



Evidence-base for EU diabetes information

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Kuwait City, 2nd-4th May 2009

Sources used

- Health indicators: EUDIP, ECHI, OECD
- Guidelines: IDF, SIGN, Consensus on diabetic foot, New Zealand, ADA, Canada, German Diabetes Association
- Systematic literature search in: Cochrane database, Medline

Thematic area's

- Risk profile for Diabetes
- Diagnosis and classification
- Risk profile for complications and intermediate outcomes
- Management and care of diabetes and its comorbidities
- Self management and lifestyle management
- Complications
- Individual characteristics
- Health status
- Demographic and socio-economic factors
- Health system & health care delivery

Selection of indicators (1)

- Indicator: “a measure used to determine, over time, performance of functions, processes and outcomes.”
- OECD defined selection:
 - Capture important performance aspect
 - Be sufficiently sound
 - Be feasible
- 3 Dimensions per indicator
 - Impact on health
 - Policy importance
 - Susceptibility to be influenced by health care system

Selection of indicators (2)

- Validity evaluation
 - Face validity
 - Content validity
- Feasibility
 - Data availability
 - Reporting burden
- Selection process by BIRO group in plenary session extensively and accepted by the above mentioned system.



Indicators selected: epidemiology and structure

- Epidemiology:
 - Annual incidence in children of type 1 diabetes
 - Prevalence of diabetes mellitus
 - Age at diagnosis with 10 year age bands
- Structural indicators (regional):
 - Hospital beds per 100.000 population
 - Physicians employed per 100.000 population
 - Number of Diabetologists per 100.000 population
 - Number of doctors taking care of diabetes per 100.000
 - Number of diabetes nurses per 100.000 population
 - Number of physicians in DMP per 1000 diabetes
 - Portion of diabetes patients in DMP



Indicators: process

- Examined during last 12 months:
 - HbA1c
 - Total/HDL cholesterol
 - Microalbuminurea
 - Eye examination
 - Foot examination
 - Smoking status
 - Serum creatinine
 - Blood pressure
- Elevated RR and med.
- Portion with RR med.
- Number anti RR med. Used
- Number lipid med.
- At least once education
- Number on self monit.
- Oral medication
- Portion Oral/insulin
- Pump therapy %
- Number insulin injections
- Number diet only
- Diagnosed CVD and antiplatelet

Indicators: intermediate outcomes

- % HbA1c most recent > 9.0%
- % HbA1c most recent <7.5
- % Total/HDL Cholesterol < 4.5
- % RR <140/90
- % BMI > 30
- % with fundus inspection with prol.ret. or maculop.
- % laser treatment ever
- % of tested with micro-albuminurea
- % of current smokers
- % with current alcohol abuse/dependence
- % former or current foot ulceration

Indicators: final outcome

- Annual incidence of blindness (among those visited)
- Annual incidence of dialysis/transplantation
- ESRD prevalence
- Annual incidence of amputations above ankle
- Annual incidence of stroke
- Annual incidence of MI
- Annual death rate in diabetes adjusted for standard European population

Data items needed

- Indicator needs data
- Data clearly defined
- Information gathering by BIRO system
- New indicators can be defined by partners

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| <ul style="list-style-type: none"> • Patient data • Year of birth • Sex • Height • Epidemiology • Diabetes type • Newly diagnosed diabetes • Year of diagnosis • Total number of children between 0-14 yrs • Diabetes y/n • Total number of general population in area • Age at diagnosis • Structural quality • Hospital beds in area • Physicians employed in area • Number of diabetologists in area • Number of doctors who regularly take care of diabetic patients in diabetes clinics in primary or secondary care in area • Number of diabetes nurses employed in area • Number of physicians offering structured Disease Management Programs (DMP) in area • Patient enrolled in structured Disease Management Program (DMP) • Process quality • Number of clinically diagnosed diabetes patients in the area • HbA1c tested within last 12 months • Total Chol/HDL tested within last 12 months • Microalbuminuria tested within last 12 months • Medical attention for nephropathy within last 12 months • Dilated eye examination or evaluation of retinal photography by a trained caregiver within the last 12 months • At least one foot examination within last 12 months • Smoking status ascertained within last 12 months • Serum creatinine tested within last 12 months • One or more blood pressure measurements within last 12 months • Hypertension prevalent within last 12 months • Received antihypertensive medication within last 12 months • Diabetes specific education at least once before • Treatment with diet only • Treatment with sulfonylurea y/n within last 12 months • Treatment with biguanides within last 12 months • Treatment with glucosidase inhibitors within last 12 months • Treatment with glitzones y/n within last 12 months • Treatment with glinides y/n within last 12 months • Treatment with insulin within last 12 months • Pump therapy within last 12 months • Average number of insulin injections per day • Self monitoring of blood/urine glucose within last 12 months • Clinically diagnosed CVD | <ul style="list-style-type: none"> • Treatment with anti-platelet therapy within last 12 months • Treatment with lipid lowering medication within last 12 months • Outcome - intermediate outcomes • Most recent HbA1c level (number) • Most recent Total Cholesterol • Most recent HDL Cholesterol • Most recent systolic blood pressure • Most recent diastolic blood pressure • Most recent Weight • Most recent BMI (Calculated from Weight, Height) • Retinopathy prevalent within last 12 months • Maculopathy prevalent within last 12 months • Fundus inspection within last 12 months • Eye laser treatment ever • Positive testing for urinary albumin within last 12 months • Smoking currently • Current alcohol abuse/dependence • Former or current foot ulceration • Outcome - terminal outcomes • Blindness prevalent • Blindness newly diagnosed within last 12 months • Dialysis and/or transplantation new within last 12 months • ESRD prevalent • History of amputation above ankle • Amputation above ankle new within last 12 months • History of stroke • Stroke new within last 12 months • History of myocardial infarction • Myocardial infarction new within last 12 months • Death within last 12 months |
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