Soft data, hard effects. Strategies for effective policy on health impact assessment — an example from the Netherlands

Lea den Broeder,[1] Manon Penris,[2] & Gerard Varela Put[3]

Abstract Health impact assessment (HIA) on a strategic level focuses on the broad determinants of health. However, the evidence with regard to the health impacts is often necessarily ''soft''. The example of a health impact review on national housing policy in the Netherlands shows that HIA can be effective even in the absence of hard data. Strategies used to overcome the problem of not having hard data are outlined. The authors argue that, for HIA to be effective, it does not necessarily have to be limited to easy-to-measure, easy-to-quantify programmes and health effects.

Keywords Health status indicators; Policy making; Health policy; Intersectoral cooperation; Public health administration/trends; Outcome assessment (Health care); Decision making, Organizational; Program evaluation; Environmental health; Evidence-based medicine; Housing; Physical fitness; Risk assessment/methods; Data collection/methods/standards; Socioeconomic factors; Netherlands (*source: MeSH, NLM*).

Mots clés Indicateur état sanitaire; Choix d'une politique; Politique sanitaire; Coopération intersectorielle; Administration santé publique/orientations; Evaluation résultats (santé); Prise décision institutionnelle; Evaluation programme; Hygiène environnement; Médecine factuelle; Logement; Aptitude physique; Evaluation risque/méthodes; Collecte données/méthodes/normes; Facteur socio-économique; Pays-Bas (*source: MeSH, INSERM*).

Palabras clave Indicadores de salud; Formulación de políticas; Política de salud; Cooperación intersectorial; Administración en salud pública/tendencias; Evaluación de resultado (Atención de salud); Toma de decisiones (Administración); Evaluación de programas; Salud ambiental; Medicina basada en evidencia; Vivienda; Aptitud física; Medición de riesgo/métodos; Recolección de datos/métodos/normas; Factores socioeconómicos; Países Bajos (*fuente: DeCS, BIREME*).

الكلمات المفتاحية: مؤشرات الوضع الصحي، رسم السياسات، السياسة الصحية، البرامج الصحية الوطنية، التعاون بين القطاعات، إدارة الصحة العمومية، اتجاهات إدارة الصحة العمومية، تقييم النتائج (للرعاية الصحية)، صحة البيئة، تقييم الخطر، طرق تقييم الخطر، جمع المعطيات، طرق جمع المعطيات، معايير جمع المعطيات، الطب المرتكز على البيّنات، تقييم البرامج، عوامل اجتماعية واقتصادية، دراسات تقييم، المملكة المتحدة، هولندا (*المصدر: رؤوس الموضوعات الطبية – المكتب الإقليمي لشرق المتوسط*).

Bulletin of the World Health Organization 2003;81:404-407.

Voir page 406 le résumé en français. En la página 407 figura un resumen en español.

يمكن الاطلاع على الملخص بالعربية على الصفحة ٤٠٧ .

Introduction

Since 1995 health impact assessment (HIA) in the Netherlands has been developing in two different directions. One approach is the environmental HIA, which is closely linked to risk assessment. In this type of HIA the attention is focused on the influence of the policy or project on the physical environment and, through this determinant of health, health itself. Levels of noise, smell, air pollution, pollution of soil and water, and radiation are measured, and expected changes in these levels are calculated. Subsequently, the health consequences can be calculated, or at least estimated. An example of this approach is the checklist for HIA developed in the project City and Environment (*1*). This approach in HIA is predominantly project based and concentrates on specific geographical regions such as a city, a well-described region — for example, around an airport — or a specified neighbourhood.

The other approach focuses on the broad range of determinants of health, including lifestyle, social and physical environment, and economic circumstances. Screening of policies, programmes, and projects for health relevance is carried out on a correspondingly broad range of policy fields. The goal is to identify policy proposals that are relevant to health and to discover opportunities for health, such as creating circumstances that promote healthy lifestyles. To attain this goal the national budgets of different ministries, coalition agreements, and reports from governmental advisory boards are screened for health relevance. (A screening tool such as the Checklist for HIA, which was developed in 1998 (*2*), was used in our study.) In the subsequent scoping and impact assessment stages, data about health determinants and health status (mortality and morbidity data and data about self-assessed health) are the starting point. Ideally, these are compiled in a health profile that reflects the aspects that are most relevant for the policy, project, or programme assessed. This approach was developed for application at the strategic level — that is, on the level of national policies. Currently, HIA policy is developing rapidly at a local level in the Netherlands. In several places pilot studies are being carried out and instruments for HIA and intersectoral policy are developed for the local setting.

[1] Netherlands Institute for Public Health and the Environment (RIVM), Department of Public Health Forecast, PO Box 1, 3720 Bilthoven, Netherlands (email: Lea.den.Broeder@rivm.nl). Correspondence should be addressed to this author.

[2] Netherlands Institute for Public Health and the Environment (RIVM), Bilthoven, Netherlands.

[3] Netherlands Institute for Public Health and the Environment (RIVM), Bilthoven, Netherlands.

Ref. No. **03-001842**

This second, broadly oriented approach in HIA, raises an important concern. Many policy documents, especially those on a national level, and also frequently those at regional or local levels, contain proposals that are rather unspecific. Exact figures — for example, of people affected, expected costs, and differences in regions and time frames — are not mentioned. Consequently, it is difficult to estimate the health benefits or health damages that will be brought about by the policy in question. HIA is an instrument for evidence-based policy-making, but how hard can the evidence be with regard to the consequences of strategic policy proposals? Do we have to conclude that certain policies should not be assessed for health consequences, or that they should be assessed only in a "mini" HIA (*3*)?

We believe that this should not necessarily be the case. The HIA on national housing policy carried out in 2001–02 (*4*) is an example of how HIA can be effective even when hard data are not available. The present paper outlines this health impact review (HIR) of the Dutch Housing Policy.

An example: HIA on housing policy

The Dutch Housing Policy was assessed for health impacts in what may be called an incremental process (*5*). The first step was the screening of the coalition agreement in 1998, followed by the screening of the national budget in 1999. These exercises showed that in the field of housing and spatial planning, policies that are health relevant, such as housing policy, would be developed. We continued to scope the policy by assessing first steps in the policy design for health-related topics. In a meeting with experts from different work fields (policy experts, health researchers, experts on spatial planning and housing), we tried to define which health topics would have to be addressed in a more in-depth review. We discussed this matter with the Ministry of Health and a representative of the Ministry of Housing, Spatial Planning, and the Environment, and finally, decisions were reached. In 2001 we started the HIR on the housing policy, which had gradually been developed in the meantime.

The housing policy document provides a view on the future of housing in the Netherlands, and is based not only on demographic developments, but also on social and cultural changes expected. The Ministry of Housing, Spatial Planning, and the Environment consulted experts, stakeholders, and, most importantly, the general public to assess the needs and wishes of the Dutch population regarding their housing situation. An important feature of the policy is the emphasis on self-determination of citizens and their individual freedom of choice regarding types of households and forms of housing preferred, and a reduction in governmental regulations.

The HIR focused on the health determinants of physical exercise and safety, because these are related to important policy targets of the Ministry of Health, Welfare, and Sport. Physical exercise is an important determinant of obesity, which is considered a serious health problem in the Netherlands. Physical exercise and safety are two interrelated focus points in the Dutch Health Policy. Because the policy was very broad in scope, we selected three main clusters of measures that were relevant to both topics. These were deregulation, promotion of computer applications in housing (domotics, or "intelligent housing"), and restructuring of neighbourhoods, mainly in terms of increasing or decreasing population density.

The methods applied were secondary data analysis, close reading, tapping expert opinion, and modelling.

Expectations

On reviewing the housing policy, the following expectations were defined:

- The proposed policy will change transport behaviour. A higher population density in neighbourhoods will promote slow transport (bicycle, walking), which will have a positive effect on both traffic safety and physical exercise. A lower density will lead to more car kilometres, less exercise, and less traffic safety. Domotics will not reduce transport, but it may change the times of the day at which people travel.
- Improving the quality of neighbourhoods and housing will lead to a higher sense of social safety and well-being.
- Sports and recreation will be influenced by neighbourhood restructuring. A lower population density might create new opportunities for physical exercise, whereas higher density poses the risk of sports and recreational accomodation disappearing to the outskirts of towns.
- The policy proposals will disproportionally affect the safety and opportunities for physical exercise for the elderly, children, ethnic minorities, and people with a low socio-economic status. The latter two groups are included because they are over-represented in the neighbourhoods to be restructured. Elderly people and children are dependent on the direct surroundings of their house, and changes in this environment will therefore affect them more than other people. To a certain extent, this also applies to ethnic minority groups.
- More freedom of choice in housing may have adverse effects for those who, for financial reasons, have little choice.

"Soft" evidence

The results of the HIR cannot be considered "hard" evidence. There are several reasons for this:

- Goal of the study: in this HIR we were looking for opportunities for health: how can health be promoted or protected through the national housing policy?
- Availability of data: data on several topics were simply not available. For instance, the connection between the distal factor "built environment" and the proxy factor "physical exercise" cannot be quantified. The impact of "intelligent" housing on the health determinants was impossible to estimate because the development of such new applications in housing was entirely new.
- Broadness of the policy document: the new housing policy differed from earlier ones because it did not, as before, consist mainly of targets such as the numbers of houses to be built annually, or reducing the shortage of housing by a certain rate. Instead, a vision regarding housing was outlined, based on the wishes, needs, and expectations of the population, as well as on economic, social, cultural, and demographic trends as foreseen in society. Because the policy was more a visionary set of ideas than a number of clear-cut measures, it was impossible to quantify its consequences.
- Implementing the policy: the responsibility to put this vision into practice was envisaged to be taken up by municipalities, although the government would provide the legal framework. How municipalities would implement the policy

could not be foreseen, nor could it be predicted on what scale they would do so.
- Long causal chains: the health effects of behavioural changes such as physical exercise or taking safety measures to prevent domestic accidents are hard to predict because the effects might only become evident after a long period of time, and because many other factors may influence health.

Overcoming the lack of "hard" data

We tried to overcome the problem of the absence of hard data in several ways. We concentrated more on the effect of the policy on health determinants than on "health" itself. We showed how changes in these determinants will influence health, and although exact figures were not given, the direction of the health effects was outlined.

We showed that aspects of the policy would affect some groups in the population more than others. For example, a policy aimed at constructing "intelligent" housing for the elderly to enable them to live outside institutions up to a high age is particularly important for this group. We went on to show how large these groups were, and how large they would become in the future, using data from demographic trend studies. Even if the health effects themselves were smaller than expected, the total number of people affected would be large enough to take the effects seriously.

We attempted to overcome uncertainties posed by the ways in which the policy was to be implemented, as well as to what degree, by outlining a series of scenarios. For example, a scenario could be that a reduction in population density would be realized while restructuring or regenerating urban areas: we considered what effects this might have on the determinants studied. We also tried to identify measures that would either reinforce beneficial effects or mitigate negative ones.

Finally, the plausibility of the effects predicted was increased by using the opinions of experts, who each viewed the topic from a different angle; we tried to attain expert consensus.

Implementing the HIR results

The results of the HIR were welcomed by both the health and housing ministries. The information — qualitative and quantitative — presented to them highlighted aspects of the relation between housing and physical exercise and safety, as well as the interrelationship between those determinants of health. The opportunities for health that could be identified for different policy scenarios were outlined, and recommendations were given on maximizing these, as well as on minimizing negative health impacts. The Ministry of Housing has used the report as a basis for an essay on housing and health, which will be one of the starting points for further policy development (*6*). The Ministry of Health, by invitation of the Ministry of Housing, is working out a strategy regarding the social and physical aspects of restructuring processes in 50 Dutch neighbourhoods, including the components (social) safety and physical exercise.

At a local level the results of our review have started to take effect: a first pilot project is currently being carried out in a middle-sized municipality, developing a manual for building safe neighbourhoods that stimulate physical exercise.

Conclusion

Our main aims while performing the HIR were to explain the relevance of housing policy to health, and to create an awareness of this within another policy sector. The evidence offered in the review was inevitably "soft" due to the visionary nature of the policy document.

Of course, the strategies we applied did not completely compensate for the "softness" of the evidence. However, we bore in mind that the main reason to perform a HIA was to secure a high level of health in the policies that are designed. HIA helps to keep policy-makers informed about the possible health implications of their decisions and paves the way for intersectoral cooperation for health. It also helps health advocates to identify the so-called windows of opportunity.

That such a window was open in this case was helpful. At least part of our success was due to the strong involvement of the representatives of the Ministry of Housing in the HIA process. These representatives participated in the scoping process and in discussions about the topic of the HIA, and they served as members of the advisory committee while the HIA was carried out. In a more general sense the Ministry was open to social aspects of its policies. The results of the HIA will be integrated in further policy development of the Ministry of Housing, for which the social determinants of health has become a focus of interest.

This case hopefully illustrates our view that HIA, to be effective, does not necessarily have to be limited to easy-to-measure, easy-to-quantify programmes and health effects. This is fortunate because if such a limitation was imposed, many policies that are clearly relevant to health, including transboundary ones, would not be assessed for health consequences. An opportunity to keep public health on the agenda of policy-makers would be lost, and article 152 of the Amsterdam Treaty would be hard to fully implement. ■

Conflicts of interest: none declared.

Résumé

Données « molles », effets « durs ». Pour des stratégies efficaces d'évaluation des impacts sanitaires – exemple aux Pays-Bas

Au plan stratégique, l'évaluation des impacts sanitaires s'appuie sur des déterminants non spécifiques de l'état de santé. Les données obtenues sont cependant souvent « molles » en ce qui concerne l'impact sur la santé. L'exemple d'une étude d'impact de la politique nationale du logement sur la santé réalisée aux Pays-Bas montre que l'évaluation de l'impact sanitaire est cependant possible, même en l'absence de données « dures ». Les stratégies employées pour surmonter les difficultés dues à l'absence de données « dures » sont indiquées. Selon les auteurs, pour que l'évaluation des impacts sanitaires soit efficace, il n'est pas nécessaire de la limiter à la mesure des effets sanitaires et des programmes faciles à quantifier.

Resumen

Datos ''blandos'', efectos ''duros''. Estrategias para una política eficaz sobre la evaluación del impacto sanitario: un ejemplo de los Países Bajos

La evaluación del impacto sanitario (EIS) a nivel estratégico se centra en los determinantes generales de la salud. Sin embargo, los datos relativos al impacto sanitario suelen ser necesariamente ''blandos''. El ejemplo de un análisis del impacto sanitario de una política nacional de vivienda en los Países Bajos muestra que la EIS puede ser eficaz incluso en ausencia de datos ''duros''. Se describen las estrategias usadas para superar el problema de la inexistencia de datos ''duros''. Los autores sostienen que, para que la EIS sea eficaz, no tiene que limitarse necesariamente a programas y efectos de salud fácilmente cuantificables y medibles.

ملخص

المعطيات الهشة والتأثيرات القوية. استراتيجية لوضع سياسات فعَّالة حول تقييم التأثير الصحي ـ مثال من هولندا

يركِّز تقييم التأثير الصحي على الصعيد الاستراتيجي على مجال واسع الطيف من محدِّدات الصحة. إلا أن البينات المتعلقة بالتأثيرات الصحية تكون في غالب الأحيان سردية وهشة، وقد أوضح مثال من استعراض التأثير الصحي على السياسة الوطنية للإسكان في هولندا أن تقييم التأثير الصحي قد يكون فعَّالاً حتى في غياب المعطيات الصلبة (الكمية). وقد تم استعراض الاستراتيجيات التي اتبعت عند عدم توافر المعطيات الصلبة (الكمية). ويقدم المؤلف بيِّنات على أن فعالية تقييم التأثير الصحي لا تتوقف على توافر البرامج التي يسهل قياسها ويسهل حساب الكميات فيها ويسهل حساب التأثيرات الصحية لها.

References

1. Fast T, Van Den Hazel P, Van De Weerdt R. Lokale Gezondheidseffectscreening t.b.v. ruimtelijke ordening en *milieu* [Local Health Impact Assessment for spatial planning and the environment]. Dieren: Bureau Medische Milieukunde Jans, van den Hazel & van de Weerdt; 2000. In Dutch.
2. Netherlands School of Public Health. *Checklist for health impact screening*. Utrecht: Netherlands School of Public Health; 1998.
3. Parry J, Stevens A. Prospective health impact assessment: pitfalls, problems, and possible ways forward. *BMJ* 2001;323:1177-82.
4. Den Broeder JM. Mensen, wensen, gezond wonen. Een rapportage over kansen voor gezondheid in de Nota Wonen [People, wishes, healthy housing. A report about opportunities for health in the national policy on housing]. Utrecht: Netherlands School of Public Health; 2002. In Dutch.
5. Putters K. *Health impact screening. Rational models in their administrative context*. Rijswijk: Ministry of Health, Welfare and Sport; 1997.
6. Vos R. Tussen souterrain en dakterras: Wonen als motor voor maatschappelijke kansen. Gezond wonen in gezonde wijken. [Between basement and roof terrace: Housing as a motor to societal opportunities. Healthy housing in healthy neighbourhoods]. The Hague: Ministry of Housing, Spatial Planning and the Environment; 2002. In Dutch.