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A strategy for tackling health inequalities in the Netherlands

Johan P Mackenbach, Karien Stronks

The Netherlands ministry of health has undertaken systematic research into inequalities in health. Twelve different interventions have been tried and evaluated, and from the results an independent advisory committee has devised a strategy to reduce inequalities by 2020

Socioeconomic inequalities in health are a major challenge for health policy worldwide,¹ and several countries are struggling to develop realistic and effective programmes for reducing them. In Britain the Acheson committee² and in Sweden the National Public Health Committee have developed recommendations and policy targets that are intended to reduce inequalities in health.³ In this article we describe the approach followed in the Netherlands.

The Dutch ministry of health has over the past 10 years commissioned systematic research into the problem. An initial five year research programme mapped the nature and determinants of socioeconomic inequalities in health in the Netherlands,⁴ and some of the key findings are presented in the table.⁵⁻¹⁰ Health inequalities and their explanation in the Netherlands are largely similar to those in other countries in western Europe.^{6, 8, 11} A second, six year, programme was launched in 1994 to gain systematic experience with interventions and policies designed to reduce health inequalities.

Approach

The main focus of the programme was on developing and evaluating interventions and policies, but several other activities (monitoring of health inequalities, a longitudinal explanatory study, research seminars, publications, establishing a documentation centre) were undertaken as well. Box 1 lists the 12 intervention studies that were commissioned after two calls for proposals and assessment by peer review of the submissions. The intervention studies started between 1997 and 1999. Most had a quasi-experimental design and compared health outcomes (for example, school absenteeism) or process measures (for example, use of folic acid) in an experimental and a control group.¹² Seven interventions gave positive results:

- An integrated programme to prevent school children starting smoking
- Programmes for tooth brushing at primary school
- Adapted working methods and equipment for bricklayers
- Rotation of tasks among dustmen
- Formation of local care networks
- Peer education for patients of Turkish origin with diabetes
- Introduction of nurse practitioners for patients with asthma or chronic obstructive pulmonary disease.

Four of the remaining intervention studies either failed or produced negative results,¹³⁻¹⁶ and one had not reported at the time of writing.

When the results of the intervention studies became available, scientific experts and policy makers

Summary points

The Netherlands has pursued a systematic, research based approach to develop a strategy for reducing socioeconomic inequalities in health

Twelve evaluation studies were conducted to study the effectiveness of different interventions

A government advisory committee developed a strategy covering four different entry points for reducing socioeconomic inequalities in health, containing 26 specific recommendations and 11 quantitative policy targets

We need international exchange of experiences with developing and implementing interventions and policies to reduce socioeconomic inequalities in health in order to increase learning speed in this field

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in six different areas (income, education, health promotion, working conditions, housing conditions, health care) met in 2000 to discuss possible recommendations for new policies and interventions.¹⁷ Subsequently, the committee overseeing the programme held several plenary meetings to develop a comprehensive strategy for reducing health inequalities. The committee consisted of past and present politicians of various political backgrounds, as well as health policy makers and researchers, and reported directly to the minister of health.

The committee wanted its strategy to be based on sound evidence. Ideally, factors targeted by the strategy should be known to contribute to health inequalities, and interventions and policies should be known to diminish exposure of lower socioeconomic groups to these factors. This second requirement was difficult to meet. Although the programme produced evidence on effectiveness of interventions and policies and showed some positive results, there remained important gaps in the knowledge base, both in coverage of various policy options and strength of evidence. This problem has also been encountered in other countries.^{18, 19} The committee considered that further evidence is unlikely to become available unless large scale measures to reduce inequalities in health are undertaken. It therefore decided to recommend a combination of implementation of "promising" interventions with continued evaluation efforts. The committee published its main report in March 2001.²⁰

Box 1: Intervention studies**Interventions targeting socioeconomic disadvantage**

- Supplementary benefits to parents living in poverty, identified during preventive health screening of children (feasibility study only; no evidence on effectiveness collected)

Interventions to reduce effects of health on socioeconomic disadvantage

- Counselling of secondary school children with frequent school absence due to illness (planned evaluation method failed)

Interventions to reduce effects of socioeconomic disadvantage on health

- Tailored mass media campaign to promote periconceptional use of folic acid in lower socioeconomic groups (intervention does not reduce socioeconomic gap)
- Community based intervention to improve health related behaviour in deprived neighbourhoods (evaluation results available in 2002)
- Integrated programme (including teaching social skills and monetary rewards) to prevent school children in lower general and vocational education starting to smoke (intervention reduced smoking initiation rate)
- Tooth brushing at primary schools (intervention eliminated socioeconomic gap in tooth brushing)
- Adapted working methods (raised bricklaying—working at waist height) and equipment (use of lifting machine) for bricklayers (intervention reduced physical workload and sickness absenteeism)
- Rotation of tasks (driving and minicontainer loading) among dustmen (intervention reduced physical workload and sickness absenteeism)
- Introduction of self organising teams in various production organisations (planned evaluation method failed)

Interventions to improve accessibility and quality of healthcare services

- Formation of local care networks among general practitioners, housing corporation staff, and police officers to prevent homelessness among chronic psychiatric patients (intervention reduced house evictions and compulsory admissions to psychiatric hospitals)
- Peer education for patients of Turkish origin with diabetes (intervention improved glycaemic control and healthy behaviour, but only in women)
- Introduction of nurse practitioners for patients with asthma or chronic obstructive pulmonary disease attending general practices in deprived areas (intervention increased treatment compliance and reduced exacerbations)

Recommended strategy

Targets

The committee decided to base its strategy on a number of quantitative targets, because these can help in plotting a clear policy and can function as milestones for interim assessments of the strategy. It took the World Health Organization target as its starting point,¹ reformulated for the Netherlands as: “By the year 2020, the difference in healthy life expectancy between people with a low and people with a high socioeconomic status should be reduced from 12 to 9

years, due to a (stronger) increase in healthy life expectancy in the lowest socioeconomic groups.”

To attain such an ambitious goal, major efforts are required, if only because during the last few decades inequalities in health in the Netherlands have increased rather than decreased.²¹ Although it was considered unwise to abandon the ultimate ambition laid down in this “inspirational” target, the strategy focused on a set of intermediate targets that seemed feasible today or in the near future (box 2). These targets were chosen to represent each of the main entry points for reducing socioeconomic inequalities in health, and were limited to intermediate outcomes for which quantitative data for the Netherlands are currently available.

Package of policies and interventions

Box 3 lists the interventions and policies constituting the strategy recommended by the committee. The strategy covers all four entry points and spans the entire range between “upstream” measures targeting socioeconomic disadvantage and “downstream” measures targeting accessibility and quality of healthcare services. Where current policies (education policies, income policies, work disability benefit schemes, health care financing schemes) were expected to contribute to reducing health inequalities the committee explicitly recommended continuation. This is by no means a trivial decision, because none of these achievements of the past can be considered safe for the future. For example, the Dutch government is considering a reform of the healthcare financing system that could lead to reduced coverage of health care for those insured under the current public scheme, which would jeopardise equal financial accessibility.

In a number of other areas the committee recommended intensified or new policies. These recommendations were partly based on reports of positive results of intervention studies. This applied to the recommendations for school health promotion programmes, technical and organisational measures to reduce physical workload, reinforcement of primary care in disadvantaged areas by employing practice nurses and peer educators, and local care networks to prevent social problems among chronic psychiatric patients. The results of some of the other intervention studies led to recommendations for further development of those interventions, as in the case of special benefit schemes for families living in poverty, and of counselling schemes for school absenteeism. Most of

Socioeconomic inequalities in health in the Netherlands, 1990s, GLOBE-study^a

Health indicator	Level of education*			
	1 (high)	2	3	4 (low)
Prevalence of “less-than-good” self-assessed health (odds ratio)	1.00	1.46 (1.28-1.66)	1.99 (1.77-2.23)	3.41 (3.01-3.86)
Prevalence of one or more long term disabilities (odds ratio)	1.00	1.56 (1.10-2.21)	1.87 (1.37-2.57)	3.02 (2.18-4.20)
Incidence of lung cancer (rate ratio)	1.00	1.44 (0.67-3.12)	2.36 (1.20-4.61)	2.66 (1.34-5.26)
Incidence of acute myocardial infarction (rate ratio)	1.00	1.23 (0.75-2.02)	1.26 (0.81-1.97)	1.85 (1.19-2.88)
Incidence of traffic injury resulting in hospital admission (rate ratio)	1.00	1.50 (0.55-4.08)	3.04 (1.25-7.38)	2.76 (1.06-7.17)
Mortality from cancer (rate ratio)	1.00	1.54 (0.98-2.42)	1.54 (1.01-2.33)	1.86 (1.22-2.83)
Mortality from cardiovascular disease (rate ratio)	1.00	1.60 (0.97-2.66)	1.47 (0.92-2.35)	1.91 (1.20-3.04)
Total mortality (rate ratio)	1.00	1.35 (0.96-1.90)	1.44 (1.06-1.96)	1.75 (1.28-2.40)

* (1) post-secondary education: higher vocational school and university

(2) higher secondary education: intermediate vocational and intermediate/higher general education

(3) lower secondary education: lower general and vocational school

(4) primary school only

Odds ratios and rate ratios adjusted for age, sex, marital status, degree of urbanisation.

Box 2: Recommended quantitative policy targets**Targets relating to socioeconomic disadvantage**

- Percentage of children from lower social class families who enter secondary education to be increased from 12% in 1989 to $\geq 25\%$ by 2020
- Income inequalities in the Netherlands to be maintained at the level of 1996 (Gini coefficient=0.24)
- Percentage of households with an income below 105% of the "social minimum" to be reduced from 10.6% in 1998 to $\leq 8\%$ by 2020

Targets to reduce effects of health on socioeconomic disadvantage

- Disability benefit for total work incapacity due to occupational health problems to be maintained at the level in 2000
- Percentage of chronically ill people aged 25-64 who are in paid employment to be increased from 48% in 1995 to $\geq 57\%$ by 2020

Targets related to factors mediating the effect of socioeconomic disadvantage on health

- Difference in smoking between those with lower and those with higher education to be halved, by decreasing the percentage of smokers among those with only primary school education, from over 38% in 1998 to $\leq 32\%$ by 2020
- Difference in physical inactivity between those with lower and those with higher education to be halved, by decreasing the percentage of the physically inactive among those with only primary school education, from over 57% in 1994 to $\leq 49\%$ by 2020
- Difference in obesity between those with lower and those with higher education to be halved, by decreasing the percentage of obese persons among those with only primary school education, from over 15% in 1998 to $\leq 9\%$ by 2020
- Difference between lower and higher education groups in percentage of those engaged in heavy physical labour to be halved, by decreasing the proportion of people with complaints resulting from physical labour among those with primary school education only, from 53% in 1999 to $\leq 43\%$ by 2020
- Difference in control in the workplace between those with lower and those with higher education to be halved, by increasing the percentage of persons who control the execution of their work among those with only primary school education from 58% in 1999 to $\geq 68\%$ by 2020

Targets related to accessibility and quality of healthcare services

- Differences in use of healthcare facilities (consultation with GPs, medical specialists, and dentists; hospital admissions; prescribed drugs) between lower and higher education groups to be maintained at the level in 1998

the other recommendations, however, were primarily based on an understanding of the factors contributing to health inequalities, and of the best way to deliver interventions targeting these factors. The committee did not attempt to estimate the costs of the recommended interventions and policies.

Research and development

Given that research has not yet fully disclosed the origins of socioeconomic inequalities in health, the committee considered continued explanatory

research to be vital because it may lead to new entry points for intervention. The same applies to further development of effective interventions and policies. The committee therefore recommended continuing evaluation of all recommended interventions and policies.

Discussion

In 1994 the *BMJ* published a paper reviewing the first Dutch research programme on socioeconomic inequalities in health and announcing the second programme, which has now ended.⁴ While many countries, including Britain, Sweden, and Finland have carried out research in health inequalities in the second half of the 1990s, the Dutch programme is unique in its emphasis on interventions and its focus on commissioning evaluations of interventions. Although this was done systematically, using an explicit conceptual and methodological framework, the programme also had obvious limitations. It had a modest budget of €3m (£1.9m; \$2.9m) over six years, which funded no more than 12, rather small scale, intervention studies targeting relatively easily modifiable factors. The choice of target was constrained not only by the small budget but also by the strict methodological requirements which in practice made it nearly impossible to study the effectiveness of broader policy measures. Some of the intervention studies failed because the evaluation planned turned out not to be feasible. In the end, therefore, the contribution of the intervention studies to strategy development was modest.

Nevertheless, remarkable progress has been made since 1994, not only in terms of knowledge gained but also in terms of increased confidence among policymakers and practitioners to take action to reduce inequalities in health. Many health agencies in the Netherlands are working to reduce health inequalities. This is illustrated by the fact that the "National Contract on Public Health," concluded in 2001 between many national and local agencies in public health, has chosen the reduction of socioeconomic inequalities in health as its first priority. Many local health agencies have already implemented some of the interventions discussed in this paper. The official reaction of the Dutch cabinet to the recommendations presented to parliament in November 2001 was positive but it left decision making to the next cabinet formed after the elections in spring 2002.²²

No single country has the capacity to contribute more than a fraction of the knowledge necessary to support strategies for reducing inequalities in health. This is a matter not only of insufficient resources for research but also of restricted opportunities for implementing—and then evaluating—policies and interventions. International exchange, and perhaps coordination, is therefore necessary. There is an important role for international agencies such as the European Union to support such collaboration.²³

The programme committee was chaired by W Albeda; JM acted as secretary; and other members were H Dupuis, H F L Garretsen, P J van der Maas, M Mootz, KS, and R W Welschen.

Box 3: Recommended interventions and policy measures

Interventions and policies targeting socioeconomic disadvantage

- Continuation of policies that promote educational achievement of children from lower socioeconomic families
- Prevention of an increase in income inequalities through adequate tax and social security policies
- Intensification of antipoverty policies, particularly those that relieve long term poverty through special benefit schemes and help with finding paid employment
- Further development and implementation of special benefit schemes for families whose financial situation threatens the health of their children

Interventions and policies to reduce effects of health on socioeconomic disadvantage

- Maintaining benefit levels for long term inability to work, particularly for those who are totally or partially disabled due to occupational health problems
- Adaptation of working conditions for chronically ill and disabled people to increase work participation
- Health interventions among long term recipients of social benefits to remove barriers to finding paid employment
- Further development and implementation of counselling schemes for school pupils with regular or long term health related absenteeism

Interventions and policies targeting factors mediating the effect of socioeconomic disadvantage on health

- Adapting health promotion programmes to the needs of lower socioeconomic groups, particularly by focusing on environmental measures, including introducing free fruit at primary schools and increasing the excise tax on tobacco
- Implementing school health promotion programmes that target health related behaviour (particularly smoking) among children from lower socioeconomic families
- Introducing health promotion into urban regeneration programmes
- Implementation of technical and organisational measures to reduce physical workload in manual occupations.

Interventions and policies to improve accessibility and quality of health care services

- Maintaining good financial accessibility of health care for people from lower socioeconomic groups
- Relieving the shortage of general practitioners in disadvantaged areas
- Reinforcing primary health care in disadvantaged areas by employing more practice assistants, nurse practitioners, and peer educators—for example, for implementing cardiovascular disease prevention programmes and better care for people who are chronically ill
- Implementation of local care networks aiming for the prevention of homelessness and other social problems among chronic psychiatric patients.

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Endpiece

The perils of publishing

When you publish something, it is very much as if you pulled your pants down in public. If what you have written is good, nobody can hurt you; if what you have written is bad, nobody can help you.

Edna St Vincent Millay, American poet
(1892-1950)

Submitted by Matthew Menken, physician,
Princeton, United States