PROFILE OF SCIENCE ADVISORY REPORTS ON HEALTH IN EUROPEAN MEMBER STATES: RESULTS OF A SURVEY

CIUTAN M1, SKIBA M2, SASU C1, FLORESCU S1, ANGHELUTĂ C1, COENEN TMM3, GUNNING LG2, SEGOVIA C4, PAUWELS A2
ALLANDER S6, KNOTTNERUS JA7, VLĂDESCU C1

1 National School of Public Health, Management and Professional Development, Bucharest, Romania;
2 National Institute of Public Health - National Institute of Hygiene, Poland;
3 Health Council of the Netherlands, the Netherlands;
4 Carlos III Health Institute, Spain;
5 Hoge Gezondheidsraad, Belgium;
6 Swedish Council on Technology Assessment in Health Care, Sweden;

INTRODUCTION

In a world increasingly focused on progress, knowledge has become a key element of development and social policies are elaborated based on scientific evidence. Also, the progress itself has created the need to improve the effectiveness of interventions and decisions. In this context, the role of science advice in supporting knowledge transfer between science and policy seems to be essential. A good science advisory report is the best guarantee for combining "the needs of society", "the results of science" and "the policy making process" into a balanced evidence-based conclusion.

The European Union encourages the active participation of Member States in European structures such as networks, partnerships and cooperations to disseminate best practices and search for possible efficiency. EuSANH represents the European organisations (i.e. Science Advisory Bodies for health - SABs) actively involved in producing and providing science advice in order to support policy makers in decision making processes. Today, the network brings together SABs from 13 countries, and aims to provide a basis for sharing experience between SABs, in order to improve and streamline the process of science advice.

The study reported here is conducted in the context of the EuSANH-ISA project (EuSANH - Improving Science Advice for Health in Europe) and aims to provide an overview of the ways in which EuSANH members produce science advice and to draw a profile of the current science advisory reporting process. The study focused on the thematic analysis of a selection of SARs published by EUSANH members over the past four years. Based on that analysis we tried to describe the main methodological issues involved in science advice and to assess the European relevance of SARs issued by member organisations of EuSANH.

METHODS

A number of SARs from participating organisations were collected, translated and analysed. The range of topics addressed in the selected reports was explored using a thematic analysis that was carried out as a first step of this methodological approach. Furthermore, we looked at the process by which reports were planned, produced and disseminated.

Thematic analysis of the reports: Fifty-one reports (2-5 reports from each SAB) considered as relevant for each organisation were collected and analysed with regard to the topics addressed. The subjects were coded in a particular topic category and finally categorised in one of the following major themes: identifying health...
criteria were: international relevance of the subject (advisory advice reporting activity of each EuSANH member. These relevant in a European context and typical for the science We used selection criteria to highlight those reports that are selected reports from each Eu SANH member organisation. analysis of the information comprised in the structured inter-We combined quantitative (frequency tables of the items in view and reports). A sample of 23 SARs consisted of two selected reports from each EuSANH member organisation. The 23 reports, provide a good overview of the current science advisory practice of EuSANH members.

For the assessment of the SARs usefulness at the EU level we performed a literature review of the main political documents by the EU decision-making structures/entities with a focus on the main policy issues in the field of public health. The approach was complemented by in-depth interviews with key informants from the participating organisations. The conclusion that scientific advisory reports are useful at EU decision-making was mainly based on the arguments of the report’s main author for considering the report relevant at EU level (information collected through the in-depth interview) and on the similarity of EU and national concerns in the field of public health, health care and health policy based on the literature review.

R E S U L T S

Although there appears to be no European standard for producing a typical science advisory report, the current practice in EuSANH member organisations did suggest some general patterns (“different archetypes”) of science advice practice. These archetypes depend on the topic addressed and on the methodological traditions in producing SARs.

The thematic analysis reveals that the advisory bodies of EuSANH members produce very different types of reports that cover a wide spectrum ranging from research assessment to policy papers and also from topics of local interest to international perspective of the health problems approached. The issues addressed are mostly on public health, healthcare or health policy issues.

“Health care” is the most common topic and “Health Policy Problems” is the least frequently addressed. The issues encountered most often in this analysis were topics related to Quality, Health services availability, Inequalities and inequities in health, Nutrition, Health and environment, Screening programs, Mandatory vaccination, Mental illness and Cancer.

The results show there are specific topics for each EUSANH member, but also common themes to different countries showing a great opportunity for collaborative work that would improve not only quality (by recruiting the best available expertise and operating with European standards) but also efficiency (by distributing the cost amongst a number of SABs) in producing SARs.

Methodological issues: The analysis of practices in producing, writing and disseminating SARs by the independent advisory bodies of the EuSANH network shows a wide variety.

1. Formulating the question: Most reports present succinctly the problem definition without any reference to the context out of which the need for advice arose. Almost all organisations’ key informants recognize the importance of close collaboration between policy makers and scientists when a request for advice is first formulated. For SABs which are positioned directly under the Minister of Health a request often appears to be dictated by the decision maker who has a strong conviction about a specific issue and appeals to scientists to support and argue this conviction. For SABs with complete independence (including financial independence), the process of a request for advice can be initiated from both sides and the role of SABs in clarifying the request is greater. Because of their expertise and authority in the field of science advice, these SABs can also present new findings related to current health policy issues at informal or formal scientific meetings where politicians or decision makers participate.

Analysing the reports shows that there often is a good participation of specialists and experts even in the first steps of the process (need detection and problem definition). This high degree of cooperation between all actors involved represents a sound basis for a good advisory report. The more cooperation between actors involved, the better the chances of a useful science advice. The results highlight both the major role of scientists working closely together with the decision makers and the weak influence of special interest groups in society. Despite the differences, the key element identified for all reports is reaching consensus on the final definition of the problem by joint discussion.

2. Producing science advice: In general, SABs with long tradition in producing science advice have a standard format for the process of science advisory reports. But given the different profiles of EuSANH members, producing the SAR shows a varied practice even within the same SAB. Although all SARs bring together the scientific evidence available, the way it is synthesised differs widely.

Committee formation: Analysing the information received, we were able to distinguish three different models of structures that support the production of the relevant SARs published by EuSANH members (Figure 1).

Model 1 is characteristic for SABs with a long experience in producing science advice and especially for health policy issues addressing several aspects. The other two models were found in the practice of SABs with less
experience and which produce science advice for specific topics that usually require a single health problem to be addressed.

These three models function quite differently. While in the case of the first model, each structure is supported by specific and dedicated staff and the relationships between structures are very well defined, for the other two models, these different roles either are the responsibility of one coordinator (who is overloaded with responsibilities in this case) or are not supported adequately resulting in a weaker functionality in producing the SAR. The practice of a SAB with much experience such as The Health Council of the Netherlands that traditionally defines the four main teams (in the model 1) for each SAR could be seen as a model of best practice in committee formation. Regardless of the topic addressed, we consider that at least the roles of these four structures must be exercised, whether they are part or not of a formal structure.

Sources of information: All relevant advisory reports were based on scientific results on the topic of advice. In the case of one third of the reports, primary data were collected by using diverse methods (questionnaires, interviews, focus group interviews, observation, case-studies, diaries, etc.). Sources in English were used almost as often as sources in the national language. Almost half of the reports have selected information by applying both inclusion and exclusion criteria, while for more than half only inclusion criteria were used. A good literature review appears to include both an overview of past policies and of relevant research in that particular field.

Methodology for analysis: It is important for a SAR to look at the topic addressed from different perspectives. A multidisciplinary approach both in the collection of the material and in the analysis assures that all angles are explored. The weighing of the evidence must be made explicit. Half of the reports applied a qualitative methodology such as conceptual analysis and a formal quantitative review.

The methods highlighted in our analysis are comparable to the classical methods used in evidence-based medicine which has a long tradition in supporting clinical decision-making. More than half of the reports used critical appraisal of the evidence, peer reviewed scientific papers and grey literature. In a lesser proportion, authors applied a formal meta-analysis as the method for appraisal of the evidence. The methods used appear to depend on the SAB/team’s experience in practicing and applying each method, but some also are specific to the topic addressed: critical appraisal and grey literature (“Identifying health determinants” area); all methods were used for all reports categorised in the “Preventing diseases or promoting health” area; while no common methods were encountered for reports in the area of “Health services organisation & functioning”.

Aspects discussed and considered in the report: “Limitation & fulfilment of objectives proposed”, “Evidence” and “Methodology” were the most frequently discussed aspects in the reports analysed. To a lesser extent, aspects such as: “Ethical”, “Economic”, “Societal” and “Cultural”, “Patient, consumers, stakeholders’ perspectives”, were discussed. Not considering or discussing these issues could lead to a bias in providing comprehensive solutions. Therefore, it is useful to include a specific chapter for analyzing and discussing these aspects in each SAR.

Reviewing science advice: All reports rely on the expertise of the scientific staff and competence and independence of the experts members of the SAB. In addition to these internal reviewers, the reviewing of SARs is made with the participation and formal involvement of reviewers outside the SAB. “Scientific Community” and “Health care Community” were the segments of society most frequently involved in reviewing the reports. “Civil society” and “other communities” have participated to a lesser extent in the reviewing process of the reports.

The drafting of the reports requires scientific staff with special writing skills. The authors should not only summarize the literature, but have to be able to reflect the nuances of the multidisciplinary approach to the topic with all its concealed and implied meanings. Selecting staff and involved experts with these skills is an important prerequisite for a good SAR and often reflects the traditional relationship developed by the SAB with different experts/organisations.

3. Publishing and disseminating the science advice: The dissemination channels most frequently used for policy makers are electronic channels (SAB website), hard copy reports and personal communications (presentations). Content analysis of the main elements of the selected reports highlights that the process of producing and disseminating science advice is not always clearly reported. The communication channels used differ by topic and type of audience (figure 2).
The EuSANH topics partly overlap with the current European concerns. Therefore, EuSANH could play a role in supporting policy making at a European level for those health issues helped by science advice. There are three areas where EuSANH expertise is available and which match the main concerns at EU level: health topics addressed in more than one Member State; transnational health issues where the EU has a responsibility and health problems needing a large international participation where Europe has to be represented.

DISCUSSION

The analysis of a selection of SARs produced by the independent science advisory bodies that make up EuSANH, shows a wide variety of approaches in producing a SAR. Besides this variety, some similarities were found in the way SARs are produced and disseminated. The large variety in the methodology of producing science advice could partly be explained by the different positions and responsibilities of the SABs in a multinational network. On the other hand, the variety of topics in the reports addressed and the available scientific information may also partly explain this. This could be verified by comparing reports where the same question is addressed with different methodologies by different SABs.

The variety encountered could also offer opportunities. The different methodologies could be useful to the member organisations which may learn from one another. They may also be mutually complementary depending on the working programmes and the topics covered. As no practice is perfect, we have to start from the assumption that each practice could be improved, so, the diversity could enable the members to use each other’s work and expertise.

As the common methodological approach is refined further and a more intense European cooperation is achieved, EuSANH members might be able to share the initial work of synthesising the scientific evidence necessary for a SAR. Given the national budget constraints, they might then together be able to cover more topics than each national organisation could cover by itself.

Despite the large diversity in producing, writing and disseminating a SAR, it seems to be very difficult to define a successful or influential SAR. The effectiveness of SARs in the policy making process is influenced by many factors of which three were identified as defining the level of effectiveness: 1) the scientific quality of the report; 2) the topic addressed and 3) the interest of the appropriate policymakers regarding the advisory topic. To evaluate the efficacy of the dissemination of the results of science advice, timing and language are key elements, but also compatibility between the format in which advisory text is elaborated and the ways used for dissemination are important.

CONCLUSION

In the context of these results, the following possibilities for further action to EuSANH members can be envisaged:

Make the opportunities for quality improvement and efficiency in science advice apparent to policy makers in Member States and at EU level, in order to promote a collaborative agenda of science advice for policy issues;

Focus the network’s efforts on identifying common themes and encourage international collaboration in providing common scientific advice on these topics even if it involves only a few EuSANH members;

Broaden the coverage of key public health issues to a European and international level.

Moreover, a common methodological framework would be useful to optimise science advice to support the decision making process. This would not only promote quality, but also the mutual credibility and international exchange of the reports from different Member States.

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