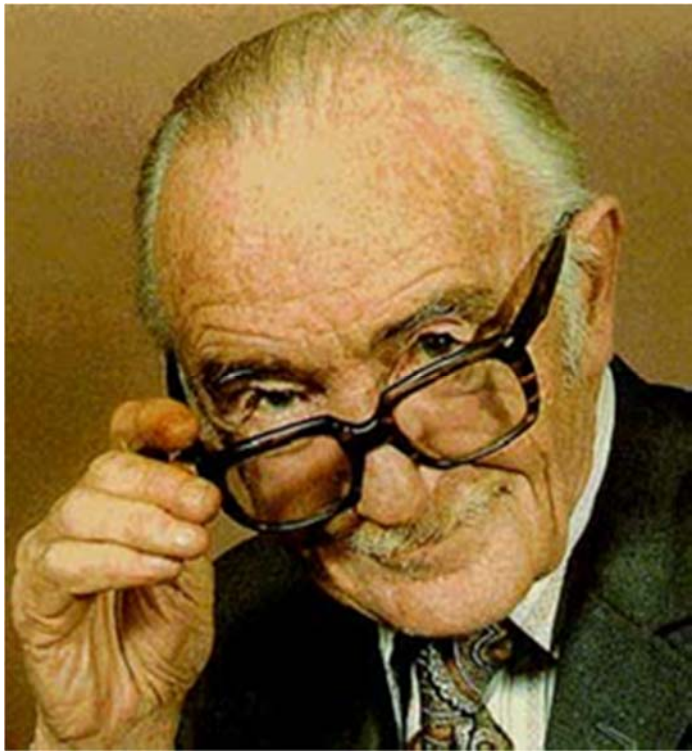
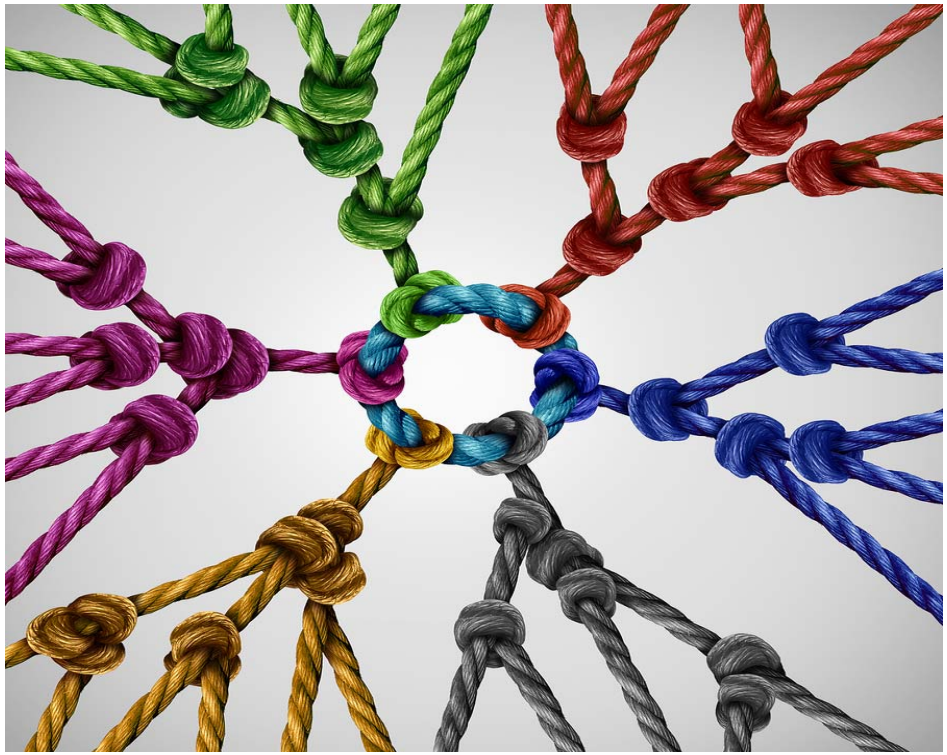
KCE REPORT 291

Federaal Kenniscentrum voor de Gezondheidszorg
Centre Fédéral d'Expertise des Soins de Santé
Belgian Health Care Knowledge Centre

TOWARDS AN INTEGRATED EVIDENCE- BASED PRACTICE PLAN IN BELGIUM

PART 1 – LITERATURE, BELGIAN SITUATION AND END-USER NEEDS





KCE REPORT 291
HEALTH SERVICES RESEARCH

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JEF ADRIAENSSENS, NADIA BENAHMED, MARIJKE EYSSEN, DOMINIQUE PAULUS, RAF MERTENS

COLOPHON

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Reported interests:	'All experts and stakeholders consulted within this report were selected because of their involvement in the topic of this study "EBP Plan". Therefore, by definition, each of them might have a certain degree of conflict of interest to the main topic of this report' Membership of a stakeholder group on which the results of this report could have an impact: Bert Aertgeerts (President CEBAM, president CDLH), Sam Cordyn (CIPIQ-S), Alfons De Schutter (PQK asbl, workgroup ELR), Benjamin Fauquert (EBMPracticeNet asbl, CDLH asbl), Roy Remmen (MINERVA), Thierry Van der Schueren (SSMG), Patrick Vankrunkelsven (CEBAM), Mieke Vermandere (EBMPracticeNet asbl, KU Leuven) Fees or other compensation for writing a publication or participating in its development: Benjamin Fauquert (CDLH), Roy Remmen (KCE reports about dissemination (KCE 212)), Thierry Van der Schueren (fee for the realization of scientific work in the context of prevention (funds Walloon region)) Participation in scientific or experimental research as an initiator, principal investigator or researcher: Thérèse Van Durme (Project Gudelmans 'd' 2009-2010) A grant, fees or funds for a member of staff or another form of compensation for the execution of research described above: Roy Remmen

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LIST OF ABBREVIATIONS

ABBREVIATION	DEFINITION
EBP	Evidence-Based Practice
EBM	Evidence-Based Medicine
CPG	Clinical Practice Guideline. Evidence-based guideline for health care practitioners.

SCIENTIFIC REPORT

1 INTRODUCTION

About this document

In June 2016, the Minister of Social Affairs and Public Health wrote a conceptual note regarding the need to strengthen the Evidence Based Practice (EBP) policy in Belgium. At the same time, the Minister commissioned KCE to provide the scientific background necessary to develop an EBP Plan for Belgium. This EBP Plan should allow to install an EBP Programme, and should strengthen the efficiency and quality of care by steering and coordinating EBP related activities in Belgium at the federal level. In a first time, it should address primary health care professionals. After evaluation, extension to secondary care will be considered.

Two Syntheses available in French and Dutch summarize the EBP Plan developed by KCE. The first Synthesis deals with the overall aim of the national EBP Programme, and with its governance structure. It was developed in close collaboration with the Steering Group appointed by the Minister, and composed by representatives of RIZIV/INAMI, FOD Volksgezondheid – SPF Santé publique, FAGG – AFMPS, KCE, Cabinet of the Minister of Social Affairs and Public Health). A second Synthesis deals with issues on change management, implementation, and performance management. We use S1 to refer to the first Synthesis, and S2 to refer to the second Synthesis.

This document is the first of a set of five chapters that served as scientific background for the development of the EBP Plan. The first of these chapters provides a general scientific background while the second chapter focuses on the governance structure of the EBP Programme. The third scientific background chapter is related to change management and leadership, and the fourth chapter aims to discuss EBP implementation issues in primary health care. The fifth chapter is dedicated to performance management of EBP implementation in primary healthcare in Belgium. An overview is visualised in Figure 1

When we refer to one of these chapters, we use the abbreviation SB with the number associated to the chapter. E.g. the third scientific background chapter related to change management is referred to as SB3.

Figure 1 – Key themes in the development of the EBP Plan

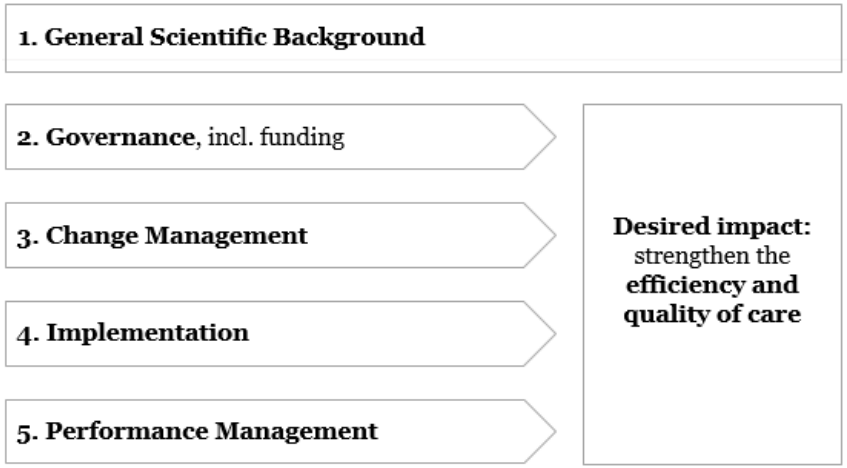
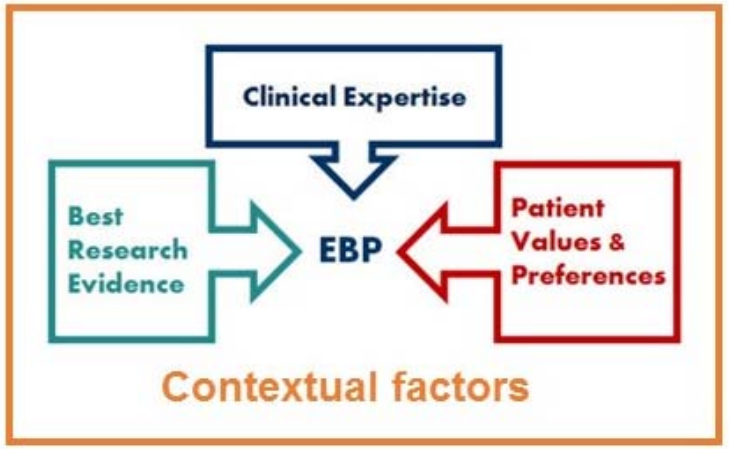


Figure 2 – Visualization of the concept of EBP



1.1 Evidence-Based Practice and its position in the medical landscape

1.1.1 What is evidence based practice?

Evidence Based Medicine (EBM) and Practice (EBP) can be defined as 'the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The main aim of EBM/EBP is integrating individual clinical expertise with the best available external clinical evidence from systematic research.'[1] A fourth dimension, 'contextual factors' (such as costs and availability of resources) is added as this is an element that affects the strength of a recommendation and can hamper implementation of a guideline [2]. (Figure 2) Solely using scientific evidence in health care decision making without taking into account professional expertise, context and patient' preferences (called 'cookbook medicine ') does not result in high quality healthcare provision.

For the purpose of the readability of this report, the term 'evidence-based practice' (EBP) is used throughout this report, as it is 'broader' than evidence-based medicine, and it implies the use of evidence-based knowledge by multiple professional disciplines in health care. Historically, EBM primarily involved physicians and concentrated on the "treatment" aspect of medicine. EBP takes a more multidisciplinary (nurses, clinicians, NPs, PAs, Physical & Occupational Therapists and Hospital Administration) approach and includes many facets of health including aetiology, prevention, diagnosis, treatment, and more.

Clinical practice guidelines (CPGs), and similar systematic approaches to specifying 'best practices' (such as Rapid Recommendations, EBP screening tools, patient guidelines), are important instruments for implementing EBP in healthcare practice. CPGs are generally defined in terms of quality and efficiency improvement and thought to help practitioners and patients to make informed decisions about appropriate healthcare for specific clinical circumstances. In addition to clinical practice guidelines, a broad range of derivatives and tools have been created in the last decades to support, facilitate or enlarge EBP use (e.g. evidence summaries, EBP

calculators, screening & assessment instruments, shared decision-making tools, real-time decision support …)

Although the primary emphasis of EBP is on the use of scientific evidence in clinical decision making, there also is a prominent place for the patient. As most of the clinical decisions are not clear cut (in terms of pro's and con's), patients and clinicians often have to discuss the different treatment options to make informed joint decisions. This process, called "shared decision making", takes into account the best available evidence together with patients' context, values, and preferences and has become increasingly important in recent years [3]. Shared decision making, also called 'preference sensitive' decision making, occurs mainly in 'conditional' recommendations, i.e. in case of lack of evidence (weak rather than strong recommendations), availability of more than one valid treatment option (dilemma), or in case patients have preferences or values that differ from preferences of health care providers (e.g. side effects versus beneficial effect of treatment) [4]. Research shows however that the 'shared decision making' approach is not easy to conduct. On the one hand, health professionals need to develop specific attitudes, competencies and skills to handle this consultation model and provide trust and clarity to the patient in the decision making. On the other hand, specific tools have to be made available during the clinical encounter to support clinicians in this process[3].

1.1.2 Evidence based practice and policy

EBP is also important in terms of health policy as it provides important means to improve efficacy, efficiency and quality of care. In specific topics it may also help and to keep health care expenses under control [5]. From that viewpoint, nationwide implementation is an important policy objective for every country. However, major obstacles have to be overcome to reach this goal.

- Effective use of EBP implies a good governance of a nationwide system. There is a strong need to structure and align all the efforts that are made by the different stakeholders in the EBP field, in order to improve efficiency of development and dissemination of best available health care knowledge.
- Research also shows that the uptake of EBP by the end-user is still substandard. Efforts, made by developers and disseminators today, do not always result sufficiently in optimization of care as provided by health care professionals in the field. This implies that more more emphasis and attention is needed on implementation of EBP in end users.

1.1.3 Evidence based practice in Belgium

A broad spectrum of stakeholders is involved in Evidence-Based Practice (EBP) in Belgium (developers, disseminators, implementers (if existing), end-users, patients and policy makers). KCE report 212[6] highlighted that development and dissemination of guidelines are still scattered over many organisations. Nevertheless, there is already coordination between developers for primary care (WG-richtlijnen) and a platform to centralise dissemination (EBMPracticenet) has been set up. However, a fundamental problem remains implementability, implementation and communication towards end-users. Implementability refers to a set of characteristics that "predict ease of (and obstacles to) guideline implementation"[7]. Moreover, an overall governance plan to coordinate this process (including prioritization and the corresponding funding flows) is lacking.

Therefore, the Minister of Social Affairs and Public Health created a concept note (June 2016) that states:

> *"Evidence Based Policy and Practice, the objective is the same for both: high quality patient care. To emphasize this, a strengthening of the Evidence Based Practice (EBP) policy is required. The financing spent today on individual initiatives will be combined into one Multi-annual Framework for Quality of Care from 2017 to 2020. A platform composed of all EBP-core partners will work in the following years on the roll out of scientific evidence to implementation in practice. Every healthcare professional should have access via a unique portal to the latest and validated evidence. Evidence Based Practicenet has a key position in this project. There will be specific emphasis on implementation strategies that will be evaluated for their effectiveness."*

1.1.4 Research Objective

The aim of this research project is to design a National EBP Plan, covering and unifying all existing initiatives under federal competencies.

The development of an overarching governance structure (including funding, prioritisation and accountability) will align the work of all EBP partners and increase the effectivity of EBP in end-users (in terms of dissemination, acceptability, applicability, adoption and use of guidelines). This EBP Plan will focus on first-line and second line of care; second line of care will however be considered at a later stage. The final objective of this Plan is (1) to allow every health professional to get access to up-to-date and validated evidence, by a unique entry site, and (2) to set up a system of structuring, coordinating and monitoring of EBP in Belgium.

1.1.5 Starting point

This research project started from a number of policy criteria, as described in the vision statement 'Conceptnota Evidence-Based Practice 21.06.2016' from the Belgian Federal Minister of Social Affairs and Public Health. Based on this Ministerial concept note, the national Plan has to focus on overall governance of the EBP activities in Belgium as well as on the effectivity of EBP use in Belgium (adoption of EBP in end users). The concept note states (1) that the strategic decisions of the EBP Plan will be taken by an overarching steering group, (2) that operational activities regarding this EBP Plan will be done by a coordinator (KCE) and (3) that there should be an accent on implementation: implementation strategies should be reinforced, and an evaluation strategy of their efficacy should be put in place. More details can be found further in this report. The Ministerial concept note is also added to this report in appendix. Policy plans that already are operational in Belgium have been taken into account as much as possible.

2 METHODOLOGY

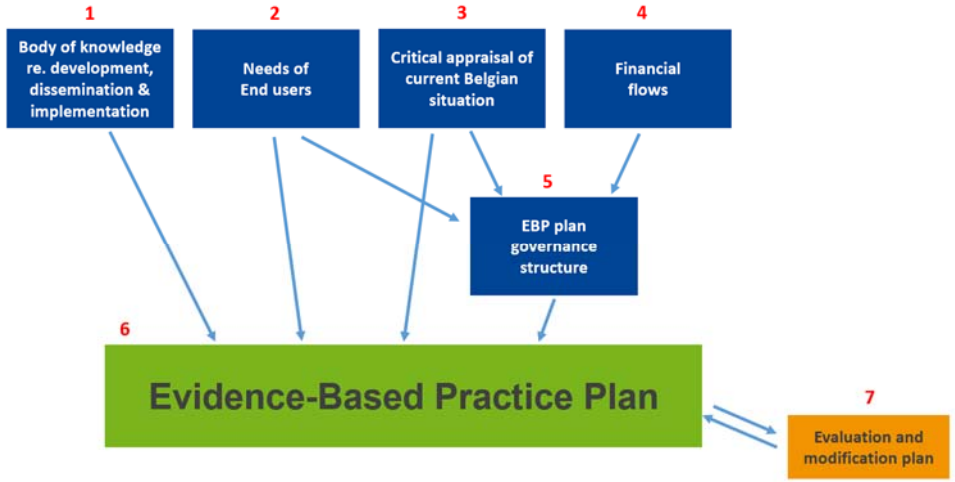
This research project consists of eight work packages (see figure below).

- The preliminary work package (Leading and coordinating the project) defines a workable governance structure for the development of the EBP Plan is defined. This work package is not visualized in Figure 3.
- The next work package (N° 1) aims to develop a body of knowledge regarding dissemination, implementation and implementability of EBP guidelines in end users, and will also gather information and best practices on governance, management, prioritization, communication, funding and evaluation of nationwide evidence-based practice use.
- Work package 2 aims to gain insight in specific needs, culture (attitudes, beliefs) and contextual factors in the different end users groups.
- Work package 3 is a SWOT analysis of the (organization of the) present EBP landscape in Belgium to identify barriers and facilitators of EBP use in Belgium.
- Work package 4 is an analysis (visualization) of funding flows for EBP in Belgium, based on information gathered in KCE report 212.
- Work package 5 aims to design processes and structures needed to manage and govern EBP development, dissemination and implementation in Belgium, and will be based on preliminary work package.
- Work package 6 aims to design an implementation and communication plan to attract and retain end users in the effective use of EBP and focuses primordially on professional end users and patients.
- Finally work package 7 aims to develop a system to monitor, evaluate and modify processes and outcomes of EBP use in Belgium.

Work package 5, 6 and 7 are published as separate parts (Scientific Background 2, 3, 4 and 5).

Information in this part of the report (Scientific Background 1) is up-to-date until 30 June 2017. After this date, no new information has been added.

Figure 3 – Consecutive steps of the research project



3 RESULTS

3.1 Leading and coordinating the project

3.1.1 Aim

This preliminary work package describes an organizational structure meant as a starting point (foundation) for the governance of the EBP plan in Belgium, based on scientific knowledge and management insights, and focuses on the strategy of the plan (including mission and vision), the (provisional or temporary) structure and organogram of the organization, the responsibilities and the procedures regarding internal and external communication, negotiation and decision making. The results of this work package will be further developed in the following work packages.

3.1.2 General principles of structuring an organisation

A well-structured organization must meet the following conditions according to the principles of good management and the reports of the King Baudouin Foundation (KBS)[8] on good corporate governance:

- Having a clear mission and vision.[9, 10 8]
- Having a clear and stable organizational structure (organogram), including procedures on decision making [8, 11]
- Having the flexibility to start up 'ad hoc' project groups or committees based on opportunities and threaths [12]
- Knowing the strengths, weaknesses, opportunities and threaths of the organization (related to its place in the environment)
- Having clear and achievable strategic, tactical and operational goals (targets) (defined SMART)[13]
- Having a clear actionplan (based on the goals)[9]
- Having a clear financial management plan (related to getting funding & spending financial means)
- Having a clear communication management plan (internal and external communication)[8]

3.1.3 Application to the unrolled EBP Plan for Belgium[a]

3.1.3.1 Mission[14]

The mission of an organization is the "reason of existence" of this organisation [9]. The mission can act as a framework to develop a vision, goals and an action plan [10]. The five reasons to define an organizational mission are (1) framing, (2) distinguishing, (3) evaluating, (4) motivating and (5) culture-forming[9].

In June 2016, the Minister of Social Affairs and Public Heath sent to KCE a concept note as basis of **federal EBP Plan** in Belgium:

[a] The present mission and vision are applicable for the unrolled EBP Plan. However, they have to be taken into account during the development process. Although the duration of the plan (the term) ends in 2021, the plan can be used further on (perhaps in a modified version).

The "National EBP Plan Belgium" aims to improve the quality, efficiency and effectivity of health care as provided by Belgian care professionals by means of optimizing the complete process of Evidence Based Practice (prioritization, development, validation, dissemination, implementation, and evaluation) and the national governance of evidence-based practice (EBP). The 'National EBP Plan Belgium' strives to identify, streamline, integrate and validate the efforts, made by the diverse stakeholders in Evidence Based Practice and will develop and roll out a national overarching Federal governance plan.

3.1.3.2 Vision

The vision of an organization is framed by the mission and provides the basic values of employee or partner behaviour in an organization[14]. It gives an answer to questions such as what wants to be achieved with the organization and what are the mid- and long-term ambitions. A vision is in fact the underlying plan from which members of the organization work and has still to be translated into practice (operationalization)[15, 16].

It must be stated here that a significant part of the EBP process already has been developed in Belgium. These elements will be incorporated as much as possible in the overall EBP Plan.

Based on the vision statement of the Minister of Social Affairs and Public Health and the mission, the following vision statement for the unrolled EBP Plan is applicable:

The National EBP Plan will clarify, standardise and strengthen the policy of Evidence-Based Practice (EBP) in Belgium. The EBP Plan will combine the funding that is now spent on individual initiatives into one Multiannual Framework for Evidence Based Practice from 2018 to 2021. The KCE will act as coordinator of this EBP Plan. A platform composed of all EBP-core partners will work in the following years to roll out the process from development of scientific evidence to implementation in practice. Every healthcare professional will have access via a unique web-based portal to the latest and validated evidence. EBMPracticeNet herein has a key position. Implementation strategies will be a specific focus of effort for the next years. Results of process innovations will be evaluated for their effectiveness.

3.1.3.3 Clear and achievable strategic, tactical and operational goals

A goal or objective is the concrete description of the desired result of a certain act or process[13, 14]. These goals must be aligned with the mission and vision of the organization. If organizations want to achieve their goals, it is important to describe these goals as accurately as possible. Goals and objectives provide the foundation for measurement. Goals are outcome statements that define what an organization is trying to accomplish, both programmatically and organizationally.

Based on the concept note of the Minister, the mission and the vision, the following strategic goals can be described:

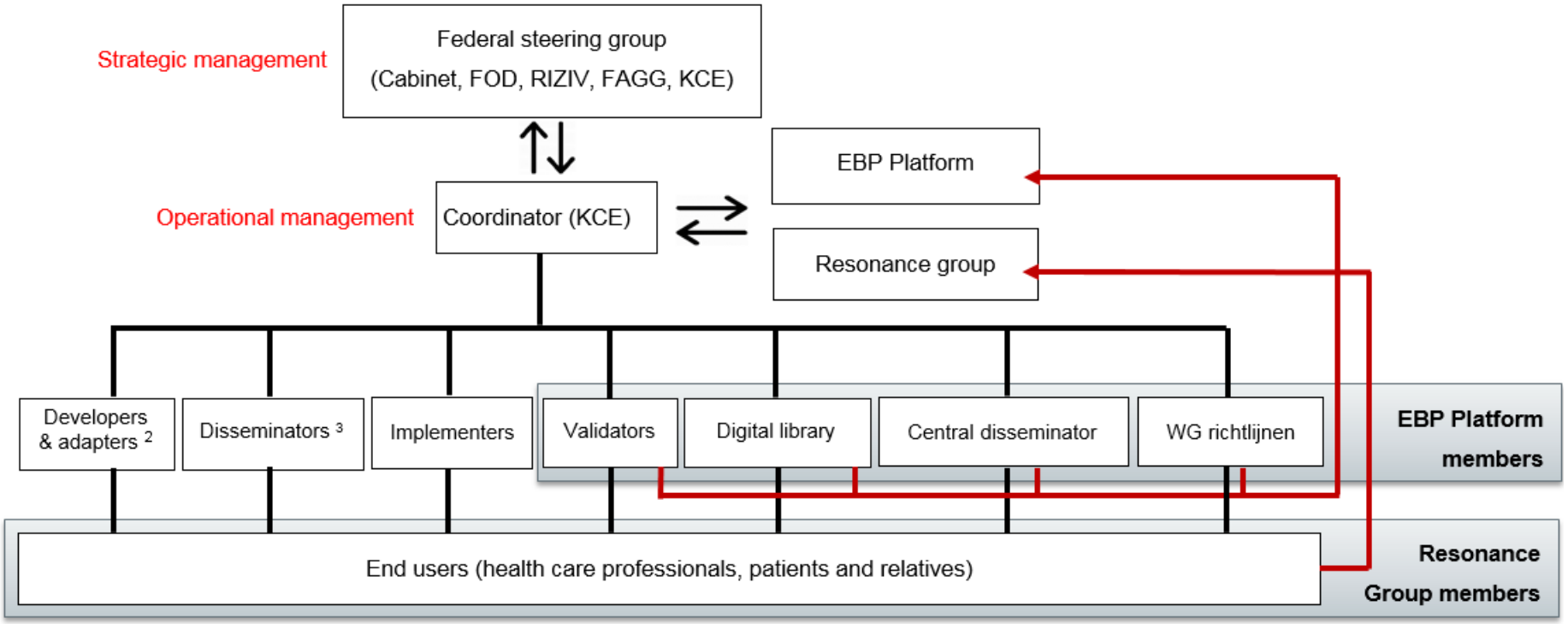
- Alignment of processes and policy in the EBP platform and regular consultations to prevent fragmentation;
- Rationalization of the budget: more efficient use of resources keeping in mind the closed envelope budget.

- Multidisciplinary approach, broader than GPs: second line and other professionals: dentists, physiotherapy, nursing, midwives, ...
- Implementation and connection to the electronic patient file:
  - Evidence Linker: a pull system in which the validated guidelines can be consulted by means of a mouse click (EBPracticeNet)
  - Decision support: push system. Including alerts / reminders
  - Distribution of EBP knowledge through various strategies
- EBP has to be included in the competence of healthcare professionals and in basic education and further training packages
- Input in eLearning applications. All e-learning packages created in the context of the EBP Plan should go through a centralised platform (e.g.DOKEOS).
- Approval (homologation) of the software (application of coding to link patient data with EBP recommendations)
- Evaluation of cooperation and implementation (inventory requires quality criteria)
- EBMPracticeNet will be a unique and central portal
- Evaluation of written publications: evolution towards a unique (single) journal / publication / newsletter?
- Evaluation of EBP policy based on results.

3.1.3.4 EBP Plan governance structure (preliminary version, useful for WP5)

The following visualisation of the organisational structure of the EBP Plan is based on the Ministerial Concept Note (June 2016) (see 1.1.3). A feedback loop is created to give stakeholders the opportunity to give feedback on EBP practices in Belgium. (Figure 4)

Figure 4 – Visualization of the preliminary EBP Plan governance structure



Rationale for the organogram: *(1) An important aim of EBM Practicenet and WG Richtlijnen is collaboration, i.e. making agreements and striving for alignment between the partners. This model emphasizes and strengthens this aim. Partners have to negotiate internally within their group and need to have clear positions before attending the EBP Platform Meeting. (2) It is not logical that certain partners (groups) will be represented three times in the EBP Platform group. It is however acceptable that groups are involved in development (WG Richtlijnen) AND dissemination (EBM Practicenet).*

[2] ***Developers & adapters***: *Domus Medica, SSMG, CIPIQs, VBOV, WVVK, Werkgroep EBP ergotherapie, Minerva, Farmaka, BCFI, BAPCOC, Rode Kruis Vlaanderen, VVL, APB, EVV, Pallialine, … (This list is not limitative. Group can be expanded)*

[3] ***Disseminators***: *outreaching visitors for physicians, visitors of LOKs/GLEMs, … (This list is not limitative. Group can be expanded)*

Federal steering group

- Aim of the steering group:
  - the steering group has a strategic task:
    - consider the whole picture of the EBP activities in Belgium (helicopter view)
    - maintain an overview of and supervise the project activities
    - plan and align the EBP plan project with broader legislation or policy plans
    - streamline the financial flows
    - prioritize development & implementation activities
  - the steering group has an operational task:
    - advise, guide and inform regarding the direction of the EBP Plan project
    - support the effective project management (coordinator)
    - provide a steer for the project development, implementation and dissemination activity of the EBP Plan
    - evaluate project direction and suggest, discuss and decide on changes to project activity of the EBP Plan
    - advice and decide on dealing with risks and issues
    - play an active role as link with the Federal administration and policy bodies
- Responsibilities & power
  - The steering group has to monitor the progress of the project against its goals
  - The steering group can decide to change aspects of the overall plan, depending on development and progress
  - The steering group has to monitor the project's expenditure and the overall work of the project (outcomes and finances)
  - The steering group has to strengthen links between the project and other relevant (policy) bodies
  - The steering group takes the strategic decisions regarding the direction of the project.
  - The coordinator of the project (KCE) is responsible for the operationalisation of this strategic decisions.
- Composition
  - The steering group consists exclusively of representatives of the Minister of Social Affairs and Public Health, the Federal Public Health Service (FOD/SPF), the National Institute for Health and Disability Insurance (RIZIV/INAMI), the Federal Agency for Medicines and Health Products (FAGG/AFMPS) and the Belgian Health Care Knowledge Centre (KCE).
  - The size and composition of the steering group has to be considered (negotiated) by the policy bodies, keeping in mind preserving the equilibria and keeping the size of the group operable. It was decided to have the following composition.
    - The Ministery of Social Affairs and Public Health

      Two representatives (decision meeting 09.03.'17)
    - The Federal Public Health Service (FOD/SPF)

      Three representatives (decision meeting 09.03.'17)
    - National Institute for Health and Disability Insurance (RIZIV/INAMI)

      Two representatives (decision meeting 09.03.'17)
    - The Federal Agency for Medicines and Health Products (FAGG/AFMPS)

      Two representatives (decision meeting 09.03.'17)
    - The Belgian Health Care Knowledge Centre (KCE)

      Two representatives (decision meeting 09.03.'17)

- substitute members
  - RIZIV/INAMI and FAGG/AFMPS appoint/identify a substitute for each representative in the steering group. FOD/SPF and the Ministery of Social Affairs and Public Health decided not to appoint a substitute. (decision meeting 09.03.'17)
  - This substitute can replace the representative in case of inability of the representative to attend the steering group meeting.
  - Every policy bodies is responsible to ensure presence at the steering group meetings.
- power of attorney
  - A system of 'power of attorney' is not applicable for the operation of the steering group

- meeting frequency
  - By default, the Federal steering group plans at least 2 meetings, equally distributed over the year. Additional meetings may be scheduled in case of specific needs.
  - The date for these meetings will be agreed based on a maximum availability of the representatives.
- agenda composition, communication of agenda
  - The agenda of the meeting is drawn up by the coordinator of the EBP Plan, based on the progress of the project or specific topics, problems or issues that need to be discussed.
  - Every representative has the opportunity to add supplementary agenda topics by means of sending an email to the coordinator (at least one week in advance).
  - At the beginning of the meeting, the coordinator will inquire the members if there are 'miscellaneous points' to add to the agenda.
  - The final agenda will be sent by mail to every representative at latest 5 days before the meeting.
- chairing of meeting
  - The Federal steering group meetings will be chaired by the KCE (coordinator).
- process of decision making, voting procedure
  - The Federal steering group can only deliberate and take decisions if the majority of its members are present or represented (substitute member).
  - When this condition is not met, a new meeting with the same agenda has to be planned within a month. The steering group can then, whatever its composition, deliberate.
  - The steering group tries as much as possible to decide by consensus. In every other case, a simple majority of votes (abstentions not counting) is needed.
  - Every organisation (FOD/SPF, RIZIV/INAMI, FAGG/AFMPS, KCE, representatives of the Minsiter of Social Affairs and Public Health) has two votes.
- minutes format, communication of minutes
  - The minutes of the meeting are drawn up by the KCE.
  - The minutes of the meeting will be sent by mail to every representative at latest one week after the meeting
  - Objections with respect to the content of the minutes have to be sent to the coordinator at latest one week after the sending of the minutes.
  - Every meeting of the steering group starts with approval of the minutes of the previous meeting
  - Minutes of the Federal steering group are confidential and can only be shared under the member of the group.
- Financial compensation
  - Members of the steering group do not receive financial compensation for the presence at the meetings

Coordinator

- Aim of the function of coordinator
  - The coordinator is an intermediary function in the organisation. He/she acts as a liaison between the steering group and the stakeholders
  - The coordinators communicates and negotiates with the steering group, the EBP Platform and the resonance group.
  - The coordinator is responsible for the organisation of meetings, the minutes of those meetings and the amendments to be made
- KCE is entitled to take the role of coordinator of the EBP Plan
- Responsibilities and power
  - The coordinator is responsible for the operational aspects of the governance of the EBP Plan
  - The coordinator is responsible for the communication between steering group, EBP Platform and Resonance group
  - The coordinator supervises the activities of all stakeholders and is entitled to demand stakeholder groups for information to clarify operational processes of the EBP Plan
  - The coordinator has no decision making power in the steering group
  - The coordinator chairs the meetings of the steering group, the EBP Platform and the Resonance Groups.
- Conflict of interest
  - The coordinator has no conflict of interest regarding his position as coordinator and his position in KCE.

EBP Platform

- Aim of the EBP Platform:
  - To give input from the core partners (see organogram) about feasibility, acceptability and applicability of the consecutive EBP Plan project steps and deliverables
  - To facilitate and structure communication and discussion of project steps and strategies between the Federal steering group and the core partners.
  - To discuss issues on functioning of stakeholders in the process (audit, evaluation and accountability)
- Responsibilities & power
  - The EBP Platform is an advisory council and has no decision making power as that is the responsibility of the steering group. The EBP Platform's role is limited to give advice and counsel.
- Composition
  - The EBP Platform consists exclusively of representatives of the cooperation and coordination bodies in the EBP Plan structure, i.e. CEBAM, CDLH, EBMPracticenet and WG richtlijnen.
  - One person for each of the above mentioned organisations has a member seat in the EBP Platform.
  - substitute members
    - Every EBP Platform member appoints/identifies a substitute for each representative in the EBP Platform.
    - This substitute can replace the representative in case of inability of the representative to attend the EBP Platform meeting.
    - Every EBP Platform member is responsible to ensure presence at the EBP Platform meetings.

- power of attorney
  - a system of 'power of attorney' is not applicable for the operation of the EBP Platform
- Addition of new members
  - Candidates can be nominated upon the proposal of a member of the EBP Platform or can apply for membership themselves. In both cases a written request must be sent to the coordinator.
  - The coordinator will bring the potential membership to the attention of the Steering group members. The Steering group decides on the acceptance of new effective (voting) members.
  - The EBP Platform can accept permanent or temporary observing or advisory members for specific topics or in case external input is needed. These added members have no voting or decisional rights at the EBP Platform meeting. Their rights and obligations are determined by internal regulations.
- Resignations or exclusions of members
  - The resignations and exclusions of members are made following Art. 20 (art. 12) of the Law of May 2, 2002, concerning the non-profit associations, international non-profit associations and foundations.
  - A member can resign voluntarily as an effective member of the EBP Platform, by means of a letter sent to the coordinator. The coordinator will bring this message to the attention of the Steering group members.
  - A decision to exclude a member must be taken by the EBP Platform with a 2/3 majority of votes. This decision needs however to be approved formally by the Federal steering group.

- meeting frequency
  - By default, the coordinator plans at least two meetings for the EBP Platform, equally distributed over the year. Additional meetings may be scheduled in case of specific needs.
  - The date for these meetings will be agreed based on the availability of the representatives
- agenda composition, communication of agenda
  - The agenda of the meeting is drawn up by the coordinator of the EBP Plan, based on the progress of the project or specific topics, problems or issues that need to be discussed.
  - Every representative can add supplementary agenda topics by sending an email to the coordinator (at least 1 week in advance).
  - At the beginning of the meeting, the coordinator will inquire the members if there are 'miscellaneous points' to add to the agenda.
  - The final agenda will be sent by mail to every representative at latest 5 days before the meeting
- chairing of meeting
  - The EBP Platform meetings will be chaired by the KCE (coordinator).
- process of decision making, voting procedure
  - The EBP Platform can only deliberate and take decisions if the majority of its members are present or represented (substitute member).
  - When this condition is not met, a new meeting with the same agenda has to be planned within a month. The EBP Platform can then, whatever its composition, deliberate and decide validly.
  - The EBP Platform tries as much as possible to decide by consensus. In every other case, a simple majority of votes (abstentions not counting) is needed.

- minutes format, communication of minutes
  - The minutes of the meeting are drawn up by the KCE.
  - The minutes of the meeting will be sent by mail to every representative at latest one week after the meeting
  - Objections with respect to the content of the minutes have to be sent to the coordinator at latest one week after the sending of the minutes.
  - Every meeting of the EBP Platform starts with approval of the minutes of the previous meeting
  - Minutes of the EBP Platform can be shared between full members, observing and advisory members of the EBM Platform, the Federal steering group members and the members of the Resonance group

Resonance group

- Aim of the Resonance group
  - To get input from the end users (health care professionals, patients and relatives) about feasibility, acceptability and applicability of EBP Plan deliverables and end-points
  - To facilitate communication and discussion regarding preferences and needs, implementability, dissemination and implementation of EBP in end users (health care professionals, patients and relatives).
- Responsibilities & power
  - The Resonance group is an advisory council and has no legal decision making power as that is the responsibility of the steering group. The Resonance group authority and responsibility is limited to giving advice and counsel.
- Composition
  - The Resonance group consists exclusively of
    - representatives of health care professional groups, councils and committees (multidisciplinary), and patient and relative representatives (groups). The Steering group decides on its composition.
  - substitute members
    - Every Resonance group member appoints/identifies a substitute for each representative in the Resonance group.
    - This substitute can replace the representative in case of inability of the representative to attend the Resonance group meeting.
    - Every Resonance group member is responsible to ensure presence at the Resonance group meetings.
  - power of attorney
    - Every representative has the opportunity to hand over a ‘power of attorney’ document to another member of the Resonance group.
  - Addition of new members
    - Candidates can be nominated upon the proposal of a member of the Resonance group or can apply for membership themselves. In both cases a written request must be sent to the coordinator.
    - The coordinator will bring the potential membership to the attention of the Steering group members. The Steering group decides on the acceptance of new effective (voting) members.
    - The Resonance can accept permanent or temporary observing or advisory members. These added members have no voting or decisional rights at the Resonance group meeting. Their rights and obligations are determined by internal regulations.

- Resignations of exclusions of members
  - The resignations and exclusions of members are made following Art. 12 of the Law of May 2, 2002, concerning the non-profit associations, international non-profit associations and foundations.
  - A member can resign voluntarily as an effective member of the Resonance group, by means of a letter sent to the coordinator. The coordinator will bring this message to the attention of the Steering group members.
  - A decision to exclude a member must be taken by the Resonance group with a 2/3 majority of votes. This decision needs however to be approved formally by the Federal steering group.
- meeting frequency
  - By default, the coordinator plans at least meetings for the Resonance group, equally distributed over the year. Additional meetings may be scheduled in case of specific needs.
  - The date for these meetings will be agreed based on the availability of the representatives
  - Besides physical meeting, alternatives might be considered (e.g. tele-meetings, surveys, online feedback, mail)
- agenda composition, communication of agenda
  - The agenda of the meeting is drawn up by the coordinator of the EBP Plan, based on the progress of the project or specific topics, problems or issues that need to be discussed.
  - Every representative can add supplementary agenda topics by sending an email to the coordinator (at least 1 week in advance).
  - At the beginning of the meeting, the coordinator will inquire the members if there are 'miscellaneous points' to add to the agenda.
  - The final agenda will be sent by mail to every representative at latest 5 days before the meeting
- chairing of meeting
  - The Resonance group meetings will be chaired by the KCE (coordinator).
- process of decision making, voting procedure
  - The Resonance group can only validly deliberate and take decisions if the majority of its members are present or represented (substitute or power of attorney document).
  - When this condition is not met, a new meeting with the same agenda has to be planned within a month. The Resonance can then, whatever its composition, deliberate and decide validly.
  - The Resonance group tries as much as possible to decide by consensus. In every other case, a simple majority of votes (abstentions not counting) is needed.
- minutes format, communication of minutes
  - The minutes of the meeting are drawn up by the KCE.
  - The minutes of the meeting will be sent by mail to every representative at latest one week after the meeting
  - Objections with respect to the content of the minutes have to be sent to the coordinator at latest one week after the sending of the minutes.
  - Every meeting of the EBP Platform starts with approval of the minutes of the previous meeting
  - Minutes of the Resonance group can be shared between full members, observing and advisory members of the Resonance group, the Federal steering group members and the members of the EBP Platform.

3.2 Work package 1: Building of a body of knowledge about EBP development, dissemination and implementation

3.2.1 Aim

This first work package in the construction of the EBP Plan aims to compile a body of knowledge about the EBP process, from initialisation of the process until the implementation phase. Information on governance of EBP is also included in this chapter. This knowledge can be used to critically evaluate the Belgian situation (WP 3) and to build the next work packages. This work package does not have the intention to be comprehensive but can be perceived as the framework in which the EBP plan can be developed.

3.2.2 Methods

For the purpose of this work package, a grey literature search was performed in websites and documents from key institutions of evidence based practice and quality improvement in health care (e.g. AHRQ, NICE, SIGN, McMaster University, Joanna Briggs Institute, The Cochrane Foundation, CEBAM, EBMPracticenet, KCE,…). Based on these result a snowball method was applied to find additional information. Models and concepts were selected, based on scientific reports or key publications. Information was also retrieved from Governmental sources and policy bodies. And finally, we used the results of the KCE report 212 on "Dissemination and implementation of clinical practice guidelines in Belgium" (2013) and the recent KCE report on "Tailoring KCE guidelines to the needs of end-users" (2017).

For the purpose of the foreign examples (good practices) we conducted a limited scoping search for relevant literature on organisation and governance of nationwide EBP. Websites of EBP organisations were searched for relevant information on governance of EBP on a national level. A snowball method was used to find additional information. Literature was rather sparse but information from three organisations was found.

Although a thorough search was conducted for this work package, it does not pretend to be comprehensive, but can be applied to guide the development process in the next stages.

3.2.3 The consecutive steps of Evidence-Based Practice

The EBP process consist of several successive stages, which are all important in terms of reaching the final goal of EBP: the effective use of best evidence in real practice. This report uses the conceptual framework from the Agency for Healthcare Research and Quality (AHRQ)[17] for maximizing and accelerating the transfer of research results (See Appendix 2). This model is a synthesis of concepts from scientific information on knowledge transfer, social marketing, social and organizational innovation, and behavioural change. The evidence-based practice process is divided in three stages: (1) knowledge creation and distillation, (2) diffusion and dissemination, and (3) adoption, implementation and institutionalization. These stages are subdivided in consecutive steps. The authors of this framework state that the knowledge transfer process is not linear; rather, activities occur simultaneously or in different sequences, with implementation of EBPs being a multifaceted process with many actors and systems.

3.2.3.1 Knowledge creation and distillation

The first phase of the model is **Knowledge creation and distillation** and includes the conducting of the research followed by a rigorous process of sifting through the research results to package them in ways that will be meaningful to potential users to increase the likelihood that the research evidence will find its way into practice[18]. This sifting process is called 'distillation'.

A broad range of users and needs has to be identified

The knowledge distillation process must identify a broad range of users and needs to be informed and guided by these end users in order for the results to be implemented in care delivery. It is advisable to involve these users early in the development process, for example in the scoping phase (definition of clinical questions, delineation of field of application)[19]. In addition to the perspectives of the end users, the criteria used in knowledge distillation should include consideration of the 'transportability to the real world care delivery' (contextualisation), the feasibility of translation, the volume and the strength and the generalizability of the evidence [17].

There is need to meet independent quality criteria

An EBP guideline must meet a number of independent quality criteria to ensure high quality, independent, comprehensive evidence based knowledge, to provide clear applicable messages for patient and health care provider, and to increase and maintain trust and acceptance by end users. These criteria are described in the international, rigorously developed, and validated AGREE instrument, developed by the Appraisal of Guidelines, Research, and Evaluation in Europe (AGREE) Collective Group[20]. Although the AGREE instrument is used to evaluate an already developed guideline, it is highly recommended to take the criteria into account during the development phase.

Early involvement of experts and stakeholders is important

Another important point of attention during the development of EBP recommendations is to establish a multidisciplinary expert and stakeholder group comprising of key stakeholders who will be affected by the selection of guideline recommendations, including patient (groups). The advantages of using a group to evaluate guidelines include sharing of work among group members, reduced potential for bias in the evaluation process, and increased awareness of guidelines and opportunities for group members to develop ownership of the resulting decisions [21].

Knowledge adaptation as an alternative of 'de novo' development

Guideline adaptation is defined as the 'systematic approach to considering the use and/or modification of (a) guideline(s) produced in one cultural and organizational setting for application in a different context[22]. Customizing foreign evidence-based guideline recommendations for national or regional application demands both methodological expertise and an intimate knowledge of the intended clinical practice environment. Dedicated guideline development bodies may have greater capacity to synthesize evidence but often have more limited access to detailed contextual information[23]. This implies a close collaboration between developers and stakeholders to create the most optimal fit between evidence and 'local' context. Customizing a clinical practice guideline to a particular region or setting may improve acceptance and adherence. Active involvement of the end-users of the guideline in this process has been shown to lead to significant changes in practice[24].

3.2.3.2 Diffusion and dissemination

The second phase of the model is **Diffusion and dissemination**, whereby efforts aimed at (social) marketing, selection of media, and appropriate messaging are used to 'spread the word' about the newly created knowledge in an effort to raise awareness of end users and to gain interest in translation and replication in real practice [18]. 'Dissemination' is the targeted distribution of information and intervention materials to a specific public health or clinical practice audience, in contrast to 'diffusion' of knowledge, which is a spontaneous distribution and unaided adoption of information [25]. The intent of this phase is to spread knowledge and the associated evidence-based interventions.

Knowledge has to be spread by means of mass diffusion (centralized) media channels

A previous KCE report, focusing on dissemination and implementation of clinical practice guidelines in Belgium[6], studied the effectiveness of dissemination strategies based on the Cochrane Effective Practice and Organisation of Care (EPOC) classification. Based on insights from literature and interviews, the KCE report recommended a unique platform for the comprehensive dissemination of clinical practice guidelines in Belgium including clear messages, various formats and a label for high-quality guidelines. There also is some evidence that the use of specific messages (and formats) to particular audiences might increase the uptake of information [18]. It is however important to first provide new evidence to health-care practitioners before patients and relatives are informed, as the latter often consult with these information.

There is a strong need for specific targeted dissemination interventions

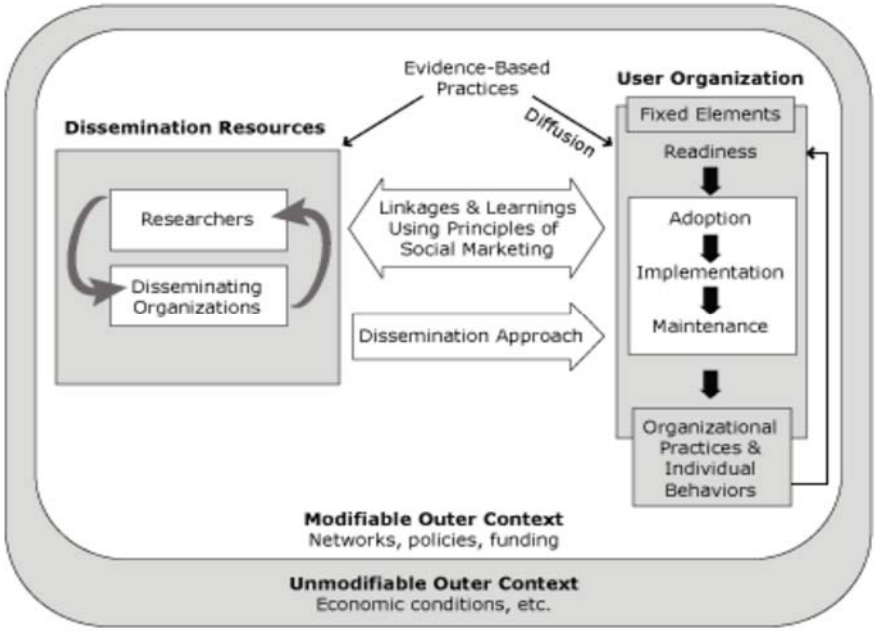
Specific targeted dissemination interventions, such as creation of interprofessional dissemination partnerships (with professional organizations but also with opinion leaders and innovation champions) and setup of knowledge transfer teams (also called knowledge brokers) in health care organizations to disseminate knowledge can form the basis of action[26]. The aim is linking researchers with intermediaries that can connect the practitioners, health care delivery organizations, and professional organizations [17]. Another assumption in this process is that early users will influence the later adopters to use the newly developed EBP knowledge [27]. This push & pull of information for diffusion and dissemination should increase the effectiveness of the efforts to spread new knowledge. Monitoring of the dissemination process, in terms of audiences reached, can be interesting to get a view on the effectivity of the process (e.g. uptake of guidelines, change in practice)[26].

Dissemination and adoption of evidence based information is influenced by socio-political contextual factors outside the science field.

As described in figure 1 of this report, contextual factors of the health care systems, and even of the society as a whole, can hamper or facilitate the effective application of evidence based practice in end users[28, 29]. On the one hand the context of the patient is important (social status and network, comorbidities, financial constraints …) and needs to be taken into account in the final decision regarding the care approach. Current evidence for treatment of a given condition requires interpretation within the context of a patient's health and situation, in order to safely and judiciously apply it[30].

On the other hand the socio-political and cultural context factors can influence the uptake of evidence and recommendations in practice. These can be divided in modifiable outer context factors, such as organizational networks, policies & policy support and funding, and unmodifiable outer context factors, such as economic, historical and cultural conditions and the overall political climate [31] (Figure 5) The former modifiable context elements can be adapted to a certain extent to facilitate implementation, while the latter unmodifiable context elements have to be taken into account. It might even be necessary to adapt the guideline or its implementation plan to these circumstances. Close collaboration between researchers (developers) and end user organisation is primordial to overcome these potential barriers.

Figure 5 – The dissemination framework (CDC)[31]



3.2.3.3 *End-user adoption, implementation, and institutionalization*

The final phase of the AHRQ model is the **end-user adoption, implementation, and institutionalization**. Implementation is the part of the guideline lifecycle in which systems are introduced to influence clinicians' behaviour toward guideline adherence [32].

The need for tailored implementation strategies

A careful assessment of and attention to the complex interrelationships among the EBP innovation itself, organizational structures, beliefs and values, the external environment, and the individual clinicians might be necessary to overcome implementation barriers and difficulties. The results of these assessments can be the basis of tailored implementation strategies [18]. This third phase differs from the previous ones as the emphasis is more on change management and behavioural change and less on evidence based science.

Changing habits takes time and needs efforts

This phase takes into account that changing practice takes time and considerable (mental) effort and that people have the intention to resist change. Adoption of new techniques and professional insights implies a process of careful persuasion, support, information provision and education. These implementation strategies have to improve the likelihood that the innovation (new evidence-based knowledge, technique or approach) will become a standard of care or 'institutionalized' [17]. Policy makers have to be aware that a certain period of time (in terms of years) is needed to change professional behaviour.

3.2.3.4 *Prioritization, validation and evaluation: missing elements*

Prioritization

Although the AHRQ model is quite comprehensive, and has been used in several studies worldwide [33], from a national viewpoint it is not complete. The first aspect of the EBP process on a national level, which is not mentioned in the model, is **prioritization**. Adequate governance implies that policy makers can decide which EBP activities will be developed or performed and funded. These decisions have to be taken on a number of criteria which have to be predefined.

The Agency for Healthcare Research and Quality proposes to use a series of criteria to prioritize guidelines topics [34]. These topics can be taken into account to build a list of prioritization criteria for Belgium.

- appropriateness
  - does it represent a health care facet that is available (or soon will) in the country?
  - does it represent a priority health condition as defined by Governmental policy?
- Importance
  - Does it represent a significant disease burden affecting a large proportion of the population or a priority population?
  - Is the topic of high public interest, affecting health care decision making, outcomes, or costs for a large proportion population or?
  - Does to topic affect a priority population in particular?
  - Was the topic nominated/strongly supported by one or more stakeholder groups?
  - Does the topic represent important uncertainty for decisionmakers?
  - Does the topic represent important variation in clinical care or controversy in what constitutes appropriate clinical care?

- Does the topic represent high costs (common use, high unit costs, high associated costs to consumers, patients, health care systems?

- Desirability of new research / duplication
  - Is there potential for redundancy (i.e., is proposed topic already covered by an available or soon-to-be available high-quality guideline)?
- Feasibility
  - Is there newly available evidence (particularly for updates or new technologies)
- Potential value
  - Potential for significant health impact (to improve health outcomes, to reduce significant variation in practice, …)
  - Potential for significant economic impact (to reduce unnecessary costs)
  - Potential for change (topic exists within a clinical, consumer, or policymaking context that is amenable to Evidence Based change)
  - Potential risk for inaction (risk for uninted harms from lack of prioritization)
  - Addresses inequities, vulnerable populations
  - Addresses a topic that has clear implications for resolving important dilemmas in health (decisions) made by stakeholder groups

A systematic review by Reveiz et al. (2010)[35] resulted in a list of 41 prioritization topics, categorized in 10 domains.

- Disease Burden
  - Disease/Condition incidence or prevalence
  - High risk impact of disease/condition in the health system
  - High frequency of risk factors associated with the disease/condition
  - High frequency of avoidable risk factors associated with the disease/condition
- Information needs in the Health Sector
  - Information needs within the Institution/Organization
  - Current controversy about topic importance
  - High importance of new methods and technology assessment
  - Fast diffusion of non-assessed technologies, availability of resources and sufficient time for technologies implementation
  - Country health priorities in agreement with CPG's need
  - High impact on national health system
- Feasibility on development and implementation
  - Feasibility on recommendations development which will improve health outcomes and cost
  - Is the proposal politically feasible?
  - Does it belong to priority health areas according to government policies?
  - Feasibility in implementation; will not require an excessive amount of resources and will not present important barriers to implement changes
  - Will reduce inequities when implemented
  - Will require education to training professionals

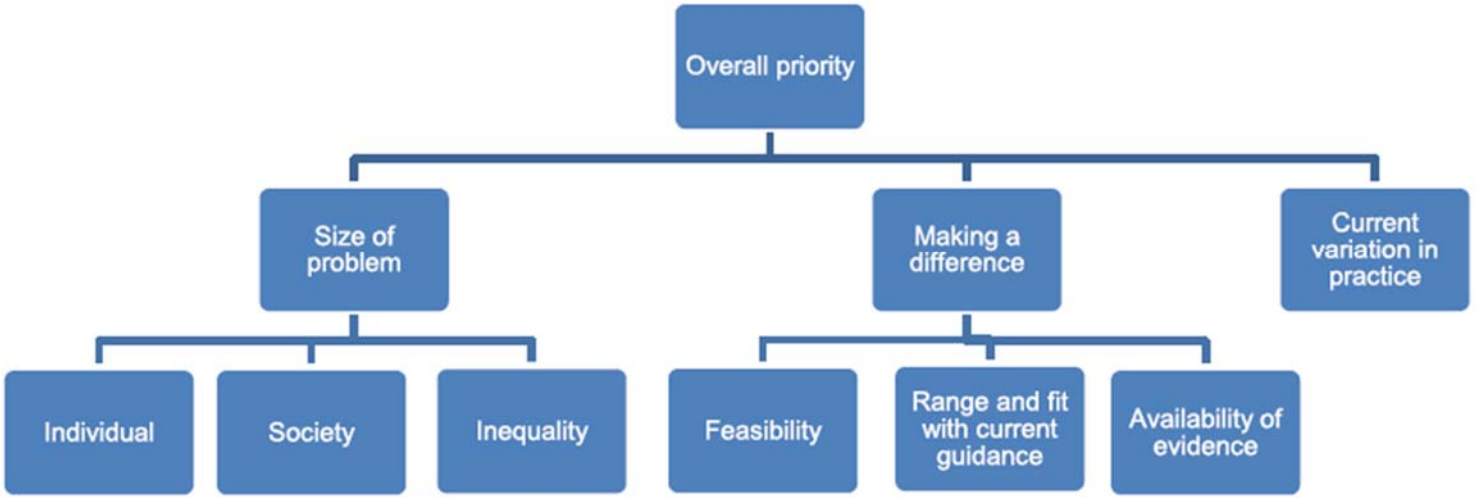
- Does the proposed topic include the participation of multiple departments, institutions, organizations, etc?

- Effectiveness
  - Availability of effective methods shown by methodologically adequate studies.
  - Certainty about effectiveness of assessed interventions and technologies
  - Potential impact of CPG
- Economic impact on the health system
  - Economic effects on health system (cost of an individual patient is high during diagnosis or therapeutic process)
  - Disease/Condition associated with iatrogenic interventions that are significantly high in cost.
- Clinical Practice Variation
  - Current evidence is insufficient for disease control in the population
  - Lack of high quality CPGs
  - Availability of high volume of evidence regarding the CPG topic
  - Evidence of inappropriate use of available technologies used in the treatment of condition (iatrogenic)
  - Conditions/diseases where effective treatments could reduce mortality or morbidity
  - Evidence of disagreements between current treatment and literature recommendations.
- Other social effects/Equity
  - Absenteeism from work or school, inability to work, inequities in access to health services
  - Will the service be available to anyone who requires it?
  - Will this CPG have a positive or negative impact on minorities' access to health services?
  - Will the CPG increase health service access to those affected by the condition?
- User Preferences
  - High patient demand or interest
  - Concerns about patients' quality of life
  - Feasibility of patient empowerment
  - High acceptability of the topic between the general public and professionals affected by the use of the CPG.
- Adverse events
  - Possibility of adverse events
  - Possibility of serious adverse events
  - Disease/condition associated with high incidence of adverse events or sequels
- Health Promotion and Disease Prevention
  - Feasibility of prevention between patients with risk factors
  - Are there specific activities of health promotion, disease prevention, early diagnosis or treatment? Have all of them shown a reduction in disease burden?

The Australian government emphasized that a coordinated national clinical practice guidelines framework is the first step to ensuring that guidelines are only commissioned when they are considered the most appropriate vehicles for disseminating evidence-based clinical guidance. They propose a number of criteria to be taken into account in the decision, such as burden and prevalence of disease, financial impact of disease or present treatment, national health priority areas, potential reduction of risk or harm, variation in practice, existence of relevant guidelines and expiring (or soon-to-expire) national guidelines[36], prevalence of disease

Reddy et al (2014)[37] showed the added value of a multi criteria decision analysis (MCDA), a mathematical approach to support prioritization decisions. They calculated normalised weights for every criterion in the prioritization figure under, based on the relative importance of the criterion to the prioritization decision. Given scores for each potential guideline topic on each criterion and the associated weight of these criteria, a 'total score' for each topic can be derived using a weighted sum approach. These total scores can be used by the prioritization committee or policy body as the basis for better informed discussion for prioritizing topics for EBP guidelines. (Figure 6). A similar approach was used in the KCE report 272 (2016) on the appraisal of (unmet) medical needs in Belgium[38].

Figure 6 – Prioritization criteria in hierarchy[37]



Finally, the KCE report 284[39] also discusses the prioritisation of guideline topics. KCE uses the following five criteria to select the topics for their own guidelines: policy relevance, frequency of the pathology, severity, room for improvement and feasibility of the research. All seven agencies abroad who participated in the KCE survey on this subject (e.g. NICE, SIGN), used similar criteria. KCE proposes to consider three additional elements in the prioritisation of guideline topics:

- No recent, high-quality guideline on a certain topic exists yet in Belgium. The availability of guidelines on the same topic in other countries should also be checked.
- International collaboration should be considered, if a guideline developer in another country aims to work on the same topic and uses comparable quality standards.
- Topics for de novo guidelines should be in line with a list of predetermined health targets and (unfulfilled) health care needs. This list should be created in the context of the national EBP Plan; it should take into account advices and interests of scientific organisations, patients, citizens, and the federal and federated policy makers.

Validation

Another element of the EBP process, which is not mentioned in the AHRQ model, is **validation**. The overall quality and the methodological correctness of the EBP information is of very high importance. Weak or ambiguous information can undermine trust and acceptability for evidence based practice in the work field. That is why an audit (validation) by and independent officially recognized control body is needed before the official release (diffusion and dissemination) of new EBP guidelines. The term "validation" can refer to validation of the methodology and/or to validation of the content. The audit implies that the evidence based guideline has to meet certain quality criteria (by methodology) and that it is recommended to be used by health care workers in clinical practices (methodology and content) [6]. A validation can be informal (based on expert opinions and consensus building) or formal (following a strict methodology, such as the AGREE criteria [40]).

External validation is an essential element in the ranking of guidelines in terms of quality, as external validation assesses to what extent potential sources of bias in the development of guidelines have been addressed adequately and whether recommendations are both internally and externally valid and are feasible in practice. The validation process primarily refers to the procedural aspects[41]: is the approach used to develop the guideline methodologically correct? However, as methods used to generate the guideline recommendations need to be described thoroughly, major flaws or mistakes regarding the content of the guideline can be identified during the validation process (e.g. neglect of important scientific sources). Validated guidelines are considered to be superior to unvalidated guidelines (also in case of jurisdiction)[42].

The majority of EBP organisations apply the AGREE II instrument as a basis for external validation. Nevertheless, small (subtle) differences between institutions might exist[42]. The question can be raised whether a foreign guideline is equivalent to a Belgian (externally validated) guideline. This implies that one has to be cautious when "importing' a foreign guideline and that these "validated" guidelines also need to be checked for the robustness of the methods used to develop them.

Guideline developers are found to be somewhat resistant against external validation. This is mainly due to the cost and time, which are related to a perform a critical internal review of a guideline by means of the AGREE instrument. Another reason for this resistance is the uncomfortable feeling experienced by guideline developers when an external validation is performed for a guideline which they have developed with dedication[43].

Evaluation

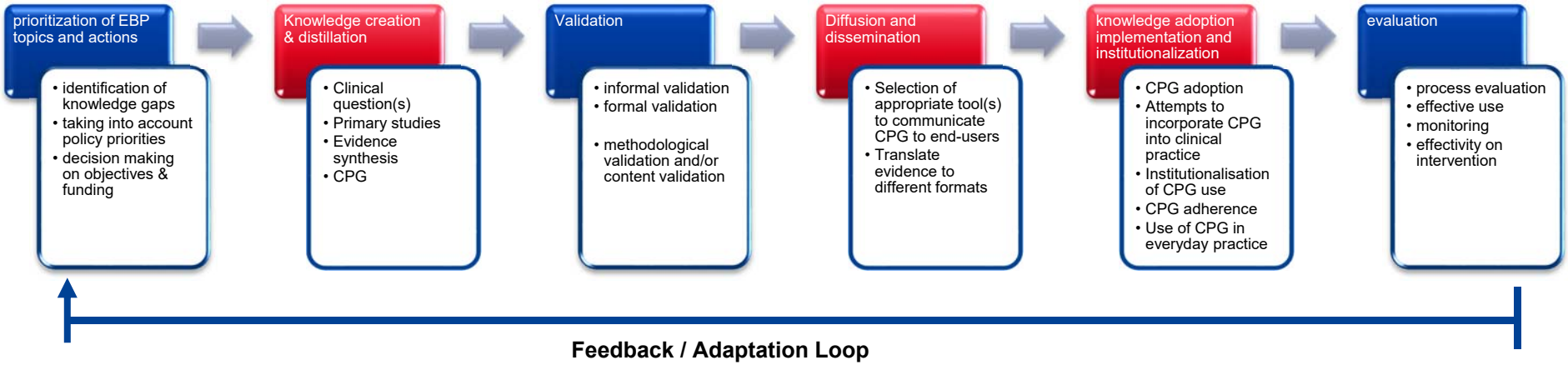
The final phase of EBP process is the **evaluation** of the process. To determine the success of implementation of evidence into practice and to measure the effectivity of the intervention, evaluation must part of the EBP process. Much of the current literature evaluating EBP focuses on process steps such as critical appraisal or searching and not as much evidence exists to guide evaluation of a given practice change (i.e., outcomes) [44]. Evaluation implies collection of data regarding downloading, reading, using and acting on the EBP guideline and evaluation of the effectivity of the intervention itself (in terms of benefits & harm).

Feedback loop

Based on the concept of the PDCA quality cycle, a feedback loop is added to the model to provide the opportunity to improve and adapt the EBP process, based on evaluation results.

In conclusion, a conceptual model of EBP was developed. Figure 7 visualizes the consecutive steps of the evidence based practice process. Steps in red are elements of the AHRQ Trip model.

Figure 7 – The consecutive steps of EBP



3.2.4 Implementation of EBP

Implementation can be defined as 'the art and science of incorporating innovations into typical human service settings to benefit patients, families and communities' [45]. Organizational adoption and implementation of evidence based information is an important but very challenging step in the knowledge transfer process from science to practice. The aim of this phase focuses on getting organizations, teams and individuals to adopt and consistently use evidence-based research findings and innovations in everyday practice.

Worldwide, a broad range of models have been developed to explain and visualize the implementation process of evidence based practice. Although all of these models identify potential barriers in implementation (implying a substantial conceptual overlap), a part of these models were primarily built as a theoretical and explanatory model. Other models aim to provide a more 'hands-on' support to implement guidelines, with practical tips and tricks to overcome barriers and with assessments to guide the development of tailored strategies. The PARiHS model (Promoting Action on Research Implementation in Health Services) [46](see Figure 7) is a model that has been widely applied and is considered to be a powerful tool "that can be used by "*anyone either attempting to get evidence into practice, or anyone who is researching or trying to better understand implementation processes and influences, suggesting that it has ambitions that go beyond its primary function as a determinant framework.*"[47]. It emerged from the observation

that successful implementation in health care might be premised on three key determinants (characteristics of the evidence, context and facilitation), a proposition which was then analysed in four empirical case studies. PARiHS has subsequently undergone substantial research and development work.

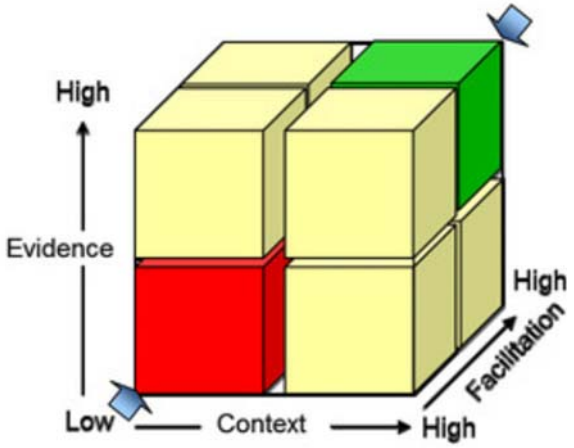
The different types of determinants specified in determinant frameworks can be linked to classic theories from other fields such as psychology, sociology and organizational theory. Thus, psychological theories that delineate factors influencing individual behaviour change are relevant for analysing how user characteristics affect implementation outcomes, whereas organizational theories concerning organizational climate, culture and leadership are more applicable for addressing the influence of the context on implementation outcomes[47]

3.2.4.1 Success factors in implementation

The successful implementation of evidence into practice in health care environments is more likely to occur in situations where (1) the research evidence is strong, there is a consensus about it among professionals and it matches patients' preferences, (2) the context is receptive to change, and (3) appropriate approaches and mechanisms of facilitation are in place [48]. This finding is the basis of the PARiHS implementation framework for evidence in health care.

The main aims of this framework are (1) assessing change readiness, based on the three dimensions of the model, and (2) building implementation strategies while taking into account weak and strong assessed elements. This implies that multiple factors have to be taken into account to create the highest odds for implementation success.

Figure 8 – The PARiHS model



Nilsen et al (2015) analysed eight of the most commonly cited frameworks in implementation science (among which the PARiSH framework itself)[47]. The PARiHS framework illustrates well the 5 core implementation determinants emerging from this analysis:

- characteristics of the implementation object (e.g. guideline);
- characteristics of the users/adopters (e.g. health care practitioners);
- characteristics of the end users (e.g. patients);
- characteristics of the context;
- characteristics of the strategy or other means of facilitating implementation.

The same factors were also highlighted in the systematic meta-review by Francke et al (2008)[49].

Changing practice takes considerable time and effort at both the individual and organizational level. A specific and tailored set of interventions (including clear communication towards the work field) may guide end users to smoothly agree to use the innovation in their daily practice. Once the EBP

change is incorporated into the structure of the organization, the change is no longer considered an innovation but a standard of care [26].

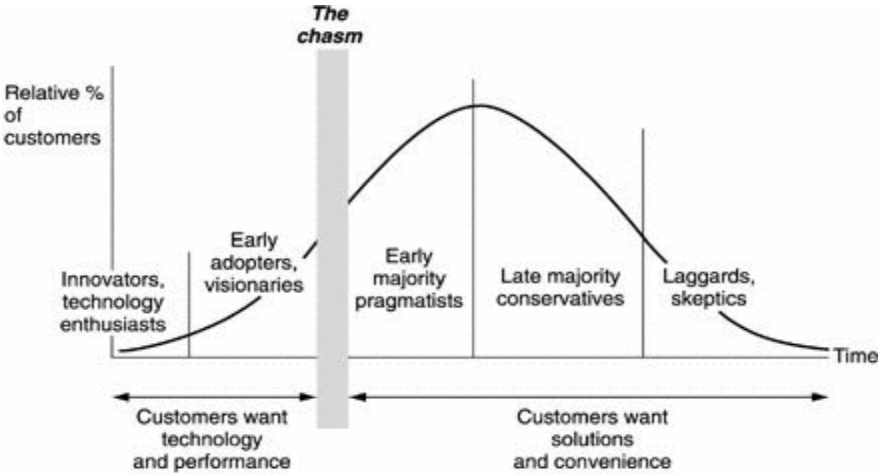
A variety of strategies for implementation is described in recent years, including the use of opinion leaders, audit & feedback, outreach visits, decision support & reminders, interactive education, change champions in the organization, piloting the change in a particular patient care area, and using multidisciplinary implementation teams to assist in the practical aspects of embedding innovations into ongoing organizational processes [26, 50]. A KCE study[6] (2013) on dissemination and implementation of EBP guidelines in Belgium revealed that audit and feedback, educational strategies and/or opinion leaders have a greater impact on the practice in multifaceted interventions than in single interventions. Reminders seem to be more effective as single interventions. Electronic dissemination strategies have the advantage to be incorporated in the work process of the clinicians and to combine different strategies as for example reminders, electronic educational materials. It was concluded that a dissemination strategy should be multifaceted, tailored to the characteristics of the clinicians and the patients, and with active participation of the participants. Interventions to promote professional behaviour change in healthcare are not always successful. A systematic review by Johson & May (2015) revealed that (1) normative restructuring of practice seems to modify peer group expectations and perception of practice (e.g. use of opinion leaders, educational outreach, educational meetings and provision of materials/guidelines); and (2) relational restructuring reinforces modified peer group norms by emphasising the expectations of an external reference group (e.g. "educational outreach using academic detailing, reminders, audit and feedback). Bundled together, such interventions seem to create a coherent and legitimised set of rules in end users about the conduct of practice; which are adopted to become a normal component of everyday work. Once adopted, individual participants feel encouraged to replicate activities common to their peers. Importantly, such interventions tend to use action. Interventions that try to reshape the attitudes of end users are more diffuse and indirect (e.g. marketing, mass media campaigns) and there is less evidence for effectiveness[51]. A study by Chiu et al (2010) confirmed this finding and concludes that a multifaceted nationwide outreach program on the diffusion and implementation of evidence-based practice has an impact on knowledge, skills, behaviour and perception of barriers in health professionals [52].

Implementers of evidence based practice in the work field have to be aware that barriers in uptake can be found at three levels: the micro-level (related to the individual practice of health care professionals), the meso-level (related to health care organisations and institutes) and the macro-level (related to the broader social environment or policy level) [53]. The aspects of all of these three levels have to be taken into account to build strategies for implementation of evidence based practice. This emphasizes the need for a multifaceted approach to get the highest odds for a successful implementation of EBP [54].

3.2.4.2 The chasm of cultural opposites and EBP implementation

Implementing and sustaining EBP in health care settings involves complex interrelationships among the EBP topic, the organizational social system characteristics (such as operational structures and values, the external health care environment), and the individual health care professionals [26]. Behavioural elements, attitudes, acceptance and adherence have to be taken into account when building strategies to implement EBP knowledge in the work field. An important focus of these strategies is behavioural change, which is a scientific approach attempting to explain and use environmental, personal, and behavioural characteristics as the major factors in behavioural determination [47]. While evidence based knowledge development is mainly driven by scientific motivations (science, statistics, technology and performance), the EBP user is often driven by other motivations such as efficiency, convenience and ease of use or even anxiety, doubt, time constraints and resistance (solutions and convenience). These differences, called the 'chasm in cultural opposites'[55] (Figure 9), is important for effective implementation as the specific drivers of end users will influence the uptake and adoption of EBP knowledge. As these motivational aspects in end users are in most cases not the core business of EBP developers, they can be overlooked and hamper the implementation process [56]. Specific expertise in behavioural change (social marketing, change management) might be needed to effectively overcome these implementation barriers [57].

Figure 9 – The chasm of cultural opposites (Moore, 1991)



3.2.4.3 *Implementability of EBP guidelines*

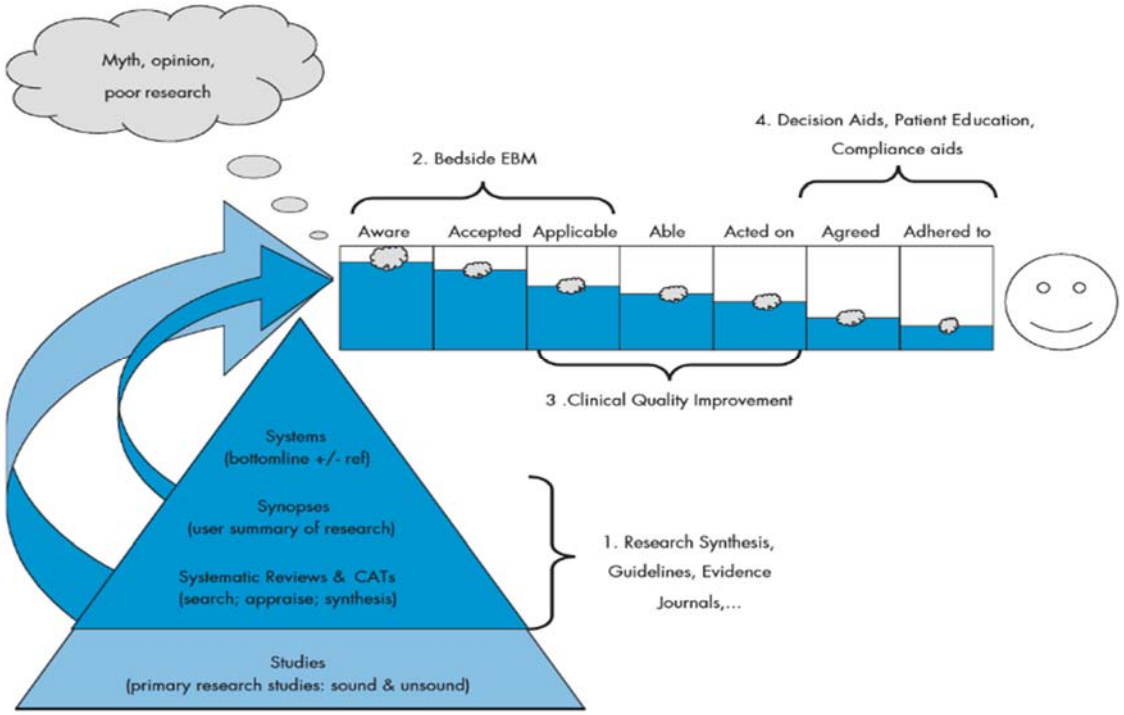
Although conceptual models of knowledge translation often visualize implementation as a distinct separated part of the process, EBP implementation is closely intertwined with the other steps of the process. There is a broad range of evidence that shows that every step in the knowledge transfer process contains elements that can hamper or enable/facilitate effective implementation. This important element in the process, called 'implementability'. Implementability refers to a set of characteristics that "predict ease of (and obstacles to) guideline implementation"[7]. Implementability is an abstract construct, relating to a number of factors, some of which are intrinsic to the guideline itself, and therefore are under the control of the developers, and some of which are extrinsic, related to the processes following the development phase or related to the actions of the healthcare system in which the guideline is used [58]. For the purpose of this report two models are described, as they are closely related to the main aim of this report: optimizing the effective use of evidence based knowledge on the work floor.

3.2.4.4 *The Research-to-Practice Pipeline*

The "research-to-practice pipeline" model specifically targets the knowledge translation in healthcare [59]. Sometimes the term 'leaking' is added to the name of the model. As shown in Figure 10, the model defines 8 stages in the transfer from EBP recommendations to clinical practice. Every stage implies barriers that might lead to a drop-out of clinicians, resulting in a lower impact of EBP on patient outcomes. Although synthesis of evidence is prior to the transfer pipeline, a strong interaction between these two is needed to increase the odds of implementation success. A first crucial element in transfer is creation of awareness of clinicians regarding new EBP recommendations. There is a strong need for a formal communication plan (including provision of ICT tools and social media) to make clinicians aware of new findings and changes in their practice field. Acceptance of new approaches and interventions (in terms of benefit or harm) is the second element. Unfortunately, clinical decisions are often made, based on non-scientific motives such as persuasion, authority, marketing and social validation. Developers have to identify methods to overcome this barrier (i.e. distinguish their EBP knowledge from other 'less sound' information). Applicability of the information is also important for the success of EBP implementation, e.g. a clear definition of the target group, description of pros and cons of the different treatment options, practical tools to facilitate guideline use, specific attention for format and design of recommendations. Availability of EBP knowledge and ability of end-users to find and handle it is the next step in the transfer process. Easy access to recommendations is primordial but end users also have to be educated and trained to search, use and understand the evidence. This implies that a close collaboration is needed between guideline developers, academic institutions and professional organisations. Next is the 'acted on' phase. As habits are difficult to change, despite the best intentions, supportive tools, such as reminders and alerts, are needed for clinicians to draw attention to alternative (best evidence) treatment options. In the agreement phase, the clinician might be convinced of a certain approach, but the agreement of the patient is also needed in terms of compliance and therapy adherence. This implies the need for specific tools and information (decision support/ decision aids) to help the patient making informed decisions. The final phase of the knowledge transfer pipeline is adherence. Patients constantly have to contend with competing, often non-scientific, claims regarding their therapy

that might hamper therapy adherence. Research shows that well informed patients more easily adopt the right health-related behaviour, resulting in higher levels of adherence than people who got inadequate information, especially in case of chronic illness [59].

Figure 10 – The Research-to-Practice Pipeline



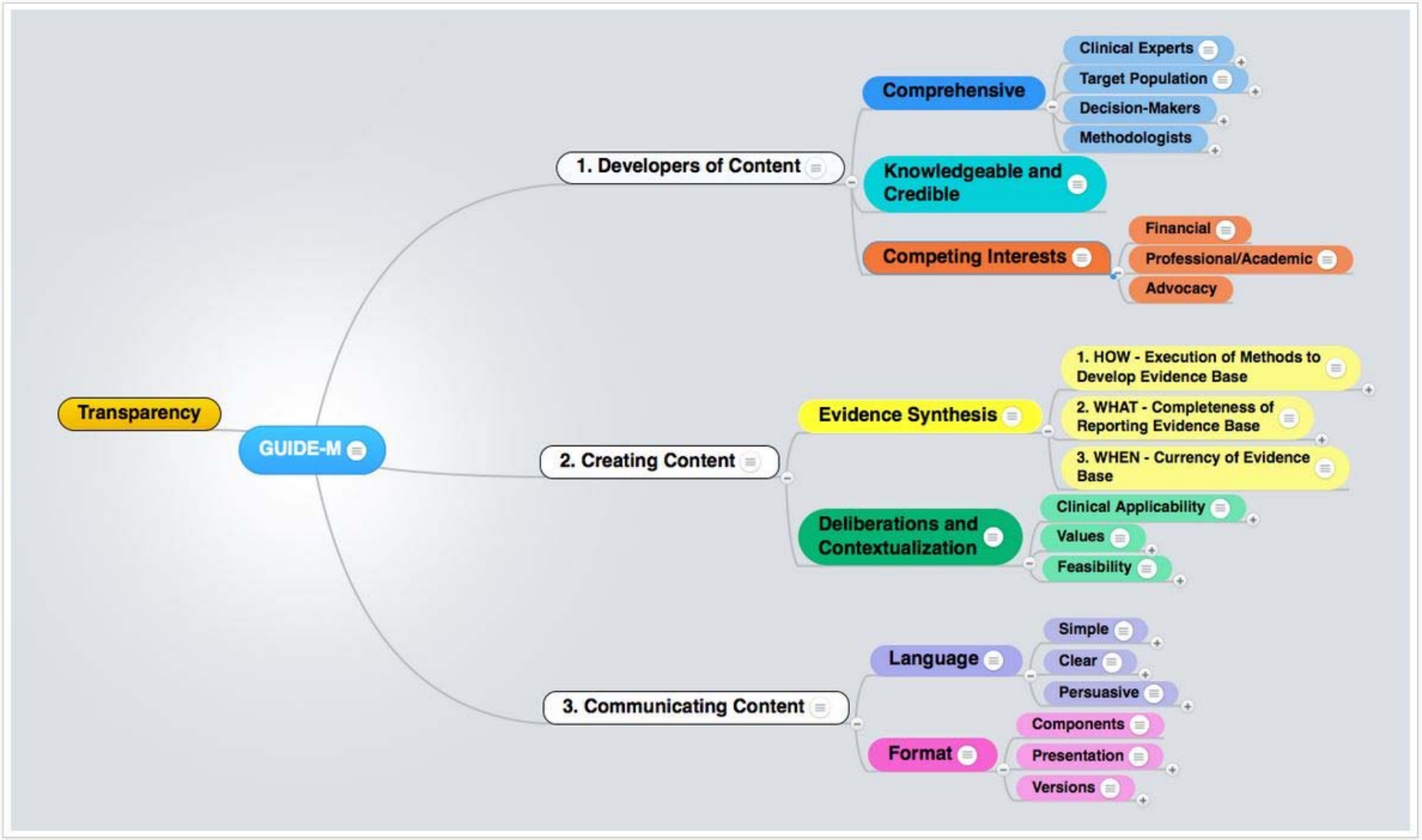
CAT: critical appraisal topic (EBP summary that answers a clinical question).
Systems: integrated ICT solutions that link EBP evidence directly with health care data and provide decision support

3.2.4.5 The GUIDE-M model

In an attempt to increase quality, acceptability, feasibility, usability and implementability of evidence based recommendations, Brouwers & Bhattacharyya developed, more recently, the comprehensive GUIDE-M model (Guideline Implementability for Decision Excellence Model) [60]. This model was based on a realist review of the literature and input of a collaborative network. It consists of components intrinsic to evidence based guidelines that play a role in optimizing the implementability of these guidelines. The model consists of 3 core tactics (development of content, creation of content and communication of content), 7 domains (comprehensiveness, being knowledgeable & credible, managing competing interests, evidence synthesis issues, deliberation of contextualisation, language and format), 19 sub-domains, 44 attributes and 40 sub-attributes and elements. Figure 11 gives a visualisation of the main dimensions of the model. An extensive description can be found online (http://www.agreetrust.org/agree-research-projects/guide-m/). An important core aspect of the GUIDE-M model is that implementation of a guideline does not start after the development of this guideline but has to be taken into account extensively during the development. All of the elements, integrated in the model, have to be taken into account during the development phase, as they can impede or facilitate effective implementation of evidence based practice in every day delivery of health care. In the last decade, several other models to identify implementation barriers have been presented, such as the work of the GLIA group, GIRANet, IOM, FIN, GUIDE-IT and GRADE. However, these have (at least partly) been taken into account for the development of the GUIDE-M model [7, 58, 61-63]. A visualization of the GUIDE-M model can be found on the next page.

In conclusion, implementability of guidelines is influenced by a broad set of aspects throughout the whole process of EBP development of content, and communication of content. Therefore, implementability will be a very important point of attention for the development of a Belgian EBP Plan.

Figure 11 – The GUIDE-M model



3.2.5 Needs for training and education in EBP end users

Creating awareness and insight, and increasing knowledge in evidence based practice in end users has been found to be a predictor in uptake and effective use of EBP. Therefore it is needed to pay attention to the availability and quality of EBP training and education in (para-)medical undergraduates as well as in lifelong learning for professionals on the work floor[6] .

There is empirical evidence that initial as well as continued EBP training activities improve knowledge and skills needed for the critical appraisal and understanding of scientific papers and guidelines[64] in physicians as well as in allied healthcare professionals. Different approaches have been used such as attending courses, conferences, workshops or journal clubs. Some studies have compared stand-alone approaches while others tried to integrate EBP in clinical teaching. Not every type of education has proven its effectivity. In general, teaching EBP has the potential to improve knowledge, attitudes and skills but there is no proof for superiority of one method. Moreover, evidence supporting the effect of EBP teaching on students' future behaviours and use of evidence (change) is currently insufficient [64, 65].

3.2.6 Interdisciplinary differences in implementation of EBP

A broad range of studies conducted in recent years have investigated the perceptions of EBP among a variety of healthcare-related professional groups [53, 66-69]. Overall, most healthcare professionals hold positive attitudes towards EBP but they lack sufficient knowledge and skills for implementation. Differences in beliefs can however be seen between disciplines. Moreover, a number of personal and organizational barriers impede EBP implementation (e.g. professional status, financial constraints, limitations of time, ease of access, availability of a computer, working practices, direct versus indirect applicability of guidelines) but also positive perceptions towards EBP, level of self-efficacy, educational training for EBP, and having a faculty position or a higher academic degree were found to be predictive [70, 71]. These differences have to be taken into account while building implementation strategies for health care professionals.

3.2.7 Foreign experiences and good practices

3.2.7.1 Results from a grey literature search and local contacts

Governance system in Switzerland[b]

There is no national plan for EBM/EBP in Switzerland. At national level, evidence is only used for the reimbursement of interventions or medicine. The usage of evidence is done here in the form of HTA and not as guidelines. Guideline development experience are still scarce and mainly based on district level.

Governance system in France[c]

France has neither a national EBP governance and dissemination Plan, nor a central dissemination platform for guidelines. The Haute Autorité de Santé (HAS) is the only public, non-governmental, independent developer and implementer of evidence based guidelines in France. HAS does not have specific power to oblige professionals to use their guidelines, but they spread their EBP products and communicate about it ("porte parole"). Every year, a work group within HAS prepares a list of about 30 potential topics for guidelines. This list is sent to a specific prioritization committee of experts within HAS ("Le Collège de l'HAS") who compile a shortlist of about 10 topics out of the proposed topics. This Collège consists of 7 members appointed by the Public Authorities: they validate the work plan and the future guideline topics. These members have different backgrounds (e.g. finance auditors, doctors, pharmacists, economists, patient representatives) and the composition of the committee can change over time. Evidence based recommendations are also developed by scientific societies ("Sociétés Savantes") but these products are not officially accredited. This might sometimes result in overlaps or contradictory information. However the overlap has been decreasing during the last years, given the fact that a

[b] Based on an interview with a local expert.

[c] Based on an interview with a local expert

better collaboration has been established between the scientific societies and HAS. As an illustration, HAS invites members of these scientific societies to take part in their guideline development groups. There is also a more intense and closer collaboration between HAS and the scientific societies. Some clinical guidelines are 'co-produced'. In this case the scientific societies act as promotor of the guideline: the final version of the guideline is approved by HAS and is allowed to wear the HAS logo. Besides the full guidelines, other derivative supporting products are developed in France, such as quality criteria and indicators, algorithms, patient leaflets. In 2010 HAS made available a set of criteria to support the scientific societies to develop their recommendations in terms of methodology ('label méthodologique'). There is however an evolution towards a combination of methodological and content quality appraisal. A final "validation" of a guideline involves patient representatives and health care professionals. Representatives of the Government and of the sickness funds are not involved in this process. For implementation purposes, the HAS guidelines and derivatives can be used but public agencies and administrations can also be involved (e.g. lifelong learning agencies: Développement Professionnel Continu). The latter often collaborate with the scientific societies as well.

Governance system in UK

The best known European example of a nationwide EBP governance system is the National Institute for Health and Care Excellence (NICE) (°1999), an 'independent organisation responsible for developing national guidance, standards and information on providing high-quality health and social care, and preventing and treating ill health' in the UK [72] . This organization situates in the centre of the health and social care system and works closely with developers of EBP, policy makers, professional bodies and organisations of end users. The vision of NICE is to collaborate with stakeholders as closely as possible and *"…to encourage and support a quality- and safety-focused approach, in which commissioners and providers use NICE guidance and other NICE accredited sources to improve outcomes.* [72]" The main pillars of the operationalisation of this vision are (1) a well-structured and transparent governance model that facilitates and aligns cooperation between stakeholders while keeping in mind clearly predefined national policy objectives and (2) central dissemination of a substantial national set of guidelines. These guidelines are considered 'the backbone' of the state's strategy for EBP policy in healthcare, which also comprises e.g. the web-based health library for health professionals, a specific database with patient leaflets (based on CPGs) and systematic knowledge reviews produced by government agencies.

A broad spectrum of activities[73]

'NICE guidelines' make evidence-based recommendations on a wide range of topics, from preventing and managing specific conditions, improving health and managing medicines in different settings, to providing social care to adults and children, and planning broader services and interventions to improve the health of communities. These aim to promote integrated care where appropriate, for example, by covering transitions between children's and adult services and between health and social care. 'Technology appraisals guidance' assess the clinical and cost effectiveness of health technologies, such as new pharmaceutical and biopharmaceutical products, but also include procedures, devices and diagnostic agents. This is to ensure that all NHS patients have equitable access to the most clinically - and cost-effective treatments that are viable. 'Medical technologies and diagnostics guidance' help to ensure that the NHS is able to adopt clinically and cost effective technologies rapidly and consistently. 'Interventional procedures guidance' recommends whether interventional procedures are effective and safe enough for use in the NHS. NICE is also responsible for 'Quality Standards'. These are concise sets of statements, with accompanying metrics, designed to drive and measure priority quality improvements within a particular area of care. These are derived from the best available evidence, particularly NICE's own guidance and, where this does not exist, from other evidence sources accredited by NICE. NICE also has a 'Quality and Outcomes Framework' (QOF) which undertakes the development of an annual menu of potential indicators for inclusion in the clinical component of the QOF[74], the quality element of the contract the NHS has with General Practitioners. NICE also recommends whether existing indicators should continue or be retired. And finally NICE also has a 'Clinical Commissioning Group Outcomes Indicator Set' (CCGOIS). Working with the NHS Commissioning Board, as well as with professional and patient groups, NICE has developed a framework for measuring health outcomes and the

quality of care (including patient reported outcomes and patient experience) achieved by clinical commissioning groups (CCGs).

Prioritization of guideline topics

The focus on topic selection at NICE is largely on prioritising existing topics. NICE does no longer actively seek new topics from stakeholders, as topics now come from the libraries of topics. Meetings with stakeholders are organized as part of the topic refinement process to identify the focus for guidance within the referred quality standard topic area. This might results in a small number of new guideline topics yearly to complete the list. In August-September a longlist for prioritisation is prepared, consisting of an existing list of guidelines that need updating, topics that were granted in the running year but where development has not yet commenced and new topics. Criteria to add these topics to the short list are identification as high priority, alignment with national policy, potential to impact outcome frameworks in healthcare and public health, burden of care/illness, premature mortality or reduced quality of care, exploitation of development opportunities (collaboration). This list is discussed in September-October in a governmental prioritization commission, to propose and decide on the next year work plan.

Spreading the knowledge to the end user

NICE spreads its knowledge by use of 'NICE Evidence' an online knowledge portal and search engine that identifies relevant clinical, public health and social care guidance. As part of the service, NICE also provides access to information content purchased on behalf of the NHS. This includes access to a range of bibliographic databases such as MEDLINE and professional journals. Further on, NICE publishes the 'British National Formulary' (BNF) and 'British National Formulary for Children' (BNFC), published jointly by the Royal Pharmaceutical Society and the British Medical Association. For a number of years, NICE has been responsible for providing NHS access to these publications, including recently through the use of smartphone apps. And finally NICE provides 'Medicines and prescribing support': information and new pharmaceutical products and information about the use of particular products outside the scope of their licensed indications. This includes Medicines practice guidelines to support best practice in medicines management, including practical advice on developing and maintaining local medicines formularies.

Transfer from science to practice

Regarding the transfer from science to practice, NICE provides implementation support, a selection of resources to help making effective decisions for local services. This support consist of 'return on investment tools' (modelling tools for public health and decision makers) [75], 'resource impact assessments' (tools to support decision makers in planning of financial, time and staff resources) [76], 'audit and service improvement' (resources that provide help with planning ahead for EBP implementation, understanding where you are now, and conducting improvement initiatives) [77], and tips and tricks to promote adoption of new health technologies [78].

Evaluation of EBP processes

The NICE implementation support service provides access to a database of publications that measures the uptake of guidance and quality standards (audit data, assessment levels of uptake over time, comparison of uptake at regional level) [78]. The NICE website provides access to a broad range of quality standards and indicators. All of these are not mandatory but can be freely used in quality improvement projects. Quality standards cover 148 areas where there is variation in care. Each standard gives a set of statements to help improve quality and information on how to measure progress. The majority of the standards are endorsed by public policy bodies, such as NHS England or the UK Department of Health[79]. NICE also provides about 150 indicators, which fit in the QOF or the CCGOIS (see above) which can be used freely. Each indicator has a denominator describing the target population included in the indicator, a numerator describing the number of people in the denominator who should have the specified intervention, treatment or outcome, and a description of the inclusions, exclusion and exceptions[80]. All indicators are underpinned by a robust evidence base and have been through a rigorous process of testing and public consultation.

Governance system in Scotland

The Scottish Intercollegiate Guidelines Network (SIGN) was founded in 1993 and consists of professionals organisations in a broad range of medical disciplines [81]. The aim of SIGN is to sponsor and support the development of national clinical practice guidelines for Scotland on a multi-professional basis [82]. In the first twelve years SIGN was an independent institution but in 2005 SIGN became part of NHS Quality Improvement Scotland (NHS QIS)[83], an overarching initiative to drive improvements that support quality of care (including regulation of hospitals and clinics, definition of standards and norms, healthcare environment inspectorate, cost effectiveness studies) [84]. At present, SIGN cooperates closely with NICE and has a formal agreement of collaboration.

A multidisciplinary network and international collaboration

The membership of SIGN includes all the medical specialties, nursing, pharmacy, dentistry, professions allied to medicine, patients, health service managers, social services, and researchers. SIGN is strongly connected with guideline development methodology and international collaboration, as co-founder of the Guideline International Network (GIN) and co-developers of methodological manuals and screening instruments (DECIDE, GRADE, SIGN50).

Prioritization of topics

SIGN uses a 'bottom up' approach for topic selection, with guideline topics proposed by individuals or by persons actively working in NHS Scotland. Any group or individual can propose a topic for a SIGN guideline. For a topic to be suitable for the development of a SIGN guideline there must be (1) evidence of variation in practice which affects patient outcomes, (2) evidence that the topic affects a substantial number of patients in Scotland and (3) a strong research base providing evidence of effective practice. In addition, the potential benefit to patients must be sufficient to justify the resources invested in the development and implementation of a SIGN guideline. Once SIGN became part of NHS QIS, this process underwent a number of changes. The basic process remains the same, but with the addition of new factors such as NHS Scotland priority areas for healthcare and the need to integrate with the rest of the NHS QIS programme [82].

Spreading the evidence

SIGN has a programme of evidence-based clinical guidelines - published, in development, or under review - covering a wide range of topics. Many of the SIGN guidelines relate to the NHS priority areas of cancer, cardiovascular disease, and mental health. However a significant part of the available guidelines is consensus or 'expert opinion' based or is a non-systematic review of the scientific literature [85]. Dissemination of the guidelines is done by means of a website where all information is freely available. However there is also a network of Guideline Distribution Coordinators that empowers and supports the distribution to end users. Implementation is the responsibility of each individual regional.

Implementation support and policy

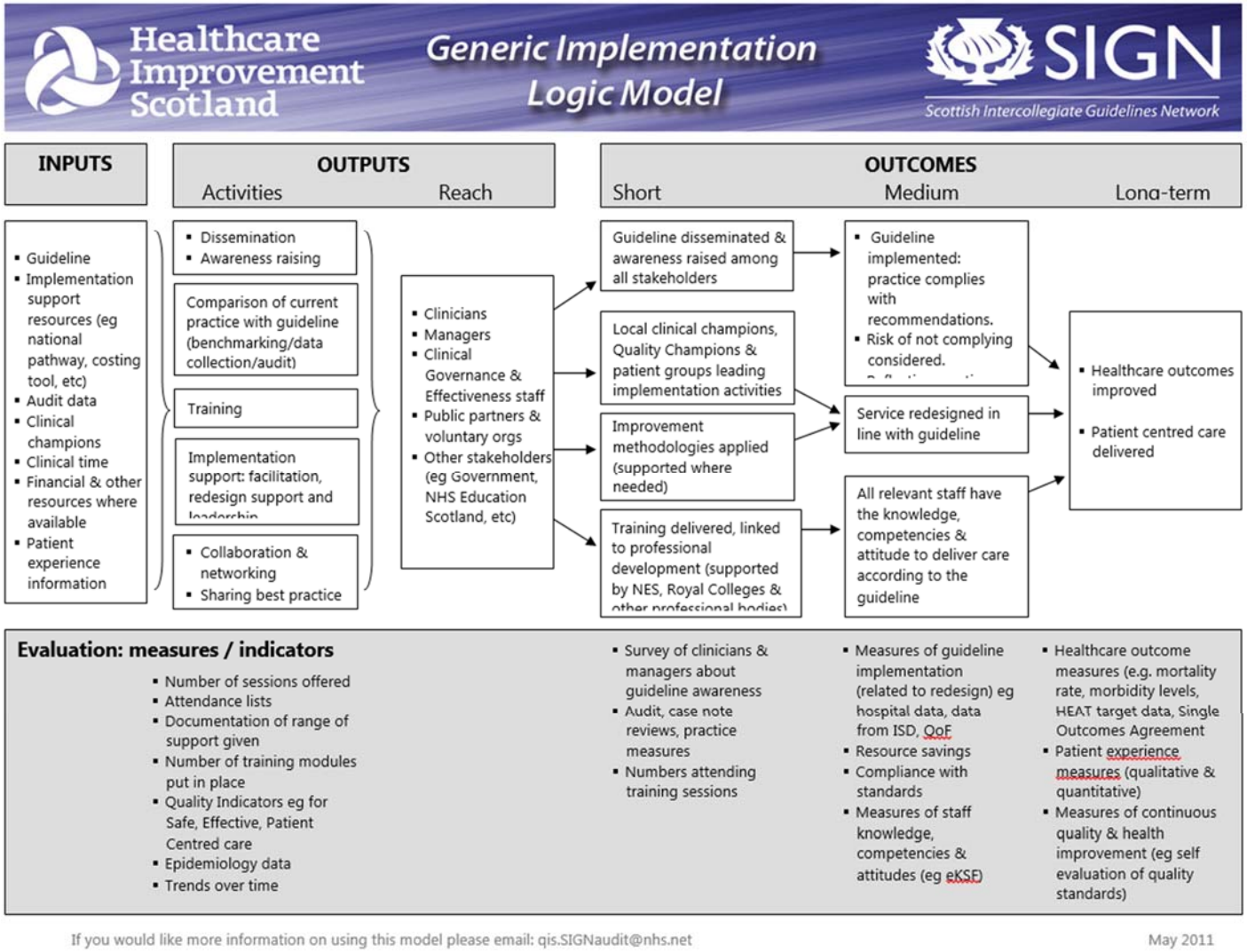
In the last years, SIGN is taking a proactive role in supporting the implementation of its guidelines and in improving the implementability of its recommendations. Their vision is to become a World leader in guideline implementation support, in line with the wider Healthcare Improvement Scotland vision of better support for implementation.

Until recently SIGN was not involved in implementation of guidelines, but now they provide support and information for local or regional organisations to help them implementing new evidence [86]. SIGN starts from the idea that every aspect of the EBP process has to be kept in mind for implementation of guidelines. They constantly improve their development processes, they invest in raising awareness [87], they invest in education (continuous professional development, also in e-learning)[88], and they involve patients, relatives and informal care in the roll out of EBP[89]. Over years the bottom up approach of SIGN has created a broad network which is supported extensively [86]. Further on, SIGN provides a broad set of implementation support resources (generic and guideline specific information, algorithms, care pathways, calculators, audit tools, electronic decision support tools) and they are involved in an implementation research and application network (GIRAnet)[90].

Monitoring and evaluation

SIGN also provides tools and information to support evaluation of implementation strategies. One of their tools to assess the impact of implementation activities and to find out whether implementing a guideline is improving outcomes is by use of 'a logic model'[91]. (Figure 12) A logic model is a tool that graphically describes the steps being taken to implement a guideline (or any improvement programme) and links the individual actions with short term and long term outcomes. The power of logic models is in the measures and indicators providing evidence that individual implementation activities lead to the desired outcomes. SIGN states that Logic models are therefore valuable evaluation tools as they can provide evidence of impact. Besides the logic model approach they also provide tools for audit and regular review[86].

Figure 12 – The SIGN Generic Implementation Logic Model



Governance system in Sweden

Also the Swedish Government decided to develop and implement a national informative governance strategy, with a central point of dissemination of knowledge. This central Swedish knowledge portal, the Statens Beredning för medicinsk och social Utvärdering (SBU)[92], founded in 1987, is an independent national authority, tasked by the government with assessing health care interventions from a broad perspective, covering medical, economic, ethical and social aspects. SBU states that its assessments are based on 'systematic literature reviews' of published research and that the review method developed by SBU is thorough and rigorous. Although the primary aim of SBU is to develop Health Technology Assessments (HTA) they also provide a broad range of reports, assessments and evidence maps in different formats to support practitioner and policy makers in the field to organize an provide health care. The SBU also provides support in prioritization of health topics in EBP development [92].

Informative governance and EBP

The backbone of health care in Sweden is 'Informative governance'. This is a management and policy system that seeks to increase the extent of evidence-based practice through well-planned developing, dissemination and implementation of best available knowledge to achieve the best possible benefit to users and patients. It is broader than solely EBP as it includes activities to create and maintain structures and processes that lead to the use of best available knowledge when making clinical and administrative decisions. It implies a medium and long term vision on the development and dissemination process, and a performant system for monitoring of results from health care delivery [5]. A governmental agency - the National Board of Health and Welfare (NBHW) - develops National guidelines for healthcare (evidence-based decision supports that consist of recommendations for prevention, diagnosis and treatment of diseases that affect large numbers of patients and are costly to society) and is also responsible for the implementation of these guidelines.

Guiding health care policy in Sweden

The National guidelines are considered 'the backbone' of the state's strategy for informative governance in healthcare, which also comprises e.g. the National Quality Registries, the Regional Comparisons of Quality and Efficiency in Swedish Health Care, the web-based health library for health professionals, and systematic knowledge reviews produced by government agencies. The Swedish National Guidelines are intended as a support for prioritizations and decision-making on how to allocate resources within healthcare according to population need. Each recommendation in a guideline contains a degree of priority, which can guide health care professionals as well as decision makers. The final decision on allocation of resources is however on the regional level [93].

Monitoring systems to guide health policy

Feedback, monitoring and evaluation results are used to guide governance and regulation of health care. NBHW regulates guideline development and is responsible for the content of the guideline and its recommendations. Depending on the topic of a guideline, NBHW involves Swedish experts in the development. Guideline-specific sets of quality indicators for the most important recommendations are developed as they are perceived as crucial for monitoring and follow-ups in terms of informative governance. Guideline follow ups must be linked as close as possible to medical data registry. Data on guideline use and adherence are published openly and are accessible for every citizen.

3.2.7.2 Results from a recent KCE survey in foreign guideline developers

In March 2016, KCE launched a survey related to its Guideline Use project. An online questionnaire was developed and submitted to 18 foreign guidelines development agencies. Seven organisations responded and gave insight in their work processes on Evidence Based Practice guideline development, based on the three main dimensions of the GUIDE-M model: (1) developers of content, (2) creating content, (3) communicating content (see above).

Organisations that provided information:

- Haute Authorité de Sandé (HAS), France
- Duodecim, Finland
- Nederlands Huisartsen Gennotschap (NHG), the Netherlands
- Integraal Kankercentrum Nederland (IKNL), the Netherlands
- Verpleegkundigen en Verzorgenden Nederland (V&VN), the Netherlands
- Scottish Intercollegiate Guidelines Network (SIGN), Scotland
- National Institute for Health and Care excellence (NICE), United Kingdom

The following topics from this KCE survey were found relevant for the present report:

- Topic submission
  - HAS regularly launches a call for submission of topics
  - Duodecim, SIGN, V&VN rely on a system of free submission of topics
  - IKNL & NHG propose a predefined topic list to practitioners or professional organisations. NHG launches no formal call.
  - NICE chooses guideline topics from a library of topics for quality standards
- Topic selection (prioritization)
  - All surveyed guideline developers (except HAS) have also have a formal procedure to select guideline topics. Decision makers are in charge of the topic selection at NICE (Secretary of State for Health, an elected politician) and at SIGN (SIGN Council, board of governance)
  - Other institutions rely on expert groups whose composition varies widely between guideline developers. Some expert groups include health professionals (IKNL, NHG, V&VN). Other institutions have expert groups with broader skills for topic selection as for example Duodecim that includes representatives from authorities, hospitals, primary health care and other stakeholders (excluded industry)
  - All agencies use room for improvement, feasibility and emergence of new evidence as selection criteria. Some agencies take other criteria into consideration such as unavailability of a national guideline (NHG, IKNL, NICE, SIGN, V&VN) or number of patients involved and severity of illness (NHG, Duodecim, NICE, V&VN)
- Funding of guideline development
  - all surveyed agencies are publicly funded. However, NHG is supported by private non-commercial funding including members' fees, national health council funding, revenues from NHG products and services
- Communication of content, in terms of informing end users and professional group
  - Communication specialists (editor staff members) challenge the simplicity, the clarity of the recommendations and the use of persuasive language in all surveyed agencies except in Duodecim and HAS.
  - All but 2 (Duodecim – V&VN) surveyed agencies have staff or external department dedicated to communication of guideline to health professionals. The composition of the eam varies widely by agency. NHG has a Marketing and Communication including approximately 25 staff members. NICE is supported by a 40 people teams for communication, field team and implementation support teams with a range of communications, media, clinical and managerial skills. At SIGN, one person is in charge of dissemination and awareness raising. For V&VN guidelines, the communication is dedicated to the guideline development group.

- All respondents, except HAS, base their communication on a specific plan. While SIGN applies a standard plan for all guidelines, Duodecim and V&VN establish a tailored plan for each guideline. NICE has strategic communications plan for the organisation as a whole and communications plans for key pieces of guidance. The plans are tailored to the guideline and may focus on national health organisations, general and specialist media outlets, patient groups as well as a local health services.
- Regarding the communication with patients, all agencies have staff or external department dedicated to communication with patients.

- Dissemination of guidelines
  - Guidelines are mainly available in non-commercial centralised databases (GIN-databases: NHG, NICE and SIGN or National Guideline Clearinghouse: SIGN).
  - Four agencies (IKNL, NHG, NICE and SIGN) have a specialist dedicated to dissemination in their own team. These agencies collaborate also with international partners for dissemination. In addition to classical dissemination material such as the organization website (IKNL, NHG, NICE, SIGN), mailing (IKNL, NICE, SIGN), printed material (IKNL, SIGN), NICE uses a field team and conferences as dissemination tools while SIGN and V&VN disseminates guidelines through social media.
- Implementation related activities
  - Some agencies (NHG, IKNL and NICE) have an implementation specialist. Strategies to enhance implementation of guidelines are differently implemented. IKNL sets up an implementation plan for each guideline. NHG uses educational materials, conferences and online content –including movies. NICE can rely on a field team of 8 implementation consultants and diverse tools such as local practice collection, costing tools, quality standards, education tools, fellows and scholars program.
  - The Guideline Development Group is involved in the implementation in several organisations (IKNL, Duodecim, NICE, SIGN and V&VN).

3.2.8 Collaboration between EBP organisations in Belgium[6]:

3.2.8.1 Aim

The following description of collaboration between EBP organisations in Belgium is based on a previous KCE report on a “dissemination strategy for clinical practice guidelines (CPGs) in Belgium” (2013) [6]. This was a first attempt to describe the former situation in Belgium, determining which organisation played a role in the development and dissemination of CPGs and how these organisations were linked to each other (or not). In the first part of this chapter a summary of the most important elements of the report 212 is given. Summary of report 212

This section, which will be mainly based on the previous KCE report, aiming to identify the current EBP organizations and to visualize their current collaborations. Next to this description, potential opportunities for future collaboration will be identified, taking into account the intentions and attitudes of the EBP organisations and potential facilitators and barriers to disseminate and implement EBP.

Belgium, a scattered EBP landscape

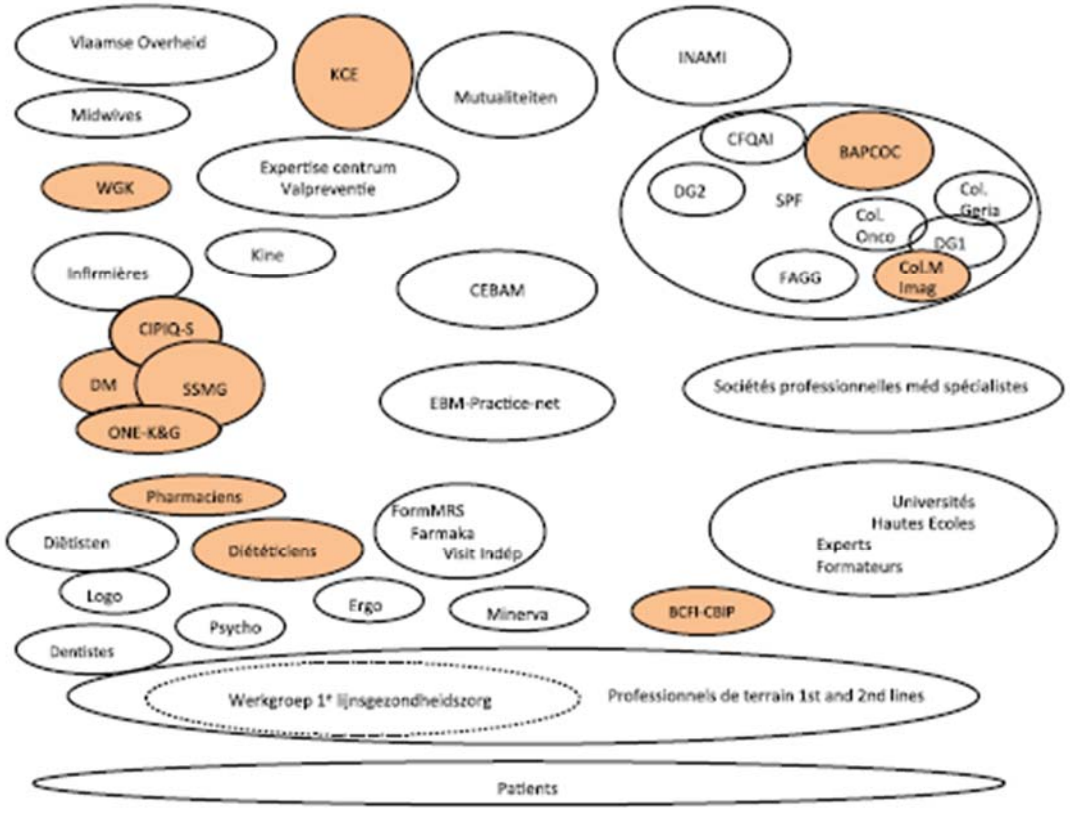
Numerous organisations are involved in the development and/or dissemination of EBP guidelines. In the previous KCE report a long (but non-comprehensive) list of organisations was made. For the report 212, a selection of 28 organisations was made for more in-depth interviews on their process of developing and/or disseminating CPGs. Based on the interviews, maps were created (and discussed with the interviewees) representing the perception of these stakeholders in relation to different levels in the developmental and dissemination procedures of CPGs.

CPG development

In Figure 13 the organisations that develop CPGs are indicated in orange. This figure is a non-comprehensive overview of the landscape, only the interviewees indicated which organisations were involved in the development of CPGs. It is possible that other organisations also develop guidelines (or other EBM products) for their target group of care providers and/or patients. Within the developmental process, different steps were

identified: choice of guideline topic, authors of the guideline, developmental methods including testing and updating.

Figure 13 – Perception of stakeholders: Belgian institutions that develop clinical practice guidelines



- Choice of guideline topic

Topics for clinical guidelines were chosen using different approaches. CPG developers chose a subject either themselves, occasionally influenced by financing organisations (RIZIV/INAMI or FOD/SPF) (e.g. KCE, the general practitioners (GP) associations, the pharmacists' association). The National Council for the Promotion of Quality (CNPQ/NRKP) can play a role to suggest topics to the developers (e.g. to KCE with the aim to use later the evidence for developing feedbacks). Sometimes the developers perform a survey among users to identify fields of priority (e.g. College of Geriatrics, pharmacists, CIPIQ-S (Collaboration internationale des Praticiens et Intervenants en Qualité dans le domaine de la santé)). Interviewees also reported on the use of local consensus processes in order to choose a topic.

- Authors of the guideline

The affiliations of authors are important for the (perception of the) quality of the guideline. Authors often work for a professional organization or for academic institutions. They are often academics, PhDs or Master students. Many participants declared that for the selection of authors "everyone knows someone".

- Developmental methods including testing and updating the guideline

In general, the guidelines developers can be subdivided into two groups: either organisations that develop guidelines themselves or in collaboration with other guideline developers, and organisations that focus on the translation and adaptation of CPGs for their target population.

Two types of methods are reported as broadly used to develop CPG: a strict, predesigned method with the explicit use of tools to define the level of evidence and the quality of the evidence reporting, or either a combination of literature search with expert opinions and/or consensus model.

Anyhow, all organizations consult experts at some point in the development process (or at the end) either to add their individual opinion or in search of consensus of opinion.

Guideline validation

The term "validation" can refer to a validation of the methodology and/or to a validation of the content. This term means that the guideline meets certain quality criteria (methodology) and that it is recommended to be used by health care workers in clinical practices (methodology and content).

Two types of procedures could be identified: an informal procedure by relying on a consensus model, expert opinion/consensus and/or testing for feasibility or rather a formal validation by CEBAM (Belgian Centre for Evidence Based Medicine). A formal validation procedure is perceived as a quality label. Obtaining this quality label requires many resources and is not feasible for some organisations.

Guideline dissemination

Many strategies to disseminate guidelines were mentioned by the interviewees. Most organisations disseminate with paper documents and/or by means of a website. Other strategies, such as educational meetings, e-learning modules, or local opinion leaders, sometimes complete the dissemination process. Some interviewees mentioned EBMPracticeNET as a disseminator of electronic EBP guidelines and considered this organization as the first step towards a common dissemination platform. Another example mentioned was the "Platform Wetenschap en Praktijk" (www.portal4care.be). Concerning the content of the material, interviewees also mentioned the importance to propose and present various levels of information (CPG itself, synthesis, decision algorithms). Many organisations use various pathways to reach the target population but there often is a lack of clear strategy.

Collaboration between CPG stakeholders

Interviewees talked about various types of collaboration: with other guideline developers but also with people disseminating, implementing or financing EBP guidelines. In general, the participants emphasized the multidisciplinary aspect of collaboration. Collaborations could be non-structural, based on coincidence (sporadic sharing of interest for a topic) or structural (e.g. BAPCOC & Domus Medica, Wit-Gele Kruis & CIPIQ-S, Domus Medica & SSMG, RIZIV/INAMI & FOD/SPF, EBMPracticeNET & Werkgroep Eerstelijnsrichtlijnontwikkelaars).

Participants reported these collaborations in general as positive and fruitful. Many thoughts were dedicated to future collaborations in demand, e.g. VLOV, Physiotherapists & EBMPracticeNET, VVP & Trimbosinstituut Netherlands, dieticians & doctors & nurses. Collaborations could be national or international:

- Nationally, some CPG developers collaborate with other developers (e.g. within Werkgroep Eerstelijnsontwikkelaars, Domus Medica & BAPCOC; CIPIQ-S with Domus Medica and SSMG). Collaborations are also established with universities, professional organizations, LOK/GLEM's, patient organizations, informal caregivers, CEBAM (as methodological expert), federal institutions like FOD/SPF, RIZIV/INAMI, KCE or with disseminators like EBMPracticeNET. A remarkable observation was that Flemish organizations more often collaborate with international organizations, rather than with French-speaking Belgian organizations (e.g. VVP & Trimbosinstituut Netherlands). The interviewees suggested that this was more explained by a similar culture than the language.
- International collaborations that were mentioned are between Flanders (Domus Medica) & The Netherlands (NHG), between Belgium (KCE) & UK, within a network of professional organizations (e.g. AXXON & World Confederation for Physical Therapy; UPDLF & European Federation of the Associations of Dietitians), within a network of centres that promote evidence (Belgian Interuniversity Collaboration for Evidence-based Practice (BICEP) & Joanna Briggs Collaboration).

The participants noted some **difficulties** within collaborating organisations. Language was reported as an obstacle, just as organizational and structural differences between e.g. the Belgian and Dutch health care system (for instance for GPs). One interviewee described collaboration as a constant "dragging and pulling". Furthermore imposing one's opinion to the partner, a top-down approach, agenda's that do not match and an unorganized way of collaborating and financial expectations were reported. Some interviewees (e.g. physiotherapists) noted that they had to make some efforts in order to be heard as a professional group among other CPG stakeholders.

Interviewees reported following aspects to **facilitate** the collaborations: good agreements, win-win situations, collaboration with organizations experienced in developing evidence-based guidelines, needing each other as partners and sharing a common concrete objective

Potential opportunities for future collaboration

Interviewees agreed in 2012 that the guideline landscape (developers, disseminators) was fragmented: they expressed a need for coherence in the domain of EBP. A suggestion made by the stakeholders was the creation of **a unique national coordinating group**. This committee of experts would represent the main institutions involved in guideline development and dissemination.

Next suggestion was **a common database of all guidelines** (finished or under process). This database would be a tool for the coordinating group of experts that would decide on priorities and on a common plan of actions. The centralisation of information (on an electronic platform, e.g. EBMPracticeNet) for all professionals would decrease the time for searching the information and facilitate the dissemination of information between professional groups.

The interviewees insisted also on the need for more **resources** to develop and disseminate EBP guidelines in the future. Another suggestion to tackle the financial need was the elaboration of a collaboration network with European organisations, which would promote the synergy between people and institutions. The interviewees questioned also the idea of developing guidelines in Belgium, whereas other countries have more manpower and finances for development and these guidelines could be translated and

adapted to the Belgian context. Another financial aspect mentioned by the interviewees, was the compensation for the extra time and energy needed by the professional to change the professionals' attitude towards EBP. The implementation of guidelines should not be restricted to the local clinical practice, but the whole healthcare system should be in line with the EBP philosophy.

The development of a **global framework on "how to develop CPG"** would increase the standardisation of information, facilitating the dissemination and implementation of the guidelines and the collaboration between the Belgian (and international) CPG developers. Within the collaboration network of CPG developers, **all health sectors** (including secondary, tertiary care and the patient organisations) should be involved to improve CPG development, dissemination and implementation. Next to a developmental plan, also **a dissemination strategy** was suggested by the interviewees.

Preliminary discussion and conclusion

- Scope of the KCE report

A major limitation in the incorporation of the results of the previous KCE report on a dissemination strategy for clinical practice guidelines in Belgium, is the restricted focus on clinical practice guidelines, whereas evidence-based practice, as considered in this EBP plan, encompasses more products and approaches. Therefore the results are only partially applicable to the current report.

- Mapping the current landscape

The participants had different reactions on the map that was proposed by the researcher. Some participants did not change or add much, sometimes declared that they had no (clear) view on who is (or not) involved in EBP guidelines in Belgium. Others had a broader vision and changed the map by adding organizations, drawing arrows between organizations or commenting on organizations that should not be there according to them.

- Limitation of the report 212

The qualitative study involved a broad variety of representatives of the Belgian guideline landscape but due to feasibility reasons, only a selection of these representatives could be interviewed. It remains uncertain to what extent this study captured the entire span of the opinions of the stakeholders. As the opinion of the end-users was not considered in this report the efficacy of EBP implementation in Belgium could not be analysed.

Conclusion

- ***A patchy landscape*: the Belgian CPG landscape is broad and scattered. The communication and financing flows are unclear in the eyes of the interviewees.**
- ***Value of international guidelines*: Similar to the development of Belgian guidelines, some organisations advocated the use of a strict ADPATE procedure to produce high quality guidelines, and other organisations used less demanding (in terms of resources and skills) procedures.**
- ***One dissemination platform*: Following characteristics were mentioned fot this single platform to disseminate guidelines: selection of the best guideline for a specific clinical topic, information on the validation status is desirable, comprehensive but easily accessible key information, focus on multidisciplinary work, reliable sources of information for the patient.**
- ***A clear dissemination strategy*: easy accessible CPGs, presented in a short and understandable way, integrated in the patient record, disseminated by a combination of strategies are a challenge for the future.**

3.3 Work package 2: analysis of needs of end users

3.3.1 Aim

To promote the effective uptake and use of evidence based practice information in the different end user groups (health care professions and patients) it is essential to align the submitted/distributed end product as close as possible to the specific needs of the end users. As all the medical professions have different approaches in provision of care and different practice environments (e.g. solo practice versus team based), their specific needs towards EBP use can differ[68].

The authors of this report decided to include only Belgian studies and survey results on specific needs in this report, because significant international differences exist in professional status, span of control, interdisciplinary collaboration and decision authority in professional disciplines. That might influence the needs of health practitioners regarding EBP end products. Studies were collected by means of a Google search and contacts with the broad network of CEBAM and EBMPracticenet. Relevant KCE reports were also included. The available results (Table 1) are described by professional discipline. The results of the recent KCE survey on guideline use are further summarized in Table 2

Table 1 – Studies on preferences of different health care disciplines in Belgium regarding EBP guidelines

Reference	Target population	Number of respondents	Region of Belgium	Quantitative/ Qualitative
Gillet et al. (2016) EBNursing report[94]. (study report FOD/SPF) [a]	Nurses managers, staff nurses & education-	56	NL, FR	Qualitative (focus groups)
Benahmed et al. (2017) Tailoring KCE guidelines to the needs of end-users.[39] (KCE-report) [b]	Physicians Nurses Midwives Physiotherapists	1074 642 340 383	NL, FR	Quantitative
Autrique et al. (2008) Practitioners' attitudes concerning evidence-based guidelines in Belgian substance abuse treatment.[95] (journal article) [c]	Staff from addiction therapy centres	60	NL, FR	Quantitative
Heselmans et al. (2009) The attitude of Belgian social insurance physicians towards evidence-based practice and clinical practice guidelines.[96] (journal article) [d]	Social insurance physicians	224	NL	Quantitative
Hannes, Goedhuys & Aertgeerts (2012) Obstacles to implementing Evidence-Based Practice in Belgium: a context-specific qualitative evidence synthesis including findings from different health care disciplines. [97] (journal article) [e]	Physician GPs Nurses Dentists Psychiatrists	141 53 79 39	NL, FR	Qualitative Systematic Review

	Physiotherapists	43		
Linssen et al. (2015) Evidence-based practice bij kinesitherapeuten in Vlaanderen: Een cross-sectioneel surveyonderzoek. Master Revalidatie-wetenschappen en Kinesitherapie, Universiteit Hasselt.[98] (Thesis) [f]	Physiotherapists	309	NL	Quantitative
Vanneste (2016) CEBAM Digital Library for Health – user survey.[99] CEBAM [g]	Physician GPs Physician Specialists Nurses Physiotherapists Pharmacists Midwives Others (incl students)	303 86 77 71 48 7 101	NL, FR	Quantitative
Tency et al. (2017) EBP survey in Belgian Midwives. (survey VBOV, ongoing) [h]	Midwives	ongoing	NL	Quantitative
Desomer et al (2013) Dissemination and implementation of clinical practice guidelines in Belgium.[6] (KCE-report) [i]	Physicians Nurses Dieticians Physiotherapists	17 (all together)	NL, FR	Qualitative

(1) Included studies Hannes et al are from 2003-2008. (2) Not all information and disciplines included in the abovementioned studies was relevant for the present report. This implies that information on specific disciplines is not mentioned in the description of the results. (3) information in results section is marked with references based on the publications and surveys above.([a] EBNursing study, [b] KCE GCP-Use study, [c] Autrique et al, 2008, [d] Heselmans et al, 2009, [e] Hannes et al, 2012, [f] Linssen et al, 2015, [g] Vanneste M, 2016, [h] Tency et al, 2017, I Desomer et al, 2013)

3.3.2 Physicians

3.3.2.1 In general

Knowledge and use

Seven out of 10 physicians expressed that they know the concept of EBP well and one out of five reports to know it more or less. Twenty nine percent of physicians reported that there is a lack of availability of guidelines for their professional group, while almost half of the respondents feels convenient with the amount of knowledge [b]. Physicians reported that situations described in guidelines do often not fit with situations occurring in their practice, which demotivates them to use EBP guidelines [b]. Almost two out of three actual non-users in physicians reported to have the intention to use guidelines in the future [b]. Physicians preferred a central bi- or trilingual electronic platform to present guidelines. They expressed to need different formats favouring user interactivity, however they emphasized the need for brief messages that are 'to the point' [i]. Physicians also emphasized the need for a 'quality label', given after methodological and content validation. However, other validation procedures besides the CEBAM procedure might also be useful ('light validation, specific procedures for guidelines with little or no evidence) [i].

3.3.2.2 Specific results regarding physicians specialised in general practice (GPs)

Importance of accessibility

Direct and rapid access to guidelines was specifically mentioned as potential driver for implementation of EBP [b]. EBMPracticenet or CDLH as a point of access to EBP guidelines was mentioned by half of GPs in practice [b]. However, access by means of an eID card was perceived as a barrier by one out of five [g]. Difficulties in accessing guideline databases was described as a significant barrier for EBP implementation in GPs [d]. English as the language of guidelines was also found to be a barrier by almost half of the GPs [b].

Mobility, applicability, acceptability and contradictory messages

Usability (size, layout & translation of the guideline), applicability (link with daily practice & fit with practice field) and acceptability (credibility, trustworthiness) are also mentioned as important enablers for implementation [b]. GPs also expressed that evidence provided by guidelines is not always transferable to or applicable in all settings (context specific). Patients often consult with vague complaints which hamper diagnosing and consequently the effective use of EBP guidelines [d]. Another point of concern is that an internet search may yield different guidelines on the same topic with sometimes contradictory information. This can hamper uptake of EBP significantly [d].

Role of integrated decision support systems

Regarding the provision of EBP guidelines to GPs, 6 out of ten preferred (integrated) decision support systems, connected to their electronic medical records software, followed by interactive electronic formats with navigation menus (55%) and electronic PDF formats (55%). Paper format was the least preferred medium (34%) [b].

Structure, format and importance of a summary

The most preferred guideline format was a full guideline (46%), followed by 'focused guideline on one clinical question' (32%) and 'rapid recommendations' (22%) [b]. A summary of existing guidelines was perceived by six out of ten GPs as essential element [b]. Well-structured and clear layout of the guideline was mentioned as a driver for EBP use [b]. Complex guidelines were indeed perceived as not useful for 'on the spot' clinical practice [d].

Adaptation to the Belgian context

High quality international guidelines, adapted to the Belgian context [b,i] and guidelines, developed by Belgian professional organisations or associations and were highly appreciated [b]. Foreign (unadapted) guidelines were not perceived as a barrier, neither as an enabler of EBP use [b].

Importance of features of a guideline and tools included

Details about method and composition of guideline development groups (GDG) were perceived as useful and conflict of interest was perceived as essential by the half of the GPs. A summary of recommendations, the level of evidence (LOE) and the strength (grade) of recommendation were all found to be essential elements of a guideline, while literature overviews, evidence tables and details of quality assessment were perceived as useful but not as essential [b]. Six out of ten GPs perceived benefits and harms of therapeutic options and details regarding implementation in the field as very important, while economic and patient preferences were perceived as less essential [b].

Provision of clinical decision trees and decision aids (assessment tools, calculators) were found to be very important by the majority while support tools for communication with patients, patient leaflets and online training tools for EBP use were found to be useful but less important [b]. Nevertheless, studies in Belgian GPs show that it is often difficult to negotiate with patients about a certain treatment (shared decision making) because tools are not available, patient are misled by wrong information (Dr Google) or patient lack insight in EBP [d].

3.3.2.3 Specific results regarding physicians specialised in other sub-disciplines

Preferences for electronic format

Regarding the provision of EBP guidelines to specialists, the majority preferred guidelines in an electronic PDF format (73%) followed by interactive electronic formats with navigation menus (57%), integrated decision support systems (31%) and paper version (25%) [b].

Structure, format and importance of a summary

A full guideline was preferred by half of the respondents, followed by focused guidelines on one clinical question and rapid recommendation [b]. A summary of the content of a guideline was perceived as essential by half of the specialists while one out of four perceived multidisciplinary guidelines as a barrier.

Adaptation to the Belgian content

High quality international guidelines, adapted to the Belgian context were highly appreciated by three out of four specialists, while only four out of ten perceive guidelines developed by Belgian associations as a driver for EBP use [b]. Foreign (unadapted) guidelines were not perceived as a barrier, nor as an enabler of EBP use, but were appreciated more by specialists than by GPs [b]

Importance of features of a guideline and tools included

Details about method, composition of guideline development groups and conflict of interest declaration were perceived as essential by the majority of specialists. An overview of the literature supporting the evidence, a summary of the recommendations, the LOE and strength (grade) of recommendation were highly appreciated by the vast majority of specialists, while evidence tables and details on quality assessment of the studies selected for the guideline were found useful but less important [b].

Benefits and harms of treatment options and details regarding the implementation in the field were found to be essential by 65% and 48% of specialists respectively, while economic issues and patient preferences were found to be useful but less important. Clinical decision trees were highly appreciated as a supporting tool by the majority while decision aids (calculators, assessment tools), tools to support communication with patients, patient leaflets and online training tools for guideline use were found useful but less important [b].

3.3.2.4 *Insurance physicians*

No relationship was found between having access to electronic bibliographic databases and effectively using these databases to read scientific content or having a positive attitude towards EBP. The overall level of skills in EBP use (search strategies, critical appraisal) was good. However, individual barriers cited most are EBM skills (79.0%) and time (61.9%) [d].

3.3.2.5 *Psychiatrists*

Psychiatrist reported that they perceive guidelines as difficult to apply to their patient population because of the statistical focus and narrow inclusion criteria. Patients often consult with complex problems (multimorbidity) or vague complaints. This hampers the applicability of 'diagnosis focused' EBP guidelines. Psychiatrists stated that for certain patient groups, treatment choices in mental health care are often based on a 'trial and error' approach and the therapeutic relationship steers the therapy [e].

3.3.3 Nurses

3.3.3.1 *Knowledge, skills and accessibility are problem*

Four out of ten nurses reported to know the concept of EBP well, while three out of ten tells to know it more or less. Working in a hospital is associated with a higher level of guideline knowledge in nursing [b]. Focus group members reported that in general there is a lack of perception, awareness and understanding of nurses regarding EBP (more specifically in older nurses) [b,e]. There also is a lack of skills in finding and using EBP knowledge in the nursing field. A significant number of nurses stated that they do not know where and how to find guidelines [b]. People expressed that they regret this lack of EBN training [a]. English language was also found to be a strong barrier for half of the nursing population [b].

A central database with EBP guidelines versus hospital protocols

Half of nurses also reported that there is a lack of guideline availability for their professional group, while one out of four feels convenient with the amount of EBP information. Nurses emphasized the need for one specific central database consisting of clear guidance on these nursing techniques [a]. A significant number of nurses also reported to prefer a hospital protocol over an EBP guideline [b]. Focus group members mentioned a lack of standardisation in EBP in Belgium. Finding the right evidence in the overload of guidelines and websites was found to be difficult and frustrating [e]. There was a strong need for central governance and a branding (quality mark) of high quality guidelines for nurses [e].

Respondents reported that lack of autonomy (decision authority) on the work floor hampers the effective use of EBP. They expressed that transdisciplinary working will facilitate the use of EBP on the work floor [a]. The vast majority of actual non-users in nurses reported however to have the intention to use guidelines in the future [b].

One central easy accessible data source

Respondents in the focus group [a] pleaded for a central dissemination channel; a frequently updated, 24/24 operational, multilingual (NL/FR), standardized, transmural and easily accessible central dissemination platform, consisting of accurate, short, correct, useful, comprehensive and complete recommendations or guidance [b,i]. "Critical mass" for the nursing field (availability of a minimal number of guidelines to attract and retain potential users). Nurses wished to find information on diseases in general, treatments, best techniques and supports, services management, legislative and ethical aspects, pharmacology [b,i]. According to the participants, the system must: retrieve nurses' database (full text access), provide links to specialized sites, articles, professional associations, resource persons, benchmarking opportunities, news (congress or recent studies). A history of the previous searches should also be proposed. It also needs to be attractive with, for example, the use of videos and pictures [a]. This is contrast with the results of the KCE survey [b].

Difficulties in accessing guideline databases was mentioned as an important barrier for guideline implementation in nurses [e]. Visibility and accessibility were mentioned as important drivers for adoption of a future EBP database. Participants wanted direct access to the site, without a password or other identification procedure [a].

Respondents stated that there is a need for an efficient and ergonomic system to spread EBP knowledge. The new platform should allow to quickly retrieve information through an advanced search tool. This tool should enable to search by key-words (this implies that the choice of the terminology is quite important), or through an algorithm constructed on basis of fields / services, technical procedures or target audiences. These categories should also be used as filters in case of searching by keyword. The search system forefront should not showcase classification, but this classification needs to operate in the background. First attempts already exist in home care nursing organisations [a].

More than a third of the nurses who expressed that they actively searched for guidelines used EBMPracticenet or CDLH, but common search engines (e.g. Google) and websites of professional organisations were preferred [b]. The websites of KCE, CIPIQs and portal4care were given as good examples because these sites allow you to find information quickly and are more complete [a].

Preferences for electronic format

Regarding the medium of the guidelines, seven out of ten nurses preferred an electronic PDF format, followed by an interactive electronic format with navigation menus, a decision support system integrated in the electronic medical file and paper format [b] Provision of knowledge through integrated tools (direct connection with electronic health records, called “Clinical Decision Support Systems” (CDSS) was however perceived by nurses to be a facilitator of the implementation process [a].

Structure, format and importance of a summary

Regarding the format of EBP guidelines, 45% of nurses preferred a full guideline, 33% preferred a focused guideline on one clinical question and 22% preferred a rapid recommendation [b]. Multidisciplinary guidelines were perceived as preferable. A summary existing guidelines was found to be a driver for guideline use [b]. A future dissemination tool should be accessible in a multidisciplinary way, which can add value to its use [a].

Adaptation to the Belgian content

High quality international guidelines adapted to the Belgian context (78%) were highly perceived by eight out of ten nurses, followed by guidelines developed by Belgian professional associations or organisations. Foreign (unadapted) guidelines were neither perceived as a barrier, nor as a driver of EBP use [b].

Importance of features of a guideline and tools included, emphasis on communication with patients

Details about methodology of the guideline development were found to be an essential part of an EBP guideline by half of the nurses while the composition of the guideline development group and a declaration of conflict of interest was found to be useful but less important [b]. An overview of the literature but even more a summary of recommendations (82%) and LOE and strength (grade) of recommendation were found to be highly essential elements of a guideline by the vast majority of the respondents, while evidence tables and details on quality assessment of the studies included were perceived useful but less important. Benefits and harms of treatment options, patient preferences and details regarding implementation were found to be essential elements by more than half of respondents, while economic issues were found less essential [b]. Clinical decisions trees, decision aids (calculators, assessments), supporting tools for communication with patients and patient leaflets were found very important supporting elements in a guideline by most of the nurses. It was stated that patients often are insufficiently informed and heavily influenced by subjective information, resulting in difficult (shared) decision making [e]. On-line training tools in EBP were found useful but less important [b].

Final thoughts about implementation

Respondents expressed the need for a multilevel approach to promote and implement EBP in the nursing field ("a promoting framework"). The promotion of a central dissemination tool can be ensured through association meetings, training, communication campaigns, social media, professional journals, schools, posters, the ministry said. A personal letter to all nursing is another idea put forward. Accreditation was found to be another advanced track [a]. A contact point (in case of difficulties finding information) might be an important function to support EBP use in nurses. Participants suggest to offer an exchange and discussion forum, skype function and a handbook. Finally, it was stated that promotion could also be provided by means of a small demonstration movie [a]

3.3.4 Midwives

3.3.4.1 Knowledge and accessibility

More than six out of ten midwives reported to know the concept of EBP well, while one out of five expresses to know it more or less b. Thirty five percent of midwives stated that the availability of guidelines for their professional group is insufficient, while 43% of them was convenient with the availability b. A significant number of midwives stated that a hospital protocol is preferred over an EBP guideline [b]. More than a third of the midwives who stated they actively searched for guidelines used EBMPracticenet or CDLH, but the KCE website and websites of professional organisations were preferred [b]. The vast majority of actual non-users in midwives reported to have the intention to use guidelines in the future [b]. English language was found to be a significant barrier by six out of ten midwives [b].

Preferences for electronic format

Regarding the medium of EBP guidelines, 60% of midwives preferred an electronic PDF format, followed by interactive electronic format with navigation menus, a paper format and a decision support system integrated in the electronic medical file.

Structure, format and importance of a summary

Regarding the format of EBP guidelines, 59% preferred a complete guideline, 26% choose a focused guideline on one clinical question and 15% preferred a rapid recommendation. A summary of available guidelines was appreciated by half of the respondents [b].

Adaptation to the Belgian content

Eight out of ten midwives preferred high quality international guidelines adapted to the Belgian context, followed by guidelines developed by a Belgian professional association or organisation (68%). Multidisciplinary guidelines and foreign (unadapted) guidelines were neither perceived as a barrier, nor as an enabler of EBP use [b].

Importance of features of a guideline and tools included

A summary of recommendations, LOE and strength (grade) of recommendation were highly appreciated by the vast majority of midwives, an overview of the included literature was appreciated by about half of the respondents, while evidence tables and details on quality assessment of studies selected was found to be useful but less important. Details about the method used, the composition of a guideline development group and the declaration of conflict of interest were all found useful but not essential. Benefits and harms of treatment options, details regarding implementation in the field, clinical decision trees and patient leaflets were appreciated by the majority of respondents. Information regarding patient preferences, decision aids for professionals and supporting tools for communication with patients were appreciated as a supportive tool by about five out of ten respondents [b].

3.3.5 Physiotherapists

3.3.5.1 Knowledge and accessibility

The KCE survey on EBP guideline use showed that one out five physiotherapists reports to know the concept of EBP well, while about one out of three reported to know it more or less b. However, one out of five expressed that he did not know how and where to access a guideline [f]. In general physiotherapist had rather positive feelings regarding EBP. Younger physiotherapist reported more positive scores than older colleagues [f]. Forty five percent of the physiotherapists stated that the availability of guidelines for their professional group is insufficient [b,f] , while 27 % of them is convenient with the amount of EBP content b.

A majority of physiotherapists perceived the application of EBP as difficult [f]. English was not found to be a barrier for the majority of physiotherapists [b]. They reported that evidence is in some cases difficult to access and when available it is sometimes difficult to locate the right evidence in the overload [e]. Half of the physiotherapists stated that they do not have (fast and easy) access to guidelines in their work place [f]. They preferred a central bi- or trilingual electronic platform to present guidelines, providing different formats favouring user interactivity, with brief messages that are 'to the point' [i]. Physiotherapists also stated that evidence is not always published in the right journals, what makes it difficult to be aware of the existence [e]. Physiotherapists further reported that content of EBP guidelines often is not directly applicable on real life situations, due to the complexity of the problem or the vagueness of patient complaints [e,f]. Another barrier was that guidelines are sometimes difficult to understand or that too little detail is given regarding outcomes and treatments [e]. A significant part (67%) of actual non-users in physiotherapists reported however to have the intention to use guidelines in the future.

More than a third of the respondents who declared they actively search for guidelines, use EBMPracticeNet or CDLH, but common search engines (e.g. Google) and specialised press was preferred [b]. In another study, 86% of respondent expressed to have the intention to improve their skills in EBP [f].

Preferences for electronic format

Regarding the medium of EBP guidelines, 78% of the physiotherapists preferred an electronic PDF format, 37% choose for an interactive electronic format with navigation menus, 35% preferred a paper format and finally 32% preferred a decision support system integrated in the electronic medical file.

Structure, format and importance of a summary

Regarding the format of the guidelines, about half of the physiotherapists preferred a full guideline, followed by a focused guideline on one clinical question and rapid recommendations. A summary of existing guidelines was preferred by 57% of the physiotherapists.

Adaptation to the Belgian content

Six out of ten physiotherapists preferred a high quality international guidelines adapted to the Belgian context, while guidelines developed by Belgian professional associations or organisations and foreign (non-adapted) guidelines were neither perceived as a barrier, nor as a driver of EBP use. Multidisciplinary guidelines were perceived as drivers for EBP use by four out of ten respondents [b].

Importance of features of a guideline and tools included

A summary of recommendations, LOE and strength (grade) of recommendation were found to be highly important by the vast majority, while evidence tables and details on quality assessment of studies selected were found to be useful but less important. Details about the method used were found to be essential by six out of ten respondents while the composition of the Guideline Development Group and declaration of conflict of interest were found to be useful but less important. An overview of the included literature, benefits and harms of treatment options and details regarding implementation in the field were perceived as essential features of a guideline by the majority of physiotherapists, while economic issues and patient preferences were found to be less important. Clinical decision trees, patient leafleats and tools to support communication with patients were found to be essential supporting tools by more than half of the respondents,

while decision aids for professionals and online training tools for EBP use were found less important b.

3.3.6 Clinical coordinators of agencies dispensing specialized treatment to alcohol and drug abuse

The study sample of clinical coordinators of agencies dispensing specialized treatment to alcohol and drug abuse consisted of psychologists, heads of departments/directors, clinical-therapeutical coordinators and psychiatrists. They stated that training and education of health care practitioners in the work field to improve their skills and competences regarding EBP use is needed (combined with coaching & social marketing). Provision of official manuals for EBP use and support by experts and opinion leaders can be supportive. Easy access to guidelines was found to be essential preferably through internet access. Short summaries, reviews in peer-reviewed journals and flow charts of clinical algorithm might be helpful. However, pocket size cards with a summary of recommendations and computerized reminders were not seen as enablers of EBP use [c].

3.3.7 Dentists

Research on barriers for EBP in **dentists** in Belgium reports that evidence is often difficult to access. Dentists reported that the guidelines that are found often lack evidence to promote certain approaches and treatments. When multiple sources of information are available, evidence is often contradictory. Another point of frustration is that guidelines are sometimes difficult to understand. Dentists agreed that a certain set of skills and competences is needed to work with EBP knowledge. Finally, dentists stated that patients are often not well-informed, what results in low levels of compliance and difficulties in (shared) decision making [e].

Table 2 – Figures of preferences of different health care disciplines in Belgium regarding EBP guidelines

Feature	GP	Specialists	Nurses	Midwifes	Physiotherapists
N	589	292	642	340	383
	%	%	%	%	%
Media of dissemination (% = "preferred")					
Paper version	34%	25%	25%	43%	35%
Electronic version (PDF)	55%	73%	68%	60%	78%
Interactive version (menus)	55%	57%	55%	55%	37%
Integrated decision support	61%	31%	41%	30%	32%
Format of guideline (% = "preferred")					
Full guideline	46%	52%	45%	59%	46%
focused guideline on 1 clinical question	32%	27%	33%	26%	38%
rapid recommendation	22%	21%	22%	15%	16%
Content of guideline (% = "essential")					
methodology section	33%	52%	51%	41%	57%
composition of GDG	30%	54%	33%	44%	24%
info on conflict of interest	52%	32%	41%	57%	40%
overview of included literature	33%	74%	56%	54%	51%
summary of recommendations	86%	84%	84%	85%	81%
Level of evidence/strength of recommend.	80%	88%	79%	82%	74%
evidence tables	13%	24%	18%	19%	23%
quality appraisal of literature	21%	39%	23%	34%	33%
info benefits/harms of therapy options	58%	61%	63%	65%	58%
Info on economic issues	35%	32%	32%	29%	10%
Info on patient preferences	28%	25%	62%	49%	41%
implementation plan	57%	48%	69%	74%	63%
clinical decision tree	68%	67%	69%	69%	55%
decision aids for professionals	50%	41%	54%	49%	23%

support for communication with patients	31%	22%	63%	44%	51%
patient leaflets	38%	28%	61%	54%	59%
online training in guideline use	17%	16%	40%	36%	39%
How to access guidelines (% = "essential")					
central point of access	83%	75%	85%	86%	87%
Barriers & drivers (% = "essential")					
English language is barrier	45%	10%	48%	60%	36%
multidisciplinary guideline is driver	14%	24%	52%	31%	41%
summary of existing guidelines is driver	58%	48%	64%	54%	57%
Guideline made by Belgian organ. is driver	62%	42%	53%	64%	41%
Guideline made by foreign organ. is driver	10%	34%	17%	19%	17%
HQ foreign guideline + context adapt. is driver	71%	75%	78%	79%	59%

Abbreviations: GDG = guideline development group, HQ = high quality

Key points

- **Knowledge of EBP varies substantially between disciplines (20 – 70% of respondents expressed to know it well).**
- **Accessibility of EBP guidelines is a main barrier**
- **An electronic version (PDF) of the guideline was highly preferred by all health care professionals. GPs expressed a specific preference for integrated decision support systems (linked to their electronic health record)**
- **A good summary of existing guidelines as well as a summary of recommendations in every guideline was preferred.**
- **All disciplines preferred high quality foreign guidelines, adapted to the Belgian context. GPs also prefered guidelines developed by Belgian organisations and institutions, while specialists tend to choose more for foreign (unadapted) guidelines.**
- **Tools for sharing information with patients (clinical decision aids, decision trees, information about benefits & harms) were highly appreciated. Nurses, midwives & physiotherapists also preferred patient leaflets.**

3.4 Work package 3: Critical appraisal of the current Belgian situation regarding EBP

3.4.1 Aim

The present work package aims to assess the Belgian EBP landscape, processes and governance, based on the body of knowledge (WP1 and WP2). This assessment will result in the identification of fits and gaps, which can be addressed in later work packages.

3.4.2 Methods

This work package started with the inventory of a list of EBP-related topics to assess the Belgian EBP situation, by means of an internal brainstorm at KCE and based on the body of knowledge (WP 1) and the needs analysis (WP2). For all of these topics, a comparison was made between the present situation in Belgium (situation 'as is') and the ideal situation (situation 'as should be'). Information was gathered from the KCE report 212 (2013) on 'dissemination and implementation of clinical practice guidelines in Belgium' and updated and completed by means of multiple contacts with developers and disseminators of EBP products in Belgium. After the drafting of the report, the steering group members (FOD/SPF, RIZIV/INAMI, FAGG/AFMPS) had the opportunity to complete the content of this work package with their views and experiences. For every topic, the conclusion is presented as a number of bullet points. These bullet points can be used in later work packages to build a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats). Although the aim of this work package was to get a clear overview of the processes in the Belgian EBP landscape, it does not pretend to be comprehensive.

For all the data in the following paragraphs of this chapter, the respondent who mentioned the information is added. This does however not imply that this information is not applicable to other EBP stakeholders. The following groups were approached for this work package in March 2017.

- Domus Medica (GPs)
- SSMG (GPs)
- Minerva (GPs)
- WVVK/ProQKine (physiotherapists)
- CIPIQ-s (nurses)
- Platform Wetenschap en Praktijk (disseminator for nurse content)
- OKE (occupational therapists)
- Pallialine.be (palliative care)
- Farmaka (pharmacotherapy)
- BCFI (pharmacotherapy)
- VVL (logopedie)
- Expertisecentrum Valpreventie Vlaanderen (EVV) (multidisciplinary)
- Rode Kruis Vlaanderen (first aid professionals and volunteers, disaster management)
- KCE (Federal knowledge center for health care)
- Vlaams Patienten Platform (VPP) (patients & informal carers)
- EBMpracticeNet (central disseminator)
- CEBAM (central validator & methodology center),
- Werkgroep Ontwikkeling Richtlijnen Eerste Lijn (collaboration developer groups)

3.4.3 Results

3.4.3.1 Definition of EBP guidelines

The Belgian EBP stakeholders seem to have different views on the definition of a guideline. While certain stakeholder groups consider a CPG as a result of a strict methodological EBP development process (Domus Medica, SSMG, CIPIQ-s, OKE, EVV), other groups put more emphasis on the practical use of tools and directly create end user products, however keeping in mind a strict methodology (Rode Kruis Vlaanderen). Some groups have less experience with EBP development and do at present not apply a strict methodological process but intend to (VVL). On the other hand, certain groups state that their evidence based products are significantly different from a 'standard guideline' (BCFI, Farmaka).

- **The majority of EBP developers in Belgium perceive a guideline as a results of a strict methodological EBP development process.**
- **Some developers state that their evidence based products do not fit the definition (criteria) of a standard guideline.**

3.4.3.2 Prioritization of EBP topics

- Who is responsible for topic prioritization of EBP development in Belgium?

At present, no specific Belgian policy body is responsible for prioritization of EBP topics, nor for the EBP policy orientation (e.g. to put more emphasis on certain aspects of the EBP process). CPG topics developed by organizations focused on primary care are in the majority of cases chosen by the organizations itself and gathered in the Werkgroep (WG) Ontwikkeling Richtlijnen Eerste Lijn. The National Council for the Promotion of Quality (NRKP/CNPQ) plays a role in the prioritisation process, as they give input and approve the guideline topics list of the WG. Sometimes FOD/SPF and RIZIV/INAMI propose specific topics to guideline developers.

- What is the present procedure for prioritization of EBP topics in Belgium? Who is involved in the prioritization of EBP topics (incl. stakeholders)?

At present, no central procedure for EBP topic prioritization exists in Belgium. CPG developers often have internal processes to choose their CPG topics. Occasionally they are influenced by RIZIV/INAMI or FOD/SPF (KCE, Domus Medica, SSMG) or by the Flemish Government (EVV). In previous years FOD/SPF, RIZIV/INAMI or the Flemish Government occasionally ordered a guideline for a specific health care topic (Domus Medica, SSMG, Rode Kruis Vlaanderen). The short list resulting from the prioritisation process of a developer organisation often first needs to be approved by a governmental supervising commission (begeleidingscomite, comité d'accompagnement). Regarding the Werkgroep Ontwikkeling Richtlijnen Eerste Lijn, the members internally discuss (consensus process) the shortlist (de novo guidelines, adaptations and updates). This shortlist than has to be approved (or amended) by the National Council for the Promotion of Quality (NRKP/CNPQ).

For several stakeholder groups, end users are involved in the choice of guideline topics (e.g. KCE, CIPIQs, Rode Kruis Vlaanderen, OKE, BCFI). Certain developers perform a survey among end users to identify fields of priority (KCE, CIPIQ-S, OKE, BCFI). BCFI monitors campaigns and promotion actions of the pharma industry to guide its prioritization, however they also try to focus on more common, less mediatised therapies (BCFI). KCE launches a public call for topics, followed by assessment of submitted topics based on a set of criteria. The following topics are taken into account: (1) political relevance in terms of decision making, (2) frequency of occurrence of health problem, (3) gravity of the health problem, (4) opportunities to improve the present treatment, (5) feasibility of the research project. For oncological topics, KCE collaborates with the College for Oncology to prioritize topics. A selection is fainally made by the management of KCE based on the evaluation of KCE experts. This final topic list needs to be approved by the board of directors[100]. In some cases, opportunities for cooperation in the development of guidelines were a trigger to prioritise a guideline topic (e.g. Domus medica & NHG, Domus Medica & KCE, IKNL & KCE, NICE & KCE). In case of adaptation/contextualisation of EBP guidelines, availability of content, methodological quality and opportunities to collaborate with foreign developer groups have influenced prioritization of activities (WVVK, OKE, KCE).

In most of the guideline developer groups, no formal criteria are taken into account for prioritization. Most of the groups apply an internal consensus strategy (bottom up) to choose guideline topics. A close connection and cooperation with end users is mentioned as an added value to choose topics (Rode Kruis Vlaanderen). In some cases, new emerging scientific insights regarding therapy and approach have influenced prioritization of EBP topics (WVVK, SSMG, Domus Medica). Another aspect taken into account is the publication date of the guideline (need for updating). A number of guideline developers systematically perform a search for existing high quality (foreign) guidelines, to avoid overlap or parallel work (e.g. Rode Kruis Vlaanderen, KCE). CEBAM emphasizes the need for guideline developers to intensively collaborate (in terms of guideline sharing) with international groups for the development, updating or adaptation (contextualisation) of EBP guidelines.

Efforts to involve patients in prioritization of guideline topics were not identified. Patient organisations emphasize the need to participate in this discussion, however keeping in mind the workload for the volunteers, their specific role as “experience expert” and the adequate planning (timing) of their involvement (VPP).

Up till now, no official policy body is responsible for prioritization of EBP topics in Belgium. However NRKP/CNPQ is involved in prioritisation of guideline topics, as they approve the topic short list of the Werkgroep Ontwikkeling Richtlijnen Eerste Lijn.

- **In most cases, guideline developers decide internally (in consensus) about prioritization, often with involvement of end-users. No efforts to involve patients in topic prioritization were identified.**
- **Short lists, as a resutls of the prioritisation processes made by developer organisations, often have to be approved by a governmental supervising commission (begeleidingscomite, comité d’accompagnement).**
- **The Werkgroep Ontwikkeling Richtlijnen Eerste Lijn gathers the topic lists of its members and creates a shortlist, which has to be approved (or amended) by NRKP/CNPQ**
- **Opportunities for collaboration with high quality guideline foreign developers can be an criterion for prioritization**
- **Beside the prioritization methods used by KCE, no formal prioritization criteria were identified.**

3.4.3.3 Development: knowledge creation & adaptation

- Does every developer/updater have a process book/clear procedure that needs to be followed by the members of a development team? Is the content of these procedures the same for all?

A strict, pre-designed and fully written out methodology is made by a number of developer groups (KCE, Domus Medica, Minerva, SSMG, CIPIQ-S, EVV, APB, BAPCOC, Rode Kruis Vlaanderen, OKE). Certain tools are applied to support these methods (GRADE, AGREE II, ADAPTE). The majority of developers also take into account the methodological handbook for revision of Belgian guidelines by the “Werkgroep Ontwikkeling Richtlijnen Eerste Lijn”. This manual is internally developed in the Werkgroep by a number of experts and approved (consensus model) by all members. Developers can also get methodological support from CEBAM during the development phase of a guideline, in terms of courses and trainings. Members of CEBAM can however not be involved in the development process because of ‘conflict of interest’ in case of validation. Farmaka and BCFI also have a fully written out methodology, but this is different from the above mentioned procedures as their end products are different from the format of EBP guidelines.

- Who is nationally responsible for the quality of developed EBP end products? Does Belgium apply independent quality criteria for guidelines? How and when are they used? Are these criteria also taken into account during development of guidelines by the different developer or update groups?

There is a strong tendency towards standardisation of quality assurance procedures for guideline content development. The majority of the developers apply the recently updated and widely approved methodological handbook for revision of guidelines by the ‘Werkgroep Ontwikkeling Richtlijnen Eerste Lijn’, including specific tools to support the processes (GRADE, ADAPTE & AGREE II). A validation process for guidelines after

the development phase by CEBAM (national validator), based on AGREE II (new guidelines and updates) and ADAPTE (adaptation of foreign guidelines), is mandatory to publish newly developed or updated guidelines on EBMPracticeNet. In recent years there have been some difficult guideline validations, because of certain elements (AGREE criteria) lacking in submitted guidelines (e.g. health care disciplines not involved in the development phase, lack of patient involvement). Developers mention that their authors felt discouraged by cumbersome validation procedures (SSMG). Therefore, they plead for professionalization of the production of guidelines and leaving the contextualisation to practitioners working in the care sector. CEBAM states that difficult validations can be anticipated through a change in the general development procedure, i.e. the writing of a research protocol (prior to the start of the development process) that has to be officially validated. They also emphasize the need of a close collaboration between CEBAM and the 'Werkgroep Ontwikkeling Richtlijnen Eerste lijn' to align the views on and quality criteria for processes of development and updating of guidelines.

Another difficulty regarding the development phase that needs to be overcome is the writing of a guideline summary for EBMPractriceNet. As this is a final step of the process, after development and validation of the guideline, developers are often demotivated or tired. This hampers significantly the publication of a guideline in the EBMPracticeNet database. Some developers, as well as EBMPracticeNet, argue that further standardization of the development process (across the developer groups) might solve this problem. A mandatory summary of recommendations, to be placed at the first page(s) of a full guideline, might also be used (copied) as the summary format for EBMPracticeNet.

- What are the consequences of not meeting the quality requirements?

Up till now, some developers have produced or adapted a number of guidelines that are not validated by CEBAM (e.g. Urobel, EVV, Pallialine, VBVD). In that case, there is no official "approval" of the end product needed for central dissemination, which might hamper the adoption by the end-users. The present broadening of the scope of EBMPracticeNet might however create opportunities to strengthen ties with these groups. The majority of Belgian EBP guidelines are however officially validated by CEBAM. Guidelines that do not meet the quality requirements (end-validation) can get a number of minor and major remarks. In that case, the developer has 6 to 12 months to rework the guideline and resubmit it for re-validation. There is also a financial consequence, as in most cases, the final part of the funding is only paid after CEBAM validation of the guideline (financing of guideline development or updating is paid in instalments).

- Are experts and stakeholders involved in an early stage of the development process? If yes, how are they involved (GDG group)? Does this imply some kind of ownership?

All EBP product developers involve experts and stakeholders at some point in the development process either to add their opinion or in search of opinion consensus [6]. Experts are often academics or clinicians with proven expertise in the guideline topic. "Stakeholders" can be defined as persons or groups that have a vested interest in a clinical decision and the evidence that supports that decision. Stakeholders may be patients, caregivers, clinicians, researchers, advocacy groups, professional societies, businesses, policymakers, or others[101]. There are however differences in the type of expert involved. Some experts and stakeholders are authors of a guideline because they are closely (and early) involved in the consensus process of clinical question definition or recommendation writing as a member of the guideline development group (GDG). Other experts or stakeholders are involved (and mentioned in the guideline) as peer reviewer after development (Rode Kruis Vlaanderen, Farmaka, BCFI, CIPIQs, WVVK, OKE). They assess guidelines in terms of feasibility, usability and acceptability. Involvement of experts and stakeholders is clearly described (and planned in time) in the methodological manuals of the developers and in the methodology handbook for revision of Belgian guidelines by the Werkgroep Ontwikkeling Richtlijnen Eerste Lijn. SSMG states to see their future involvement in Belgian guideline development more as an active member of a GDG than as active writer of guideline as it is currently the case, merely because the fees for writing are not sufficient to replace/cover the income lost in their practice.

- Are patients or patient groups involved in the development process? How and when? Or why not?

Involvement of patients and patient groups in Belgian guideline development is rather sparse. This has been a point of discussion, resulting in minor or major remarks, in several guideline validations. Some stakeholders report that there is some consensus that at least an additional literature search is needed to identify patient preferences and patient reported outcomes (PROMs). However, depending on the guideline topic, patients are sometimes involved in the formulation of research questions, in the prioritization process (scoping) of clinical questions, the acceptability and readability of recommendations, or in consensus meetings of RIZIV/INAMI (VPP). OKE centre for occupational therapy states that they systematically involve patients in their stakeholder groups and GDG during the development process. Developers acknowledge the need for patient involvement but also report certain difficulties (e.g. accuracy and generalisability of input coming from patient organisations, lack of knowledge in patients about the EBP process). On the other hand, the umbrella organisations for patients emphasize their added value in guideline development processes. Integration of experienced based and value based patient information might increase the quality, acceptability and usability of EBP guidelines (VPP). In case patient reported outcome measures (PROMS) and patient reported experience measures (PREMS), in quantitative or qualitative format, are developed for the specific case, they have to be taken into account. This patient involvement process needs however to be rethought. The present approach is not efficient and results in potential drop out of “experience experts” and problems attracting patient representatives in GDG. Rationalisation, adequate planning and remuneration of the efforts made by patients and patient groups needs to be considered.

- Does development of guidelines also imply the production of alternative formats or supporting materials (shared decision making tools, assessments, calculators, patient leaflets, patient versions of the guideline)? Is there a central strategy regarding development of alternative formats or supporting materials? (central & developers)

Most of the developers provide information sheets, a summary of recommendations (including the EBMPracticeNet version), decision trees, shared decision making tools and patient leaflets. In the past, SSMG produced printed materials for GPs but this was stopped with the introduction of ICT tools. Certain guideline developers only develop patient leaflets if no content is available at www.gezondheidenwetenschap.be (e.g. Domus Medica). This website is a Flemish initiative containing a significant number of EBMPracticeNet guidelines in Dutch, translated in lay language and made available in a freely accessible website. A similar initiative, owned by SSMG, and connected to EBMPracticeNet was identified in the French speaking part of Belgium (www.mongeneraliste.be). Some developers also provide links to internationally validated assessment instruments or calculators (WVVK, Domus Medica, CIPIQs, KCE). Although EBMPracticeNet already provides some links to supporting materials, several stakeholders express their wish to further broaden its scope with publication of EBP tools, patient leaflets, calculators, education opportunities and even administrative forms. Up till now, there is no Belgian central dedicated strategy regarding development of supporting EBP products.

- **The majority of guideline developers have a strict, pre-designed and fully written out methodology.**
- **There is a strong tendency towards a centrally approved methodology for guideline development. The majority of developers use the methodology handbook of the Werkgroep Ontwikkeling Richtlijnen Eerste Lijn, based on use internationally recognized procedures.**
- **The mandatory CEBAM validation of guidelines is an additional trigger for developers to apply high quality development procedures.**
- **Allignment of quality criteria between CEBAM en ‘Werkgroep Ontwikkeling Richtlijnen Eerste Lijn’ should be encouraged.**
- **The writing of a research protocol, prior to the start of the development process, might prevent a number of end-validation issues.**
- **A mandatory summary of recommendations might be useful in every guideline and can facilitate the publication in EBMPracticeNet.**

- **(Early) involvement of experts and stakeholders in the development process, as co-author or peer-reviewer, is important.**
- **Patient involvement in guideline development is underdeveloped. Integration of "experience expert" information is however important in terms of acceptability and usability of guidelines. Patient groups are willing to cooperate in this process but the process needs to be rethought.**
- **A broad range of supporting materials for professionals and patients is developed and spread by guideline developers. There is however no central strategy to coordinate these initiatives.**

3.4.3.4 Validation

- Who is responsible for validation of guidelines in Belgium?

CEBAM is the only officially recognized validator of EBP guidelines [6].

- Which procedure is applied for the CEBAM validation process.

For every external validation process in Belgium, CEBAM composes a validation committee of 3 to 5 members[41]. This committee consist of methodological experts and people with expertise in the content (topic) of the guideline. CEBAM aims use a multidisciplinary approach in the choice of content experts. The submitted guideline and a digital form with the AGREE II instrument is sent to every member of the validation committee well in advance. The members send back their remarks and scores and these results are brought together in a document. All this information is discussed in a structured way during a face-to-face meeting. The chair of the committee aims to achieve consensus per criterion of the AGREE II instrument. Finally, a decision is made to (1) accept the guidelines, (2) ask for a major or minor revision, or (3) reject the guideline. In case of acceptance of the guideline, the CEBAM label is assigned to the guideline. A delegation of the submitters of the guideline can attend the discussions and have the opportunity to reply on the remarks made by the committee members. They are however not allowed to attend the final decision process. Submitters are informed about this final decision by means of an official notification[43].

- Which criteria are taken into account for validation? Is a distinction made between content & method validation? Is a manual for validation available?

In Belgian guideline developer groups, two validation approaches are applied. On the one hand, a majority of developer groups use an informal procedure where organizations rely on a consensus model, expert opinions/consensus and or test for feasibility, usability and acceptability. In most cases this process is part of the development phase. For example, Domus Medica involves a number of external experts, the Dutch guideline developer NHG and a number of LOK/GLEM groups as peer reviewers. On the other hand there is a formal and thorough validation procedure by CEBAM (methodology & content) based on external expert feedback, the AGREE II instrument and a selection of adaptation topics from the ADAPTE instrument. Before the step up of CEBAM, the SSMG validation process was done by FOD/SPF supported by academic experts and by stakeholders included in 2 LOK and 2 GLEM (local group of medical evaluation). Although all developers acknowledge the need for validation of guideline, the CEBAM process is perceived as a heavy burden. The validation process can indeed be time and energy consuming, especially in case of major remarks that need to be solved in a revised version within 6 months. CEBAM pleads that developers of a guideline should perform a search for foreign high quality EBP guidelines prior to the development of their own guideline. In case there is, a contextual adaptation of this guideline might be sufficient (eventually, in combination with a foreign partner) which only needs a validation of the methodology. This would make the EBP process more efficient and the burden of CEBAM validation might be less heavy. Certain guidelines already underwent this procedure (e.g. the contextualized Dutch KNFG guidelines for physiotherapy, KCE guideline for routine preoperative testing in adults undergoing elective non-cardiothoracic surgery). The findings of the KCE report 284[39] on 'tailoring KCE guidelines to end users needs' are in line with this direction: health care providers of all surveyed health care disciplines highly appreciated adapted high quality foreign guidelines.

Certain developers (e.g. BCFI, Farmaka) state that a number of their products (e.g. Folia, Gecommentarieerd Geneesmiddelenrepertorium, Formularium Ouderenzorg, transparantiefiches) do not fit in this validation process. Up till now, there is no specific instrument or procedure recognised or developed in Belgium to assess the quality of these products. However, developers already apply alternative approaches for these products such as external peer review (e.g. BCFI, Farmaka, Rode Kruis Vlaanderen). Stakeholders express that alternative approaches for validation might be useful, e.g. accreditation of the developing organisation (quality label) and a yearly methodological quality check on a selection of the production (CEBAM, Rode Kruis Vlaanderen, Farmaka).

- Who can be a validator on a national level? What are the criteria to be/to choose a validator?

At present, no formal fully written out criteria for being a validator are available. Content validators need to have a positive attitude towards EBP (CEBAM). CEBAM tries to meet this requirement by involving academics from different universities who keep up-to-date on their field of practice. Methodological validators need to be familiar with guideline development and methodological processes, and have to follow internal training in specific EBP topics in case of knowledge gaps.

- What are the consequences of validation decisions? Which procedures are applied for the reworking of a negatively appraised guideline?

Approval by CEBAM of a newly developed, updated or adapted guideline (validation) is a prerequisite to publish a summary of this guideline on EBMPracticeNet. The validation of a guideline can result in approval, major remarks and minor remarks. In that case, the developer has 6 to 12 months to rework the guideline and resubmit it for re-validation. In case of major remarks, a new validation meeting is needed. In case of minor remarks, the chair of the committee is entitled to appraise the new submission[43]. CEBAM emphasizes to necessity to connect validation by CEBAM with funding [6]. This already fits in the present process as the final instalment of funding for development of EBP guidelines is only paid after validation by CEBAM.

- **Informal validation (often part of the development process) is applied by the majority of developers (peer review and consensus meetings)**
- **Formal validation is a thorough procedure that is perceived by a number of developers as a heavy burden.**
- **CEBAM is the only officially recognized formal validator of EBP guidelines.**
- **CEBAM has a strict methodology for external validation (including composition of a validation committee and procedures for validation)**
- **Developers should check for oportunities to adapt a foreign high quality guideline, prior to the development of their own. Adapted guidelines only need a methodological validation, which is less time and energy consuming.**
- **Certain EBP products do not fit in the present validation process. For these products, an alternative procedure needs to be developed.**
- **At present, no formal fully written out criteria for being a validator are available. However, CEBAM applies a set of criteria for content validators and methodological validators.**
- **Approval by a CEBAM validation committee is a prerequisite to publish a guideline summary on EBMPracticeNet.**
- **If validation results in a number of major and minor remarks, developers have a time frame of 6 months to rework their guideline and resubmit it for a new validation round.**
- **Approval of a validation committee is a prerequisite to get the final instalment of funding for developing a guideline.**

3.4.3.5 *Diffusion and dissemination*

- How is diffusion and dissemination of EBP organized in Belgium? Is there a central (national) policy?

EBMpracticeNet is set up to be a central dissemination platform for EBP products (www.ebmpracticenet.be). Up till now the majority of information on this platform is for GPs. Information for other health care disciplines is still sparse. However, the first attempts have been made to add content for these professional groups. The guideline recommendations on EBMPractriceNet can be directly connected to electronic medical records (electronic decision support) for GPs.

EBMPracticeNet also wants to strengthen the links between the different Belgian EBM producers to promote accessibility, consistency and uniformity of EBM information for all Belgian healthcare in order to optimize the quality of care. The majority of guideline developers in Belgium participate as a member of the Board of Directors or the General Assembly of EBMPracticenet. For certain developers a membership procedure is ongoing (VVT, VBVD) and other groups consider to connect. Farmaka pleads for a closer integration of pharmacological and non-pharmacological information in the central dissemination process. At present, EBMPracticeNet performs an internal audit and reorganisation process to broaden its scope and optimize its processes.

Besides this initiative, no central policy for dissemination was identified. This was however a concern for most surveyed health care professionals (end users) in the KCE report 284. Most professional organisations have their own dissemination channels and strategies to spread printed or digital EBP products. Dissemination is mainly organised by the professional organisation (developers) itself. Several of these initiatives have a high number of (unique) users (e.g. Domus Medica, SSMG, BCFI, Farmaka, Platform Wetenschap en Praktijk). Rode Kruis Vlaanderen aims to set up an online database (paid access) with more than 300 evidence summaries (for professional users, such as ambulance staff and rescue workers, but also for non-professional users). For the nursing work force, Platform Wetenschap en Praktijk gathers and provides access to all EBP guidelines and tools developed or validated in Belgium through its internet portal. OKE centre for occupational therapy launched a specific sub-website, dedicated to disseminate EBP guidelines.

- Do developers support the dissemination process of EBP? Are they closely involved? Are professional organisations also involved in this process? Is there a strategy? Which media and strategies for dissemination are used by the different organizations? Is there a strategy for active dissemination?

In a large number of cases, EBP developers are closely connected or even a part of professional organisations (Domus Medica, SSMG, WVVK, OKE). Developers emphasize that this facilitates collaboration, especially in terms of scoping of guideline topics, defining outcomes that need to be taken into account for the work field and consensus of guideline recommendations. This might also strengthen ownership and increase acceptability of and trust in a guideline. Further on, this collaboration can also facilitate the involvement of opinion leaders and key persons in implementation of guidelines (Domus Medica). Respondents in the KCE study on dissemination and implementation of EBP (2013) expressed the need to involve professionals in the process of development and dissemination [6]. KCE report 284 (2017) shows that health care professionals are keen to be involved as stakeholder in development of guidelines, and that their information channels (congresses, publications …) should be used more proactively when a dissemination plan is set up[39]. This approach is found to be highly effective in the dissemination and diffusion of developed guidelines (CIPIQs). A number of organisations developed a (multifaceted) dissemination and sensibilization strategy. Developers express the need to perform a baseline measurement on EBP knowledge, skills and awareness in end users and tailor the dissemination and implementation strategy based on the results (WVVK).

Guidelines and EBP information are disseminated in different versions (paper, PDF) and different formats (e.g. full guideline, summaries, brochures, leaflets, pocket documents, articles in periodicals, professional journals and newsletters). A number of the full guidelines and the supporting materials are available at the website of the FOD/SPF, however developers and end users express that these are quite difficult to find. A number of initiatives in Belgium (e.g. Minerva, Tijdschrift voor Geneeskunde, HuisartsNU, Folia Pharmaceutica) publish a journal with EBP content or with

some kind of derivate products based on EBP information (e.g. Cochrane Corner). Stakeholders plead to centralize and align these efforts and publish one specific journal on evidence based practice. Some professional organisations provide full access to the CDLH library (including a specific interest package (SPIP) of discipline related online journals) for their members (e.g. Axxon, NVKVV, VBOV, VVL, USfB). However, up till now most of these initiatives did not result in high database consultation (NVKVV, WVVK).

Some organizations have developed e-learning products or intend to do this, with possibility to evaluate and provide feedback (e.g. CIPIQs, WVVK, Domus Medica). EBMPracticeNet also provides access to an e-learning module about their EBP portal. The majority of these e-learning packages can be accessed through the (e-ID protected) RIZIV Dokeos portal. For certain e-learning courses, accreditation points can be obtained. Several developers express that the development of these applications was quite expensive and difficult while the use of the e-learning packages is low. Stakeholders also state that users of these e-learning applications complain that it is quite complex and time consuming to access these applications. Some developers provide more classic teaching materials (Domus Medica, SSMG) regarding the content of their CPGs, such as Powerpoint presentations. One organisation developed an app for tablet or smartphone to facilitate the use of a guideline on preoperative tests (KCE).

CEBAM, Platform Wetenschap en Praktijk, EBMPracticeNet, WVVK and Farmaka also organise courses in different professional groups, high schools and universities to teach and promote evidence based practice and train health care professionals in the use of EBP sources (e.g. CDLH, EBMPracticeNet, Portal4care). Certain health care disciplines can obtain accreditation points by attending these courses. EBMpracticeNet recently started with a “train the trainer” program to create trainers within professional organisations that can further spread the EBP body of thought. Some professional organisations (e.g. OKE centre for occupational therapy) are connected to external training organisations to organize EBP courses for their members. Some professional groups organize peer review sessions to discuss EBP topics (in local quality groups). The opportunity to get accreditation points for attendance of these meetings (incentive) was perceived as a facilitator of this process (WVVK).

Other organisations organise outreach visits to inform practitioners about evidence based practice during individual face-to-face contacts or in LOK/GLEM meetings (Farmaka, Domus Medica, EBMPracticeNet, WVVK, Pallialine.be). Farmaka emphasizes the needs of a good mix of scientific knowledge and communication skills to increase the chance of success, as the process of outreach visits has to initiate a process of reflection and evaluation in the end user. EBMPracticenNet pleads for the use of native speakers as outreach visitors as this might increase the uptake of the messages.

Most of the developers or people involved in (collaborating) professional organisations present in meetings and conferences. Sometimes seminars are organized around CPGs. Formal trainings within a framework of continuous medical education (e.g. LOK/GLEM) are also given by developers and EBMpracticeNet. Some CPG developers (e.g. SSMG, Domus Medica) prepare modules with ready-to-use materials (presentations), activities and questions [6].

The majority of the organisations use mailing or distribution of news letters to promote their EBP products. Some developers use an umbrella organisation to spread their messages by mail (e.g. CIPIQs). Sometimes reminders were used to increase dissemination [6]. Some organisations organize media events to promote their EBP products (e.g. Expertisecentrum Valpreventie Vlaanderen). Interviewees also mentioned the used of opinion leaders to spread the news, as they are better known by their colleagues [6]. Decision support was also perceived as an interesting approach [6]

CEBAM and EBMPracticeNet state that there is a need to centrally coordinate or support communication of EBP information (including staff with specific communication skills and competences). The present fragmented initiatives are not very effective. A multifaceted strategy is needed including (1) promotion of health literacy (nationwide dissemination of up to date patient guidelines), (2) integration of patient guidelines in EBMPracticenet, (3) clear communication regarding supportive tools for EBP use, and (4) adequate training and education (CEBAM). In Flanders, patient guidelines already are available (www.gezondheidenwetenschap.be), based on the content of EBMPracticeNet. A similar but smaller initiative from SSMG exists in the French speaking part of Belgium (www.mongénéraliste.be). Patient

guidelines (leaflets) were perceived as important tools for care, especially by nurses, midwives and physiotherapists[39].

- Who is responsible for the messages that are distributed regarding EBP? What are the profiles of these people? (central organisation & developers)

Some organisations have specific but very small amounts of staff for communication of EBP messages (Domus Medica, KCE, Farmaka, Rode Kruis, OKE centre for occupational therapy) but the majority of developers do not involve specific competence profiles for their communication. CEBAM and Farmaka plead for a centralisation (or at least intensive coordination) of communication efforts, including the efforts made by sickness funds, hospitals, EBP developers and (central) disseminators, to improve the efficiency of EBP communication. New methods for dissemination and communication of EBP information can be tested and benchmarked in a test environment before implementation (CEBAM). Rode Kruis Vlaanderen states that involvement of staff with didactical skills can improve the translation from evidence to recommendation and communication (in lay language). KCE report 284 argues that tailoring the communication to the audience needs might increase the uptake of information[39].

- Which methodology or strategy is used to distribute news and information? (central & developers) (dissemination plan?)

All the organisations have their own communication policy, often historically grown. EBMPracticeNet has a limited strategy for information distribution (e.g. 3x/year a newsletter). Up till now, there is no specific communication strategy for EBMPracticeNet. There is however a strong intention to invest in communication and this aspect is taken into account in the present reorganization plan of EBMPracticeNet.

- What is the role of new media (social media) in this process? What is the role of social marketing in this process? (central & developers)

Developer or dissemination groups in most cases do not have a clear strategy to use social media or marketing to promote their EBP products. Some developers and disseminators have used social media (e.g. Facebook, Twitter, LinkedIn) to spread information (e.g. Rode Kruis Vlaanderen, Platform Wetenschap en Praktijk, Think4nurses, OKE centre for occupational therapy, KCE).

- Who are the present end users of the central dissemination channels for EBP in Belgium? Is this central dissemination platform known well by (all) health professionals? Which disciplines are missing?

As the content of EBMpracticeNet is mainly focused on GPs, they make up the majority of users. Three out of four users is a GP or a GP in training. Regarding the use of CDLH, data from a survey in 2016 in an approached sample of 9115 users with a response rate of 7.6% (N = 693 from which 507 Flemish and 186 French speaking users) showed that more than half of the respondents were physicians, about 10% were physiotherapists, almost 10% were nurses, 6% were pharmacists and 2% were midwives[99].

- How is the central dissemination platform perceived by these users (usability, acceptability, usefulness, desirability, value, accessibility, credibility, findability)?

At present, no data are available on the satisfaction of users of EBMPracticeNet. There is however a fully written out protocol for a focus group study, but up till now it was not launched because of continuing problems with the eID access. Developers' and disseminators' websites are often well known, frequently accessed and appreciated by the own professional group (e.g. Domus Medica, SSMG, Portal4care). A survey in CDLH users (2016) showed that 1 out of 5 respondents was unsatisfied with the login procedure (unwieldy, time consuming, frequent error messages). English language was mentioned as an obstacle. Almost 1 out of 4 reported difficulties to integrate CDLH use in their daily practice[99].

- **EBMPracticeNet is set up to be the central dissemination platform for guidelines in Belgium. The majority of its users are GPs. The content of EBMPracticeNet is mainly focused on this professional discipline.**
- **EBMPracticenet also aims to optimize collaboration between EBP developers. The majority of EBP developers are connected to this organization.**
- **All EBP developers and professional organisations use their own dissemination channels and strategies. There is no central coordination of these activities.**
- **In the majority of cases, there is a close collaboration between developers of guidelines and professional groups. This is experienced to be an important added value for implementation of guidelines.**
- **EBP products are disseminated (digital of paper form) in a myriad of formats, all derived from the initial full guideline. Developers and professional organizations often use a multifaceted approach to disseminate their EBP materials but they do not apply a formal strategy.**
- **Some organizations developed e-learning applications but these were quite expensive and are not very successful.**
- **Several organzations are involved in education and training or provide training materials to support training by third parties. The provision of acceditation points for attending these courses can be a facilitator of implementation.**
- **Several organizations organize outreach visits (mainly to GPs) to disseminate their EBP body of knowledge.**
- **Most of the organisation present results of new EBP products on conferences.**
- **A number of organisations uses email, reminders, and media campaigns.**

- **Several organisations state that there is a need to centrally coordinate or support communication of EBP information (including staff with specific communication skills and competences). A limited number of organizations already have dedicated staff for EBP communication.**
- **More efforts are needed to increase health literacy in patients and to develop clear EBP messages in lay language. These patient information can be connected to EBMPracticeNet.**
- **Developer or dissemination groups do not have a clear strategy to use social media or marketing to promote their EBP products**

3.4.3.6 Implementation

- Who is involved in implementation in Belgium on a national or regional level? Is there a clear strategy for implementation nationwide? Regional? What is known about effectivity of implementation?

At present, no formal central implementation strategy or policy for EBP is available in Belgium. Dissemination of EBP products is perceived by a significant number of developer groups as the final step in the EBP process, however they acknowledge that further efforts are needed to actually convince end users to adopt the EBP knowledge. Energy and resources for 'on site' implementation are often spent in a rather scattered or uncoordinated way by professional organisations. Some developer groups use opinion leaders and innovation champions to facilitate implementation, but this is applied on a national or regional level. Other groups use outreach visits (e.g. LOKs/GLEMs or clinical practice groups) to change therapeutic views and attitudes of end users. And certain groups organize 'on site' trainings for health professionals.

Although change readiness is described as an important concept in behavioural change processes, it is almost unknown in EBP developer groups and professional organisations. No attempts to assess change readiness in end-user groups have been identified. When asked for implementation barriers, interviewees reported practical issues such as time constraints, financial constraints, and access problems. Behavioural barriers were not mentioned. Specific strategies for social marketing and behavioural

change interventions regarding the use of EBP products were not identified during the contacts with the different stakeholders. Finally, developer groups did not have a clear view on the implementation success of their products. Some professional groups (Domus Medica, SSMG, BCFI) report high use of their website resources, which might be seen as a sign of effective use of EBP products in daily practice.

- Which contextual aspects of the present Belgian policy (Federal and Regional) might hamper or stimulate EBP use (organizational, financial, …)? What is needed? What needs to be altered?

Interviewees reported a number of contextual aspects that might hamper EBP use.

Lack of knowledge (in terms of EBP in general or specific EBP products) was mentioned several times as a barrier of EBP implementation. A significant part of practitioners (in the different disciplines) are not aware of EBP or do not have a positive attitude towards EBP. A link was often seen with the age of the practitioner. Some interviewees express that professionals from their health care discipline perceive EBP as a governmental strategy to control their practice (and penalize) them. Interviewees also express a strong need for thorough integration of EBP in initial education and training, continued education (lifelong learning), conferences and lectures.

Further on, difficulties with the 'single sign on' procedure (eID access to online EBP resources and connection to electronic medical record) were mentioned as frustrating and demotivating. Decision support was however mentioned by GP organisations as an important added value for integration of EBP use in daily practice. For other disciplines (nurses, midwives, physiotherapists) there was some uncertainty about the added value of this tools. Up till now, few attempts to develop decision support systems in these disciplines have been made.

Other factors that were mentioned were lack of time, lack of access to online resources, lack of available knowledge for the specific discipline (all disciplines except GPs) and uncertainty to apply new EBP evidence.

Another aspect that was mentioned was the lack of incentive to use EBP products (financial incentives as well as opportunities for accreditation). Financial constraints were also mentioned by developers in terms of an imbalance between funding received for development work and loss of income in the developers' private practice (SSMG).

The majority of developers pleaded for further development of the central dissemination platform (EBMPracticeNet), with specific emphasis on multi-disciplinarity and easy and free access. GP organisations plead for further integration of supporting tools in the platform. Non-GP disciplines plead for integration of a sufficiently large number of EBP guidelines for their profession (critical mass), as this might motivate non-users to adopt EBP in their daily practice.

- **A central strategy or policy for implementation of EBP is lacking in Belgium.**
- **Knowledge on implementation and behavioural change is insufficiently developed.**
- **Implementation efforts are scattered and uncoordinated**
- **Knowledge gaps in end users, often linked to age, are perceived as a barrier for implementation of EBP**
- **Financial constraints (insufficient fee for development, incentives for use,…) were mentioned as a barrier for the EBP process.**
- **The majority of developers pleaded for further development of the central dissemination platform**

3.4.3.7 Evaluation

- How is guideline use evaluated in Belgium? Is there a formal procedure? Which tools or indicators are available?

Up till now there is no central policy to evaluate the use and the effectiveness of guideline recommendations in health care practice. Information on evaluation of EBP processes, gathered during the contacts with the different stakeholders was sparse.

The KCE report 212 (2013) on dissemination and implementation states: 'Only few experiences relate to the evaluation of the impact on the practice. All interviewees regret that so much time, energy and financial resources were spent to develop and disseminate CPG without knowing whether these strategies have an impact on change of practice or not.' [6]. To date, a number of guideline developers aim to integrate indicators in their guidelines. Often, foreign validated indicators are translated and adopted (Domus Medica). Provision of tools to check (monitor) the use of guideline recommendations is however an element of the AGREE II instrument, used in validation processes.

Regarding the use of EBMPracticeNet, the following indicators are applied: (1) number of unique visitors per year, (2) cumulative number of visits per guideline, (3) number of guidelines consulted per visit and (4) length of stay per visit. Anonymised data of EBP users (discipline, age, language, consultation of guidelines) can be made available to monitor guideline use in the future (keeping into account the privacy regulation). EBMpracticenet states that their statistics (popularity of guidelines) might even guide the prioritization process. Up till now, these statistics are only used for research purposes or for official reports for the government.

Some developers state that the use of their own website resources can be a potential measure of effectivity (BCFI, Domus Medica). Others suggest to use existing databases (e.g. Intego) to distillate evaluation-data regarding guideline use and recommendation application (e.g. cystitis and specific antibiotics therapy) (Domus Medica). CIPIQs and EBMPracticenet argue that the use of and feedback on their e-Learning applications might be seen as an indicator for EBP implementation.

- Who takes care of evaluation of EBP guideline use in Belgium?

At present no specific organisation takes care of the evaluation of EBP in Belgium.

- What are the consequences of evaluation results of guideline use in Belgium?

No consequences of EBP use for health care professionals were identified during this critical appraisal.

- **Up till now there is no central policy to evaluate the use and the effectiveness of guideline recommendations in health care practice.**
- **A number of guideline developers tries to integrate (internationally validated) monitoring tools for EBP use in their guidelines.**
- **EBMPracticeNet has the tools to monitor certain aspects of its activities. To date, these data are however not used for effectivity purposes.**
- **EBP developers propose alternative sources for monitoring effectivity of guideline use in Belgium**
- **Up till now the use or non-use of EBP recommendations does not have consequences for the health care professional on the field.**

3.4.3.8 Education and training

Although the composition of the education programmes of Belgian high schools and universities is out of the scope of this report, the following information might be interesting background information.

In the French Community and the Flemish community, competency profiles are described for non-physician health care professionals[102-104]. Usage of evidence in practice is a competence described for nurses, midwives and occupational therapists (only for master level). No information was found on evidence based practice in the competency profiles for occupational therapists (bachelor level), speech therapists and physiotherapists

(bachelor and master level) in the French speaking part of Belgium. For Flanders, EBP is taken into account significantly in recent years by educational institutions for occupational therapy and physiotherapy. For nurses and midwives, there is no mandatory number of hours for EBP training. The EBP training is often included in the course dedicated to literature search. Significant variation is however found between schools and between the Dutch and French speaking part of Belgian which might be attributed to variation in the teachers' background, the financial means to access to peer review journals. Overall, midwives receive a more comprehensive EBP training that nurses. In the midwifery training, EBP is not only included in specific lessons or training but in other courses dedicated to care. In addition, midwifery students experience more often the use of EBP in practice than the nurses.

For physicians, EBM is included from the beginning of the education until the specialisation training but there is no mandatory program nor mandatory number of hours for courses dedicated to EBM. Leaning EBM exists in several forms including pure EBM courses, statistics applied to EBM (i.e. meta-analysis), inclusion of EBM in clinical case presentation, and scientific English courses (including English spoken courses in other area). In contrast with non-physician carer training, language and access to evidence do not feel as a barrier because of specific language courses and the availability of a large library catalogue. There is no specific training for the teachers. However, some universities, (e.g. Université Libre de Bruxelles), provide livelong training courses for teachers and academic assistants.

Experts in EBP in different health care disciplines in Belgium express their concerns about the present integration and organisation of EBP education in the initial training of their discipline. Often courses are focused on primary and secondary knowledge sources instead of EBP guidelines (all. EBMPracticenet, CDLH and (discipline) specific guideline databases are not or insufficiently mentioned during the courses (nursing, physiotherapy). Teachers and trainers do often not have access to (and awareness of) CDLH. There is a strong need to improve this situation. In contrast, EBP seems to be integrated quite well in the initial training of GPs (physicians).

- Are these aspects part of the end terms of the disciplines (assessments, exams or evaluation) (initial training & education)?

For midwives and nurses, knowledge of EBP is evaluated as another course.

- Which aspects of health care policy (could) hamper or enable education and training success in EBP?

According to interviewees from the French speaking federation of higher education institutions and from nurses and paramedic schools, the main barriers in EBP training are the following:

  - The use of non-native language in guidelines
  - The training of the teachers and their resistance to change
  - The resistance to change by health practitioners that have a negative view of the practice reconsideration by students and minimize the value of EBP

- What are the consequences for organizations or the different health professionals to be insufficiently trained in EBP? (payment, recognition of diploma, …)

No formal numbers of ETCS (European Credits Transfer System) are fixed for EBP courses in nursing and midwifery (French community). However, student has to pass an exam on EBP to get of his/her diploma.

3.6 Work package 4: identification of financial flows

3.6.1 Aim

The aim of the present work package is to identify and visualize the funding (by the Federal Government) of EBP activities in Belgium.

3.6.2 Methodology

For the present work package we rely on the conclusions of KCE report 212 regarding funding of EBP, and add some information on available work force.

3.6.3 Results

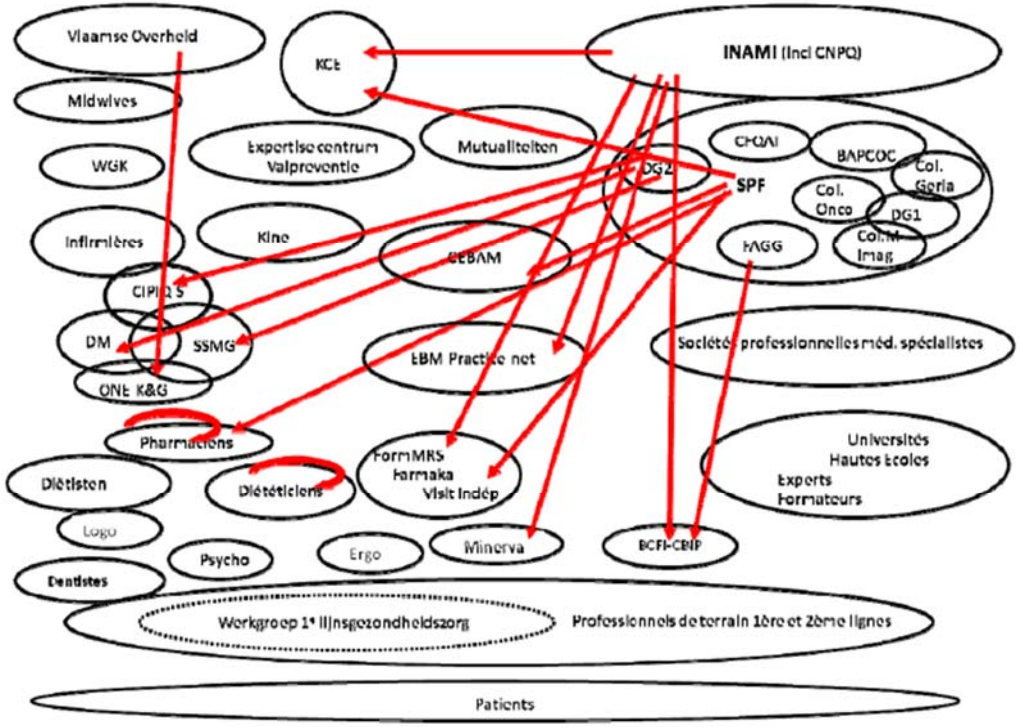
3.6.3.1 Financial flows as described in KCE report 212

The map (Figure 1) on the fluxes of money in 2012 towards organisations for the development of EBP guidelines, as reported by focus group members, shows 3 main funding organisations: RIZIV/INAMI, FOD/SPF (both at federal level) and the regional authorities. All three are governmental structures. The map also shows that some organisations self-finance the development of guidelines for their target population or care providers, e.g. dieticians. Besides these few examples of auto-funding, the majority of the organisations are dependent on governmental financial support.

The funding is not restricted to organisations involved in the development of guidelines, but also organisations involved in validation or dissemination of EBM are financed by the federal government. Two major organisations are CEBAM (funded by FOD/SPF), as methodological guard of the developmental process, and EBMPracticeNet (funded by RIZIV/INAMI) as the central web-based platform for the dissemination of guidelines and collaborative network of EBP content developers and disseminators.

A remarkable finding is that funding of the different stakeholders is quite complex and that several organisations receive money from more than one funding body. Another finding is that a significant group of stakeholders do not receive funding for their EBP activities. The majority of these are allied health professionals.

Figure 14 – Visualization of financial flows as perceived by respondents in focus groups (KCE report 212)



3.6.3.2 Present workforce involved in EBP activities in Belgium

In April 2017 an email-survey was set up for this KCE project to get insight in the workforce involved in EBP activities in Belgium. Stakeholders were identified based on their involvement in EBMPracticeNet, WG OREL or their contacts with CEBAM. Respondents were asked to describe their salaried workforce (employee or independent) at 01/02/2017.

Based on the available information (some data regarding independent workers for a few EBP partners and complete data for one EBP partner are missing) and starting from a work week of 38 hours for an employee and 40 hours for an independent worker, we roughly estimate that the total salaried work force is 65.2 FTE spread over 134 persons. Significant differences are seen between the workforces of the EBP Partners. Farmaka is the biggest employer, followed by BCFI and KCE. The workforce of Rode Kruis Vlaanderen is only partly financed by governmental funding. Another significant finding is that EBP partners of non-GP professions have very limited or no funding. Finally, it is remarkable that the work force is very scattered as almost 10% work less than one day a week for the EBP project. An important final remark, made by the majority of the respondents, is that the present funding system is not optimal, because:

- The availabiliity of awarded funding is often transcribed to the partners' banc account very late (some respondents had to wait for more than a half year). As a consequence these organisations had to pre-finance their staff costs from their own means (if available) or staff needed to wait long to get their payments.
- Due to the ambiguity and uncertainty of financing for the next year, for a large share of the respondents it was difficult to plan their activities for the medium and long term.
- Respondents also mentioned that it was difficult to attract staff (uncertainty about the future) and to retain staff (highly qualified staff wants to have a certain degree of certainty or they take other opportunities).
- Directors and coordinators of EBP partner groups mentioned that they had to invest a significant amount of their working time to search for funding and secure their work force for the coming year. They argued that this is not and efficient use of EBP funding.
- Some directors of EBP partner groups indicated that up till now, there is no clear overaching system for payment. Hourly or monthly wages differ substantially between the groups.

APPENDICES

APPENDIX 1. MINISTERIAL CONCEPT NOTE

Minister van Sociale Zaken en Volksgezondheid
MAGGIE DE BLOCK

Conceptnota
EVIDENCE BASED PRACTICE

Beleidscel van de minister van Sociale Zaken en Volksgezondheid
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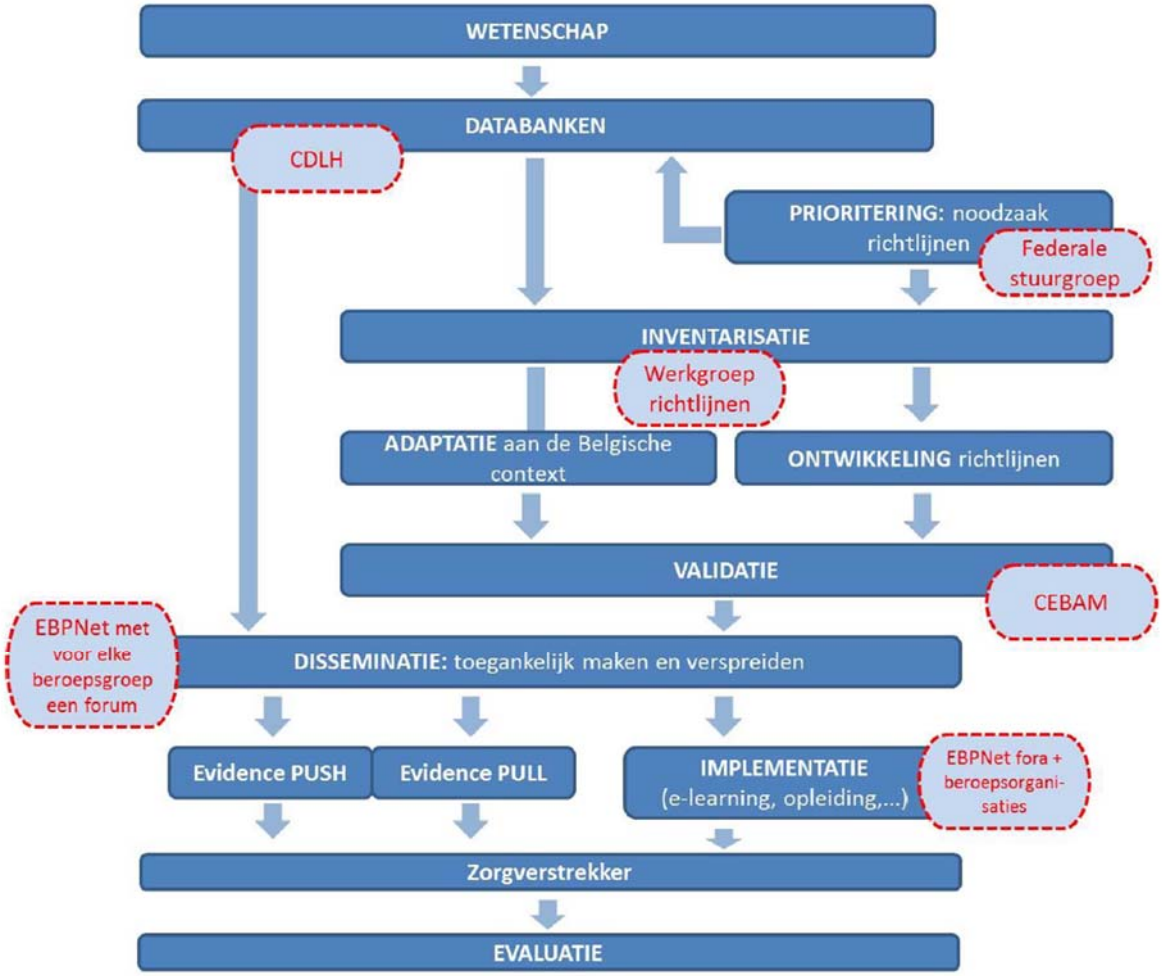
abstract nota

1. Meerjarenkader

Figure 15 – Flowchart meerjarenkader



Prioritering

Belangrijk bij prioritering is d rol va de overheid in het aanhalen van nodige accenten. Een voorbeeld zijn prioritaire actielijnen in het regeerakkoord en de beleidsplannen (zoals tabak, geestelijke gezondheidszorg…).

Door WIE? Dit is voorbehouden voor de Federale stuurgroep EBP (Vertegenwoordiging beleidscel, FOD Volksgezondheid, RIZIV, FAGG, KCE). Deze stuurgroep fungeert ook als continu begeleidingscomité aan wie gerapporteerd wordt.

Hiernaast is er ook een EBP Platform: deze bestaat uit een vertegenwoordiging van de Federale stuurgroep, uit een vertegenwoordiging van de kernpartners (zie verder) en één vertegenwoordiger per discipline uit het EBPNet.

Databases

Databases zoals Cochrane worden zo optimaal mogelijk toegankelijk gemaakt voor de zorgprofessionals. Het is niet zinvol nieuwe richtlijnen te ontwikkelen waar deze reeds voorhanden zijn in (internationale) literatuur. Er dient geëxploreerd te worden hoe we zonder excessieve kosten gebruik kunnen maken van reeds bestaande databanken zoals Duodecim. Voor verpleegkundigen is er bijvoorbeeld ook een luik voorhanden via Duodecim en JBI (Joanna Briggs Institute). Kinesitherapie heeft dan weer een internationale databank PEDRO (Physiotherpapy Evidence Database)… Kan samenaankoop gestimuleerd worden waar mogelijk (bijvoorbeeld met meerdere disciplines voor Duodecim, of met andere landen: Nederland, Frankrijk?)? In het overwegen van nieuwe contracten met databanken, dient bijgevolg een sterk vergelijk gemaakt te worden naar prijs, hoeveelheid aan beschikbare summaries en guidelines, gebruikersvriendelijkheid…

WIE? Hierin is CDLH een kernpartner binnen het EBP Net consortium.

Inventarisatie - Adaptatie – Ontwikkeling Richtlijnen

Na de prioritisatie van nodige guidelines / evidence wordt een inventarisatie gemaakt van wat reeds voorhanden is in de literatuur. Bruikbare gevalideerde richtlijnen in de literatuur worden al dan niet vertaald in Nederlands en Frans en geadapteerd aan de Belgische context. Waar lacunes zijn in de literatuur en noodzaak, kunnen opdrachten gegeven worden om nieuwe guidelines te ontwikkelen.

Het beschikbare bedrag voor deze cluster aan opdrachten wordt vastgelegd en zal via aanbesteding toegewezen worden aan een consortium van derden (universiteiten, wetenschappelijke verenigingen, …). In de toewijzing zal een evenredige verdeling bewaakt worden met de Federale Stuurgroep EBP wat betreft: evenwicht langs beide taalgrenzen, aan universiteiten, aan de diverse disciplines…

Er wordt ingezet op transparantie in de ‘kostprijs’van een richtlijn: wat kost vertaling, de ontwikkeling, de update van één richtlijn? Dit wordt medebepaald door de Federale Stuurgroep.

WIE? Voor de coördinatie van het drieluik van inventarisatie – adaptatie – ontwikkeling van richtlijnen is een herdefiniëring van de huidige vzw Werkgroep richtlijnen eerste lijn aangewezen binnen het EBPNet consortium.

Validatie

Alle richtlijnen/evidence/guidelines/… die ontwikkeld werden en verspreid / toegankelijk zullen gemaakt worden, dienden gevalideerd te worden.

WIE? CEBAM binnen het EBPNet consortium

Disseminatie

Evidence, al dan niet onder de vorm van richtlijnen, worden verspreid en toegankelijk gemaakt via Evidence Based Practice Net. Via deze weg moet iedere professional gratis en duidelijk toegang hebben tot wetenschappelijke tools.

WIE? EBP Net. Hierin hoort iedere beroepsgroep een apart forum te hebben dat waakt over vertegenwoordiging, adviseert, faciliteert. Een voorbeeld is het forum EBNursing waarin de huidige vzw Platform Wetenschap en Praktijk opgenomen wordt.

Iedere richtlijn dient bovendien naast een beroep specifieke uitwerking een interdisciplinaire toetsing te hebben.

EBPNet heeft reeds ervaring in koppelingen die gemaakt worden met het Elektronisch Patiëntdossier via software en codering. Evidence kan actief aangebracht worden op deze manier via een Evidence Push Systeem (aan de hand van decision suppor worden diagnostisch en therapeutische handelingen en beslissingen geoptimaliseerd). Een Evidence Pull systeem faciliteert het actief opzoeken of doorklikken naar literatuur voor de zorgprofessional.

Implementatie

Een cruciale fase in het overbruggen van wetenschap naar praktijk is de stap van implementatie. In samenwerking met de beroepsverenigingen ontwikkelen en voeren de fora binnen EBPNet strategieën uit om richtlijnen tot de gebruiker te brengen en tools aan te reiken. De grote implementatiekanalen zijn:

- via bezoeken aan zorgverleners: LOK's, vergaderingen, bij voorkeur multidisciplinair
- e-learning (DOKEOS)
- opleidingen
- één website (via EBPNet)
- één tijdschrift en nieuwsbrief

Evaluatie

Geen proces zonder evaluatie. Bij opmaak van het kaderakkoord zal er bepaald worden voor het meerjarenkader welke de deliverables zijn en binnen welke timing deze moeten opgeleverd worden. De resultaten van de implementatiestrategieën (outcomes) dienen eveneens te worden geëvalueerd.

Pijlers

In het luik van Evidence Based MEDICINE vestigen we aandacht op 2 aparte pijlers:

A. PIJLER ONAFHANKELIJK GENEESMIDDELENBEHEER

Momenteel zit onafhankelijk EB geneesmiddelenbeleid verdeeld over het FAGG (BCFI en FARMAKA) en FOD (BAPCOC). Het voorstel luidt deze krachten te bundelen tot 1 orgaan in geneesmiddelenbeheer. De governance van dit budget komt volledig bij het FAGG opdat een wederzijdse versterking en bestuiving noodzakelijk is en blijft.

Het budget wordt ingeperkt ten voordele van nieuwe beleidsinitiatieven binnen het Kaderakkoord. De huidige werking van FARMAKA wordt geïntegreerd in een unieke partner in het geneesmiddelenbeleid, bij voorkeur BCFI.

BAPCOC blijft omwille van de specificiteit van de campagnes en linken met diergeneeskunde, als een aparte entiteit benaderd. Het budget voor studie verschuift naar FAGG, de campagnes blijven verlopen via FOD.

B. PIJLER MEDISCHE BEELDVORMING

Verantwoord voorschrijven van medische beeldvorming iseen belangrijk aandachtspunt, zowel vanuit budgettair perspectief als naar stralingsbescherming. Ook hier verschuift bij voorkeur op korte termijn de implementatiestrategie van papieren publicaties naar elektronische nieuwsbrieven, e- learning en in het bijzonder decision support tools. Een heroriëntering in deze zin van Focus on Medical Imaging wordt overwogen met testing van de **ESR iGuide** als applicatie binnen Recip-e:koppeling van de 'Imaging Referral Guidelines' door de European Society of Radiology aan elektronisch aanvragen van medische beeldvorming, zowel in ziekenhuissetting als in eerste lijn. In dit forum dienen ook radiologen betrokken te worden.

2. Eén coherente EBPractice financiering

De budgetten worden gebundeld om te komen tot één financiering van EBPractice.

- Doelstelling is geen besparing, maar een bundelen van krachten en efficiënter werken, ten voordele van nieuwe initiatieven binnen dit kader (innovatieve apps/toepassingen, uitbreiding multidisciplinariteit…).
- Geen rechtstreekse financiering meer aan aparte beroepsverenigingen
- Het budget wordt in zijn totaliteit beheerd door het KCE, met uitzondering van de pijler geneesmiddelen die door het FAGG beheerd wordt.

Voorstel herallocatie van de middelen, rekening houdend met zo hoog mogelijke efficiëntie (zo ruim mogelijk aantal professionele zorgverleners te bereiken) en effectiviteit (impact op beslissingen in therapie, voorschrift, outcomes op patiënte niveau,… dienen geëvalueerd te worden). Door het bundelen van de financiering en integratie van de verschillende partners kunnen middelen efficiënter ingezet worden, met beperking van overheadkosten zoals administratiekosten. Het centraliseren van de governance bij één partner, met name KCE. Het beperken van de versnippering, zorgt er op deze manier ook voor dat voor de administraties de belasting verminderd wordt. In de huidige situatie dient er immers nog veel tijd en energie besteed te worden aan het voorbereiden en onderhandelen van contracten en subsidies.

3. Eén EBP-website

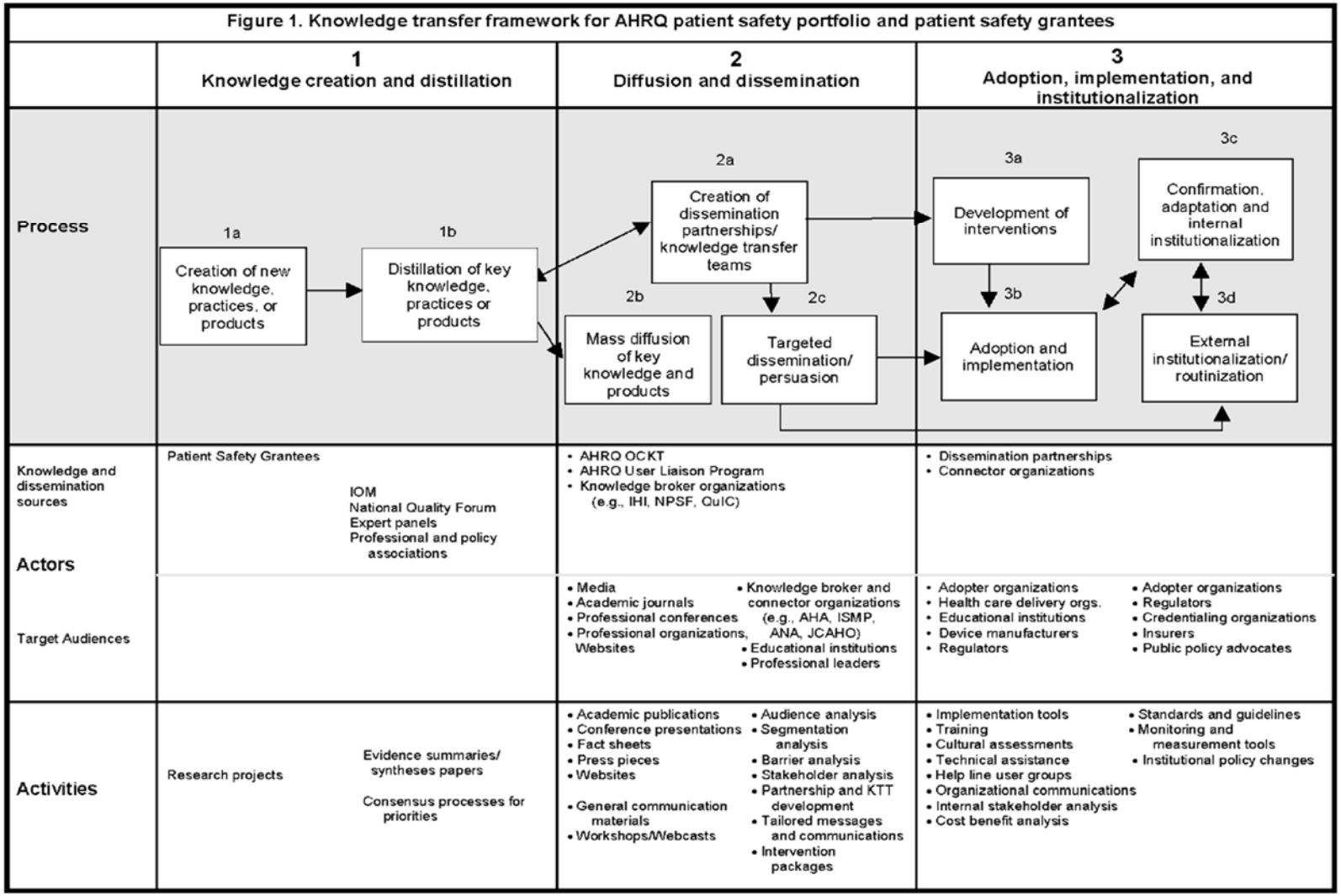
We streven naar één website: hetzij met de richtlijnen, hetzij via gemakkelijk aanklikbare linken naar de primaire (internationale of nationale) bronnen of databanken.

4. Eén EBP publicatie

We kennen in België heel wat mooie uitgaven voor de verschillende beroepsgroepen met aanbevelingen, richtlijnen, laatste inzichten. Dit zowel over diagnostiek en therapie, als specifieke geneesmiddelenleer. Er dient gestreefd te worden naar één publicatie voor de multidisciplinaire praktijk.

APPENDIX 2. THE AHRQ TRANSFER RESEARCH INTO PRACTICE (TRIP) MODEL

Figure 1. Knowledge transfer framework for AHRQ patient safety portfolio and patient safety grantees



REFERENCES

1. Sackett DL, Rosenberg WMC, Gray MJA, Haynes RB, Richardson WS. Evidence based medicine: what it is and what it isn't. BMJ. 1996;312(7023).
2. Ciliska D, Pinelli J, DiCenso A, Cullum N. Resources to enhance evidence-based nursing practice. AACN Clin Issues. 2001;12(4):9.
3. Agoritsas T, Heen AF, Brandt L, Alonso-Coello P, Kristiansen A, Akl EA, et al. Decision aids that really promote shared decision making: the pace quickens. BMJ. 2015;350:g7624.
4. HA-RING KR-. Tool for guidelines and shared decision making in practice [Web page].The Netherlands: Kennisbank Richtlijnontwikkeling - HA-RING;2013 [cited January, 10]. Available from: http://www.ha-ring.nl/download/pages/en/Tool%20for%20guidelines%20and%20shared%20decision%20making%20in%20practice.pdf
5. Fredriksson M, Blomqvist P, Winblad U. Recentralizing healthcare through evidence-based guidelines – striving for national equity in Sweden. BMC Health Services Research. 2014;14:509.
6. Desomer A, Dilles T, Steckel S, Duchesnes C, Vanmeerbeek M, Peremans L, et al. Dissemination and implementation of clinical practice guidelines in Belgium. . Brussels: Belgian Health Care Knowledge Centre (KCE); 2013. Health Services Research (HSR)
7. Shiffman RN, Dixon J, Brandt C, Essaihi A, Hsiao A, Michel G, et al. The GuideLine Implementability Appraisal (GLIA): development of an instrument to identify obstacles to guideline implementation. BMC Med Inform Decis Mak. 2005;5:23.
8. Denef M, Rubens A, Criekemans P, Duvieusart B. Aanbevelingen voor het besturen van socialprofitorganisaties: Aandachtspunten en goede praktijken. Brussel: Koning Boudewijnstichting (KBS/FRB); 2010. 1993
9. Cuyvers G, Mertens J. Organisatiekunde: Praktijktheorie voor non-profit organisaties. Mechelen: Wolters Plantyn; 2000.
10. Desmidt S, Heene A. Strategie en organisatie van publieke organisaties. Tielt: Lannoo; 2005.

11. Schermerhon J. Management. Den Haag: Academic Service; 2004.
12. Weggeman M. Kennismanagement: de praktijk. Schiedam: Scriptum; 2000.
13. Dyck B, Neubert MJ. Management: current practices and new directions. Boston: Houghton Mifflin Harcourt Publishing.; 2010.
14. Carpenter M, Bauer T, Erdogan B, Short J. Principles of Management, v. 2.0. 2014.
15. Van Korlaar C. Guide to Creating Mission & Vision Statements [Web page]. Top Non-Profits;2016. Available from: https://topnonprofits.com/vision-mission/
16. Management N. Mission, Vision, Values, Objectives and Philosophy of an Organization [Web page].2010 [cited February, 9]. Available from: http://currentnursing.com/nursing_management/mission_vision_values_of_organizations.html
17. Nieva V, Murphy R, Ridley N, Donaldson N, Combes J, Mitchell P, et al. Advances in patient safety: from research to implementation. . Rockville, MD: Agency for Healthcare Research and Quality (AHRQ); 2005. From science to service: a framework for the transfer of patient safety research into practice
18. White KM, Dudley-Brown S, Terhaar MF. Translation of evidence into nursing and health care. . New-York: Springer Publishing co.; 2016.
19. Turner T, Misso M, Harris C, Green S. Development of evidence-based clinical practice guidelines (CPGs): comparing approaches. Implementation Science. 2008;3:45.
20. Gerhardt WE, Schoetker PJ, Donovan EF, Kotagal UR, Muething SE. Putting Evidence-Based Clinical

Practice Guidelines into Practice. The Joint Commission Journal on Quality and Patient Safety. . 2007;33(4):10.

21. Graham ID, Harrison MB. Evaluation and adaptation of clinical practice guidelines. . Evidence Based Nursing. 2005;8:5.
22. ADAPTE Collaboration. ADAPTE Resource Toolkit for Guideline Adaptation Version 1.0 [Web page].2007. Available from: http://www.adapte.org;http://www.g-i-n.net
23. Harrison M, Graham I, Van den Hoek J, Dogherty E, Carley M, Angus V. Guideline adaptation and implementation planning: a prospective observational study. . Implementation Science. 2013;8:49.
24. Harrison M, Légaré F, Graham I, Fervers B. Adapting clinical practice guidelines to local context and assessing barriers to their use. . Canadian Medical Association Journal. 2010;182(2):78-84
25. Parchman M. Diffusion, Dissemination and Implementation: What is the Difference? Seattle: GroupHealth - MacColl Center for Health Care Innovation; 2015. Available from: https://www.nihcollaboratory.org/Pages/GR-Slides-10-09-15.pdf
26. Titler M. The evidence for Evidence Based Practice Implementation. In: Hughes RG, editor. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville: Agency for Healthcare Research and Quality (AHRQ); 2008.
27. Rogers EM. Diffusion of Innovations (Fourth Edition). New York: Free Press; 1995.
28. Aarons G, Hurlburt M, Horwitz S. Advancing a Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors. Adm Policy Ment Health. 2011;38:4-23.
29. McCormack B, Kitson A, Harvey G, Rycroft-Malone J, Seers K, Titchen A. Getting evidence into practice – The meaning of 'practice context'. Journal of Advanced Nursing. 2002;38(1):94–104.
30. Campbell-Scherer D. Multimorbidity: a challenge for evidence-based medicine. Evidence-Based Medicine 2010;15(6):165-6.
31. Harris JR, Cheadle A, Hannon PA, Forehand M, Lichiello P, Mahoney E, et al. A framework for disseminating evidence-based health promotion practices. Preventing Chronic Disease. 2012;9:Epub.
32. Kashyap N, Dixon J, Michel G, Brandt C, Shiffman RN. GLIA, Guideline Implementability Appraisal V. 2.0. New-Haven: Yale Center

for Medical Informatics; 2011. Available from: http://nutmeg.med.yale.edu/glia/doc/GLIA_v2.pdf

33. Blümel C, Gauch S, Hendriks B, Krüger AK, Reinhart M. In search of translation research. Berlin: Institute for research information and quality assurance; 2015.
34. Andrews J. Prioritization Criteria Methodology for Future Research Needs Proposals Within the Effective Health Care Program: PiCMe-Prioritization Criteria Methods. Rockville: Agency for Healthcare Research and Quality (AHRQ); 2013. Methods Future Research Needs Reports 10
35. Reveiz L, Tellez D, Castillo J, Mosquera P, Torres M, Cuervo L, et al. Prioritization strategies in clinical practice guidelines development: a pilot study. Health Research Policy and Systems. 2010;8:7.
36. Australian Commission on Safetyand Quality in Health Care. Prioritising clinical practice guideline development [Web page].2017. Available from: https://www.safetyandquality.gov.au/our-work/prioritising-clinical-practice-guideline-development/
37. Reddy B, Kelly M, Thokala P, Walters S, Duenas A. Prioritising public health guidance topics in the National Institute for Health and Care Excellence using the Analytic Hierarchy Process. Public Health. 2014;128:896-903.
38. Cleemput I, Devriese S, Christiaens W, Kohn L. Multi-criteria decision analysis for the appraisal of medical needs: a pilot study. 2016. Health Services Research (HSR) Brussels: Belgian Health Care Knowledge Centre (KCE) KCE Reports 272
39. Benahmed N, Adriaenssens J, Christiaens W, Paulus D. Tailoring KCE guidelines to the needs of end-users. Brussels: Belgian Health Care Knowledge Center; 2017. Methodological Reports
40. trust A. AGREE II [Web page].Canada: AGREE trust;2010 [cited February, 01].
41. Belgian Centre of Evidence-Based Medecine. Validatie door CEBAM [Web page]. Cochrane Belgium;2013. Available from: https://www.cebam.be/nl/richtlijnen/Paginas/Validatie-door-CEBAM.aspx
42. Vinck I, Paulus D, Van Brabandt H, Ramaekers D. Medico-legale aspecten van klinische praktijkrichtlijnen. 2006. Brussel: Federaal Kenniscentrum voor de Gezondheidszorg (KCE). Report 26A
43. Hannes K, Van Royen P, Aertgeerts B, Buntinx F, Ramaekers D. Het systematisch valideren van klinische praktijkrichtlijnen: het AGREE-instrument, de ontwikkeling en verspreiding van een internaltionale criterialijst. . Tijdschrift voor Geneeskunde. 2005;61 (20):1435-44.
44. Fineout-Overholt E, Johnston L. Evaluation: An Essential Step to the EBP Process. Worldviews on Evidence-Based Nursing. 2007;4(1):6.
45. Fixsen DL, Blase KA. Implementation: The Missing Link Between Research and Practice. Implementation Brief. 2009;1(1):2.
46. Kitson AL, Rycroft-Malone J, Harvey G, McCormack B, Seers K, Titchen A. Evaluating the successful implementation of evidence into practice using the PARiHS framework: theoretical and practical challenges. Implement Sci. 2008;3:1.
47. Nilsen P. Making sense of implementation theories, models and frameworks. Implement Sci. 2015;10:53.
48. Rycroft-Malone J, Seers K, Titchen A, Harvey G, Kitson A, McCormack B. What counts as evidence in evidence-based practice? Journal of Advanced Nursing. 2004;47(1):10.
49. Francke A, Smit M, de Veer A, Mistiaen P. Factors influencing the implementation of clinical guidelines for health care professionals: a systematic meta-review. BMC Med Inform Decis Mak. 2008;8:38.
50. Wensing M, Grol R. Methods to identify implementation problems. In: Grol R, Wensing M, M. E, editors. Improving patient care: the implementation of change in clinical practice. London: Elsevier; 2005.
51. Johnson M, May C. Promoting professional behaviour change in healthcare: what interventions work, and why? A theory-led overview of systematic reviews. BMJ Open. 2015;5:1-13.

52. Chiu Y-W, Weng Y-H, Lo H-L, Shih Y-H, Hsu C-C, Kuo KN. Impact of a nationwide outreach program on the diffusion of evidence-based practice in Taiwan. Int J Qual Health Care. 2010;22(5):430-6.

53. Hannes K, Leys M, Vermeire E, Aertgeerts B, Buntinx F, Depoorter A-M. Implementing evidence-based medicine in general practice: a focus group based study. BMC Fam Pract. 2005;6:37.

54. Harvey G, Kitson A. Translating evidence into healthcare policy and practice: Single versus multi-faceted implementation strategies - is there a simple answer to a complex question? Int J Health Policy Manag. 2015;4(3):123-6.

55. Moore GA. Crossing the Chasm. New-York: Harper-Colloins; 1991.

56. Kitson A, Wiechula R, S. S, Jordan Z. Knowledge Translation in Healthcare. Philadelphia: Lippincott, Williams & Wilkins; 2012.

57. Evans WD, McCormack L. Applying social marketing in health care: communicating evidence to change consumer behavior. Med Decis Making. 2008;28(5):781-92.

58. Brouwers MC, Makarski J, Kastner M, Hayden L, Bhattacharyya O, Team G-MR. The Guideline Implementability Decision Excellence Model (GUIDE-M): a mixed methods approach to create an international resource to advance the practice guideline field. Implement Sci. 2015;10:36.

59. Glasziou P, Haynes B. The paths from research to improved health outcomes. Evid Based Nurs. 2005;8(2):36-8.

60. Brouwers M, Bhattacharyya O, Team TG-MR. Guideline Implementability for Decision Excellence Model GUIDE-M [Web page].2014. Available from: http://www.agreetrust.org/agree-research-projects/guide-m/

61. Kastner M, Estey E, Hayden L, Chatterjee A, Grudniewicz A, Graham ID, et al. The development of a guideline implementability tool (GUIDE-IT): a qualitative study of family physician perspectives. BMC Fam Pract. 2014;15:19.

62. Chan W, Pearson T. Guideline implementability appraisal (GLIA) in US national guidelines. In: Proceedings of; 2013: BMJ Quality & Safety; p. A31.

63. Gagliardi AR, Brouwers MC, Bhattacharyya OK. The guideline implementability research and application network (GIRAnet): an international collaborative to support knowledge exchange: study protocol. Implement Sci. 2012;7:26.

64. Hecht L, Buhse S, Meyer G. Effectiveness of training in evidence-based medicine skills for healthcare professionals: a systematic review. BMC Med Educ. 2016;16:103.

65. Ahmadi S-F, Baradaran HR, Ahmadi E. Effectiveness of teaching evidence-based medicine to undergraduate medical students: a BEME systematic review. Med Teach. 2015;37(1):21-30.

66. Knops AM, Vermeulen H, Legemate DA, Ubbink DT. Attitudes, awareness, and barriers regarding evidence-based surgery among surgeons and surgical nurses. World J Surg. 2009;33(7):1348-55.

67. Heiwe S, Kajermo KN, Tyni-Lenne R, Guidetti S, Samuelsson M, Andersson I-L, et al. Evidence-based practice: attitudes, knowledge and behaviour among allied health care professionals. Int J Qual Health Care. 2011;23(2):198-209.

68. McEvoy MP, Williams MT, Olds TS. Evidence based practice profiles: differences among allied health professions. BMC Med Educ. 2010;10:69.

69. Jette DU, Bacon K, Batty C, Carlson M, Ferland A, Hemingway RD, et al. Evidence-based practice: beliefs, attitudes, knowledge, and behaviors of physical therapists. Phys Ther. 2003;83(9):786-805.

70. Weng Y-H, Kuo KN, Yang C-Y, Lo H-L, Chen C, Chiu Y-W. Implementation of evidence-based practice across medical, nursing, pharmacological and allied healthcare professionals: a questionnaire survey in nationwide hospital settings. Implement Sci. 2013;8:112.

71. Upton D, Upton P. Knowledge and use of evidence-based practice by allied health and health science professionals in the United Kingdom. J Allied Health. 2006;35(3):127-33.

72. NICE. NICE Charter: Who we are and what we do. National Institute for Health and Care Excellence (NICE); 2010. Available from: https://www.nice.org.uk/Media/Default/About/Who-we-are/NICE_Charter.pdf

73. NICE. What we do [Web page]. National Institute for Health and Care Excellence;2017 [cited January, 15]. Available from: https://www.nice.org.uk/about/what-we-do

74. NICE. NICE Quality and Outcomes Framework indicator [Web page].2017. Available from: https://www.nice.org.uk/standards-and-indicators/qofindicators

75. NICE. Return on investment tools - beta versions [Web page]. National Institute for Health and Care Excellence;2017 [cited Januari, 15]. Available from: https://www.nice.org.uk/about/what-we-do/into-practice/return-on-investment-tools

76. NICE. NICE Resource impact assessments [Web page]. National Institute for Health and Care Excellence;2017 [cited Januari, 15]. Available from: https://www.nice.org.uk/about/what-we-do/into-practice/resource-impact-assessment

77. NICE. Audit and service improvement [Web page]. National Institute for Health and Care Excellence;2017 [cited Januari, 15]. Available from: https://www.nice.org.uk/about/what-we-do/into-practice/audit-and-service-improvement

78. NICE. Medicines and technologies programme: adoption team [Web page]. National Institute for Health and Care Excellence;2017 [cited Januari, 15]. Available from: https://www.nice.org.uk/about/what-we-do/into-practice/adoption-team

79. NICE. Guidance and advice list [Web page].2017. Available from: https://www.nice.org.uk/guidance/published?type=QS

80. NICE. Standards and Indicators [Web page].2017. Available from: https://www.nice.org.uk/Standards-and-Indicators/index

81. SIGN. SIGN council - representatives [Web page].Scottish Intercollegiate Guidelines Network (SIGN);2014. Available from: http://www.sign.ac.uk/about/council.html

82. Harbour R, Lowe G, Twaddle S. Scottish Intercollegiate Guidelines Network: the first 15 years (1993-2008). J R Coll Physicians Edinb. 2011;41(2):163-8.

83. SIGN. About healthcare imporvement Scotland [Web page].Scottish Intercollegiate Guidelines Network (SIGN);2014. Available from: http://www.sign.ac.uk/about/nhsqis.html

84. Scotland HI. About us [Web page]. NHS Scotland;2017 [cited Januari, 17]. Available from: http://www.healthcareimprovementscotland.org/about_us.aspx

85. SIGN. What is SIGN [Web page].Scottish Intercollegiate Guidelines Network (SIGN);2014. Available from: http://www.sign.ac.uk/about/introduction.html

86. SIGN. SIGN implementation support [Web page].Scottish Intercollegiate Guidelines Network (SIGN);2014. Available from: http://sign.ac.uk/implementation/index.html

87. SIGN. National meetings - implementation/launch meetings [Web page].Scottish Intercollegiate Guidelines Network (SIGN);2014. Available from: http://www.sign.ac.uk/events/index.html

88. SIGN. Training modules linked to CPD [Web page].Scottish Intercollegiate Guidelines Network (SIGN);2014. Available from: http://sign.ac.uk/implementation/ecpd.html

89. SIGN. Welcome to the patient involvement section of SIGN's website [Web page].Scottish Intercollegiate Guidelines Network (SIGN);2014. Available from: http://www.sign.ac.uk/patients/index.html

90. G.I.N. Working Groups/Implementation - contact/join GIRAnet [Web page]. Guideline International Network (G.I.N.);2015 [cited Januari,20]. Available from: http://www.g-i-n.net/working-groups/implementation/giranet/contact

91. SIGN. Evaluating SIGN guideline implementation [Web page].Scottish Intercollegiate Guidelines Network (SIGN);2014. Available from: http://sign.ac.uk/implementation/logic.html

92. SBU. SBU: Prioritisation Support [Web page]. Swedish Agency for Health Technology Assessment and Assessment of Social Services;2017 [cited February, 14]. Available from: http://www.sbu.se/en/publications/sbu-prioritisation-support/

93. Sundell K, Wänrgard L. How do government agencies use evidence? Stockholm: Socialstyrelsen 2013.

94. Gilet P, Vander Stichele B, Adriaenssens J, Jacqmin N, Erpicum M, Gillain N, et al. EBNursing report. Brussels: FOD Volksgezondheid/SPF Santé Publique; 2016.

95. Autrique M, Vanderplasschen W, Broekaert E, Sabbe B. Practitioners' Attitudes concerning Evidence-Based Guidelines in Belgian Substance Abuse Treatment. European Addiction Research. 2009;15:9.

96. Heselmans A, Donceel P, Aertgeerts B, Van de Velde S, Ramaekers D. The attitude of Belgian social insurance physicians towards evidence-based practice and clinical practice guidelines. BMC Family Practice. 2009;10.

97. Hannes K, Goedhuys J, Aertgeerts B. Obstacles to implementing Evidence-Based Practice in Belgium: a context-specific qualitative evidence synthesis including findings from different health care disciplines. Acta clinica Belgica. 2012;67(2):9.

98. Linssen R, Verstraeten L. Obstacles to implementing Evidence-Based Practice in Belgium: a context-specific qualitative evidence synthesis including findings from different health care disciplines. Hasselt: University of Hasselt; 2015.

99. Vanneste M. CEBAM Digital Library for Health - user survey. Leuven: CEBAM; 2016.

100. Federaal Kenniscentrum Centre d'Expertise des soins de santé. KCE Process book [Web page]. Available from: http://processbook.kce.fgov.be/node/1

101. Quality AfHRa. Stakeholder Guide 2014. 2014. Available from: https://www.ahrq.gov/sites/default/files/publications/files/stakeholdr.pdf

102. Associatie K.U.L.euven. Comptentieprofiel bachelor in de verpleegkunde. 2011. Available from: http://programmagids.khbo.be/1213_VPK_02_CPR.pdf

103. Conseil Général des Hautes Ecoles. Référentiels des Compétences [Web page].2017. Available from: http://www.cghe.cfwb.be/index.php?id=1551

104. Vlaamse Overheid. Experimenteel secundair onderwijs volgens een modulair stelsel. 2017.