Patient-Centered Care
Using Clinical Databases to Improve NCD Outcomes:
International Experiences and Lessons Learned

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Outline

• Introduction
• Background – NCDs in Estonia
• Quality registries—A Tool for Improving Clinical Outcomes
  – Danish General Practice Database
  – Swedish Rheumatology Quality Register
• Other examples of QR
  – Karbase (DK)/VascuNet (AUS,
• Critical Elements for Success of Quality Registries
Conclusions
Introduction

Why the topic for this talk?

What Happened Here?

SDR, diabetes, all ages, per 100,000

Source: WHO/Europe, European HRD database, April 2014
Background

Burden of Disease from NCDs in Estonia

EST Burden of Disease - DALY (2010)
Main Risk Factors

Quality Registries—A Tool for Improving Clinical Outcomes

Example 1: Danish General Practice Database
Danish Quality Development Unit of General Practice

• Joint organization between GPs Union (PLO) and the Regions (~ Estonian Health Insurance Fund)

• Mission: To develop a tool for the world’s best craftsmen and women

Quality Registries = Tools

• “For such a tool to be used it requires more than feeling right in the hand.

• First, it requires that the craftsman sees the tool and the it makes sense to use it.
Quality Registries = Tools (2)

- Second, it has *to be easy to use, effective and precise* – and most importantly it has to add to the already good craftsman’s sense of *job satisfaction* and contribute to an even better result.”

Danish Quality Development Unit of General Practice

- Danish General Practice Database
- Automatic data collection
- *Sentinel Data Capture Software*
- Electronic patient record
The GP’s Best Tool for NCD Patients: A Quality Registry

Network Architecture of the Danish GP Database

The doctor has access to his own quality reports by using internet and his digital signature.

Annual Pop-Up Screen for Diabetes

![Annual Pop-Up Screen for Diabetes](image_url)
Danish Quality Unit of GP: Data Capture Module

### Benchmark 1

#### Sentinel Databank

**Sentinel Datafangt**

<table>
<thead>
<tr>
<th>Patients with Diabetes Mellitus</th>
<th>Benchmark page 1</th>
<th>Benchmark page 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How to read data</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Improve quality</strong></td>
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<td><strong>Print this page</strong></td>
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**Patients with Diabetes Mellitus** *(Constructed/anonymouse name list)*

Data extracted: Tuesday, 03 April 2012 10:36:25

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<th>BMI</th>
<th>GP</th>
<th>GHD</th>
<th>HbA1c</th>
<th>Blood pressure</th>
<th>Weight</th>
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<th>Last annual control</th>
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**Benchmarch 1**

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Benchmark 2

Performance indicators

Percentage of diabetic patients with HbA1c ≥ 7 %
who need no antidiabetics

Percentage of diabetic patients with a 5-Cholesterol ≥ 4.5
without use of 3-hydroxy-3-methyl-glutaryl coenzyme

Percentage of diabetic patients with systolic BP > 150 mmHg
who need no anti-hypertensive medication
Quality Registries—A Tool for Improving Clinical Outcomes

Example 2: Swedish Rheumatology Quality Registry

The Swedish Rheumatology Quality Registry and Learning System
Other Examples of Quality Registries
Danish VascuBase

Ruptured aorta aneurism (RAA), 30-day mortality (2007-2011) (Unadjusted Data)

Source: VascuBase Annual Report 2011

RAA 30-Day Mortality: 2001-2011

Source: VascuBase Annual Report 2011
VascuNet: Internal Comparisons

- VascuBase is linked to VascuNet
- VascuNet Members:
  - Australia
  - Denmark (Vascubase)
  - Finland
  - Italy
  - Norway
  - Sweden
  - Switzerland
  - UK

Other Applications

- Oral health (DMFT in children)
- Intra-partum deaths
- Blood transfusions
- Diabetes complications
  - Blindness
  - Renal failure
  - Amputations
  - Pregnancy outcomes
Continuing Quality of Care Development

Critical Elements of Success for Quality Registries
Critical Elements for Success

• Clinical databases/quality registries are tools for quality improvement, NOT for control and punishment
• Must be easy to use, privacy must be protected, and add value
• Requires support for implementation and use
• Requires a process for learning from those who do well (“good apples approach”)
• GPs and Funders seen as partners

Conclusions
Conclusions

- Quality registries are a necessary tool to improve clinical outcomes
- Can be used for both NCD and other types of patients
- Can lead to both better management of diseases and cost savings
- Quality registries can greatly increase efficiency but also job satisfaction for both doctors and nurses!

A Final Caveat

- Quality Registries can do a lot but they are not the only tools that are needed if Estonia is to become a leader in the management of NCDs
- Also needed are (among other things):
  - Organizational reforms
  - Changes in the education of HRH
  - Introduction of training programs for new types of allied health personnel, e.g., dietitians, therapeutic patient educators
  - Etc.
You CAN do it!