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# The role of health impact assessment in Phase V of the Healthy Cities European Network

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## Summary

Health impact assessment (HIA) is a prospective decision-making aid tool that aims to improve the quality of policies, programmes or projects through recommendations that promote health. It identifies how and through which pathways a decision can impact a wide range of health determinants and seeks to define the distribution of effects within populations, thereby raising the issue of equity. HIA was introduced to the WHO European Healthy Cities Network as one of its four core themes during the Phase IV (2004–08). Here we present an evaluation of the use of HIA during Phase V (2009–13), where HIA was linked with the overarching theme of health and health equity in all local policies and a requirement regarding capacity building. The evaluation was based on 10 case studies contributed by 9 Healthy Cities in five countries (France, Hungary, Italy, Spain and the UK). A Realist Evaluation framework was used to collect and aggregate data obtained through three methods: an HIA factors analysis, a case-study template analysis using Nvivo software and a detailed questionnaire. The main conclusion is that HIA significantly helps promote Health in All Policies (HiAP) and sustainability in Healthy Cities. It is recommended that all Healthy City candidates to Phase VI (2014–18) of the WHO Healthy Cities European Network effectively adopt HIA and HiAP.

**Key words:** evaluation of healthy cities network, health impact assessment, public health, sustainable development

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## INTRODUCTION

The *Gothenburg Consensus* defines HIA as ‘a combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population’ (WHO, 1999). HIA identifies how and through which pathways a decision can impact a wide range of health determinants. Pathways can be direct (e.g. increases in respiratory illnesses when air pollution increases) or indirect (e.g. vehicle traffic reducing mobility) (Dahlgren, 1995). HIA aims to improve the quality of

decisions by maximizing positive impacts and minimizing negative impacts (WHO, 1999). It follows that recommendations for action are inherent to HIA (Quigley *et al.*, 2006), which is predictive (evaluating future consequences of decisions on health), informative, and can be used for advocacy. HIA also seeks to define the distribution of effects within populations, thereby raising the issue of equity (Kemm, 2013).

Health impact assessment (HIA) emerged in the context of development projects in the early 1990s and guidelines were first published in 1992 (Birley and Peralta,

1992; Birley, 2011). HIA was popularised at first in the UK (Scott-Samuel, 1996) and is now implemented in almost all highly developed countries (Kemm, 2013).

HIA built on the methodology of environmental impact assessment (EIA): it uses a similar screening stage to decide whether an evaluation should take place, followed by scoping which defines the perimeter, methodology, management and participants of the process. The assessment itself then produces its results and recommendations. After the decision is taken and implemented, the effects of the decision are monitored to examine whether predicted impacts have materialized. This approach has much in common with the policy appraisal process (Scott-Samuel *et al.*, 2001). HIA strengthens this process by allowing a systematic review of the health consequences (Milio, 1986; Kemm, 2013).

### HIA in Phases IV and V of the WHO European Healthy Cities Network

HIA was introduced into the WHO European Healthy Cities Network (EHCN) during Phase IV (2003–08) as one of four core themes (Ison, 2012). The objectives were to raise awareness and create a common understanding of HIA, provide leadership and strengthen capacity, share results and evidence from HIA practice with other European cities, and provide evidence of HIA's contribution to areas such as healthy urban planning (HUP) and healthy ageing. Another objective was to work towards mainstreaming HIA as a framework for integrating health and well-being concerns into all urban policies and projects.

The evaluation of Phase IV showed that the majority of city representatives did not feel that they had the resources, knowledge or experience to achieve these objectives. Nevertheless, gains from introducing and implementing HIA during Phase IV included improved understanding of the social determinants of health, placing health on the agenda of policy- and decision-makers, initiating or improving intersectoral working on health and influencing decision-making in favour of health (Ison, 2012).

Despite the fact that HIA was no longer a core theme during Phase V of the WHO EHCN (2009–13), we posit that HIA remained linked with the overarching theme of health and health equity in all local policies and a requirement regarding capacity building (WHO, 2009). This viewpoint is founded on the Adelaide Statement on *Health in All Policies* (HiAP), which promotes HIA as one of the most effective tools for HiAP operationalization (WHO, 2010).

The main objective of this article is to verify the truthfulness of this assertion by studying the implementation of HIA methodology at a local level across Europe in over 30

countries with widely differing economies and administrative and socio-political backgrounds. The article also seeks to investigate if there are changes in the integration of HIA within the municipalities and if the barriers and facilitating factors remain the same as those identified during the Phase IV evaluation (Ison, 2012):

- (a) main barriers to the introduction and implementation of HIA were a lack of skill, knowledge and experience of HIA, the newness of the concept, the lack of a legal basis for implementation and a lack of political support;
- (b) main facilitating factors were political support, receiving training in HIA, collaboration with an academic/public health institution or local health agency, a pre-existing culture of intersectoral working, a supportive national policy context, access to WHO materials about or expertise in HIA and membership of the EHCN, HIA Sub-Network or a National Network.

## METHODS

The evaluation focused on HIA was a contribution to the overall EHCN Phase V evaluation and thus abiding by the realist synthesis approach of its conceptual and methodological framework (De Leeuw *et al.*, 2015). This methodology, driven by a multi-method approach, allows for triangulation of data and information. In the beginning of this supplement is provided a full account of the data collection used for Phase V evaluation and in particular the two important tools that were the General Evaluation Questionnaire (GEQ) and the case study templates (De Leeuw *et al.*, 2015).

Case study template text analysis was carried out using a selection of NVivo codes and sub-codes considered relevant for HIA: Initiate (different events leading to the city taking action), Strategic Action, Thematic Action, Learning First (learning from actual activities and possible replication), Learning Second (generalizations originating in the activities, and their impacts) and Experience (good and bad).

A framework suggested by Shankardass *et al.* (Shankardass *et al.*, 2014) was developed to record the information extracted from each case study focused on HIA (see Box 1). For almost all of them, a telephone discussion with local Healthy Cities coordinators was carried out to clarify formulations which seemed unclear in the written documents describing the case. The information from each template was then collated to provide the results presented in the 'Results' section.

The GEQ in-depth analysis for the cities proposing the HIA case studies, sought to identify inconsistencies or

**Box 1:** Extraction of information from the HIA-focused case studies according the Shankardass *et al.* framework (2014)

#### Context of initiation

- International, national and regional influences
- Policy and other problems
- Prior experience with intersectoral action for health (ISA) and health across sectors
- Ideology of health and the health system

#### Mandate for the work

##### Context of implementation

- Political prioritization
- Formal processes
- Availability of resources for necessary costs
- Capacity-building activities
- Social mechanisms—activities and actions

#### Main outcomes

- Acceptability
- Feasibility
- Sustainability

similarities between cases. The answers to the 48 GEQ questions were compared with the statements that each city provided in its HIA case-study template regarding HIA process, context of implementation and other city activities. Thus, HIA roll-out was placed in the context of overall Healthy Cities Programme implementation and possible inconsistencies between assertions in both documents were to be identified.

## RESULTS

### Characteristics of the case studies

Nine cities out of a total of 73 submitted case studies focused on HIA, since one city (Belfast) submitted two case studies. Ten was the number of cases available for analysis on HIA, out of a total of 159 submitted case studies. Table 1 presents the cities and their respective case studies, as well as the main topic areas, the different types of problems addressed and the way in which HIA was used.

The nature of political prioritization and the ideology behind the health or health system varied considerably from one country to another, and quite logically varied less between cities within the same country. Social

mechanisms involved in the HIA process were also highly variable, as well as the types of personnel which received training in HIA (see Table 2).

It is interesting also to present the ways in which those cities used HIA

- full process of HIA on a project
- integrating HIA into an EIA of a project (or in addition to EIA)
- full HIAs conducted as part of a wider set of activities
- series of pilot HIAs to develop an HIA approach to planning policy decisions
- using principles and elements of HIA to develop indicators and checklists to use on regeneration proposals
- HIA as a screening tool for policies
- incorporating HIA or elements of HIA into other impact assessment tools for use on policies
- using elements of HIA as part of a Health Equity in All Policies framework.

### Context of initiation

International influence was present in all the case studies, national or regional one in a few of them. Within the 10 case studies, cities were seeking to address a variety of problems. For cities using HIAs or pilot HIAs as part of a wider set of activities, the problem was to promote or improve health and bring a focus on inequality or inequity within the formal planning process of the municipality.

For cities integrating HIA into a comprehensive or integrated tool or framework, the main problems were:

- Differences in health status within the city's population and the health consequences and other consequences of inequity
- Lack of/reduced awareness among politicians of the health impacts of policy development and decision-making
- Lack of/reduced 'formal' opportunity to consider issues of health and equity during the policy-making process—or even access to healthcare services.

For a city using the principles and elements of HIA to generate an indicator set and tools, the main problem was the limited availability of data, platforms and tools to consider the health and equity impacts of regeneration proposals. A secondary problem was the complex administrative structure delivering regeneration proposals in the city.

A common thread throughout problem identification in many cities was the status of HIA. Four cities, all from the UK, noted that HIA is voluntary and not a statutory requirement. Other mentioned that HIA was perceived as an added burden given the existence of

**Table 1:** Use of HIA during Phase V: case studies submitted by cities—main topic areas and different types of problems addressed

City or urban community (Country)	Name of project or programme	Disciplines or topic areas	Way in which HIA was used by cities	Type of problem addressed	Primary problem (secondary problem)	International influence	Nature of political prioritization
Arezzo (Italy)	How the city of Arezzo is changing urban waste handling with citizens' participation	Infrastructure development Waste management	Full HIA or combined impact assessment used on a specific project (enlargement of an incinerator) Integrating HIA into an environmental impact assessment (EIA) of a project/or HIA in addition to EIA	Specific problem as primary problem; more general problem as secondary problem	Projections of the increasing amount of waste produced in the municipality. (Concerns of the community about health effects of the infrastructure proposal under study; distrust of public institutions)	European Week for Waste Reduction	Political decision about a specific issue: to involve citizens in the process of decision-making about urban waste handling
Rennes (France)	Implementation of a health impact assessment (HIA) approach for an urban planning project: Railway station of Pontchaillou, Rennes	Infrastructure development including urban regeneration	Full HIA or combined impact assessment used on a specific project. Full process of HIA on a project	Specific problem as primary problem; more general problem as secondary problem	National projection of the increasing number of railway passengers. (Regeneration of an urban area associated with the infrastructure proposal under study)	WHO Collaborating Centre in Rennes (S2D)	Political decision about a specific issue: to experiment with HIA in urban planning. Involvement of a city counsellor
Vitoria-Gasteiz (Spain)	Introduction of health impact assessment (HIA) in municipal projects	Infrastructure development including urban regeneration	Full HIA or combined impact assessment used on a specific project. Full process of HIA on a project	Specific problem as primary problem; more general problem as secondary problem	Potential of the project to affect a relatively large number of the city's population. (Regeneration of an urban area associated with the infrastructure proposal under study)		
Cardiff (UK)	Incorporating healthy urban planning (HUP) principles into the Cardiff Local Development Plan (2006–2026)	HUP	Full/pilot HIAs conducted as part of a wider set of activities. Full HIAs	Promoting health and equity within the principles of HUP		The Marmot Review/ Marmot Review Team	Meeting Healthy Cities Phase V objectives, particularly HHEiALP

Stoke-on-Trent	Developing a systematic approach to health impact assessment in planning policy decisions in Stoke-on-Trent	HUP	Full/pilot HIAs conducted as part of a wider set of activities Series of pilot HIAs to develop an HIA approach to planning policy decisions	Promoting health and equity within the principles of HUP		
Belfast 1 (UK)	Good for Regeneration, Good for Health, Good for Belfast	Regeneration	Use of principles and elements of HIA to generate indicators/ tools (checklists) For use on regeneration proposals	Integrating health and equity issues into a particular discipline	European Union URBACT II Programme: Building Healthy Communities	For an issue in general
Belfast 2	Health Equity in All Policies—the Belfast Approach (HEiAP)	General policy-making	Integration of HIA into a comprehensive or integrated tool or framework Using elements of HIA as part of a health equity in all policies (HEiAP) framework	Consequences of health inequities/differences in health status. Incorporating a consideration of health and equity into the general policy-making process, including raising the awareness of politicians of the impact of their decisions	HiAP work in South Australia; The Marmot Review/ Marmot Review Team; WHO Commission on the Social Determinants of Health	Meeting Healthy Cities Phase V objectives, particularly HHEiALP
Pécs (Hungary)	Health Impact Assessment used as a health filter in the municipality of Pécs	General policy-making	Integration of HIA into a comprehensive or integrated tool or framework HIA as a screening tool for policies	Consequences of health inequities/differences in health status. Incorporating a consideration of health and equity into the general policy-making process, including raising the awareness of politicians of the impact of their decisions		Meeting Healthy Cities Phase V objectives, particularly HHEiALP

Continued

Table 1: Continued

City or urban community (Country)	Name of project or programme	Disciplines or topic areas	Way in which HIA was used by cities	Type of problem addressed	Primary problem (secondary problem)	International influence	Nature of political prioritization
City and County of Swansea (UK)	The development and use of an integrated impact assessment framework	General policy-making	Integration of HIA into a comprehensive or integrated tool or framework Incorporating HIA or elements of HIA into other impact assessment tools for use on policies	Consequences of health inequities/differences in health status. Incorporating a consideration of health and equity into the general policy-making process, including raising the awareness of politicians of the impact of their decisions		Agenda 21 (sustainability); WHO Commission on the Social Determinants of Health	Involvement of a city counsellor
Carlisle	Policy Embedding Health Considerations into Carlisle's Comprehensive Impact Assessment Process	General policy-making	Integration of HIA into a comprehensive or integrated tool or framework Incorporating HIA or elements of HIA into other impact assessment tools for use on policies	Consequences of health inequities/differences in health status. Incorporating a consideration of health and equity into the general policy-making process, including raising the awareness of politicians of the impact of their decisions			

**Table 2:** Use of HIA during Phase V: case studies submitted by cities—ideology behind, extra resources, social mechanisms and types of personnel

City or urban community (country)	Name of project or programme	Ideology of health and health system	Formal processes	Availability of extra resources	Commonly used social mechanisms (activities and actions)	Other social mechanisms (more rarely used)	Personnel receiving training
Arezzo (Italy)	How the city of Arezzo is changing urban waste handling with citizens' participation	Social determinants of health. Reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population Links between environment and health	Impact assessment of individual projects	EU-LIFE Project	Partnership working. Using the full process of HIA or elements of HIA Identifying potential impacts on health Establishing a Steering Group for the case-study Workshops, focus groups or other participative meetings	Problem identification and scoping Conducting a health survey or questionnaire with residents Holding a public meeting	Technicians or city council officers. Stakeholders external to the city administration (family doctors)
Rennes (France)	Implementation of a health impact assessment (HIA) approach for an urban planning project: Railway station of Pontchaillou, Rennes	Social determinants of health. Reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population Individual and lifestyle factors, the socio-cultural environment, the physical environment and the economic environment	Impact assessment of individual projects	Staff seconded from the University of Rennes	Partnership working. Using the full process of HIA or elements of HIA Piloting or pilot projects Establishing a Steering Group for the case-study Identifying potential impacts on health Literature review Workshops, focus groups or other participative meetings	Screening a number of proposals to select the proposal to be studied Conducting a health survey/questionnaire with residents	Technicians or city council officers. Politicians. Staff from local universities
Vitoria-Gasteiz (Spain)	Introduction of health impact assessment (HIA) in municipal projects	Social determinants of health. Reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population Twenty-seven determinants of health in three domains—habits and behaviour, financial factors and environmental factors.	Impact assessment of individual projects		Partnership working. Using the full process of HIA or elements of HIA Piloting or pilot projects Identifying potential impacts on health Establishing a Steering Group for the case study + specific workgroups	Screening a number of proposals to select the proposal to be studied. Problem identification and scoping Development of an indicator set for monitoring and evaluation	Technicians or city council officers. Politicians. Staff from the Regional Government Stakeholders external to the city administration

Continued

Table 2: Continued

City or urban community (country)	Name of project or programme	Ideology of health and health system	Formal processes	Availability of extra resources	Commonly used social mechanisms (activities and actions)	Other social mechanisms (more rarely used)	Personnel receiving training
Cardiff (UK)	Incorporating healthy urban planning (HUP) principles into the Cardiff Local Development Plan (2006–2026)	Housing, education, environment, employment and sustainable travel. A tax-based health system free of charge at point of access with equity explicitly outlined in the governing Constitution	Impact assessment within planning policy		Partnership working. Using the full process of HIA or elements of HIA Literature review	Use of population data and expertise locally and with wider networks Geographical mapping of relevant sites Identification of best practice	Technicians or city council officers. Healthy Cities administrators
Stoke-on-Trent	Developing a systematic approach to health impact assessment in planning policy decisions in Stoke-on-Trent	Social determinants of health. Reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population	Impact assessment within planning policy	External consultants	Partnership working. Using the full process of HIA or elements of HIA Piloting or pilot projects Developing a locally relevant tool/checklist		Technicians or city council officers. Stakeholders external to the city administration (staff from local universities)
Belfast 1 (UK)	Good for Regeneration, Good for Health, Good for Belfast	Social determinants of health. Reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population	Policy and strategy development	External consultants	Partnership working. Using the full process of HIA or elements of HIA. Piloting or pilot projects Developing a locally relevant tool/checklist Identifying potential impacts on health Literature review Workshops, focus groups or other participative meetings Establishing a Steering Group for the case study + a technical indicators group	Use of population data Development of an indicator set for monitoring and evaluation Producing publications Literature review of existing key indicator sets Gap analysis of existing indicators for health and regeneration	Healthy cities administrators. Stakeholders external to the city administration (people from the public, voluntary and community sectors) EU partners



Belfast 2	Health Equity in All Policies—the Belfast Approach (HEiAP)	Social determinants of health. Reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population Lifestyles, social networks, access, economic factors and environmental factors. Economic, social, environmental and access to services and facilities. A tax-based health system free of charge at point of access with equity explicitly outlined in the governing Constitution.	Policy and strategy development	EU URBACT II Programme. External consultants	Partnership working. Using the full process of HIA or elements of HIA. Piloting or pilot projects Developing a locally relevant tool/checklist Identifying potential impacts on health Literature review Workshops, focus groups or other participative meetings Establishing a Steering Group for the case study + a wider stakeholder group + a strategy reference Group	Sharing knowledge and expertise locally and with wider networks Producing publications Development of a model for HEiAP Support with writing the strategy and the associated action plan Literature review of existing key indicator sets	Technicians or city council officers
Pécs (Hungary)	Health Impact Assessment used as a health filter in the municipality of Pécs	Social determinants of health. Reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population Health 21—Health For All in the Twenty-first century HIA as a filter for the potential health impacts of policies, with 11 criteria: social gradient, stress, early life, social exclusion, work, unemployment, social support, addiction, food, transport, and improving the quality of health with decreasing environmental and environmental health risks	Policy and strategy development				Technicians or city council officers. Healthy Cities administrators
City and County of Swansea (UK)	The development and use of an integrated impact assessment framework	Social determinants of health. Reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population Health 2020 Social inclusion Sustainable development	Policy and strategy development		Partnership working. Piloting or pilot projects. Developing a locally relevant tool/checklist		
Carlisle	Policy Embedding Health Considerations into Carlisle's Comprehensive Impact Assessment Process	Social determinants of health. Reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population	Policy and strategy development		Developing a locally relevant tool/checklist		Technicians or city council officers

statutory impact assessments such as Equality Impact Assessment. One said that this status may reduce opportunities to integrate health and equity issues into formal decision-making.

A city mentioned that technicians in the municipal administration were unfamiliar with HIA methodology, because of its status. Two others mentioned prior general experience of intersectoral action on health (ISA) and/or health across sectors through membership of the WHO Healthy Cities Network since its inception or for many years. A few cities had previous experience of using HIA during Phase III and/or Phase IV Healthy Cities. At last, one city mentioned experience in conducting other impact assessments that were statutory.

The health ideology underlying the work was the promotion of the social model of health and the social determinants of health for all the cities. Another common thread was reducing sources of health inequalities and inequities, or focusing on vulnerable groups in the population.

### Mandate for HIA work

The mandate for the HIA work was different for the different ways in which HIA was used. For cities seeking to incorporate HIA or health and equity issues into existing processes and procedures, the mandate was a statutory requirement to undertake other forms of impact assessment, such as EIA or equality impact assessment.

For cities seeking to incorporate health and equity issues into the policy-making process, the mandate was a commitment to the objectives of Healthy Cities Phase V, including health and health equity in all local policies, in one case as the mandate for introducing HIA into the municipality in the form of assessing a strategic infrastructure project.

In one other case, the City Council passed a resolution that: 'all strategic documents for the city (every mid and long-term conception, programme, strategy, etc.) discussed by the City Council has to be sent to the Healthy City Foundation for assessment which is based on Healthy Cities principles and on the method of Health Impact Assessment'.

For a city concerned to develop a systematic approach to HIA in planning policy decisions, the mandate was a commitment in the local Core Spatial Strategy to improving the health of the local population.

### Context of implementation

A variety of formal processes were used to implement HIA and/or its elements in the case studies, which can be broadly categorized in three main groups:

- Impact assessment of individual projects
- Impact assessment within planning policy
- Policy and strategy development.

The financial requirements were covered by resources allocated to Healthy Cities in the municipality, except for two of the case studies, where some funds were received from external sources. In terms of human resources, many of the cities involved worked on a partnership basis and received support from other municipal departments. Two cities mentioned the use of external consultants to support the work.

Some form of capacity-building activity was undertaken by six of the cities for seven of the case studies: training courses were given to technicians/city council officers in six cases, to stakeholders external to the city administration in four cases, to Healthy Cities administrators in three cases and to politicians in only two cases.

A variety of social mechanisms, that is activities and actions, were used in the case studies, e.g. establishing a Steering Group to oversee the work described in the case study, holding workshops, focus groups or other types of participative meetings, developing a locally relevant tool, etc.

### Main outcomes: acceptability

The acceptability of HiAP interventions can be influenced by the level of 'buy-in' from non-health sectors during implementation, for example, the role of agenda setting activities, effective communication and dialogue and communication of the benefits of policy implementation (Shankardass *et al.*, 2014).

In the case studies focused on HIA, many different factors improving the acceptability of HiAP interventions were identified, however, only some of them were common with in two or more of the case studies. From our analysis, it would appear that there were five factors increasing the acceptability of interventions that were common to three or more case studies:

- The benefits, added value, cost-effectiveness or other resource-saving aspects of the HIA framework
- Responsiveness and flexibility in the development or use of the tool/framework (i.e. willingness to adapt the tool following stakeholder feedback/adapting the framework to organizational needs of different stakeholders/responding to requests for tool development, etc.)
- An evidence base for the work, whether in the published literature or demonstrating good practice
- Engagement of stakeholders, and in some cases the involvement of citizens from the municipality
- The use of simple, clear language when engaging with stakeholders.

As additional factor, the achievement of Healthy Cities accreditation and the profile of being a member of the WHO EHCN increased the acceptability of the development of a comprehensive impact assessment tool. The 'local'

relevance of the tool also increased acceptability, as did the focus on health improvement and reducing inequalities. The fact that the policy authors were able to retain ownership of the policy also increased acceptability. Finally, policy authors commended the capacity of the tool to help them identify interdependent outcomes and new links across policies, which also made it more acceptable.

### Main outcomes: feasibility

According to Shankardass *et al.* (Shankardass *et al.*, 2014), the feasibility of multisectoral health policies appears to be partly driven by the institutional capacity for implementation, including tools and human expertise to facilitate technical tasks, and the presence of human, financial or infrastructural resources across participating sectors.

Many different factors improving the feasibility of HiAP interventions were identified, however, some of them were common within two or more of our 10 case studies. From our analysis, it would appear that there were eight main factors increasing the feasibility of interventions which were common to three or more case studies:

- Support at a strategic level or from senior politicians
- The support of internal and external partners or stakeholders
- Early involvement or participation of partners and stakeholders at the start of the process, and/or the introduction and use of the framework or tool early on in the process
- Investing time in the process, and/or recognition that it is a long-term agenda
- Effective and regular communication (information dissemination and explanation, especially of complex concepts, with a focus on key issues and clear messages) with councillors, partners (internal and external) and/or stakeholders, including the community
- Systematic nature of the HIA framework
- Fitness-of-purpose of HIA process and tools to support the work
- The HIA approach framework enabled a novel (possibly unique) approach to be taken to the work or innovative elements within the work to be developed.

Factors increasing the feasibility of an intervention which occurred in two of the case-studies are:

- Support from WHO Expert Advisers
- Participation of staff key to implementation
- Facilitating ownership of the intervention
- The use of pilots/piloting
- The use of the HIA tool framework supported integrated work on health and health equity issues.

### Main outcomes: sustainability

Shankardass *et al.* (Shankardass *et al.*, 2014) suggest that sustainability is a main outcome of policy implementation and that an indicator of sustainability would be the description of successful or completed HiAP interventions. There is also an implication that acceptability and feasibility of HiAP interventions may be necessary pre-conditions for sustainability (Morestin *et al.*, 2010). Acceptability is defined as ‘Are sectors willing to collaborate on health and equity?’ Feasibility is defined as ‘Do sectors have the capability to collaborate on health and equity?’ However, the sustainable implementation of HiAP interventions is not necessarily guaranteed by evidence of their improved acceptability or feasibility.

According to our analysis, many different factors affected the sustainability of HiAP interventions, and only two were common to three or more case studies. Designing an inclusive process from the start was deemed critical in three cities, while incorporating health and equity issues (including access to health services) and/or health improvement into policy and strategy documents and/or decision-making for different types of proposals from policies to infrastructure projects was central for almost all case studies.

Four factors increasing the sustainability of an intervention occurred across at least 2 of the 10 case-studies: gaining trust among partners during the process; incorporating HIA in urban planning policies; improved ISA in general; partners expressing interest in addressing issues of equity.

Further factors affecting the sustainability of the comprehensive impact assessment tool were

- The existence of a long-term vision
- Having the opportunity to take part in corporate-level discussions
- Development of a comprehensive impact assessment tool, and its use in enabling the achievement of Healthy Cities aims and objectives for Phase V
- Where the municipality was using HIA as a health ‘filter’, the additional factor influencing sustainability was that the aims of each professional discipline and sector in the municipality now included health
- Establishing an HIA Review Service at the local university
- Enabling planners to gain ownership of the HUP agenda (indeed, in some cases planners have become the strongest advocates for public health)
- In the development and use of an integrated impact assessment tool, the additional factors influencing sustainability are the development of a framework in which to promote issue of health and health equity, which has universal applicability across the range of policy and strategy topics.

## Content analysis

The examination with NVivo software leads to the following findings:

- Support (and funding) from Healthy Cities politicians is often decisive for the initiation of the HIA process:
  - Initiate Politics Internal was coded 6 times within 6 of the 9 case studies
  - Initiate Funding was coded 3 times within 2 of the 9 case studies
  - Initiate Community Spontaneous was coded once within 1 of the 9 case studies
  - Initiate Research was coded once within 1 of the 9 case studies
  - Initiate Unclear was coded once within 1 of the 9 case studies
- As the process concerns the use of a new tool (often for the first time), learning from actual HIA implementation is strongly represented:
  - Learning First was coded 11 times within 8 of the 9 case studies.
- The same can be said for the generalization of this (often first) experience and the impact that this will have—not necessary on the same aspects of the EHCN:
  - Learning Second Governance was coded 7 times within 5 of the 9 case studies
  - Learning Second Leadership was coded 4 times within 4 of the 9 case studies
  - Learning Second Participation was coded 3 times within 3 of the 9 case studies
  - Learning Second Partnership was coded 10 times within 7 of the 9 case studies
  - Learning Second Policy Making was coded 4 times within 2 of the 9 case studies.
- HIA implementation has to be seen as a strategic action for Healthy Cities, especially regarding governance and partner and policy action. In this respect it is surprising that only two out of nine case-studies mentioned equity action. This is perhaps because equity action remained implicit or because equity action is still difficult to undertake in practice within the HIA framework (Harris-Roxas *et al.*, 2011). Moreover, many cities found that their case study made a strategic difference for action with stakeholders:
  - Strategic difference/Strategic Category was coded 6 times within 6 of the 9 case studies
  - Strategic difference/Stakeholder Category was coded 5 times within 5 of the 9 case studies
  - Equity Action was coded 5 times within 2 of the 9 case studies
  - Governance Action was coded 20 times within 8 of the 9 case studies
  - Leadership Action was coded 6 times within 5 of the 9 case studies
  - Participation Action was coded 6 times in 3 of the 9 case studies
  - Partner Action was coded 18 times within 8 of the 9 case studies
  - Policy Action was coded 15 times within 7 of the 9 case studies.
- As HIA treats a wide range of objects, there is considerable diversity around thematic action, in particular as regards supportive environments and healthy living:
  - Better Outcomes for Children Action was coded 1 time within 1 of the 9 case studies
  - Active Citizenship Action was coded 2 times within 2 of the 9 case studies
  - Health and Social Services Action was coded 1 time within 1 of the 9 case studies
  - Health Literacy Action was coded 1 time within 1 of the 9 case studies
  - Preventing NCD Action was coded 1 time within 1 of the 9 case studies
  - Local Health Systems Action was coded 1 time within 1 of the 9 case studies
  - Active Living Action was coded 1 time within 1 of the 9 case studies.
- HUP and design remain a favourite field for HIA:
  - Healthy Urban Planning Action was coded 10 times within 5 of the 9 case studies
  - Housing and Regeneration Action was coded 2 times within 2 of the 9 case studies
  - Healthy Transport Action was coded 2 times within 2 of the 9 case studies
  - Exposure to Noise and Pollution Action was coded 1 time within 1 of the 9 case studies
  - Healthy Urban Design Action was coded 1 time within 1 of the 9 case studies.
- As HIA is promoted as a tool towards implementing HiAP, this issue is mentioned in a majority of the case-studies:
  - Health in All Policies Action was coded 10 times within 6 of the 9 case studies.
- Further positive and negative experiences were noted:
  - Experience Good was coded 13 times within 7 of the 9 case studies
  - Experience Bad was coded 16 times within 8 of the 9 case studies.

It is necessary to avoid over-interpreting these findings without in depth verification in the NVivo software. For instance, it was surprising to discover that Rennes' HIA-focused case study presented as 'proudest achievement' had no coding for 'Experience Good'. However it

did have one for ‘Experience Bad’. Going back to the text reference, we can read: ‘we still need tools and practice to apply HIA’s methodology to all the urban projects of the city: the experience of HIA Pontchaillou requires too much time to be generalised’, which expresses a condition for HIA generalization rather than an outright negative experience. Another example of such a risk of over-interpretation is the fact that ‘Initiate Research’ was mentioned in the case study from Vitoria-Gasteiz. This is surprising in the case of municipal administrations, where Healthy Cities coordinators usually are based. Going back to the text reference, we can read: ‘the reason for introducing HIA and the study of determinants of health in projects is to provide politicians and technicians with information . . .’. In this case, the word ‘study’ probably acted as a cue for the software algorithm without there being any research intention at all. We are probably reaching there one of the limitations of our methodology.

### Results from the GEQ

This part of our evaluation is based on

- In-depth examination of text responses of the GEQ filled-in by the nine cities that proposed HIA case-studies
- Numerical analysis and comparison of what GEQ respondents of the HIA-focused case studies cities answered for the HIA/HiAP questions (Qu. 1–3, see Figure 1 in [De Leeuw et al., 2015](#)), and Health on the Political/Social Agenda questions (Qu. 22–24, *ibid*), and what answered to the same questions all other cities.

No relevant inconsistencies were identified and no unique Healthy Cities model emerged from the GEQ review of the nine cities which presented HIA case studies. Nevertheless, it is important to underline that all the cities presented positive results (progress in most health issues) during Phase V.

Numerical analysis does not show that HIA-focused case-study cities have ensured a better position for health in the political agenda (Qu. 22–24) compared with other Healthy Cities: the average mark was 5.8 (max. 10) in the beginning of Phase V for the first category vs. 6.2 for the second, respectively, 7.0 vs. 7.6 at the end of Phase V.

In contrast, HIA seems to be implemented in Healthy Cities where consciousness about HiAP as part of the Healthy City vision is more important (Qu. 1–3): 6.0 vs. 5.6 in the beginning of Phase V, respectively, 7.4 vs. 7.2 at the end of Phase V.

## DISCUSSION

The methodologies used for the evaluation of Phase V, based on the concept and principles of Realist Evaluation, are more elaborated and structured than during previous phases—

they allow a more sensitive and reliable appraisal. NVivo analysis, in-depth examination of case studies and GEQ questionnaires all yielded converging results. It is therefore possible to assert with a very low risk of error that HIA significantly helps to promote HiAP and sustainability in Healthy Cities. In most cases, HIA helped equity, participation, partnership and the position of health move forward in the City’s agenda. HIA often focused on urban regeneration, planning and design, which are arguably the favourite field of HIA experimentation, in urban or rural area (land use), in Europe or abroad ([Haig et al., 2013](#)).

The proportion of cities that had submitted HIA-focused case studies – 9 out of 73 (12.3%) for the cities and 10 out of 159 (6.3%) for the case studies – may seem low. However, this fits in with the findings of the Phase IV evaluation that, at the onset of Phase V, less than 10 cities in the EHCN appeared to have ‘sufficient resources, knowledge and experience’ to implement HIA in a sustainable way ([Ison, 2012](#)). In fact, despite the withdrawal from WHO-Euro in Phase V of the EHCN HIA-Subnetwork and the removal of HIA as an explicit target, it is encouraging to see that HIA implementation in many cities is at least as vigorous as in Phase IV.

The role of an international network such as the EHCN in promoting and supporting innovations such as HIA is a central idea of this article. Work with HIA requires training and skills, political support, access to networking expertise and motivation for intersectoral collaboration ([Saint-Pierre et al., 2014](#)). Evaluation of Phase IV showed how difficult it was to introduce and implement HIA in countries without a history of HIA or a supportive national context. Exceptions were cities that had made a strong commitment to the Phase IV core theme by joining the HIA Sub-Network, which was an effective vehicle for spreading knowledge and supporting new local HIA leaders. Evidence for this is that all non-British Healthy Cities included in this Phase V evaluation are in countries that were members of the HIA Sub-Network: France, Hungary, Italy and Spain. Unfortunately, HIA remains absent from eastern and southern areas of the European Region: a situation which must be corrected during Phase VI (2014–18). Therefore, we suggest that WHO should require all Healthy City candidates to Phase VI effectively adopt HIA/HiAP as strategic actions critical to reaching the new phase’s overarching goals.

Among the factors increasing the feasibility of HIA interventions, the following are particularly relevant:

- Support at a strategic level or from senior politicians, internal and external partners or stakeholders
- Introduction and use of the framework or tool early on in the process

- Investing time in the process and recognition that it is a long-term agenda
- Effective and regular communication (information dissemination and explanation, especially of complex concepts, with a focus on key issues and clear messages) with councillors, partners and/or stakeholders, including the community
- Fitness-of-purpose of HIA process and tools to support the work
- The HIA approach framework enabled a novel or innovative (possibly unique) approach to be taken to the work or novel or innovative elements within the work to be developed
- Support from WHO Expert Advisers
- Facilitating ownership of the intervention
- The use of pilots/piloting
- Developing a joint understanding of HUP between public health and planners.

The main barriers and facilitating elements identified during the Phase IV evaluation were confirmed here, but we were able to refine HIA implementation conditions and expectations. The achievement of Healthy Cities accreditation and the profile of being a member of the WHO European Healthy Cities Network increased the level of acceptability of the development of a comprehensive impact assessment tool. Although this was only mentioned explicitly in one case, such a mechanism was effective in all cities (Simos and Cantoreggi, 2008). These findings are partially convergent and partially complementary with the results of the more recent surveys found in the scientific literature regarding the factors that increase the feasibility of HIA interventions and their barriers and facilitating elements (Rhodus et al., 2013; Bourcier et al., 2015).

An important limitation to our study is the fact that the basic material was available only in English and was given to people of other languages. Differing cultural backgrounds and a sometimes partial command of the English language can significantly impede research in this area.

## CONCLUSION

Despite the disappearance of the HIA Sub-Network at the end of Phase IV, this study shows that several new areas of the European Healthy Cities Network (i.e. outside the UK and Scandinavia) are strongly committed to HIA process implementation. The methodology used in Phase V evaluation allowed the verification of the features, obstacles and facilitating elements already identified in Phase IV evaluation. It also enabled a more accurate analysis of HIA operationalization and its links with other important EHCN dimensions.

HIA pursues its development as a decision-aid tool for decision makers who want to promote health across policy sectors. Already mentioned in the Adelaide Statement in 2010, HIA has a visible position in the Health 2020 Strategy (WHO, 2012), for which Healthy Cities are an important vehicle for local level implementation. For Phase VI, HIA as a tool for HiAP is linked with the same overarching goals: ‘creating resilient communities and supportive environments’ (core theme 4) and remains, as in Phase V, a requirement regarding capacity-building. The current evaluation brings evidence for the recommendation that WHO should encourage all Healthy City candidates to Phase VI to effectively adopt HIA/HiAP as strategic actions critical to reaching the new phase’s overarching goals.

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