

National framework: FinDM - Diabetes in Finland Register

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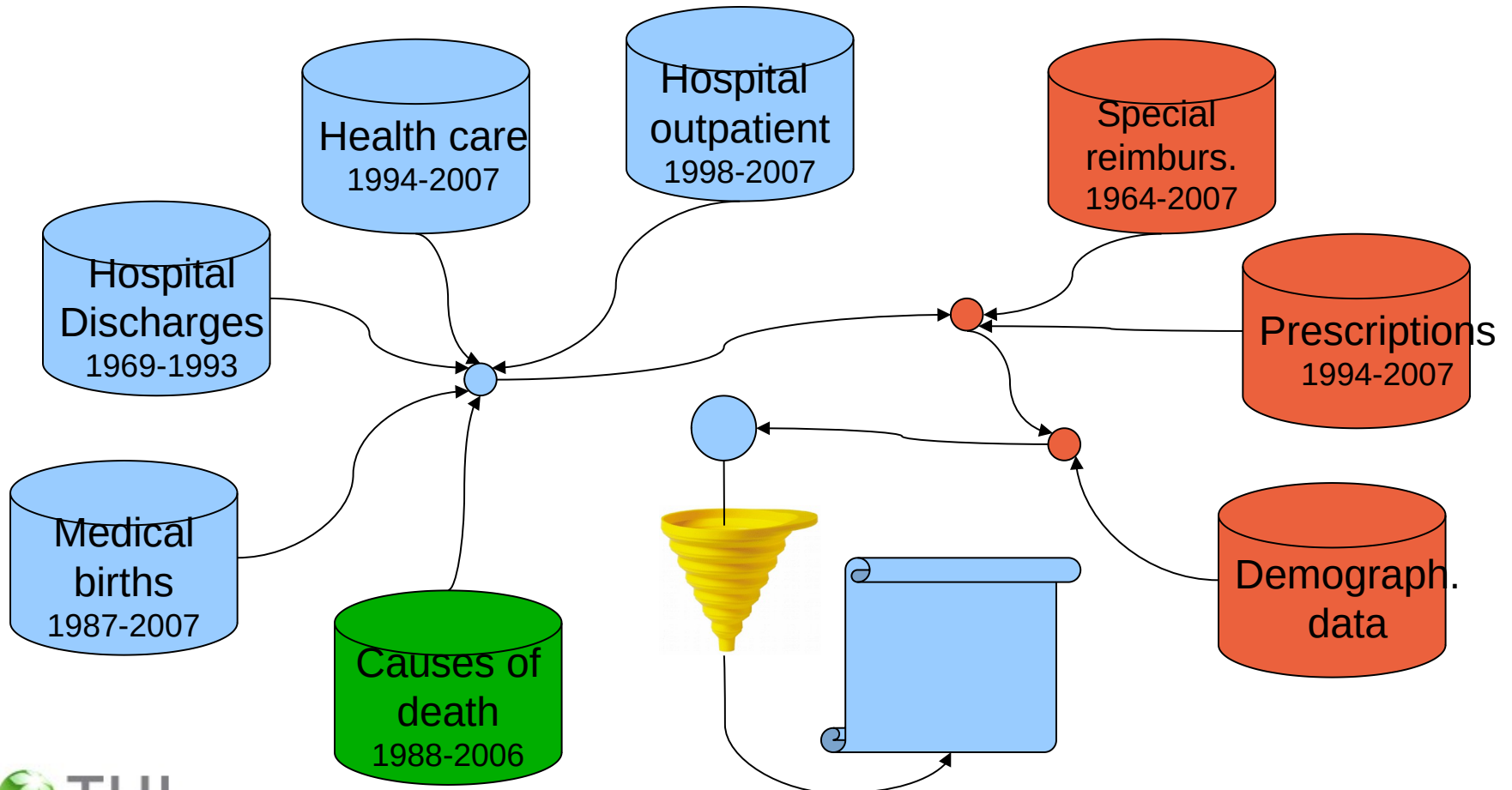
Background

- National Development Programme for the Prevention and Care of Diabetes (DEHKO) in 2000-2010
- Objectives:
 - Epidemiological monitoring, outcomes and quality of care
 - Follow-up of the national project
- Joint project:
 - National Institute for Health and Welfare (THL)
 - Social Insurance Institution
 - Finnish Diabetes Association
- Funding: THL, research grants

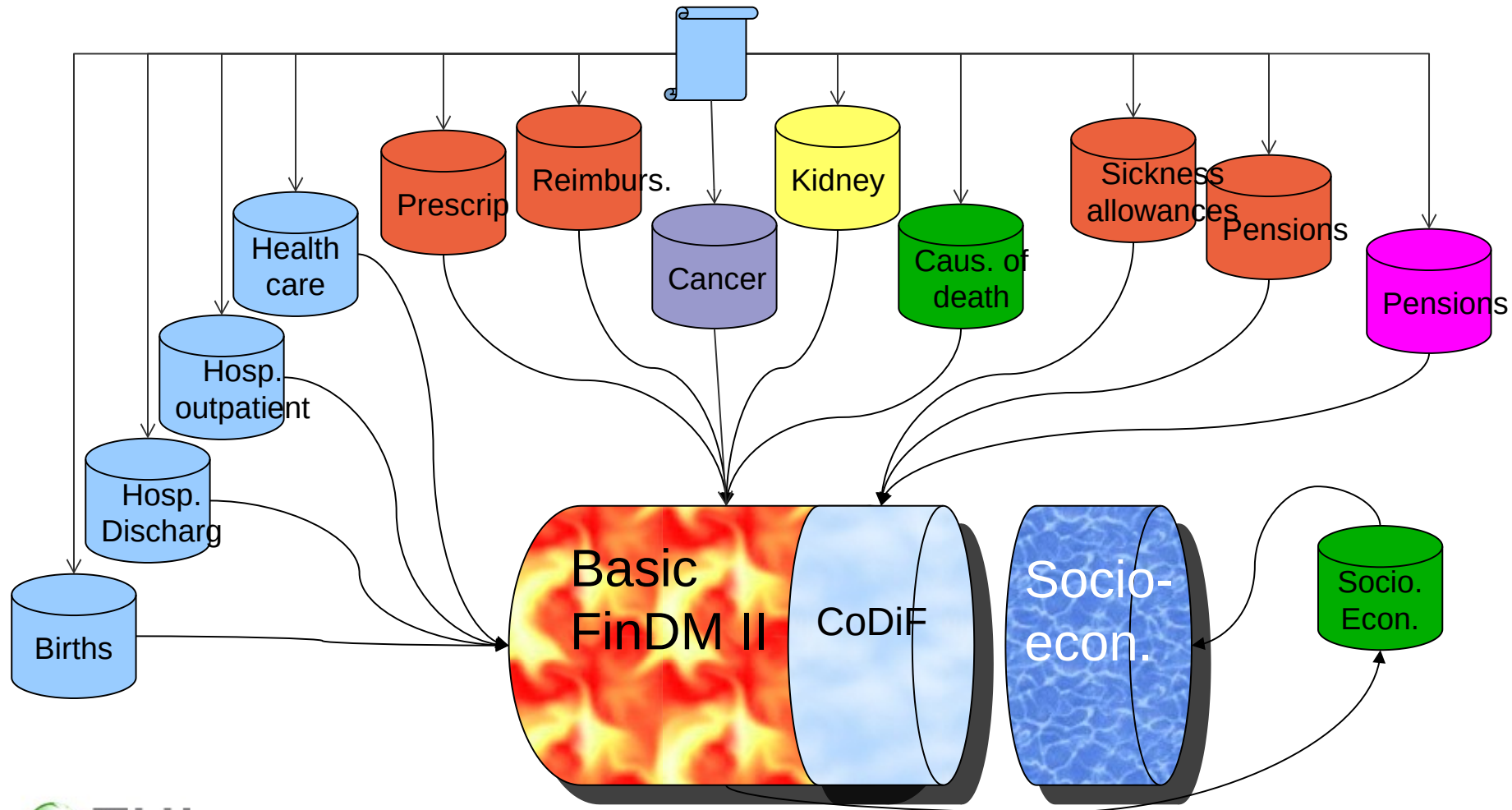
FinDM Register

- National register covering all persons diagnosed for diabetes and identified in administrative health registers since 1964
- Comprehensive linkage scheme of administrative registers using the uniform personal identifier as the key
- Linkages carried out by statistical and register authorities
- Pseudonymised data released for the FinDM project
- Updates with the intervals of 2-3 years
- Legal status: research database

Identifying the diabetes cohort in FinDM



Follow-up data for the entire cohort in FinDM



Classification of diabetic persons (2008)

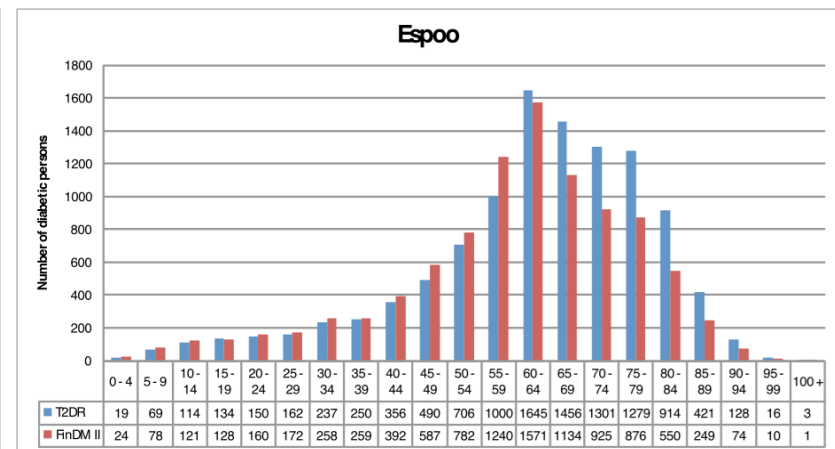
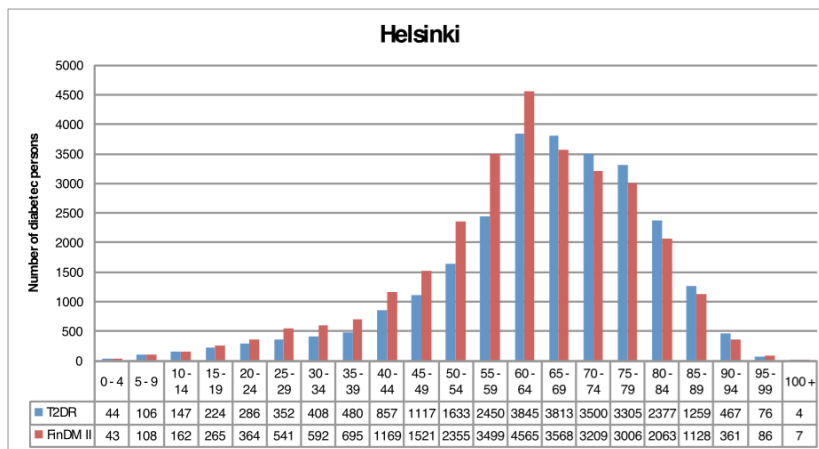
Class	N
Persons died before 1997	180 813
No confirmed diabetes	7 740
Gestational diabetes (and no other diabetes)	52 715
Insulin-treated diabetes mellitus (ITDM): <ul style="list-style-type: none"> • Insulin prescriptions filled for each possible year • No prescriptions for medication that stimulates the secretion of insulin from the pancreas 	50 027
Non-insulin-treated diabetes mellitus (NITDM). <ul style="list-style-type: none"> • Other diabetic persons 	346 290
Total number of persons in the cohort	637 585

Source: Sund R, Koski S: FinDM II. On the register-based measurement of the prevalence and incidence of diabetes and its long-term complications. A technical report. Tampere: Finnish Diabetes Association; 2009.



Validation of the FinDM Register: Case inclusion compared to local diabetes registers

- A total of 38 898 and 37 611 diabetic persons were identified in Helsinki and Espoo in the FinDM and local (T2DR) register
- FinDM II identified more in the age groups 20-65
- T2DR identified more among seniors (65+)



Source: Sund R, et al: Comparing the case inclusion in two population-based diabetes registers. Finnish Journal of eHealth and eWelfare 2010, 2(3):136-146.

Activities in the FinDM project

- Focus on research
- Collaborative project with research groups in universities and research institutes in Finland and other countries
- Main topics:
 - Comorbidity, complications and mortality among diabetic people
 - Treatment of cardiovascular diseases among diabetic people
 - Diabetes and cancer
 - Socioeconomic factors, care and outcomes in diabetes
 - Cost of diabetes

Publications - examples

- Sund R, Koski S. FinDM II: On the register-based measurement of the prevalence and incidence of diabetes and its long-term complications. A technical report. Finnish Diabetes Association, Tampere 2009. http://www.diabetes.fi/files/1167/DehkoFinDM_Raportti_ENG.pdf
- Forssas E, Manderbacka K, Arffman M, Keskimäki I. Socioeconomic predictors of mortality among diabetic people. Eur J Public Health 2012; 22(3):305-10. PubMed PMID: 21498561.
- Forssas E, Sund R, Manderbacka K, Arffman M, Ilanne-Parikka P, Keskimäki I: Increased cancer mortality in diabetic people treated with insulin: a register-based follow-up study. BMC HSR 13:267. doi: 10.1186/1472-6963-13-267.
- Harjutsalo V, Sund R, Knip M, Groop P-H: Incidence of Type 1 Diabetes in Finland. JAMA 2013; 310(4): 427-8. doi:10.1001/jama.2013.8399.
- Vehko T, Sund R, Arffman M, Manderbacka K, Ilanne-Parikka P, Keskimäki I: Monitoring the use of lipid-lowering medication among persons with newly diagnosed diabetes: a nationwide register-based study. BMJ Open 2013; 3(11):e003414. doi: 10.1136/bmjopen-2013-003414.
- Venermo M, Manderbacka K, Ikonen T, Keskimäki I, Winell K, Sund R. Amputations and socioeconomic position among persons with diabetes mellitus, a population-based register study. BMJ Open 2013;3:e002395. doi:10.1136.