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SESSION III: Development and use of health output indicators

HEALTH FOR ALL
ASSESSING REGIONAL DIFFERENCES IN HEALTH STATUS WITHIN SWITZERLAND

Supporting paper submitted by the Swiss Federal Statistical Office[1]

1. Introduction

Target 1 of the European strategy for Health for All by the Year 2000 adapted by the member states of the European region of WHO in 1984 aims at reducing differences in health status between countries and between population subgroups within countries by at least 25%[2]. Periodic evaluation of progress has to be done considering two aspects. On the one side, time trends of health status as well as of determinants have to be observed, and on the other side it is of interest to check if differences between population subgroups show increasing or decreasing tendencies. In the area of health status progress can be assessed quantitatively to a great extent but mostly on the basis of mortality data. However, in the area of the instrumental targets we have mainly qualitative indicators except for lifestyle. If listings of measures taken indicate activity levels, they allow merely or

[1] Prepared by Walter Weiss, Institut de santé et d'économie (ISE), Therese Stutz Steiger, Swiss Federal Office of Public Health, Thomas Spuhler, Swiss Federal Statistical Office, and Stephanie Zobrist, Swiss Federal Office of Public Health.

[2] Ziele zur «Gesundheit für alle». Die Gesundheitspolitik für Europa. Aktualisierte Zusammenfassung, September 1991. Kopenhagen 1992 (WHO Regionalbüro für Europa)

seldom to assess the effects on the targets set. In addition, health status of a population is not only and not exclusively determined by health policy but by many other political decisions and situations.

2. Objectives of regional health status assessment

As far as Switzerland is concerned, the evaluation reports indicated continuing improvements of health status and several indicators, e.g. life expectancy, put Switzerland among the leading countries. The question arises, how these improvements of health are distributed within the Swiss population? Have health inequalities increased or decreased between population subgroups?

Social inequalities in health have been shown more than once in Switzerland[3]. However, interpretation of respective time trends are rather problematic. In addition, mortality data indicate impressive and long lasting regional (or cantonal respectively) differences for all causes as well as for selected causes of death. This paper tries to examine this phenomenon further. We restricted the analyses on the causes of death influencing premature mortality (before age 65) primarily, because one of the main objectives of the Health for All strategy was the reduction of premature deaths (add years to life). Furthermore, the potential for action of different kinds, i.e. prevention, health promotion, early detection and treatment, is biggest before age 65. Also, reduction of inequalities in health has to be focused on reducing mortality of disadvantaged population groups because they not only suffer from more diseases but especially from premature death.

Time trends of regional differences in mortality and disability have been examined using the "index of dissimilarity" as proposed by Kunst and Mackenbach[4].

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[3] U.a. Beer V., Bisig B., Gutzwiller F. (1993): Social Class Gradients in Years of Potential Life Lost in Switzerland. Soc. Sci. Med. 37 (8), 1011-1018; Bodenmann A., Ackermann-Liebrich U., Spuhler T. (1990): Soziale Unterschiede in der Schweizer perinatalen Sterblichkeit. Schw. Ärztezeitung 71, 1927-1930; Minder C. E. (1993): Socio-economic factors and mortality in Switzerland. Soz. Präventivmedizin 38, 313-328.

[4] Kunst A.E., Mackenbach J.P. (1996: Die Messung sozioökonomisch bedingter gesundheitlicher Ungleichheiten. Kopenhagen (Weltgesundheitsorganisation, Regionalbüro für Europa)

3. Regional mortality trends

About three quarters of all the years lost prematurely can be attributed to 3 broad groups of causes of deaths. Among men accidents and violent deaths (mainly suicide) are on top with 37% followed by cancer (22%) and cardiovascular diseases (17%). Among women cancer (38%) ranks first, before accidents and violent deaths (23%) and cardiovascular diseases (12%).

In Switzerland, overall mortality at ages 0-64 declined by 20% for men and 15% for women between 1982 and 1993. Although the ranking of the cantons changed considerably, the top and bottom ranks remained unchanged. Only one canton achieved a 25% decrease during this time period.

Among men the targeted 15% reduction of cancer mortality has been achieved almost completely on national level as well as regional level (cantons). Among women a similar reduction has been achieved by two cantons only. Female cancer death rates declined by only about 7% and even increased in two cantons.

Reduction of cardiovascular mortality was more sucessful. It declined by about 30% and was most impressive in cantons with highest mortality in 1982. Different patterns can be observed for mortality due to cirrhosis of the liver where the highest levels were seen in men living in wine producing regions. Among men respective mortality declined most in those regions while among women mortality even increased in three cantons.

Suicide mortality decreased a little without reaching the targets so far. Opposing trends could be observed in the different cantons. However, mortality due to road accidents was reduced much more than the targeted 25%.

The following table presents the regional mortality differences and their trends from 1982 to 1993. Generally, dissimilarity between cantons is rather low and it mostly declined during the observed time period. However, this does not hold for mortality due to alcoholic cirrhosis of liver and road accidents where regional differences are rather high. A remarkable increase of regional differences was observed for male suicide.

Table: Time trends of regional mortality and disability differences in Switzerland

	Sex	No.of cases 1981/83	No.of cases 1992/94	Cases to redistribute 1981/83	Cases to redistribute 1992/94	Index of dissimilarity 1981/83	Index of dissimilarity 1992/94	Dissimilarity difference
All causes of death	M	9041	8401	318	222	3.5	2.6	-25%
	F	4506	4242	92	96	2.0	2.3	15%
Cancer mortality	M	2591	2421	125	100	4.8	4.1	-15%
	F	1875	1909	38	36	2.0	1.9	-5%
Cardiovascular mortality	M	2427	1854	73	64	3.0	3.4	13%
	F	815	616	37	27	4.5	4.3	-4%
Suicide	M	874	789	38	53	4.3	6.7	56%
	F	348	284	26	22	7.5	7.9	5%
Alcoholic cirrhosis of the liver	M	291	217	42	22	14.3	10.1	-29%
	F	105	103	15	13	14.7	12.7	-14%
Road accident mortality	M	670	400	86	46	12.8	11.4	-11%
	F	209	115	26	13	12.3	11.6	-6%
Disability pensioners, total*	M	71499	93995	6905	7639	9.7	8.1	-16%
	F	48633	66235	3648	5141	7.5	7.8	4%
Disability pensioners, mental diseases*	M+F	24965	39311	3209	5587	12.9	14.2	10%
Disability pensioners, accidents*	M+F	11664	16463	1172	1484	10.0	9.0	-10%

* Reference periods: 1986/88 and 1993/95

4. Regional disability trends

In Switzerland, data on morbidity is still sparse. Reliable information on time trends concerning subjective health, health problems and disabilities will only be possible based on the results of the Swiss Health Surveys conducted periodically (every 5 years) since 1992.

Data from the national disability insurance presented here cannot be considered as valid epidemiologic morbidity indicators, because they do not indicate disability levels but exclusion from the labour market due to disabling conditions. In the framework of HFA-strategy evaluation these data are important, however, since they provide information related to target 2 "to live socially and economically fullfilling lives".

Among both sexes and within all regions considerable increases of the proportion of disability pensioners could be observed form 1986/88 to 1994/96 (3 years average). The reasons of this development are not fully clear (22.5% increase for men and 27.6% for women respectively). Interestingly, above average increases have been seen for disabilities due to mental and behavioural disorders (48%) and due to accidents (33%).

Regional differences in disability increased slightly among women, while they decreased among men. It should be noted that dissimilarity for disability, especially for mental disabilities, is rather high in comparison to mortality.

5. Trends in regional health status

The results of this study do not sufficiently answer the question whether regional differences in morbidity and mortality increased or decreased in Switzerland.

Among men, recent development is positive because the mortality decline indicates a reduction of the gender differences. On the other side the decreasing regional dissimilarity suggests that mortality reduction was primarily due to improvement of the health of disadvantaged population groups. Regional differences in disability decreased as well.

Among women however, dissimilarity increased in mortality as well as disability. These findings indicate generally a trend towards worsening health of females in many regions.

6. Conclusions

These results do show quite clearly the relation between living conditions, life styles and health status of the population. They confirm the claims for intersectoral activities as suggested in the HFA-strategy, e.g. setting up living conditions conducive to health, examination of health effects of policy areas other than health. In addition, they reaffirm the importance of

continuous monitoring of population health and its determinants. Health monitoring enables, thus, evaluation of health effects of measures from outside health policy per se. Effects of social or labour force policies on health care costs could be identified and stopped thereafter, for example.

Health monitoring should be done in the proximity of everyday life, on the level of regions, local areas or towns and it should include the specific living conditions of specific population groups. Evaluation of the health of population should not be limited to assessing differences between and within regions or population subgroups. If health policy aims at reducing health inequalities, evidence for such inequalities demands thorough analysis of its causes. Such scientific evidence has to be communicated to policy makers and the public at large in order to find solutions to remedy suggested causes.

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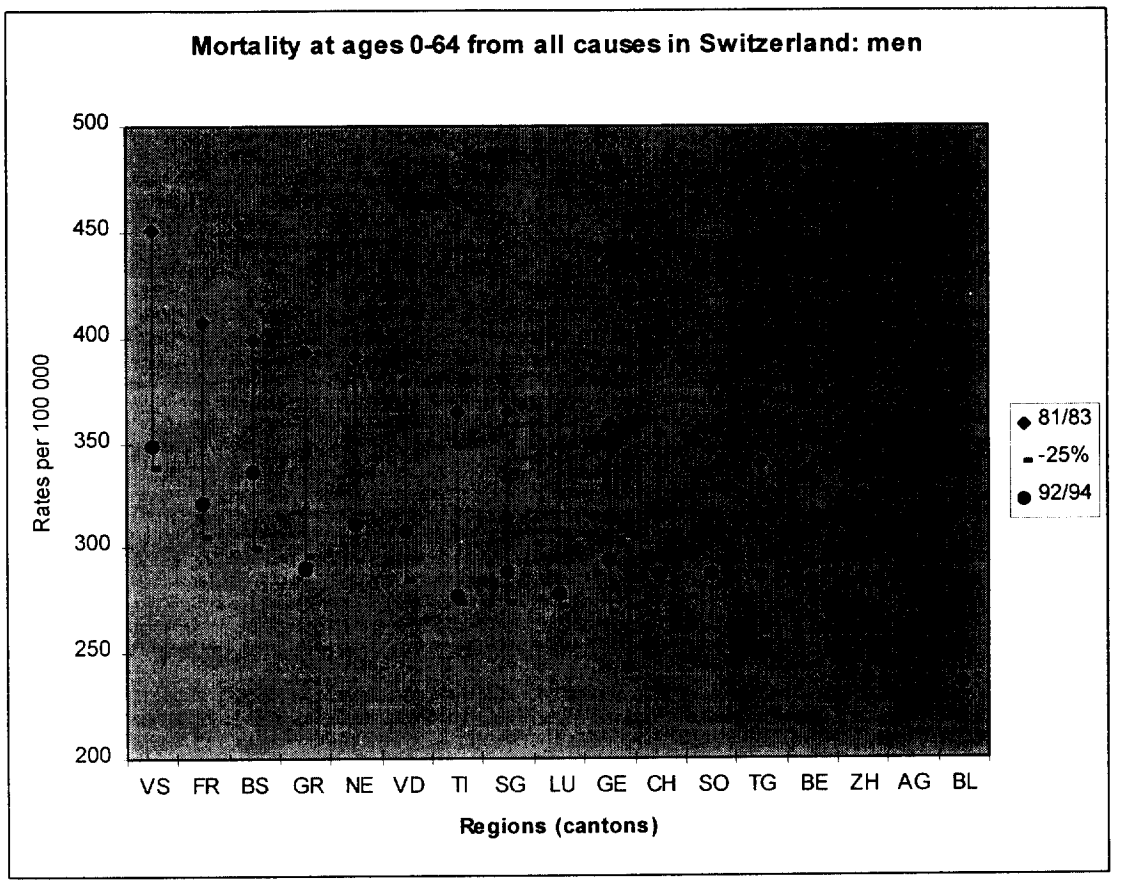
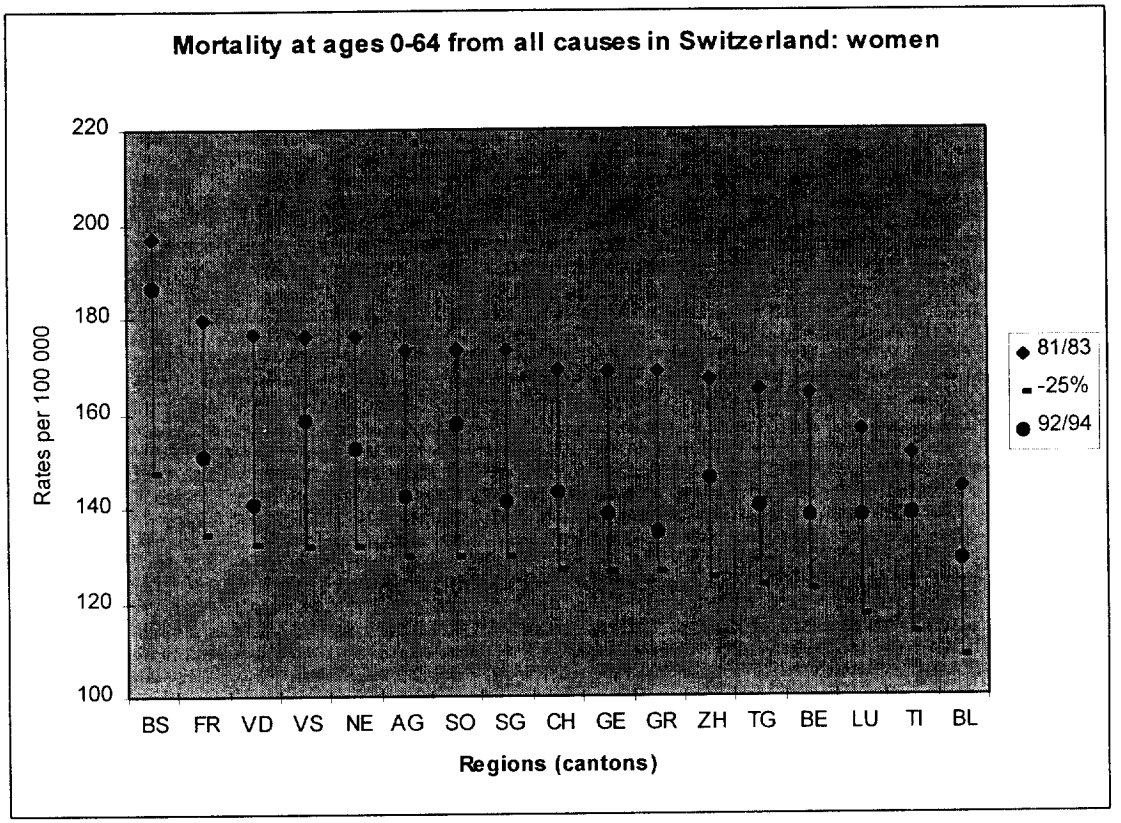

Mortality at ages 0-64 from all causes in Switzerland: men
Rates per 100 000
500
450
400
350
300
250
200
VS FR BS GR NE VD TI SG LU GE CH SO TG BE ZH AG BL
Regions (cantons)
81/83
-25%
92/94


Mortality at ages 0-64 from all causes in Switzerland: women
Rates per 100 000
220
200
180
160
140
120
100
BS FR VD VS NE AG SO SG CH GE GR ZH TG BE LU TI BL
Regions (cantons)
81/83
-25%
92/94