



CEPHOS-LINK



NATIONAL INSTITUTE
FOR HEALTH AND WELFARE
FINLAND

The idea behind CEPHOS-LINK

National routine health care data as a source of information for research: the Finnish example

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Burden of mental disorders



CEPHOS-LINK

- Every second person will suffer from a mental disorder at some point in life
- One in four persons suffer from a mental disorder in any given year
- Rising global burden of disease due to mental disorders
- 19 % of worldwide disability (YLD*)
- YLDs increased by 16 % from 2005 to 2015
 - Major depression is third leading cause of disability worldwide (increased by 18 % from 2005 to 2015)
 - Anxiety disorders are ninth leading cause of disability (increased by 15 % from 2005 to 2015)
- Historically underfunded conditions, services are not funded according to share of burden

Source: GBD2015 Consortium. Lancet 2016; 388: 1603

*YLD=Years Lived with Disability

Expenditure for mental health services in selected EU countries

	% of all health expenditure (2013)
The Netherlands	24.8 %
Finland	11.6 %
Slovenia	8.3 %
Czech	5.3 %
Bulgaria	2,2 %

Source: Eurostat/HEDIC data set

Quality of inpatient mental health care

- Inpatient suicide rate (per 100 patients, OECD)
- Suicide within 30 days/1 year after discharge (per 100 patients, OECD)
- Excess mortality for patients with mental disorders (SMR, OECD)
- Rehospitalisation rate

Rehospitalisation

- indicates insufficient hospital treatment or lack of support or services in the community
- breaks the recovery process
- a major cost driver (a hospital episode in e.g. Finland costs 92 000 €)

International comparisons

- CEPHOS-LINK set out to analyse the use of rehospitalisation rates as a mental health care quality indicator
- By comparing countries with different health systems, a comparative effectiveness study will be performed

Finland: long tradition of register-keeping

This population census is from the year 1751

TAB. III.
GENERAL-GOUVERNEURENS I FINNLAND
NÖDIGE UNDERRÄTTELSE
i undermålingens öfver
Om STOR-FURSTENDÖMETS Underföretas Tillväxt, genom hälftägnas invandringar, eller Aftrågande genom Sjukdomar, Hunger och Wanfödsel, samt bref på nyttiga näringslag, befunnen efter jämfärd fördelning af Alder, Kön och Giftermål, samt Sänd och Omständigheter.

ÅR 1751	ALDER.		STÅND.		ANMÄRKNINGAR.	
	MÄNNIKÖN.	QVINKÖN.	MÄNNIKÖN.	QVINKÖN.		
Yngre	7106	7810	20	917	<p>ANMÄRKNINGAR.</p> <p>I GENERAL-GOUVERNEUREN I FINNLAND adderar på thesne fin 3de Tabell, ruta från ruta, alla LANDSHÖFDINGARS Sittre-Summor, uti sin Tabell öfver hela STOR-FURSTENDÖMET; Utaf hvilken äfven som af the 2ne förra, et Ark öfver inländes, in medio Aprilis, til Vår CASSELLA-COLLEGIUM, sedan en lika lydande Afskrift uti STOR-FURSTENDÖMETS Tabell-Bok bifvrat afgegn, som af GENERAL-GOUVERNEUREN och thes effertärdare förvaras.</p> <p>II. Hela befväret, af förlärdiga få väl alla 3 Kyrbö-Tabellerna, som thes Methodiska, hvilken endast tgnar til thes beqvänliga uprättande för PASTORAS, befrä blott therutinnan, at man drager några få strek, och adderar the samma. Sjätes at vinna thetta få nödige ändemål, både til GUDS ÅRAS utvidgande, genom ovederflygelige härät flytande och bevilte Grund-Sanningar, såsom ock til Rikets fänkylliga välstånd och trykta, år jämväl med the gjordt få lätt och enfalligt, at ock et Barn, som alenast lärt addera någon liten Summa, kan nyttas til at alltura alla thes Tabeller, utur hvilka thesna få nödige kundskapen, til alla delar, endast kan framkallas, hvilken genom vittra Utdömlingars rön, och mer än teo, års itadgad utöning, gifvit anledning til at bringa the mödiga Riken i Europa til märlidige anseende, samt tillfyndat thes underföretare mång befrämige lå och oförmodlige förmoner, samt te tidige hjelpmedel uti Epidemiske och Chroniske sjukdomar.</p> <p><i>Stockholm d. 1. Augusti 1753.</i> <i>J. F. V. Rosen</i></p> <p style="text-align: right;"><i>Joh. Beckroth</i></p>	
a. de 1. d. Emellan	11055	11235	171	299		
b. 1. och 2.	12875	13412	237	302		
c. 3. och 4.	24986	27206	777	610		
d. 5. och 10.	22005	21716	510	778		
e. 10. och 15.	20264	21617	1062	713		
f. 15. och 20.	19192	21273	1021	1102		
g. 20. och 25.	15990	16727	441	407		
h. 25. och 30.	11429	12702	162	629		
i. 30. och 35.	7119	10824	90	987		
k. 35. och 40.	4712	11162	258	249		
l. 40. och 45.	2603	10886	112	177		
m. 45. och 50.	1409	7792	10	11		
n. 50. och 55.	802	6902	119	165		
o. 55. och 60.	409	7792	26	249		
p. 60. och 65.	209	5571	22	110		
q. 65. och 70.	112	5088	22	107		
r. 70. och 75.	1160	2177	8	8		
s. 75. och 80.	117	1721	7	8		
t. 80. och 85.	61	109	7	8		
u. 85. och 90.	10	76	2	2		
Summa af Kön.	20338	22427	1602	2220		
Summa	42912					
GIFTERMÅL.						
	MÄNNIKÖN.	QVINKÖN.	MÄNNIKÖN.	QVINKÖN.		
A. Gifv. Pär.	20745	20705	1103	1062		
B. Andliga och Andra	4075	19710	47	273		
C. Gifv. öfver 15. år.	4112	43866	69	224		
D. Barn under 15. år.	8012	80286	220	174		
Summa af Kön.	20338	22427	205	158		
Summa	42912		1602	2220		
OMSTÄNDIGHETER.						
	MÄNNIKÖN.	QVINKÖN.	MÄNNIKÖN.	QVINKÖN.		
I. Husbild eller Matlag i Sjänsnes, dock undtagas the Gemen af Kyrkfölk, alla öfrige och icke öfrige	4437					
II. Gifvna i Sjänsnes						
III. Kungar i Sjänsnes						
IV. Kungar i Sjänsnes						
V. Husbild, Matlag eller Husbild på Landet, undtagas the Gemen af Kyrkfölk, alla öfrige och icke öfrige	42577					
VI. Gifvna på Landet						
VII. Kungar på Landet						

Finland: data sources for CEPHOS-LINK

Register	Information	Keeper	Established (year)
Care Register for Health Care (HILMO)	Specialised health care visits and inpatient care	National Institute for Health and Welfare (THL)	1969
Register of Primary Health Care Visits (AvoHILMO)	Outpatient visits in primary health care	National Institute for Health and Welfare (THL)	(2008) 2011
Causes of death registry, Statistics Finland registry	Deaths, socioeconomic factors etc.	Statistics Finland	Deaths 1722! Causes of death 1936/69 Complete census data on education 1970
Rehabilitation registry, Medication registry etc.	Rehabilitation (e.g. psychotherapy), reimbursed medication purchases and visits to private health care	Social Insurance Institution	?

- All linked by personal identity code, established 1963.

Quality of the Finnish health register data

Scandinavian Journal of Public Health, 2012; 40: 505–515



REVIEW ARTICLE

Quality of the Finnish Hospital Discharge Register: A systematic review

REIJO SUND

National Institute for Health and Welfare, Helsinki, Finland

Conclusions: Completeness and accuracy in the register seem to vary from satisfactory to very good in the register as long as the recognised limitations are taking into account. Poor recording of subsidiary diagnoses and secondary operations and other rarely used items are the most obvious limitations in validity, but do not compromise the value of data in FHDR in being used in studies that are not feasible to conduct otherwise.



Alzheimer's & Dementia 10 (2014) 303–309

Alzheimer's
&
Dementia

Validity of dementia and Alzheimer's disease diagnoses in Finnish national registers

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Lippincott
Williams & Wilkins
a Wolters Kluwer business



Original Scientific Paper

The validation of the Finnish Hospital Discharge Register and Causes of Death Register data on stroke diagnoses

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Pirjo Immonen-Räihä^c and Aapo Lehtonen^d for the FINSTROKE register

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Conclusions The sensitivity and the positive predictive values of the Finnish hospital discharge registers and causes of death registers are fairly good. Finnish administrative registers can be used for the monitoring of stroke incidence, but the number of cerebral infarctions should be interpreted with caution.

Routine data pathways: two THL examples

Specialised health care (HILMO)

a) Hospitals (inpatient, outpatient)
b) Primary health care center
inpatient wards



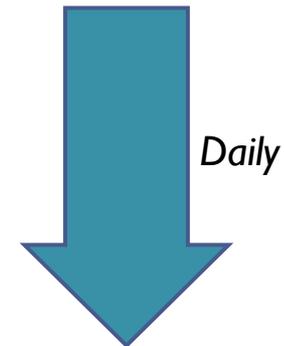
a) Hospital districts
b) Publicly-owned health sector
ICT enterprises
c) Private ICT enterprises



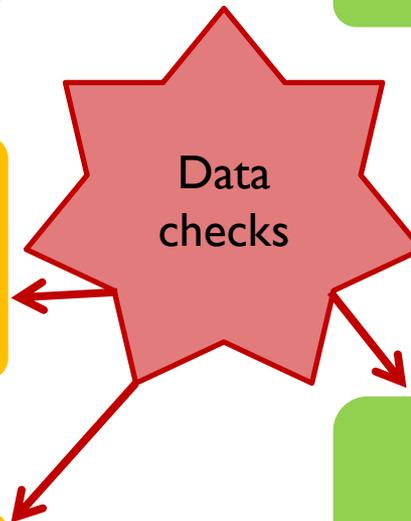
THL

Primary sector outpatient care (AvoHILMO)

Primary health care centers,
outpatient visits



THL



Thank you – Danke schön – Kiitos!

- Please visit our website: www.cephos-link.org
- Our final conference: Helsinki March 2017
– welcome!