

# Rationalising chances of success in intersectoral health policy making

L M van Hertem, S A Reijneveld, L J Gunning-Schepers

## Abstract

**Objective**—It is generally accepted that a wide range of factors determine the health of a population, many of which are beyond the remit of the Ministry of Health. The aim of intersectoral health policy is to influence these factors. Success depends on a multi-stage process. This paper aims to provide support for the first stage of this process in the form of a quick scan for appraising the feasibility of intersectoral health policy.

**Design**—The content of the quick scan for intersectoral health policy was derived from a literature review. To determine the usefulness of this quick scan, the study looked at two examples in the policy sectors of education and safety.

**Main results**—The quick scan distinguishes between three factors: (1) the availability of evidence, (2) the degree of support, and (3) the availability of tools for implementation. The quick scan made it possible to review the two policy sectors systematically in a relatively short time and to obtain sufficient information for priority setting in intersectoral health policy. The examples in this paper suggest that intersectoral health policy for community safety is more feasible than intersectoral policy for psychosocial problems in secondary education. However, specific information is required for a more precise assessment of feasibility.

**Conclusions**—There are many ways of improving health through intersectoral health policy. The proposed quick scan may provide systematic support for setting priorities before developing policies of this kind.

(J Epidemiol Community Health 2001;55:342-347)

field concept,<sup>1</sup> shows that five groups of determinants can be distinguished.<sup>2</sup> This model is often the basis for the design and study of health policies. At the national level, the Ministry of Health is directly responsible for health care services (including prevention services) and health education in specific areas. However, many determinants of health are outside its control. This means that the Ministry of Health is often dependent on collaboration with other ministries to achieve health policy targets. In turn, this can raise the question of how the Ministry of Health can realise its aims in other policy sectors.<sup>3,4</sup> The aim of intersectoral policy is to provide an answer. Intersectoral health policy can be defined as policy outside the scope of public health and health care with an explicit health component or dimension.<sup>5</sup> Intersectoral policy also plays a part at the local level and in public-private partnerships. The main focus of this paper is on the national level, but we also discuss other levels.

Intersectoral health policy can be a response to existing policy proposals from other sectors or it can consist of a new intersectoral policy. Existing policy proposals are increasingly subjected to health impact assessments (HIA). A health impact assessment is an instrument for determining the effects of a proposed policy on health. It can be relevant for policy proposals that are not directly concerned with health but that may nevertheless affect it. It allows the Ministry of Health to direct the political and social agenda and to sharpen the focus on health in interdepartmental policy making.<sup>6-13</sup>

Intersectoral health policy can also involve the development of new policy. Here, the health sector collaborates with other sectors in developing policies for improving health, an example being intersectoral health policy on traffic accidents. A structural scanning of all policy sectors can help to identify the sectors with the best opportunities for improving or protecting health. However, there is often no structured priority setting of this kind.<sup>14</sup> Ideally, the following steps should be distinguished when developing new intersectoral health policies: (1) analysis of the feasibility of intersectoral health policy; (2) ranking of relevant policy sectors; (3) sounding of the relevant policy sectors; (4) negotiation and developing of intersectoral health policies; and (5) implementation and evaluation of the agreed intersectoral health policies. The Ministry of Health should carry out the first two steps before contacts are made with other policy partners.

TNO Prevention and Health, PO Box 2215, 2301 CE Leiden, the Netherlands  
L M van Hertem  
S A Reijneveld

Institute of Social Medicine, Academic Medical Centre, University of Amsterdam, the Netherlands  
L J Gunning-Schepers

Correspondence to:  
Dr van Hertem  
(L.M.vanHerten@pg.tno.nl)

Accepted for publication  
19 December 2000

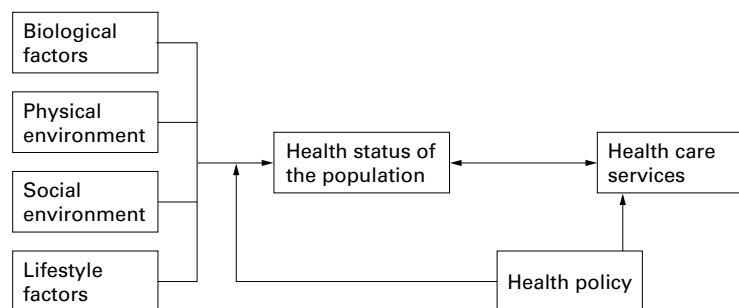


Figure 1 Health field concept.

Evidence	<p>What is the extent of the problem?</p> <p>Which health effects (positive and negative) can occur due to action in this policy sector?</p> <p>Are there causal relations between health effect and policy sector or are relations plausible?</p>
Support	<p>Is the subject on the political agenda?</p> <p>Which actors are involved?</p> <p>Will actors support or oppose?</p>
Tools	<p>Which instruments are already in use?</p> <p>Which instruments are proven useful?</p> <p>Which instruments are applicable on demand?</p>

Figure 2 Quick scan for feasibility of intersectoral health policy.

This paper aims to provide support for the first step in the development of new intersectoral policy. We present a quick scan for appraising the feasibility of intersectoral health policies as a basis for priority setting. To determine the usefulness of this approach, we look at two examples in the policy sectors of education and safety.

**Quick scan for analysing the feasibility of intersectoral health policy**

Most of the literature relating to intersectoral health policy focuses on health impact assessment. In this literature, two factors are usually identified as crucial for success. These are (1) the availability of evidence, and (2) the degree of support.<sup>6-13</sup> However, when developing new intersectoral policy, one has also to look at (3) the availability of tools for implementation.<sup>15</sup> We combined these three factors and developed a quick scan consisting of nine questions (see fig 2), which should be answered in a relatively short period (that is, one week). The answers can mostly be found in literature reviews. They should at least give an indication of feasibility based on facts.

**EVIDENCE**

The available evidence allows us to determine the extent of the problem and the plausibility of the relation between the proposed intersectoral health policy and its effects on health status. The epidemiological analysis of morbidity, mortality, health determinants and an understanding of the effects of interventions (efficacy, effectiveness and cost effectiveness) constitute the scientific basis for this evidence and for the identification of possible side effects.<sup>6 7 9</sup>

**SUPPORT**

The degree of support is the extent to which there is a social and political consensus relating to both the causal link and the proposed intervention. This covers all those involved, both advocates and opponents, in politics and in society as a whole.<sup>6 7</sup>

**TOOLS**

The availability of tools for the implementation of intersectoral health policy means the extent in which government has the instruments required to achieve proposed goals. It also means the extent to which these instruments

have proved useful and applicable where required. The instruments can be classified into four categories: nodality, authority, treasury and organisation.<sup>15</sup> They correspond to government resources for achieving goals through communications, legislation and other means of exerting power, financing, and government activities, respectively. Some tools, like legislative power, are a unique feature of government only. Other tools are available to any organisation.<sup>15</sup>

Evidence, support and tools (see fig 3) are not related hierarchically and interact with each other. When causal relations are evident, bargaining power is greater and support is often broader. Wide support can stimulate intersectoral health policy, even if causal relations with health status are difficult to determine. An example is intersectoral health policy relating to complex problems in urban areas. The complexity of interaction between problems in these areas can make it difficult to isolate individual causal relations with health status. However, public interest in this policy sector opens up possibilities for intersectoral health policy.

**Application of the quick scan to two policy fields**

This part of the paper looks at the merits of the quick scan, examining possible Dutch intersectoral health policy in the sectors of education and of safety. We determine whether the quick

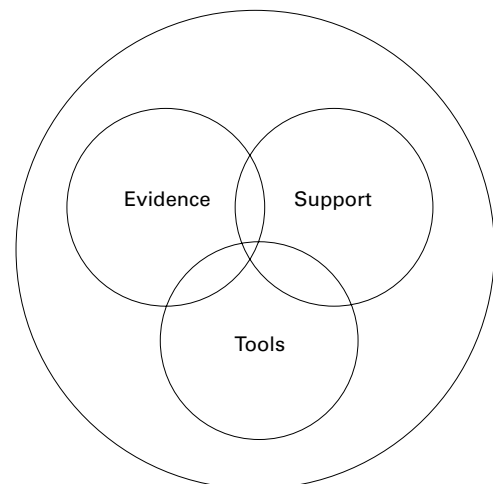


Figure 3 Feasibility factors.

scan provides enough information to prioritise policy sectors in the first step of new intersectoral health policy making. Both examples were elaborated in a short period on the basis of literature, with emphasis on the usefulness of the quick scan. The examples are therefore not comprehensive.

#### EDUCATION

The education policy sector ranges from primary schools to academic centres of excellence. Because of the many actors involved, we chose intersectoral health policy for psychosocial problems among students in secondary education to illustrate the method.

#### Evidence

The target group of intersectoral health policy in this sector can be defined as all individuals who attend secondary education. A relatively large number have psychosocial problems. These can be related to puberty, lack of parental support, or unemployment or substance abuse within the family.<sup>16-20</sup> The problems can be expressed in truant behaviour (absence from school, dropping out, addiction and criminality) or more passive reactions such as inactivity, anxiety, or other symptoms.<sup>16-20</sup> It is estimated that the overall prevalence of mental disorders in adolescence in the European Union is 15%–20% and almost 10% seem to experience clinically recognisable depressive symptoms.<sup>18</sup>

Durlak and Wells<sup>21, 22</sup> evaluated the outcomes of primary and secondary preventive mental health intervention programmes for children and adolescents, and concluded that such programmes significantly reduce problems and increase competencies. The interventions aimed at groups are effective if they focus on schools, but less if they focus on parents. Individual prevention programmes are as effective as group interventions at school. Furthermore, it is important for psychosocial problems to be recognised in time to prevent them from worsening.<sup>21, 22</sup> Screening for psychosocial problems by doctors and nurses working in community health services may be a way to reduce these problems.<sup>19</sup> These results indicate that intersectoral health policy involving collaboration with institutions of secondary education and child health care could have a beneficial effect on the range of psychological problems associated with adolescence.

#### Support

Education is a recurrent item on the Dutch political agenda. Many actors are involved, examples being teachers, parents, schools, youth care facilities, municipal health services, police, the judiciary, etc. Most of them agree that coordinated action in the field of psychosocial problems is necessary, but this is difficult to achieve in practice. Furthermore, most schools and teachers are already overloaded with work and have no time for additional duties. The opportunities for the development of new intersectoral health policy for psychosocial problems in secondary education would seem to be limited in the short-term.

#### Tools

In many respects, there is already intersectoral health policy in secondary education. All four types of instruments are in use. With respect to nodality, a structure has been developed involving schools, youth care facilities and municipal health services. It has already been proposed that this structure should be expanded.<sup>23</sup> Legislation on substance misuse, truancy and youth criminality are examples of authority instruments that are already used. Treasury can be used to impose policies on governmental and non-governmental organisations. However, the more actors involved, the more funding possibilities are harder to integrate. Finally, organisations like the Dutch municipal health services can also enforce intersectoral health policy.<sup>24</sup> There are also some experiments that can be described as intersectoral health policy making within a school. These initiatives are supported by municipal health services and open up possibilities for preventing psychosocial problems.<sup>25, 26</sup> However, it is unclear what additional measures are available for the specific psychosocial problems touched upon here.

#### Conclusion

On the basis of this quick scan, one can conclude that intersectoral health policy for secondary education and psychosocial problems could be successful, but that it will be difficult to get it started. There is some evidence indicating that psychological programmes in a school setting and for individuals are effective. However, the tools for implementation do not cater for individuals. Feasibility will also be limited because support is not very strong.

#### SAFETY

The safety policy sector covers a wide variety of topics. Intersectoral health policies for traffic accidents and accidents in and around the home are relatively well developed in the Netherlands. We therefore chose intersectoral health policy for community safety as our second example. This item has already been on the agenda for several years, but the increase in attention for victims of street violence continues.

#### Evidence

Community safety can be measured by objective and subjective indicators. Objective indicators include numbers of victims, with a breakdown into, for example, burglary, car thefts, vandalism, violence and robbery. In most cities in the Netherlands, objective community safety seems to be decreasing, but this may also be the result of a higher reporting rate.<sup>27</sup> Subjective indicators reflect perceived community safety. They can be measured with questionnaires. Research has shown that about 30% of the Dutch population sometimes feel unsafe. This percentage is even higher in large cities, among the elderly and people with low socioeconomic status.<sup>27, 28</sup> Feeling unsafe is related to poor health. Inversely, the health of most perpetrators of violence is also poor.<sup>29</sup>

Improving objective community safety (in particular, reducing violence and robbery) can reduce the number of victims. Perceived community safety has a less direct effect on health status. The health effects of perceived insecurity are related to, for instance, social isolation, stress and excessive use of medication.<sup>30</sup> Although there are a lot of interventions to improve the perceived insecurity, like improving street lightning and trimming greenery, possibilities remain for intersectoral action in this sector.<sup>27</sup> Examples are intervention programmes for people who feel unsafe or intervention programmes directed at people who cause community unsafety. Substance abuse programmes can be used in attempts to reduce the number of drug addicts involved in criminal activities.<sup>31</sup>

### Support

Some recent cases of street violence provoked widespread support for violence prevention and have placed community safety on the Dutch political agenda.<sup>32</sup> On the national level, the most important actors are politicians, followed by interest groups and the media. At the local level, police, community associations, housing associations, schools, shop owners, cafe and disco owners and senior citizens are important actors.<sup>33</sup> Most actors ask for action that will improve community safety in specific neighbourhoods. It is assumed that this will have an effect on objective and perceived community safety. An advantage of policy measures that focus on objective community safety is that the results can be made more visible. Policy that targets perceived community safety, for instance by means of media campaigns, will have less measurable effects. In addition, such campaigns can have negative side effects, given the frequently expressed suggestion that they only disguise the real problem of objective community safety.

### Tools

In the community safety sector, policies are already in place relating to objective and perceived community safety.<sup>34</sup> All four types of instruments are in use. The Dutch government is already engaged in the establishment of a network regarding community safety, and legislation is providing for stricter regulation. Financial and organisational resources make it possible to improve environmental factors by, for example, improving street lighting and trimming greenery. In addition, government has increased the number of policemen on patrol. Public campaigns, burglary prevention facilities, and neighbourhood watch schemes, etc, also improve objective and perceived community safety. Cameras in public areas are ever more common. These measures have resulted in increased objective community safety, but the recent wave of gratuitous violence and intensive media coverage have increased feelings of insecurity.<sup>27 32</sup> Additional measures to improve perceived community safety are therefore necessary. Examples are courses in self

#### KEY POINTS

- There are many possible ways to improve health through intersectoral health policy.
- HIA is an important tool for intersectoral health policy; it examines the health effects of a proposed policy in another sector.
- There should be an analysis of the feasibility of new intersectoral health policy before it is developed.
- The feasibility of policy depends on the availability of evidence, the degree of support and the availability of tools for implementation.
- A systematic quick scan of the evidence, support and tools is a starting point for the development of intersectoral health policy.

defence, training of those who cause community unsafety or asking the media to be more objective when reporting on incidents.

### Conclusion

On the basis of this quick scan, one can conclude that intersectoral health policy for community safety is highly feasible. The causal relation between objective community safety and health (especially in the case of violence and robbery) is clear; the relation between perceived community safety and health is less direct. As a result of cases of street violence, support is widespread and there are already implementation instruments in place.

### Discussion

In the introduction, we stated that, before focusing on new intersectoral policies, the Ministry of Health should first analyse the feasibility of such a policy. As this step is often skipped, we have presented a quick scan that allows for a systematic approach to listing the factors that determine the feasibility of intersectoral health policy. The proposed quick scan focuses on (1) the availability of evidence, (2) the degree of support and (3) the availability of tools for implementation. We tested the quick scan in two policy sectors. As this was a quick scan carried out in a relatively short period, we only found indicators for those three factors. However, the quick scan made it possible to review the two policy sectors systematically in a relatively short time and to obtain sufficient information for priority setting in intersectoral health policy. Comparison of the two examples suggests that intersectoral health policy for community safety is more feasible than intersectoral policy for psychosocial problems in secondary education, because the support and policy tools relating to psychosocial problems in adolescents would seem to be limited at present in the Netherlands.

However, specific information is required for a more precise assessment of feasibility. More time and information are also needed to investigate the possibilities for achieving further health benefits. The results of such a detailed analysis (see fig 4) can also provide the health

Evidence	<p>What kind of effects and side effects will occur (somatic, psychological, social)?</p> <p>In what time span can effects and side effects occur?</p> <p>How long will effects and side effects be present?</p> <p>Are effects and side effects reversible?</p> <p>Are effects and side effects direct or indirect?</p> <p>In which population groups will effects and side effects be the most radical?</p> <p>What is the size of these target groups?</p> <p>In which settings will effects and side effects occur (home, school, work)?</p>
Support	<p>Which actors will give support?</p> <p>What influence do these supporters have on the content of political discussion?</p> <p>Which actors will put up opposition?</p> <p>What influences do these opponents have on the content of political discussion?</p> <p>Which actors are neutral towards the proposed policy?</p> <p>Can supporters and opponents influence these actors?</p>
Tools	<p>Which combination of instruments is most suitable?</p> <p>Are the effects of the instruments plausible?</p> <p>Are the instruments cost effective?</p> <p>Are radical changes necessary?</p> <p>How soon should the instruments be deployed?</p>

Figure 4 Detailed analysis of the feasibility of intersectoral health policy.

sector with the tools required to make them more credible when—at a later stage—negotiations start with other policy sectors. With regard to evidence, an understanding of the underlying processes in demographic and epidemiological trends is needed to arrive at an assessment of the nature and the extent of the health effects, the lag time and the reversibility of effects. A more detailed picture will also yield information about the target groups and appropriate intervention settings (house, school, work). Public health scientists, like epidemiologists, can review the existing evidence to support this part of the analysis. For a detailed picture of levels of support for a potential intersectoral health policy, more information is required about the actors involved and their influence. To identify the actors who have the power to take decisions and those with the ability to provide opposition—as well as their relative influence—all actors have to be assessed. They will be active not only in the political arena but also in society as a whole (lobby groups, media, etc). For a detailed review of the tools required for implementation, one needs information about both public health and management. A more detailed review of this kind must provide an insight into the current use of instruments, the plausibility of effects and the cost effectiveness of the instruments. It will also show whether, and if so which, additional instruments can best be brought into action and how. The areas of support and tools mainly involve work for policy analysts.

After prioritisation and a more detailed analysis of the feasibility of relevant policy sectors, the sectors responsible for these policies should be drawn into the process. Here, government as a whole, and the health sector in

particular, must recognise the legitimacy of action involving several policy sectors with the aim of promoting better health. The specification of consensus goals with measurable targets can provide the necessary benchmarks for such an intersectoral health policy.<sup>35</sup> With a health target approach of this kind, policymakers from other sectors can be asked to assess and elaborate how their proposed initiatives will achieve further progress toward the achievement of the health targets chosen, and to indicate how their initiatives will not hamper progress.<sup>8</sup>

However, it must be recognised that different sectors have different—and sometimes conflicting—priorities. In recognising this phenomenon, it is important for the health sector to provide leadership where appropriate, to negotiate and to adapt to existing agendas and priorities.<sup>36</sup> The health sector will be stronger when it does its homework and has an understanding of the evidence, support and tools for implementation. However, this will not be enough. One must also be aware of some disadvantages associated with the health sector that can hamper negotiations with other policy sectors. Firstly, the proposed intersectoral health policy is usually preventive in nature and, even putting aside the difficulty of proving causal relations, the outcomes are mostly in terms of risks of undesirable effects in the distant future.<sup>37</sup> An actual lobby group—such as patient representatives—is often absent. Furthermore, negative side effects such as a possible increase in injuries as a result of the encouragement of physical exercise<sup>38</sup> can also raise barriers in the negotiation phase. With respect to tools for implementation, the speed at which instruments can be brought into action is also important. Additional legislation, for instance, generally requires much more time than budget allocation. Frequently, however, there are no economic incentives to support intersectoral health policy and integrated initiatives.<sup>39</sup> In addition, integrated programmes are often seen as threats to sector specific budgets, whereas support from others is necessary for intersectoral health policy. So during negotiations about potential intersectoral health policies, the health sector has to present arguments to create win-win situations. With respect to the examples mentioned in this article, the prevention of psychosocial problems can reduce drop out in schools in the education sector and the reduction of drug related crime can result in improvements in the safety sector.

Finally, the proposed quick scan was developed for the national level. Its methodology may also be applicable to the local level and to public-private partnerships. The evidence does not differ from the evidence on the national level. However, there may be substantial differences between the various levels in terms of support and available tools.<sup>39 40</sup>

In summary, there are many possible ways of improving health through intersectoral health policy. Choices must therefore be made about where to start. In the Netherlands, our quick scan proved to be useful at the national level. Future research should examine its usefulness

at the local level and in other countries. It is probable that it will function best in the framework of health target setting where it will have the potential to generate additional health benefits.

We thank all our colleagues for their helpful comments on earlier drafts of this paper.

Funding: The Council for Public Health and Health Care, Zoetermeer, the Netherlands supported this study.  
Conflicts of interest: none.

- 1 Lalonde M. *A new perspective on the health of the Canadians: a working document*. Ottawa: Government of Canada, 1974.
- 2 Schaapveld K, Bergsma EW, Ginneken JKS, et al. *Setting priorities in prevention*. Leiden: NIPG-TNO, 1990.
- 3 Milio N. Priorities and strategies for promoting community-based prevention policies. *Journal of Public Health Management Practice* 1998;4:14–28.
- 4 Putters K, Grinten TED van der. Health impact screening: the administrative function of a health policy instrument. *Eurohealth* 1998;4:29–31.
- 5 Griffiths S, Hunter DJ, eds. *Perspectives in public health*. Oxford: Radcliffe Medical Press, 1999.
- 6 Ministry of Health, Welfare and Sports. *Gezondheidseffectscreening: verkennend rapport en verslag van een workshop*. [Health impact assessment: Exploration and report of a workshop]. Rijswijk: Ministry of Health, Welfare and Sports, 1995.
- 7 Putters K. *Gezondheidseffectscreening: modellen in hun bestuurlijke context*. [Health impact assessment: Rational models in their administrative context]. Rijswijk: Ministry of Health, Welfare and Sports, 1996.
- 8 Ratner PA, Green LW, Frankish CJ, et al. Setting the stage for Health Impact Assessment. *J Public Health Policy* 1997; 18:67–79.
- 9 Scott-Samuel A. Health impact assessment—theory into practice. *J Epidemiol Community Health* 1998;52:704–5.
- 10 Lerer LB. Health impact assessment. *Health Policy and Planning* 1999;14:198–203.
- 11 Lock K. Health Impact Assessment. *BMJ* 2000;320:1395–8.
- 12 World Health Organisation European Centre for Health Policy. *Health Impact Assessment: main concepts and suggested approach*. Gothenburg consensus paper. Brussels: WHO European Centre for Health Policy, 1999.
- 13 World Health Organisation Regional Office for Europe. *Assessing the health impact of integrating in the European Union*. Budapest: 16–18 december 1999. Copenhagen: World Health Organisation Regional Office for Europe, 2000.
- 14 Herten LM van, Reijneveld SA, Kleijn-de Vrankrijker MW de. *Gezondheid in al haar facetten*. [Health in all its aspects]. Zoetermeer: Council for Public Health and Health Care, 2000.
- 15 Hood CC. *The tools of government*. London: The MacMillan Press, 1983.
- 16 Schuyt CJM. *Kwetsbare jongeren en hun toekomst: een beleidsadvies gebaseerd op een literatuurverkenning*. [Vulnerable adolescents and their future: a policy recommendation based on literature]. Rijswijk: Ministry of Health, Welfare and Sports, 1995.
- 17 Rutter M, Smith DJ, eds. *Psychosocial disorders in young people: time trends and their causes*. Chichester: Wiley, 1995.
- 18 European Commission. *Report on the state of young people's health in the European Union: a commission services working paper*. Luxembourg: European Commission Directorate-General Health and Consumer protection, Unit F3—Health promotion, health monitoring and injury prevention, 2000.
- 19 Brugman EB, Reijneveld SA, Verhulst FC, et al. Identifying psychosocial problems in children. *Arch Pediatr Adol Med* (in press).
- 20 Spencer N. *Poverty in child health*. Abingdon: Radcliffe Medical Press, 2000.
- 21 Durlak JA, Wells AM. Primary prevention mental health problems for children and adolescents: a meta-analytic review. *Am J Community Psychol* 1997;25:115–52.
- 22 Durlak JA, Wells AM. Evaluation of indicated preventive interventions (secondary prevention) mental health programs for children and adolescents. *Am J Community Psychol* 1998;26:775–802.
- 23 Ministry of Justice, Ministry of Internal Affairs, Ministry of Education, Culture and Science, Ministry of Health, Welfare and Sports. *Vier jaar Van Montfrans: Uitvoering plan van aanpak Jeugdcriminaliteit*. [Four years of Van Montfrans: Execution of plan for tackling juvenile crime]. The Hague: Ministry of Justice, 1998.
- 24 Lemstra W. *Advies van de Commissie Versterking Collectieve Preventie: Gemeentelijk Gezondheidsbeleid: Beter op zijn plaats*. [Advisory report of the Strengthening Public Health Committee: Local health policy: A better position]. Zoetermeer: Hageman, November 1996.
- 25 Reijneveld SA, Stiggelbout M, Swagerman-van Hees M, et al. *Verbetering van de uitvoering van preventieprogramma's door GGD'en: Aanbevelingen over signalering en preventie van psychosociale problemen bij kinderen en jeugdigen*. [Improving the implementation of prevention programmes by Municipal Health Services: recommendations on observing and preventing psychosocial problems in children and adolescents]. Leiden: TNO Prevention and Health, 2000.
- 26 Verloove-Vanhorick SP. *Project Basistaken Collectieve Preventie: Hoofdlijnen adviezen Basistaken Collectieve Preventie*. [Public health primary tasks project: outlines of recommendations from Public Health Primary Tasks Committee]. The Hague: Ministry of Health, Welfare and Sports, 1998.
- 27 Verweij AO, Latuheru EJ, Rodenburg AM, et al. *Jaarboek 1997 Grote stedenbeleid. deel 1: Situatie en ontwikkeling in de steden*. [Urban areas 1997 part I: situation and developments in cities]. Rotterdam: Institute on Socio-economic Research, 1998.
- 28 Ministry of Internal Affairs. *Integrale Veiligheidsrapportage 1998*. [Integrated Safety report 1998]. The Hague: Ministry of Internal Affairs, 1998.
- 29 Junger M, Laan AM van der, Stroebe W. Delinquency and health: the relationships between delinquent behaviour, health related behaviour and health outcomes in adolescence. *Br J Health Psychology* (in press).
- 30 Koornstra A, ed. *Ruimte voor gezondheid: Gezond bouwen en wonen in nieuwe wijken: een terreinverkenning*. [Space for health: healthy building and living in new neighbourhoods: an exploratory study]. The Hague: VNG Uitgeverij, 1997.
- 31 Otero Lopez JM, Luengo Martin A, Miron Redondo L, et al. An empirical study of the relations between drug abuse and delinquency among adolescents. *British Journal of Criminology* 1994;34:459–78.
- 32 Dijkstra A. Straatgeweld als gepercipeerd gezondheidsrisico voor en na een mediagolf. [Street violence as perceived health risk before and after a wave of media interest]. *Tijdschrift voor Gezondheidswetenschappen* 1999;77:316–23.
- 33 SER. Socio-economic Council. *Samen voor de stad: advies inzake het grote stedenbeleid*. [Together to the city: advice concerning urban areas]. The Hague: Socio-economic Council, 1998.
- 34 Ministry of Internal Affairs. *Integraal veiligheidsprogramma*. [Integrated safety programme]. The Hague: Ministry of Internal Affairs, 1999.
- 35 Herten LM van, Gunning-Schepers LJ. Review: Targets as a tool in health policy. Part II: Guidelines for application. *Health Policy* 2000;53:13–23.
- 36 Gray B. Conditions facilitating interorganisational collaboration. *Human Relations* 1985;38:911–36.
- 37 Gunning-Schepers LJ, Barendregt JJ. Timeless epidemiology or history cannot be ignored. *J Clin Epidemiol* 1992;45: 365–72.
- 38 US Department of Health and Human Services. *Physical activity and health: a report of the Surgeon General*. Atlanta, GA: US Department of Health and Human Services, Centres for Disease Control and Prevention, National Centre for Chronic Disease Prevention and Health Promotion, 1996.
- 39 World Health Organisation. *Intersectoral action for health: a cornerstone for health for all in the twenty-first century*. Report of the international conference, 20–23 April 1997, Halifax, Canada: WHO, 1997.
- 40 Plamping D, Gordon P, Pratt J. Practical partnerships for health and local authorities. *BMJ* 2000;320:1723–5.