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**Best Information through Regional Outcomes**

A Public Health Project funded by the European Commission, DG-SANCO 2005



# Clinical Review Update

## Work Package 2

JOANNEUM RESEARCH  
Brussels, November 2008



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# Agenda

- Aim and Methodology
- Data item and indicator summary
  
- Revision Changes walkthrough
- TODOs to be discussed



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# Aim of the Clinical Review

- Give an overview of the existing literature
  - in order to propose a set of relevant measures
  - collected routinely at the provider level
  - that can also be used for benchmarking of diabetes prevention and care in the different European health care systems.



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# Methodology

- **Extraction** of literature references and potentially interesting data items and Clustering in thematic areas  
→ Data item = „the smallest piece of information“
- **Selection** of Indicators  
carried out along the recommendations for indicator evaluation developed by the US Institutes of Medicine as described in the OECD Health Technical Papers No. 151 whereby
- Indicators have to
  - capture an important performance aspect,
  - be scientifically sound,
  - be potentially feasible.
- **Rating** according to the above mentioned scheme



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# Indicator Rating

- Importance („Relevance“)
  - **Impact on health.** What is the impact on health associated with this problem? Does the measure address areas in which there is a clear gap between the actual and potential levels of health?
  - **Policy importance.** Are policymakers and consumers concerned about this area?
  - **Susceptibility to being influenced by the health care system.** Can the health care system meaningfully address this aspect or problem / have an impact on the indicator independent of confounders like patient risk? Will changes in the indicator give information about the likely success or failure of policy changes?
- Scientific Soundness
  - **Face validity.** Does the measure make sense logically and clinically?
  - **Content validity.** Does the measure capture meaningful aspects of the quality of care?
- Feasibility
  - **Data availability.** Are comparable data to construct an indicator available on the international level?
  - **Reporting Burden.** Does the value of the information contained in an indicator outweigh the cost of data collection and reporting?



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# Clinical Review Thematic Areas

- 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 factor
- Health system and health care delivery
- Data and documentation (meta-data)



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# Indicator Classification

- **Epidemiology**
- **Structural quality**
- **Process quality**
- **Outcome quality – intermediate outcomes**
- **Outcome Quality – Terminal outcomes**



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# Revision Changes I

- Systematic Literature Search also in Cochrane and partially in MedLine
- Additional Data Sources
  - Quality and Outcomes Framework
  - trials, observational studies and pilot projects sponsored by the Clinical Trials Service Unit, Oxford, the MRC Clinical Epidemiology Unit
  - retinopathy (and diabetes) screening from UK National Screening Committee
  - UK BioBank
  - Hospital episode statistics
  - Other health surveys





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# Revision Changes I

- Obesity and Overweight now in one topic
- Alcohol abuse and Alcohol dependence are defined according to ICD 10, F10.2 / F10.3
- Drug dependence is defined according to ICD 10, F11-19.2
- Animal insulin still an option
- Diuretics: Thiazide and Spironolactone diuretics to be recorded separately
- Lipid lowering therapy
  - Gemfibrozil and other fibrates
  - Fish oil supplementation in hypertriglyceridemia



# Revision Changes II

- CVD and PVD now in one topic
  - Coronary revascularization:
    - PTCA (Percutaneous transluminal coronary angioplasty) with/without stent
    - CABG (coronary artery bypass surgery)
    - anti-platelet therapy
  - Peripheral revascularisation:
    - PTA with/without stent
    - Bypass surgery
    - anti-platelet therapy
- Anti-platelet therapy summarizes aspirin, platelet aggregation inhibitors, heparin as well as thrombolysis



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# Revision Changes III

- Physical activity: Exercise of moderate intensity
  - Diabetes Prevention Program (DPP)  
Recommendation of 150 minutes/week = 21min/day
  - Health-enhancing physical activity (HEPA)  
30 min per day  
*EUPASS* (European Physical Activity Surveillance System ) project tested the International Physical Activity Questionnaires (IPAQ) a questionnaire which reflects duration, intensity and frequency of HEPA.
- Education:
  - Added: Participation in health promotion programmes with relation to physical activity and weight loss
- Quality of life:
  - Comment added: Utilization of EUROQUOL also used for measuring QoL for patients with complications
- New data item: “Hypoglycaemia requiring medical attention”



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# Revision Changes IV

- Eye complications:
  - Medical diagnosis:
    - Retinopathy, proliferative => Necessity to laser or not?
    - Retinopathy (mild, severe) non proliferative
    - Maculopathy (diabetes related)
    - Elevation of eye pressure
    - Diabetic cataract
    - Dry eye (eye complication of diabetic neuropathy motility disorder)
  - Functional losses:
    - Severe vision loss
    - Partial sightedness (percentage)
    - Blindness
  - Procedures:
    - Lasertherapy
    - Photocoagulation
    - Cataract operation
    - VEGF-Therapy (still experimentell in countries like Austria)



# Revision Changes V

- Kidney Damage / Nephropathy
  - Plasma creatinine level
  - Glomerular filtration rate (GFR)
  - Chronic kidney disease stage 1-4  
(stage 1: GFR >90; stage 2: GFR 60-89; stage 3: GFR 30-59; stage 4: GFR 15-29)
  - Chronic kidney disease stage 5:  
GFR <15 = end stage renal disease (ESRD ) or end stage renal failure (ESRF)
  - Type of renal replacement therapy
  - Urinary albumin-creatinine ratio
  
  - Added SIGN guideline references



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# TODOs left

## Microalbuminuria / Macroalbuminuria / Proteinuria

- What data items should be recorded?
  - Record albumin excretion rate
  - Record albumin/creatinine ratio
  - Record GFR
- Possible Suggestion
  - Use local thresholds for microalbuminuria and qualify them as „normal“, „microalbuminuria“, „proteinuria“



# Revision Changes VI

- Neuropathy Examination options:
  - screening for neuropathy using the 10-g Semmes-Weinstein monofilament
  - or 128-Hz tuning fork with specification to the number and location of sites to be tested
  - Further examination:
    - abbreviated neurologic examination of pinprick sensation
  - distal muscle strength and reflexes
  - Referral for additional neurologic evaluation
- Peripheral Vascular Disease (PVD)
  - Introduced Stages according to Fontaine, Rutherford



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# Revision Changes VII

- Socio-economic factors:
  - Life expectancy in years at birth (at the age of 40 etc.)
  - Health care resources:  
Added: dieticians, podiatrist, cast technicians
- Data Sources
  - Added Death Certification





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# Revision Changes VIII

- Introduced new indicators
  - Prevalence of diet only treated diabetic patients
  - Number of physicians who offer structured Disease Management Programme participations to patients
  - Number of diabetic patients enrolled in structured Disease Management Programmes (DMP)
  - Portion of patients with OAD therapy in patients with diabetes type 2
  - Portion of diabetes patients with anti hypertensive treatment
  - Portion of diabetic patients with a blood pressure above RR 140/90 that receive anti-hypertensive treatment
  - Percent of patients with clinically diagnosed CVD and diabetes who are treated with anti-platelet therapy



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# Revision Changes IX

- Indicator clarifications
  - **Thrombolytic therapy in diabetic patients with previous myocardial infarction**
  - **Type of insulin therapy (evaluate separately for diabetes type 1 and 2)**
  - **Type of blood pressure treatment / first line treatment in patients with diabetes**



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# TODOs left

- Indicators:
  - Number of doctors who regularly take care of diabetic patients in diabetes clinics in primary or secondary care per 100,000
    - Amanda Adler asked for stricter definition
  - Average number of insulin injections per day in insulin treated patients
    - Shouldn't we better collect type of insulin therapy (CIT, MDI, ODI, PIT)
  - Mortality
    - 1) „mortality due to diabetes mellitus in general population“ (EUCID) – Diabetes is primary or secondary cause of death
    - 2) „mortality rate in diabetic population“



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# TODOs left

- Rediscuss to be put on the list:
  - Percentage of patients with one or more depression tests annually
  - Percentage of patients with one or more HRQoL tests annually
  - Percent of patients with hypertension performing self-monitoring of blood pressure



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**Thank you!**