Israeli National Diabetes Register- evolving story

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Outline

- Israeli Health Care System
- Pre-registry data
- National Diabetes Register Framework
- Diabetes Status in Israel

Israel Health System

- National Health Law
- All citizens have medical insurance covering outpatient +inpatient medical services
- Outpatient services organized through 4 health providers
- The 4 HMOs use EMRs (since 1998) and advacned IT systems
- All hospitals have EMR to some extent

Pre - registry status

Three main sources for national diabetes data :

Diabetes type 1 registry

- Voluntary reports of new cases among 0-17 years
- Unidentified - Limited data, no follow up
- Coverage about 70%.

The National Quality indicators for community healthcare Program

- Joint partnership of the 4 HMOs & academic research institutes
- Data is extracted uniformly from EMR
- Each HMO contribute aggregated data
- Results published yearly, publicly available
- Provides snapshot of prevalence, process and outcome indicators
- No follow up
- No data about complications

Health surveys

- Based on self report
- Preformed every 2-3 year
- Better for prevalence that for incidence
- Limited clinical data
- Representation issues- no data about small sub-populations

National Diabetes Registry -goals

- Epidemiological data
  - Prevalence, incidence
  - Risk groups
  - Time trends
- Disease course
  - Incidence of complications
  - Mortality rate
- Clinical indicators

Establishment of a national Diabetes Registry

- Formed in 2013
- Full partnership of the 4 HMOs and the Ministry of Health
- Yearly report based on data extracted from EMR
- Coded ID numbers
- Can be cross linked with data sources using the same coding mechanism

Diabetes Registry

- Case definition
  - High Hba1c/glucose value in the previous year

    and/or
  - Purchase of anti-glycemic drugs in 3 separate months
- Data collected:

  demographic variables, weight and height, smoking status

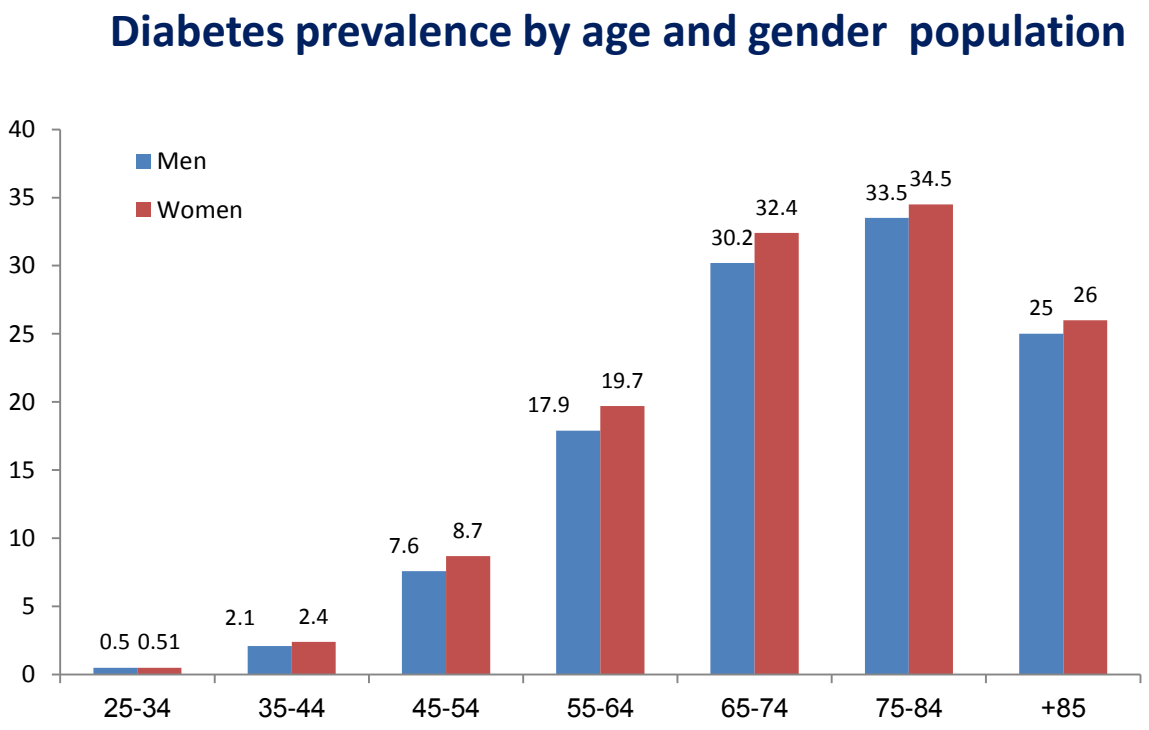
  lab results (HbA1c,proteinuria, lipids), insulin treatment

Diab. Reg.- Initial data

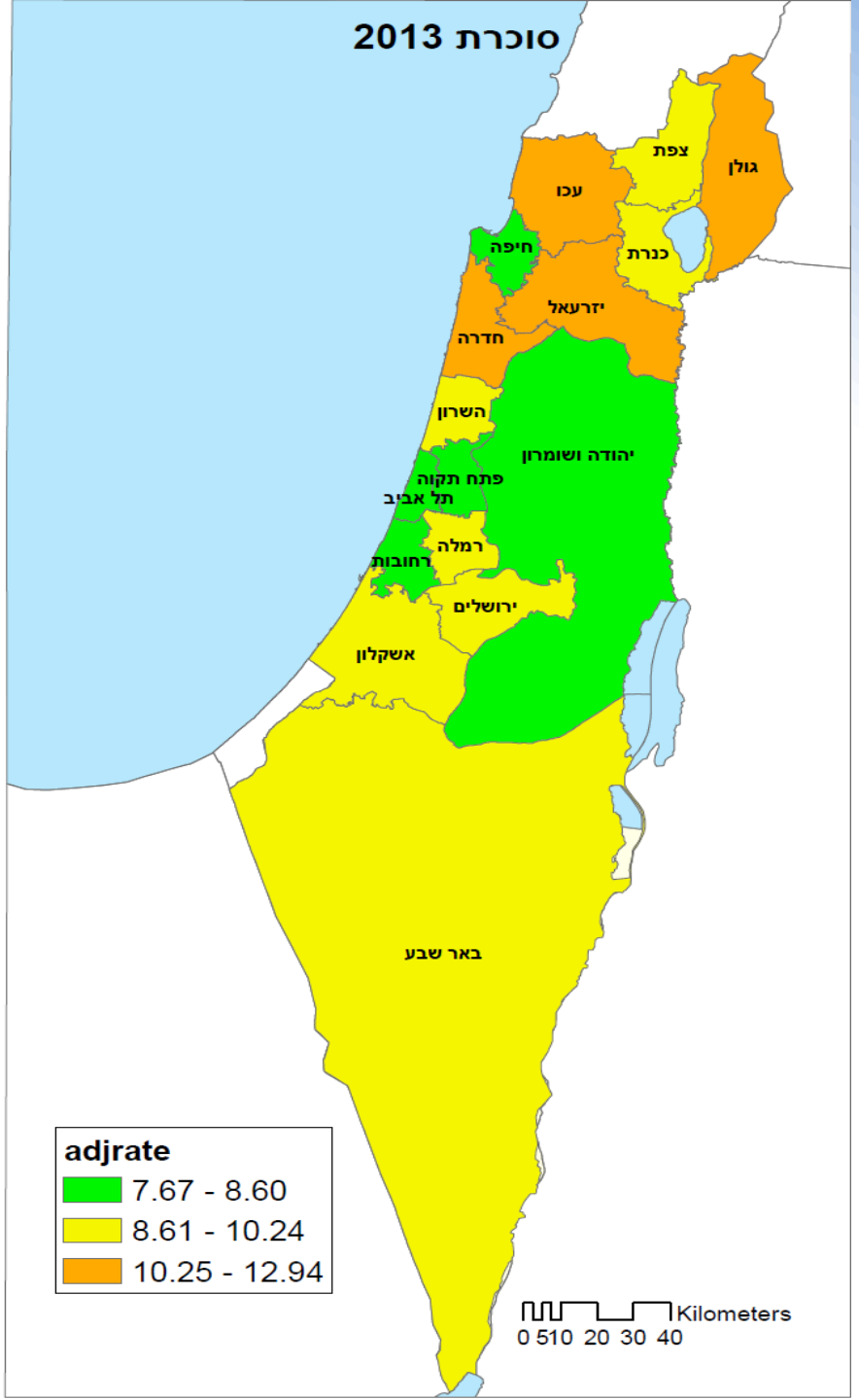
- Reports submitted for 2012, 2013,2014.
- Reports for 2015-6 are in process
- Positive predictive value is at least 95%
- Estimated sensitivity in a single report 80%-85%, two consecutive reports cover ~95% of diabetics

Diab. Reg.- Initial data cont.

Diabetes prevalence in adult population is 9.6%



Age adjusted diabetes prevalence rate by sub-district

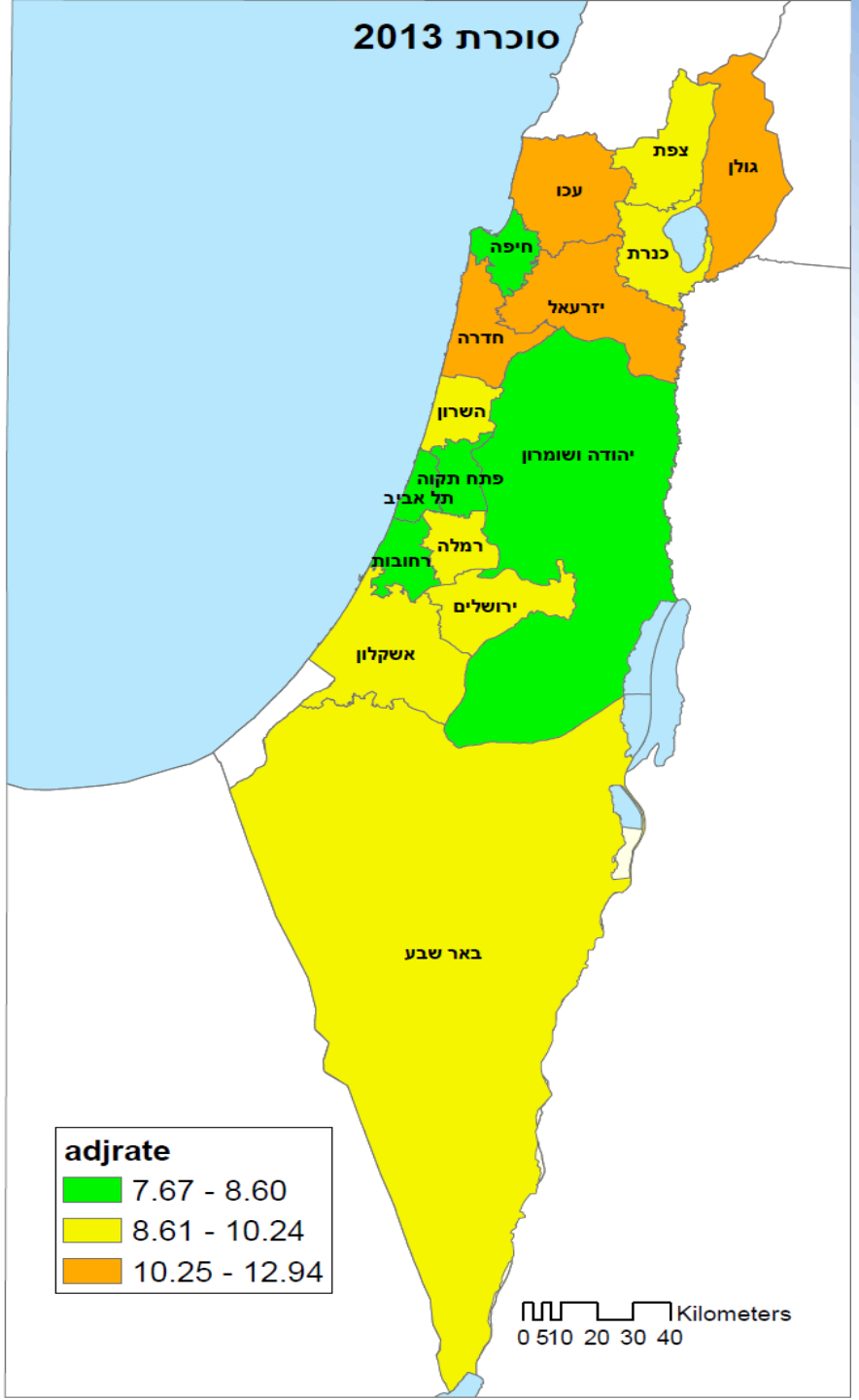


Multiple cross-linking options in the INDR

- Between different clinical parameters e.g Hba1c and lipids tests.
- Between consecutive years of reporting to assess continuous control/ poor control
- With other data bases

A few cross-linking examples…

Age adjusted diabetes prevalence rate by sub-district



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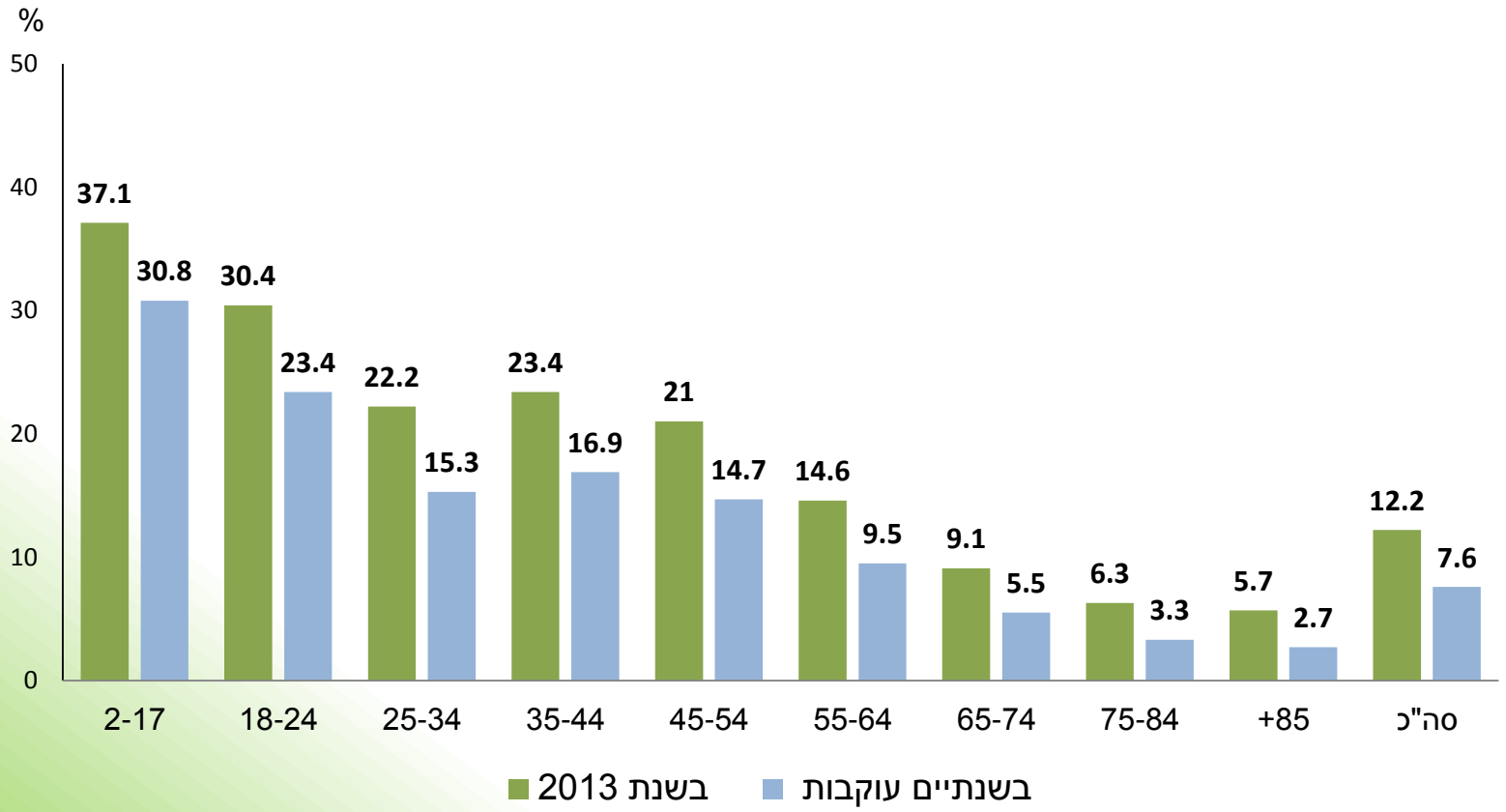
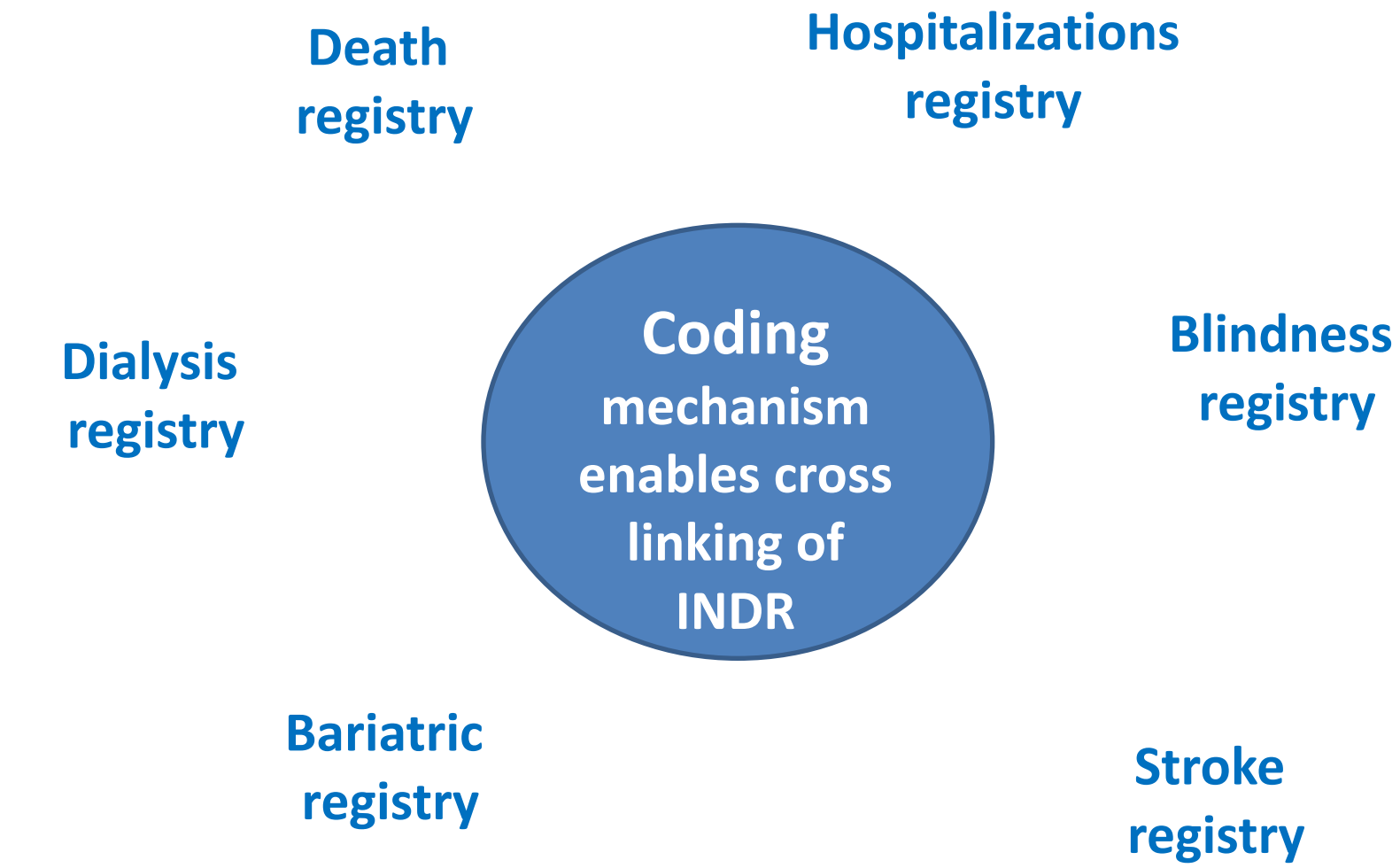
A few cross-linking examples…

Poor glycemic control (HbA1C > 9%) by age 2013, and 2012-3 consecutively

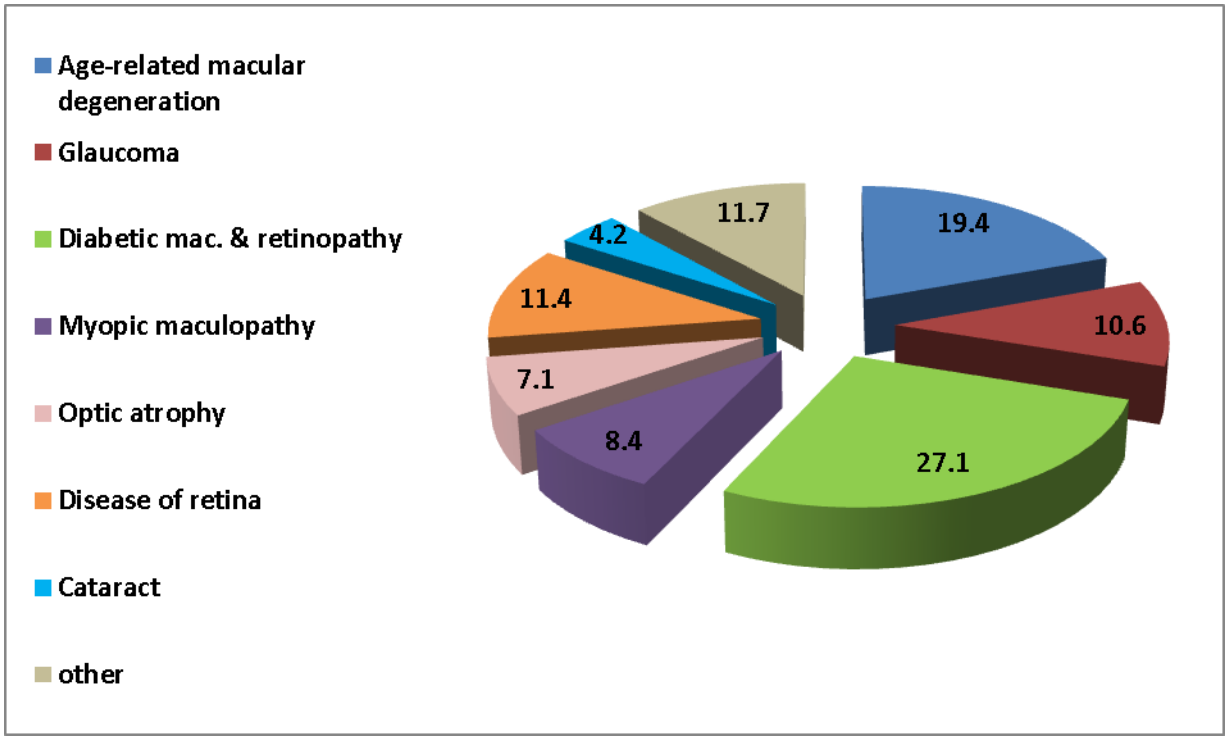
- Almost 8% have poor control for two years in a row




Death registry
Hospitalizations registry
Dialysis registry
Coding mechanism enables cross linking of INDR
Blindness registry
Bariatric registry
Stroke registry

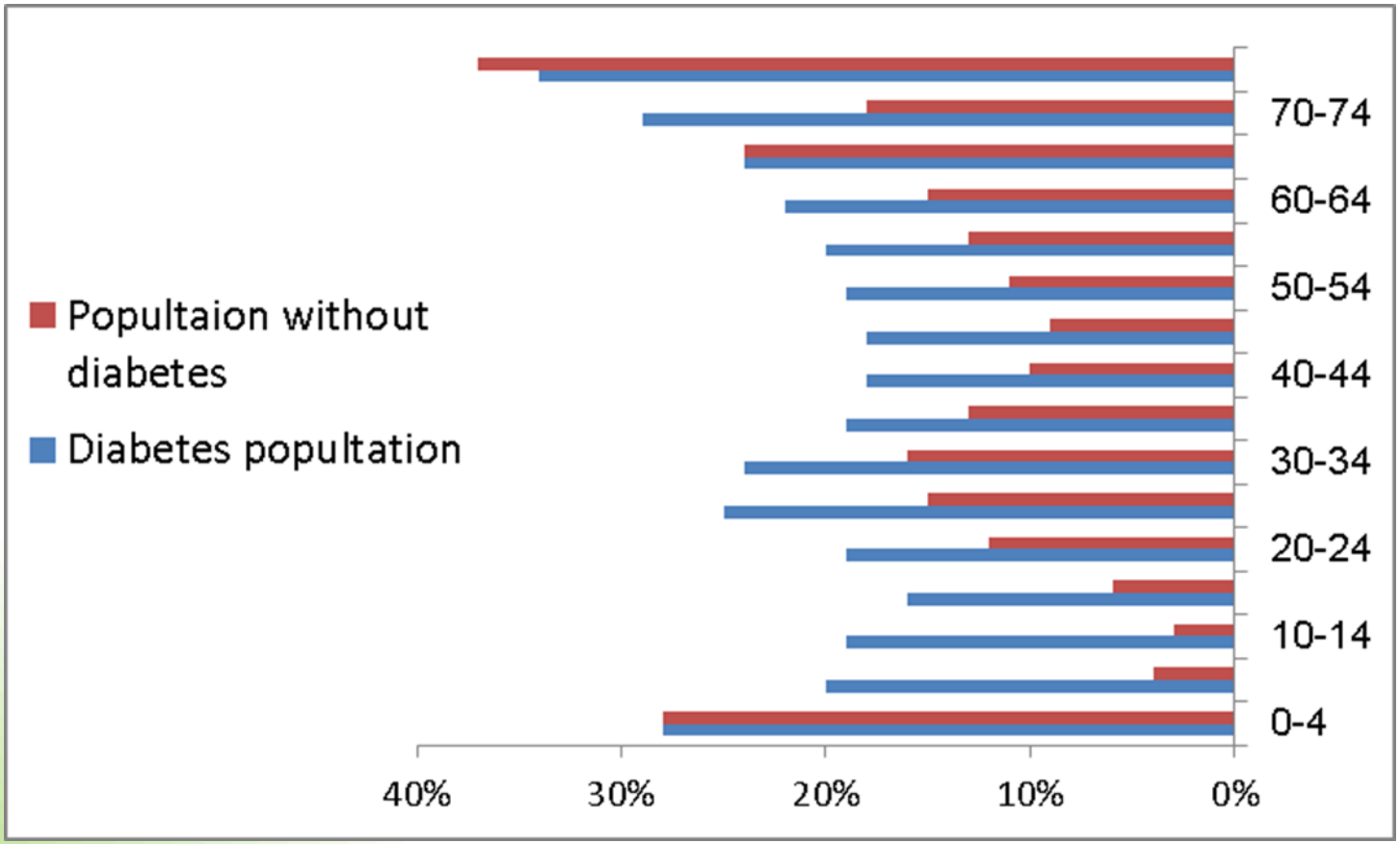
Blindness and Diabetes

- 6,526 (1.3%) of diabetes patients in 2014 were blind
- Only in 27% diabetes was the cause of the blindness



Hospitalizations in diabetes patients

- Higher Percentage of diabetics get hospitalized in a single year compared to the general population in every age group



Diabetes Registry – Key points

- Comprehensive, truly national covers ~95% of diabetics
- Will enable to monitor disease trends over time nationally and in subpopulations
- Can be used to form an assessment of disease course and burden through long-term follow-up and crosslinking
- Enriching the data regarding microvascular complications (retinopathy, foot ulcer) is in planning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danke
謝謝
teşekkür ederim
спасибо
dank je
thank you
gracias
tapadh leat
hvala
mauruuru
mochchakkeram
dziękuje
bedankt
go raibh maith agat
obrigado
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dakujem
grazie
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