Net Reductions (95% CI)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intervention</td>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>At 6 months</td>
<td>11.9 (10.5, 13.3)</td>
<td>7.4 (5.9, 8.9)</td>
<td>4.5 (2.4, 6.6)</td>
</tr>
<tr>
<td>At 12 months</td>
<td>15.6 (14.4, 16.8)</td>
<td>10.1 (8.8, 11.3)</td>
<td>5.5 (3.8, 7.3)</td>
</tr>
<tr>
<td>At 18 months</td>
<td>19.3 (17.9, 20.8)</td>
<td>12.7 (11.3, 14.2)</td>
<td>6.6 (4.6, 8.6)</td>
</tr>
<tr>
<td>Overall</td>
<td>15.6 (14.3, 16.8)</td>
<td>10.0 (8.8, 11.3)</td>
<td>5.5 (3.8, 7.3)</td>
</tr>
</tbody>
</table>
Effect of Intervention on Secondary Outcomes: Diastolic Blood Pressure

<table>
<thead>
<tr>
<th></th>
<th>Mean Diastolic BP Reductions from Baseline (95% CI)</th>
<th>Net Reductions (95% CI)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intervention</td>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>At 6 months</td>
<td>6.5 (5.5, 7.4)</td>
<td>3.5 (2.6, 4.4)</td>
<td>2.9 (1.6, 4.3)</td>
</tr>
<tr>
<td>At 12 months</td>
<td>9.4 (8.5, 10.2)</td>
<td>5.2 (4.4, 6.0)</td>
<td>4.2 (3.0, 5.3)</td>
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<td>At 18 months</td>
<td>12.2 (11.2, 13.2)</td>
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Comprehensive intervention for HTN control in Argentina

How to improve HTN control rate at the primary care level in the public health care system?

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JAMA 2017
Example 1: Comprehensive intervention for HTN control in Argentina

How to improve HTN control rate at the primary care level in the public health care system?

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Strengthening Diabetes Care for Underserved Population in Argentina

Institute for Clinical Effectiveness and Health Policy, Buenos Aires, Argentina
Objectives

• The primary objective is to implement a complex intervention to strengthen primary care clinics to provide high quality diabetes care and improve coverage in persons with diabetes living in underserved areas of the province of Corrientes, Argentina.
Setting

1 Hospital

2 Hospitals and 6 PCCs

1 Hospital and 8 PCCs
Multicomponent Intervention

- Training PC teams in CPG and education
- Outreach visits
- Clinical information system
- Educational SMS
Quality of Diabetes Care Indicators

The graph illustrates the quality of care for various indicators in diabetes management. The indicators include A1c, Cholesterol, Eye Exam, Foot Exam, Blood Pressure, CVD Risk, and Follow-up. The data is compared between baseline (N=930) and 12 months (N=913). The significance level for the differences observed is p < 0.0001.
Setting 2
Setting 3
Scaling up…

Key attributes for success

- Attributes of the intervention being scaled up
- Attributes of the implementers
- Chosen delivery strategy
- Attributes of the “adopting” community
- Socio-political context
- Research context
Scaling up…

- Attributes of the intervention being scaled up
  - Rigorously tested
    - Evidence based
    - Informed by implementation science
  - As simple as possible
    - Easy for the implementer
    - Usability
  - Process measures have been analyzed to evaluate implementation and to understand the process of change
  - Cost-effective
Scaling up…

• Attributes of the implementers
  – Strong local leadership and governance
  – Engaging key stakeholders
    - State and non-state actors
    - Consensus about value
  – Practice culture and staffing:
    • PCC traditionally focused on maternal and child care
    • Understaffed
    • Physicians: low adherence to CPGs, degree of involvement with chronic patient care was variable
Scaling up…

• Attributes of the delivery strategy
  – Sequential approach
  – Train the trainers
  – Tailoring & adaptation
  – Integrated approach
    – Building on existing resources & practices
Scaling up…

• Attributes of the adopting community
  – An engaged community (involving local participation, i.e. CHW’s)
  – Patient’s satisfaction
– Poor urban areas
– Vulnerable population, competing needs
– Gender perspective: cultural and logistic barriers to access the PCC for men
– Recognition of the role of peers (spouse and family members)
Scaling up…

• Socio-political context
  – Political will and national policies
    - Conducted in partnership with the National MoH: political will to strengthening the primary care level
    - Built upon existent programs and strategies implemented at national or subnational levels
      – Support from the local Departments of Health at each district
      – REDES Program: focused on chronic diseases, HTN and DB; training of physicians; incentives for CV risk classification
      – REMEDIAR Program: free medication at primary care centers
    - Embedded in UHC
  – Country/province ownership
Thank you!