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How to improve the impact of healthcare campaigns by introducing methods of health impact assessment among students and health professionals

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Abstract The development of health brigades in vulnerable populations constitutes a fundamental role for the approach of students to clinical practice and allows professionals to attend to basic needs in small and specific populations. Health impact assessment tools are essential to choose the populations and pathologies to study through the implementation of well-defined objectives that reduce the knowledge gap between the clinical and administrative fields of health between students and professionals, and thus, establish a scientific research and monitoring exercise.

Cómo mejorar el impacto de las campañas de salud mediante la introducción de métodos de evaluación del impacto en la salud entre estudiantes y profesionales de la salud

Resumen El desarrollo de brigadas de salud en poblaciones vulnerables constituye un papel fundamental para el acercamiento de los estudiantes a la práctica clínica y permite que los profesionales atiendan necesidades básicas en poblaciones pequeñas y específicas. Las herramientas de evaluación de impacto en salud son esenciales para escoger las poblaciones y patologías a estudiar mediante la implementación de objetivos bien definidos que disminuyan la brecha de conocimientos entre el ámbito clínico y administrativo de la salud entre estudiantes y profesionales y constituir, de esa manera, un ejercicio científico de investigación y seguimiento.

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Introduction

WHO defined the *Health Impact Assessment* (HIA) in 1999 as a builder of the evidence based in public health in order to reduce health inequalities. After years of analysis studying the impact and the pertinence of the HIAs, it has been noted that there is a main element that can be clarified by this tool: "Developing an approach that can help to identify and consider the potential—or actual—health impacts of a proposal on a population".[1]

The results of the development of HIAs applied to social contexts are the possibilities of setting up the *evidence-based* recommendations that will lead the decision-making process. This working way allows the leaders of the HIAs to develop and perform strategies that improve health conditions and avoid health detriment.

Consequently, it's understandable why another HIA's definition given by the WHO has a multidisciplinary context when saying it is: […] A *combination of procedures, methods and instruments that allow to judge the possible effects of a Politic, program or project in population's health and the distribution of the potential effects on it*".[2] Here, it inserted a fundamental concept: *Politics*. HIAs have a huge component in relation with the political leaders of the community where the program will take place. This is due to the aim of a continued revision and analysis of the information concluded in order to maintain a constant improvement of health conditions.

However, WHO doesn't have the unique definition of a HIA. The Yorkshire & Humber Politic Health Observatory has a bigger view of the multidisciplinary approach of the HIAs by defining it as a Health model that includes economics, politics, social, psychologic, and environmental determinants.[3] According to these 2 definitions, it can be concluded that the main aim of HIAs is to improve the knowledge on the effects of health programs implemented on population in order to evaluate whether there is a good performance of the decisions taken or how can we intervene to improve the development of the programs.

Given that the organisms with better performance on the influence of social changes are the ones who act towards Politics, the HIAs need to work quite closely to the local government so it can act as helpful tool at the evaluation tracing of the process. That's why HIAs need to be supported on 3 pillars: (i) Political decision-makers, (ii) tracing, and (iii) political legalization of the programs implemented so they can be continued along time as a mandatory health program.

The General Direction on Health and Consume of the European Commission expose a scheme of HIA as showed in Fig. 1 "EU Policy HIA methodology (EPHIA)".[4]

As Fig. 1 shows, processes involved in the development of any healthcare intervention in a community should foresee if the activities proposed are the ones that can improve community health conditions.[5] If it's not case, then the healthcare intervention is mostly focused on the medical care of individuals in a single moment without any possibility of extended impact in a long-term surveillance. This is why small healthcare campaigns should be led by HIAs structure in order to promote not only the brief medical care of a patient, but also to suggest recommendations to the political decision-makers about activities that should be implemented based on the analysis and results of surveillance made on the intervened community.

The communities we try to target here are the ones understood as *vulnerable communities in healthcare* which
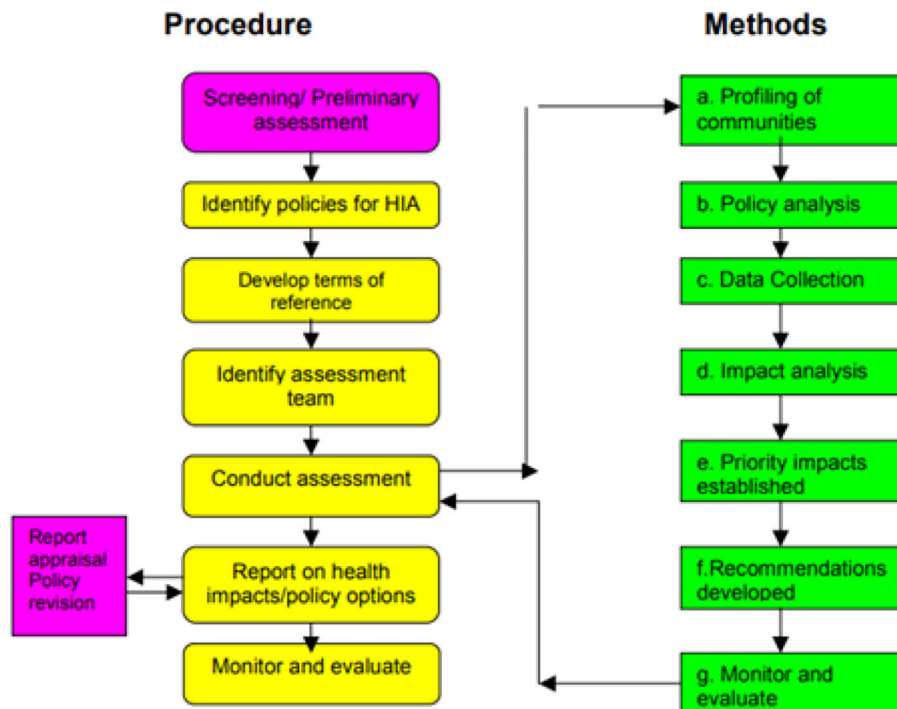

Fig. 1   EU Policy HIA methodology (EPHIA).

may be understood as the ones socioeconomically disadvantaged, underinsured, or with certain medical conditions. This is the definition and approach made by Waisel.[5] Therefore, members in vulnerable communities often have health problems exacerbated by needlessly inadequate healthcare.

As it can be seemed, HIAs work in a remarkably similar way to the systematic reviews where, given a bunch of conditions in a group of patients, it's analyzed which therapeutics have better outcomes in order to suggest medical decisions. The main difference is that working process of HIAs is not as extensive and meticulous as a systematic review and its main objective is the link between the political parties and the evidence found in the surveillance in order to suggest health programs. In that order of thought, HIAs are not tools to base any guideline but offers data and ideas in order to develop other systematic reviews.

At this correspondence, we will not make an extensive analysis on each of the elements showed in the diagram above. Nevertheless, we want to make a special highlight on 3 items that should be taken in consideration whenever a medical volunteering or campaign is planned, *i.e.*: (1) Defining the purpose of the campaign, (2) identify the items to measure health impact, and (3) define the political links and strategies with the purpose of giving continuity and surveillance to the activities proposed.

Defining the purpose of the campaign

The first task to analyze is the campaign's program in its main objective, for example, how would the project improve health in a certain population. That is the purpose of the project and should be well aimed to identify the health conditions of each community in order to perform the best activities to impact the most critical points (ex. Tobacco consumption, sexual education, periodontal or hypertensive disease, obesity, etc.). It might be important to medical formation and update to attend needs on tropical diseases such as dengue, Chagas, or Leishmaniosis but if the community has no need of education or treatment on these diseases based on its geolocation or season, then it would be a waste of resources and work from students and professionals. On the other hand, it's not suitable either to attend whatever it comes to consultation without having a main purpose of an active research of certain pathologies or conditions because the data will not be as big as needed to evaluate health impact. The main idea of defining the objective of the campaign is to aim the main needs of the population in order to prepare professionals and students to best attend the patients and take as much as information as needed from the current state of the community.

Identify the items to measure health impact

Even if there are many ways to evaluate health impact, here we want to resume the main ideas that, we think, should be taken in consideration in order to assess a wide evaluation of Health Impact by identifying the next items:

- Which are the health determinants affected in the population by this campaign and what are their consequences?
- Severity of impact on: mortality and morbidity.
- Proportion of the affected population: total, intermediate, and low.
- When will the intervention campaign show effective results? (Long-, medium-, or short-term).
- What are the characteristics of the impacted population?[5]

Define the political links and strategies

As mentioned above, one of the main objectives of HIAs is working together with the political decision-makers. Therefore, the creation of a database with the potential political influencers is a key point in order to know who are the people who will receive the analysis planned in numeral 2 and the ones who will be able to transform these examinations into social programs or legislative acts to promote and maintain the activities with a positive impact assessment in health and discard the ones that didn't show any effectiveness in order to look for better ones. This is the cornerstone that will lead the campaign to political outcomes in favor of health communities and will guarantee the development of these campaigns periodically generating positive impact and data to perform more rigorous studies.

Health campaigns are one of the major health activities made by different healthcare institutions and universities along the world consisting in a national call for doctors, nurses, dentists, and health area students who want to provide clinical care to vulnerable population who do not have the best healthcare system. Therefore, it is sustained on 2 main objectives: academic and social improvement. Academic aspects are guided to reinforce the skills such as diagnosis, elaboration of clinical record, medication prescription, and researching. On the other hand, social aspect involves the improvement of interpersonal skills between health personal and the community by generating a friendly environment which allows healthcare students/professionals and patients to feel comfortable and safe.

However, even when this healthcare campaigns are one of the most strategically events made to benefit communities, professionals, and students at the same time, it's clear that once the campaign is over, the work done starts to blur since there isn't a political link between the campaign health students and professionals with the political makers in order to trace program's progress. That's why second and third point signaled above are quite important into healthcare campaigns organization so its impact can be measured and evaluated in well-defined stipulated dates.

However, evaluating the impact of health campaigns is a crucial point to understand their effectiveness and determine whether the desired objectives are being achieved in order to determine the effectiveness of the application of HIAs. Here are 5 approaches and metrics that can be used to evaluate the impact of health campaigns:

1. Health indicators:

   Health indicators are objective measures that reflect the health status of the population. These may include

mortality rates, incidence of diseases, vaccination rates, chronic disease rates, among others. Comparing these indicators before and after the campaign can provide an idea of its impact on the health of the population.

2. Surveys and questionnaires:

   Conducting surveys and questionnaires before and after the campaign can help evaluate the change of knowledge, attitudes, and behaviors of the target population. The questions can address specific topics related to the campaign, such as awareness about a disease, the adoption of healthy practices or the search for health services. Comparing the results of pre- and post-surveys can indicate the impact of the campaign on the knowledge and behaviors of the population.

3. Data analysis:

   Collecting and analyzing relevant data can provide information on the impact of the population's health campaign. For example, demographic, epidemiological, and medical care data can be examined to identify changes in disease patterns, medical visits, hospitalizations, or other medical care indicators. Behavior data can also be analyzed, such as the use of health applications or portable devices, to evaluate changes in health habits.

4. Participation evaluation:

   Measuring scope and participation in the campaign can provide an idea of its impact. Data can be collected on the number of people achieved, attendance at campaign events, participation in prevention programs, or the dissemination of key messages in social networks. These data may indicate the level of commitment and awareness generated by the campaign.

5. Evaluation of costs and resources used:

   It is important to evaluate the financial and human resources used in the campaign and compare them with the results obtained. This implies analyzing the cost of implementation of the campaign in relation to the impact achieved. For example, calculating the cost due to behavior change or improved health outcomes can provide an impact measurement in relation to invested resources.

The implementation of this kind of tool that allows us to measure impact in each campaign is fundamental to delve in healthcare as a scientific and social labor. HIAs are an appropriate tool which can allow students and professionals to improve health in a community for a longer time because it can be traced by years, generate political changes, and develop a more solid social structure that involves continuity and surveillance of health processes.

The implementation of HIAs allows students and professionals to access not only the clinical aspects of the patient but also the public health issues that implies the development of links between healthcare agents and political decision-makers in order to create programs with a bigger impact in health. This last part is a fundamental lack of today's healthcare providers and students where there is a big gap between the treatment of a single patient versus the implementation of activities with political support that can reduce the morbidity of illness in a small population.

Finally, the application of HIAs into healthcare campaigns can also help medical students to identify what diseases and conditions should be studied and analyzed the most in order to target their medical training towards the most needed skills in their location, region, or country. This might be used also as a compelling argument to suggest modifications on educational curriculums according to each region configuring a theorical strategy to give medical education a more focused and specialized approach.

New perspectives according to the future

Considering the heyday of the new technologies, it's unavoidable to think about how the healthcare students and professionals could take advantage by implementing tools such as artificial intelligence into these kind of projects. Consequently, it is proposed 2 ways AI could potentiate HIAs approach:

Data analysis

AI can analyze substantial amounts of data efficiently and extract relevant information. This allows healthcare professionals and students to better understand health trends, identify patterns, and predict disease outbreaks. With this information, health campaigns can be better informed and target areas of greatest need. This can also be understood as a better identification of communities with major needs or risks in order to prioritize the objectives of each campaign and the identify the community that would benefits most from it.

Education and awareness

AI can play a role in education and awareness about health issues. AI-powered chatbots and virtual assistants can provide accurate and accessible information about diseases, symptoms, prevention, and treatments. Additionally, AI algorithms can analyze vast amounts of data from social media and other online sources to understand public perceptions and attitudes towards health and tailor awareness campaigns accordingly.

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Ethics Committee

The present work does not require Ethics Committee approval or patient consent.

Bibliography

1. ECHP. ECHP European Centre for Health Policy [cited 2023 Mar 8]; Available from: http://www.euro.who.int/document/PAE/Gothenburgpaper.pdf, 1999.
2. CDC. Health Impact Assessment Quick Start Resource What is a Health Impact Assessment (HIA)? [cited 2023 Mar 8]; Available from: http://www.euro.who.int/document/PAE/Gothenburgpaper.pdf.
3. Abrahams D, den Broeder L, Doyle C, Fehr R, Haigh F, Mekel O, et al. Policy health impact assessment for the European Union: final project report.Policy HIA for the EU Project Report Acknowledgements. Public Health and the Environment (RIVM). NL 4 Institute of Public Health; 2004.
4. Santamera AS, Sandín-Vázquez M, Sarría-Santamera A. Colaboración Especial; 2008.
5. Waisel DB. Vulnerable populations in healthcare. Curr Opin Anaesthesiol. 2013;26:186−92.