B.I.R.O.
Best Information through Regional Outcomes

The role of BIRO in the implementation of the Diabetes EU Policy Recommendations

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DG-SANCO, European Commission
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The problem

- Explosion in prevalence of Type 2 diabetes: EU rate 7.5%, +16% predicted growth by 2025
- Up to 50% of cases currently undiagnosed
- Inequalities in standards of diabetes care
- Dramatic rise in the costs of diabetes
  - 50 billion euros spent yearly
  - 2.5-15% National healthcare expenditure
EU Health Council 2004

- There is merit in addressing diabetes in a coordinated, strategic & comprehensive way
- A European strategy for diabetes could make important contributions to reducing public health expenditure in member states
Increasing interest in Diabetes

- The EU Health Commissioner’s statement in 2004 that he would “give his full attention to the growing diabetes epidemic”
- Austrian Presidency decision to make Type 2 diabetes one of its two key public health priorities
IDF/FEND Vienna Declaration
February 2006

The Diabetes Policy Audit
EU Policy Recommendations
Recommendations (1)

EU:
1. Encourage Exchange Best Practices
2. Establish set of common criteria for collection, compilation and reporting of diabetes information
3. Assess National Diabetes Plans
4. Encourage development/implementation of national prevention programs
5. Facilitate EU diabetes research and ensure wide dissemination of results
Member States:
1. Collect, register, monitor, manage comprehensive diabetes data
2. Collect, register and manage economic data
3. Develop/implement National Diabetes Plans
4. Develop/implement Primary Prevention Programs
5. Develop/implement Screening Programs
6. Develop/implement Secondary Prevention Programs (Disease Management)
7. Establish holistic management (discrimination)
8. Comprehensive training of healthcare professionals
June 2006: EU Ministers of Health adopted a set of Health Council Conclusions on the Promotion of Healthy Lifestyles and Prevention of Type 2 diabetes, agreeing that **Member States** should:

- Develop and implement national diabetes framework plans
- Improve the collection and reporting of diabetes epidemiological and economic data
- Adopt a multi-sectoral, multi-disciplinary approach to managing diabetes
- Develop comprehensive diabetes training for all healthcare professionals.

The Conclusions also called upon the **European Commission** to prioritise diabetes, to promote best practice through networking & exchange between Member States and to facilitate and support European diabetes research.
“Best Information through Regional Outcomes” (B.I.R.O.):

- Three years project in the field of diabetes funded by the Health Information Strand, Public Health Program, DG-SANCO
  - Start: 1st December 2005
  - Total cost: 1.2Mn€
  - Total contribution by the European Union: 715,000€

Aim: “to provide European health systems with an ad hoc, evidence and population-based diabetes information system”

- Seven partners from academia and governmental institutions, sharing an extensive experience in diabetes research/chronic care management
- Novel strategy for the routine collection of base parameters and the regular production of European summary indicators. The proposal targets better collection and integration of national and international data targeting regional networks, optimizing precision at the lowest cost through the active involvement of local users
BIRO approach

- Continuous, automated, standardized collection of longitudinal data from regional registers as a way to produce sustainable and reliable population-based indicators at the European level.
Design (1) - The Regional Diabetes Register
Design (2) – Information Exchange
Shared Evidence-Based Diabetes Information System (SEDIS)
Minimise burden for data collection
  - Data collection unaltered locally
  - Data translated to a BIRO common format

Standardise definitions
  - Common dataset and data dictionary

Standardise statistical methods and reporting tools

Adopt modern software standards
Design (4) - BIRO Technology

CLINICAL REVIEW + COMMON DATASET = DATA DICTIONARY (Data Items, Indicators) [WP2,3,4]

Completeness, Bias

SOURCE DATA

Patterns

“Statistical Objects”

Privacy Impact Assessment [WP5]

LOCAL

XML

WEB

Report Template

Report Template
Design (5) Multilevel outputs

**Clinical**
- Criteria
  - Guidelines
  - Scientific evidence
  - Epidemiological models
  - Classification system

**Data**
- Relational Database
- Linked structures

**Administration**
- System for analysis
  - Reports
  - Statistical models

**Citizens**
- Shared Care
  - Risk factors
  - Diagnosis
  - Procedures
  - Treatments
  - Outcomes

**Management**

**Analysis**

**Planning**
Design (6) - Overall Results
EU:

1. Exchange of best practice
   - Web Portal

2. Establish set of common criteria for collection, compilation and reporting of diabetes information
   - Clinical Review
   - Common dataset
   - Data Dictionary
   - Privacy Impact Assessment
   - Database/Statistical Engine
   - Reports Template

3. Facilitate EU diabetes research and ensure wide dissemination of results
   - Database/Statistical Engine
Member States:

1. Collect, register, monitor, manage comprehensive diabetes data
   - All WPs

2. Collect, register and manage economic data
   - Clinical Review, Common dataset, Data Dictionary
   - Privacy Impact Assessment
   - Database/Statistical Engine
   - Reports Template

3.2 Create an evaluation system to track health outcomes and cost-effectiveness
   - Database/Statistical Engine

6.3 Monitor and measure health outcomes in secondary prevention
   - All WPs

8.2 Establish quality of care measurement as part of normal practice for healthcare professionals
   - All WPs
WP Leaders

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Department of Medicine,
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COORDINATION, MANAGEMENT, DISSEMINATION
PRIVACY IMPACT ASSESSMENT
DATABASE/STATISTICAL ENGINES

COMMON DATASET
DATA DICTIONARY

CLINICAL REVIEW
COMMUNICATION SOFTWARE

REPORTS TEMPLATE
WEB PORTAL

TECHNOLOGY TRANSFER
EVALUATION
Results

After 1 yr:

- n. 4 meetings
- 1st Year Investigator Meeting Malta June 2006
- Deliverables:
  - Clinical Review
  - Common Dataset
  - Preliminary Privacy Impact Assessment
  - 1st Year Evaluation Report
- Poster IDF Cape Town December 2006
- Website + Forum
Activity 2007

- Dundee Technical Meeting (April)
- Statistical Analysis of Test Datasets
- 2nd Investigator Meeting, Cyprus (end May)
- BIRO Paper(s)
- Evaluation Report
Test Datasets

- June 2007 (Region, number of subjects)
  - Umbria (IT): 30,000
  - Tayside (UK): 15,000
  - Styria+Carinthia (AT): 40,000
  - Cyprus (CY): 5,000
  - Malta (MT): 25,000
Feedback

- Value of the BIRO approach for the implementation of EU diabetes policy
- Expansion of its geographical coverage
- Interoperability between BIRO and the EU web portal