Review of evidence on the effect of QA/QI approaches in HIV primary prevention in the EU-27 countries

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1 BACKGROUND

Human immunodeficiency virus (HIV) is a major public health burden in Europe, with an incidence rate of 5.7 per 100,000 population in the European Union (EU) / European Economic Area (EEA) countries in 2013 [1]. HIV prevention plays a crucial role in combating the HIV epidemic. However, Quality Improvement (QI) and Quality Assurance (QA) approaches have not been applied or documented widely in HIV prevention research. Instead, most research centers have commonly used more traditional approaches to quality control like checklists completed by staff members. These approaches mostly document what has been done but not the quality of what has been done [2]. This review has been conducted as a subcontract with the EU-funded "Joint Action on Improving Quality in HIV Prevention" and was commissioned by the Work Package 7. The so called "Quality Action" aims to increase the effectiveness of HIV prevention in Europe by using practical QA and QI tools and approaches. Quality Action has validated three tools for HIV prevention so far: SUCCEED, Quality in Prevention (QIP) and Participatory Quality Development (PQD) (http://www.qualityaction.eu/) and will develop new ones. The aim of this review was to identify and synthesize evidence on how QA / QI approaches have been applied and their effect in indicating quality in HIV primary prevention.

2 METHODOLOGY

The methodology of this review was twofold:

(1) Systematic literature search in PubMed (Medline), ScienceDirect, CINAHL and SpringerLink. The search was done with simple keywords and MeSH-terms in English. The research strategy was developed by using MeSH and first pre-tests in the database PubMed. The strings and combinations of keywords included:

- "HIV Infections/prevention and control"[MeSh], HIV prevention
- "Quality Assurance, Health Care"[Mesh], quality assurance, program monitoring, quality improvement
- "Quality Indicators, Health Care"[Mesh], quality indicators, quality standards, quality criteria, quality principles, success factors, critical success factors

Scientific articles on quality in primary HIV prevention originating in EU-27 countries, Australia, New Zealand, Canada and USA of any kind of evidence were included and qualitative analyzed. Articles published between 01.01.2003 and 01.02.2014 have been included.

(2) Based upon the peer review of the draft version trough Quality Action and the meeting of the Scientific Reference Panel and Work Package 7 in Cologne (Germany) the literature review was expanded to grey sources of information and documents related to quality assurance and improvement tools applied by the "Joint Action on Improving Quality in HIV Prevention". The main sources were the websites of Quality Action (http://www.qualityaction.eu/) and IQ^{hiv} (http://www.iqhiv.org/). Further literature was generated through an internet search with the search machine google.com and with a search in the literature sample from Quality Action. Additionally authors of PQD, SUCCEED and

QIP have been asked for more detailed information. The oldest documents were included from 2001. Included documents were qualitative analyzed in the HIV-specific context and in a more general context (e.g. public health).

The stepwise design of this review has been designed in reference to Haas, Breyer, Knaller & Weigl [3] and refers to an egalitarian approach regarding different types of evidence, with the paradigm that participative developed evidence through any kind of research has an added value due to the inclusion of local evidence of the community.

3 RESULTS

The first part of the literature research identified 25 articles originating from EU-27 countries (8|25, 32.0 %), United States of America (15|25, 60.0 %) and Australia (2|25, 8.0 %) whereas six studies were carried out in countries like Asia or Africa (24.0 %). The study selection process is presented in figure 1.

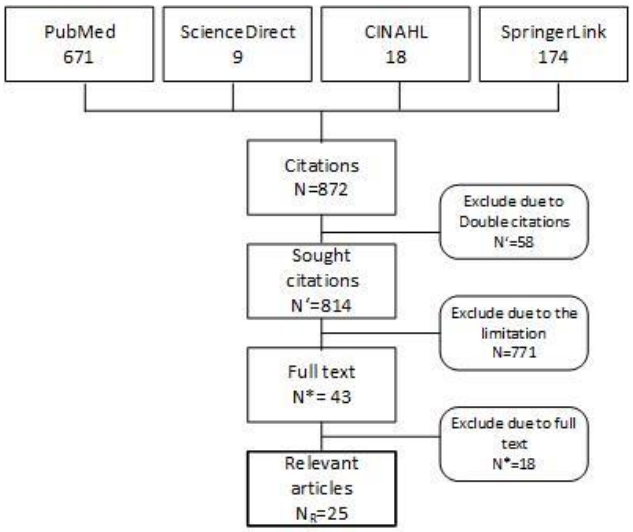

Figure 1. Study selection process (Part One)

The most often used evidence is the methodical practice knowledge (13|25, 52.0 %), followed by observational studies (4|25, 16.0 %) and mixed-method designs (4|25, 16.0 %). Information on quality criteria, indicators and QA/QI approaches were identified. QA/QI approaches were qualitative reground and presented as mind maps. Three mind maps were built focusing on the three dimensions of quality namely structure, process and outcome quality and each arm describe an important approach or criteria. Donabedian (1966) first talked about these quality dimensions. Structure quality applies to the organizational, institutional frame and to the project conditions and affects the process quality. Process quality refers to all cycles that are vital during a project and is in the center of quality assurance. The last dimension is the outcome quality that looks on the (quality) goal achievement [4]. No article was identified that considered specific QA/QI tools and the effect of these tools.

The second part of the literature review analyzed 32 documents about PQD (21|32, 65.6 %), QIP (6|32, 18.8 %) and SUCCEED (5|32, 15.6 %). Thirteen main indicators and their quality approaches and criteria were found for each tool and could be divided into structure, process and outcome quality. All three tools have several quality approaches and criteria in common.

Two important indicators of structure quality are adequate resources (human, financial, time, technical) and training/ongoing education of human resources. Literature about SUCCEED state that the relationship between level of ambition and available resources is reasonable. Furthermore literature about QIP indicates that a clear definition of responsibilities/tasks, person-days spent on the project per year and professional qualification/training is necessary. Literature about PQD write that especially human resources with HIV background and formal qualification in equal parts should be on favor employment.

Another important indicator is the organizational structure. Literature of all three tools state that the project should be clear defined and processes need to be planned and transparent. Further on literature of PQD write about flexibility of project management and staff in order to allow participatory quality development.

Support and Participation as well as active networking are seen as further indicators of structure quality that mainly address key stakeholders like collaboration partners, target group, funding body etc. The tool PQD uses the method Circles of Influence in order to define the extent of the participation to decision making processes of different stakeholders.

In addition responsibility is found as another indicator of structure quality and actively discussed in literature about SUCCEED and QIP. It cannot be stated that PQD does not value the indicator of responsibility.

Structure quality is the basis for process quality that includes the indicators of goal definition, key population, approach/method, quality assurance and improvement as well as data collection and evaluation. All tools indicate that especially a clear problem statement, a conceptualization of distinct and measurable (SMART) goals with verifiable indicators, a definition of prevention strategies (interventions) and a clear definition of the key population and its characteristics are of vital importance. Therefore it is useful to collect information from a variety of sources, like epidemiological data, observations of project environment and experiences of stakeholders and information from and with members and representatives of the target group itself.

The approach used should be well-matched to the target group, tailored to the prevailing local circumstances and based on scientific concepts and theories like participation, collaboration, empowerment, local knowledge and collective learning. Further on there should be some kind of project logic and good practice, practical knowledge as well as experiences from previous projects should be used. Literature about the tool SUCCEED state that ethical aspects of the project needs to be considered and possible ethical concerns and implication require a discussion.

The literature of all three tools state that any plans for regular quality management should be included. Especially extensive discussed is this indicator in the literature of the tool PQD that recommend to use quality improvement and assurance methods along the whole Participatory Quality cycle (needs assessment, intervention planning, implementation and evaluation).

Systematic data collection and evaluation need to be done on a regular basis in order to adapt the project approach and concrete measures to needs of the target groups / key populations.

The third dimension of quality, namely outcome quality look at the indicators of outcome itself and sustainability. It should be controlled whether the knowledge, attitudes and / or behavior of key population, the environment, structure, procedures or health costs have changed over time and if they are in line with the project goals. Practical action recommendations should be produced. The project should consider issues of sustainability through the involvement of target group and other stakeholders.

HIV-specific quality approaches and criteria were underrepresented in the literature of all three tools. Table 1 represent a synthesis of the main results of data analysis.

Table 1. Main quality indicators, criteria and approaches of structure, process and outcome quality

Structure quality	
Resources	Adequate comprehensive resources (human, knowledge, time, financial, technical) are available and the relationship between level of ambition and available resources is reasonable. *Engagement of human resources with HIV background and formal qualification in equal parts.*
Training and educational training	Possibility of ongoing education, in-service training and supervision especially on quality improvement/assurance tools and interpretation of epidemiological data. Funds for ongoing training needs are calculated in the budget. Collaborations need triangular competences, especially discrepancy tolerance and ability of balance due to the multiple perspectives of stakeholders. Possibility of regular exchange with colleagues, mutual support, supervision meetings and counselling for participating professionals.
Organizational structures	Clear description of the project and delineation from other operations in order to have a certain amount of independence. Clear definition of responsibilities/tasks of human resources. Organizational structures and project processes are transparent. Project management and staff is flexible in order to allow participatory quality development. A project manager is involved.
Support and participation	Collaboration of project/organization, target group, funding body and other important stakeholders on an equal footing. Awareness of power and resource decline. All have the opportunity to influence and take part in the development of the project and agree with the goals of the project. Clear definition of the extent of participation to decision making processes of different stakeholder through contracts or agreements. There is a minimum level of participation required for stakeholders to stay involved in the project. There are regular mechanisms for communication with stakeholders.
Networks	The project builds networks and social support. There are resources for training network members. The networks have the opportunity to assess their work on the project. The project is integrated into wider service provision in order to use existing services, recognize opportunities and explore potential synergies. Interdisciplinary collaboration and ongoing consultation with science centers, governing body of Aids organizations and regional Aids organizations.
Responsibility	There is a clear allocation of tasks, responsibilities and authorities between the project management team and others in the decision making hierarchy.

Process Quality	
Goals	Clear and specific problem description. Conceptualization of distinct and measurable (SMART) short, medium and long-term goals As the knowledge of the project team deepens, goals can and probably should change during the project. Formulation of verifiable indicators in order to assess goal attainment. Definition of strategies (interventions) based on SMART criteria
Key Population	Definition of the target group through information from a variety of sources that are combined in order to collect data on the target group's need and living environment (e.g. epidemio-logical data, participant observations, needs assessment and experiences of stakeholders and information from and with members and representatives of the target group itself) Development of "a time schedule showing the most important events and characteristics in the history" of a region. It was checked whether the project is feasible and could succeed with this target group. The project takes social disadvantage into account.
Approach/Method	There is some kind of project logic or picture describing which actions and measures are expected to produce different types of effects and what order these actions and measures should be implemented. The approach is well-matched to target group's and local characteristics by involvement of local knowledge as early as possible in order to tailor the intervention to their lived reality. Usage of good practice, practical knowledge, experiences from previous projects etc. Usage of scientific concepts and theories of participation, collaboration, empowerment, local knowledge and collective learning in project planning, implementation and evaluation. Identification of strengths and weaknesses of the approach. Ethical aspects of the project are considered and possible ethical concerns and implications are discussed.
Quality Assurance and Improvement	The approach includes any plans for regular quality management. People who work in the project on a daily basis, representatives of direct target groups and of persons from the key population take part in quality improvement. A range of different participants will ensure a broad review. Tailored, feasible, evidence-based and participatory methods for quality improvement are used in all stages of a project and can be combined with other tools like QIP, SUCCEED, EFQM or supervisions, intravisions etc. Development of a culture of quality and constructive critics as well as local and adequate standards.
Data collection and evaluation	A systematically evaluation design is regularly conducted and uses a combination of data sources and a variety of participatory methods in order to assess goal attainment, reach and response, target group and stakeholder satisfaction, the effectiveness of interventions, cost/benefit ration etc. in a realistic and empirical way. Usage of theory based evaluation in order to know why something has worked. Involvement of neutral" third parties (AIDS organization workers from other areas) is advan-tageous for the evaluation and for reflecting on the results. Collective critical reflection and analysis of results / assessments.
Outcome Quality	
Outcome	The project measures whether the knowledge, attitudes and / or behavior of key population, the environment, structure, procedures or health costs and possible intermediary target groups have changed over time and if they are in line with the project goals. Production of practical action recommendations.
Sustainability	The project considers the issue of sustainability and steps/strategies to ensure sustainability, e.g. the involvement of target groups, are taken/planned.

4 DISCUSSION

QA and QI approaches and criteria were found for all three dimension of quality in the systematic review by using qualitative methods for analysis. Reliance on strict systematic review would have excluded several articles that discuss quality indirectly. Although there are even more quality approaches in practice as Rosenbrock writes that over 80.0 % of AIDS-NGOs in Germany conduct quality assurance in their preventive work [5]. As this can be due to some limitations of the first part, like the limitation to sources accessible for FH Joanneum GmbH and the case that reference lists were not sought, it was decided to search in grey literature especially for the tools PQD, QIP and SUCCEED.

Based on the results of this literature review the authors recommend to make use of existing quality criteria and approaches established in the field of health promotion and prevention in training activities instead of developing HIV-specific criteria and approaches. However the HIV-prevention has a longstanding experience in the area of community engagement as well as not limiting its efforts only on behavior but including structural change into its efforts which to the experience of the research team happens to a lesser extend in other areas of health promotion. Therefore the HIV-specific experience can be a valuable resource for the overall health promotion discourse.

However it seems still useful for the practical work to adapt specific quality methods to the specific field of HIV prevention. Further research activities may extent the literature search to quality in general health promotion and prevention as well as in-depth interviews with important stakeholders in HIV prevention. In any case it seems important that HIV prevention experts publish their efforts in the field of QI/QA to a higher extend as it happened so far. This effort might require more intensive cooperations with applied research in the future.

LITERATURE

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