



NEUROSOME



Jožef Stefan Institute, Ljubljana, Slovenia



H2020-MSCA-ITN-2017 GA - 766251

Heraklion, Crete, May 2019

NEUROSOME: First training event

NEUROSOME

Exploring The Neurological Exposome

The Science To Policy Interaction - Different Needs Of Different Stakeholders

NEUROSOME ESR 7

Tine Bizjak



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Content



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1. Improving public health
2. Health in policies
3. Assessing health effects to inform decisions
4. Research needs



1. Introduction



- Health - "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"

(Constitution of the World Health Organization, 1946)

- Health determinants:

- Person's *individual characteristics* and behaviors
- Socio and economic factors
- Physical environment

} Genome and exposome

- How to prevent adverse health effects or improve health?
→ consideration of health in the development planning and decision-making



2. Health in All Policies (HiAP)



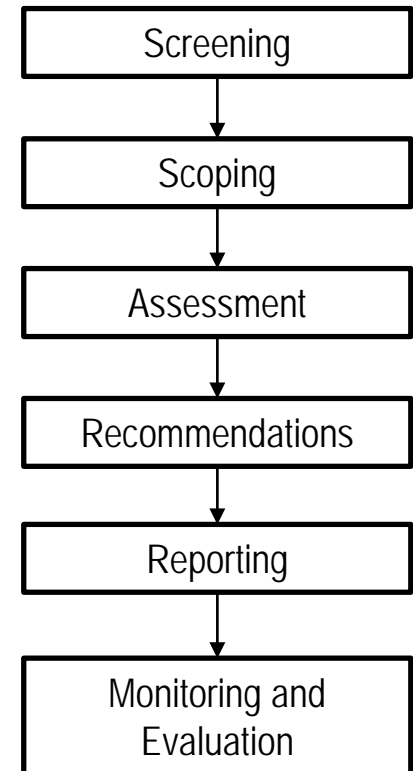
- Population health is influenced by actions and policies beyond the health sector alone
- Health protection and promotion → involvement of many sectors
- Inclusion of health makes sense **IF** prediction of possible health effects is possible
- Existing tools and methods: Health Impact Assessment (HIA), Health Risk Assessment (HRA) etc.



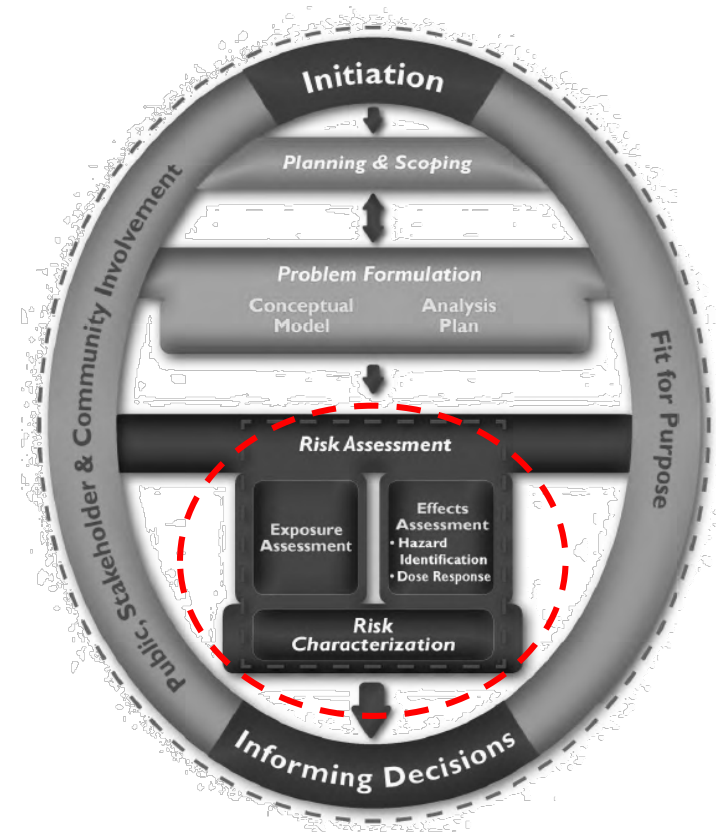
3. Health Impact Assessment (HIA)



- “Combination of procedures, methods and tools by which a policy, program 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)
- Aims to improve public health by informing decision-makers about the anticipated health effects related with their decision
- **Supports** the decision making in development planning and approval context
- No single right way of performing HIA



- Risk = Hazard * Exposure
- HRA systematically evaluates potential adverse health effects resulting from human exposure to hazardous agents
- Steps:
 - Hazard identification,
 - Dose-Response assessment,
 - Exposure assessment and
 - Risk characterization (transparent, clear, consistent and reasonable)



EPA, 2014



- Fluoride causes adverse health effects
 - Dental fluorosis, skeletal fluorosis
- *stop using fluoride to avoid bone deformities*



5.2 Example: Fluoride supplement pills - HRA



- Fluoride pills are given to a group of children (exposure)
- How many are expected to develop adverse health effects?
- Informs the decisions if it is acceptable to give fluoride to children if it causes adverse health effects
- *reduce fluoride exposure to reduce the number of bone deformities in children*

- Program proposal for giving fluoride pills to children in primary school
- Assessment of expected positive and negative health effects of the proposed due to related exposure to fluoride
- *improve the proposal by maximizing positive health effects of fluoride - dental protection and minimizing the amount of bone deformities*



6. Health in different assessments



- HIA broader than HRA
 - HRA → “exposure based”
 - HIA → “proposal based”
- Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA) and different integrated assessments (IA) can include health endpoints
- Health often not adequately addressed in other types of assessments
- Assessment type should reflect individual decision-making process needs

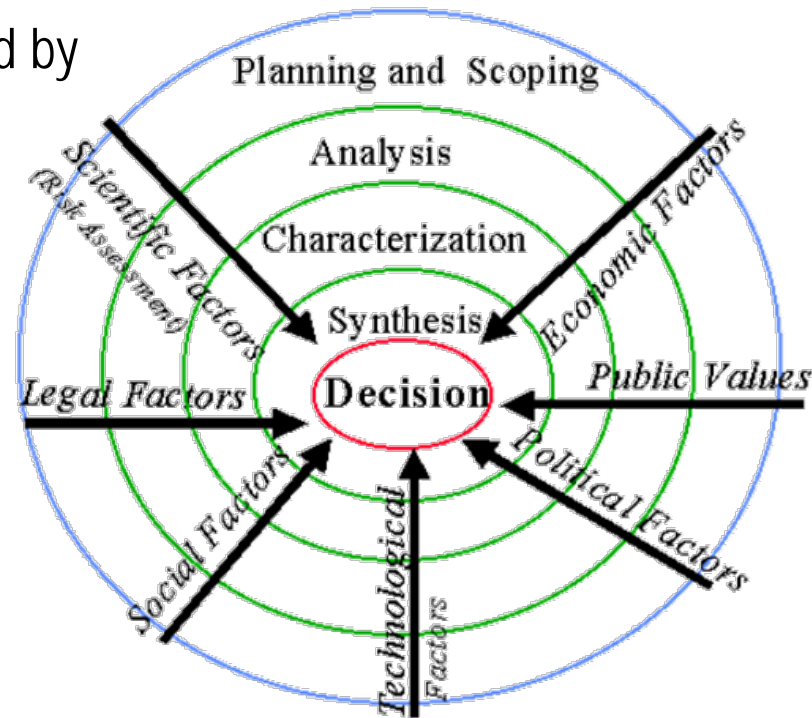


7.1 HIA and societal development



- HIA is applicable for policies, projects and programs
- Currently not widely and effectively integrated into decision-making
 - Decision-makers should value health higher on their agendas?
 - Health impact assessors need to improve the understanding of the policy making?
 - Need for improved collaboration between the stakeholders?
- Scientists need to ensure that their discoveries are applied for the improvement of health and well-being

- Development decisions influenced by different stakeholders:
 - Policy makers,
 - Individuals,
 - Researchers,
 - Payers,
 - Advocacy groups,
 - Public...
- with different needs



Risk management decision framework
(Fowle III & Dearfield, 2000)



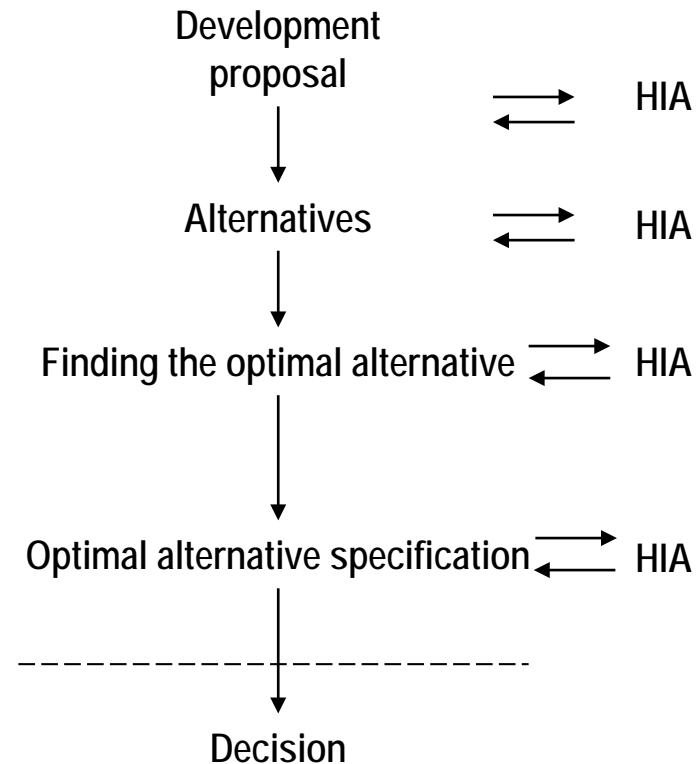
8.1 Effectiveness of HIA



- HIA aims to influence decision-making process → Success determined by the usefulness and effectiveness of HIA evidence
- Assessing and improving the HIA effectiveness usually focuses on:
 - Improving its evidence reporting
 - Training of HIA practitioners
 - Stage of HIA integration and time available
- Factors outside of HIA itself rarely considered
- Improving HIA effectiveness and impact requires:
 - improved HIA and
 - improved understanding of external factors determining the decision making process

8.2 Stage of HIA integration

- HIA in the final stages of decision making → difficult or expensive to make adequate changes
- HIA in parallel with decision making and planning → enables appropriate consideration of health impacts during planning and final decisions





9.1 My research – starting points



- Increasing amount of knowledge (i.e. exposome)
- HIA is rarely an integral part of the policymaking process
- Inadequate consideration of health:
 - Lack of coordination between stakeholders
 - Lack of HIA endpoints suitable for the evaluation of planning proposals from public health perspective
 - Lack of specialized expertise
 - Lack of transparency of policymaking process
 - Difficult monitoring of the effectiveness of health consideration
 - Level of community participation
 - Stage of HIA inclusion



9.2 My research - aim



Improve the understanding of public health policy development process by identifying factors that influence and determine the useful and effective consideration of health issues.

- Focus at strategic level of development planning
- Improving HIA (exposome approach, HBM?) and improving the entire policymaking process by HIA
- Identification of factors that determine successful integration of health assessments in individual policymaking cases



- Working hypotheses:
 - Potential health effects of planning proposals are not adequately considered in societal development decisions.
 - There is a lack of experience with currently available tools such as HIA, HRA for the purpose of improving decisions concerning development planning.
- Research guided by NEUROSOME (and HBM4EU, HERA, SciShops etc.)



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Thank you!
Questions?

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