Translation of Finnish Duodecim EBM Guidelines® from English to French and Dutch.

Helping evidence to cross borders.

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Content

Content 1

Abstract (215 words) 4

Introduction (596 words) 6

Methods 8

Results 9

Implementation of the Finnish EBM Guidelines® in the Belgian primary care setting 9

Description of the processes of translation, medical proofreading, and contextualisation. 9

Translation 9

Medical proof reading 10

The contextualisation process 10

Update frequency 11

Feedback Cycle with regard to the content during medical proofread and contextualisation 11

Discussion 12

Main points 12

Critical reflections on the medical proofread 12

Economy of effort 12

Enriching meta-data with synonyms and lay terms 13

The handling of the terms with sensible epistemological content 13

Brief discussion of the comments on the content and the reply by the Finnish editorial team 13

The concept of Prevention 13

About Mental Health 14

Prescribing 15

EBM Guidelines® and Primary Health Care 15

Strengths 16

Limitations 17

Implications for EBM policy 17

Conclusion 18

References 19

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Annex 1 : An Excel file with the content notes content note files (2017-2021) is available as Annex 1 : (see also https://tinyurl.com/454djefe). The comments on each point-of-care evidence summary are ordered by year (2017-2021) and by 4 themes, accessible by clicking the tabs of worksheets.

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Marc Jamoulle receives fees for the correction of translations from English to French from the company IVS on the Belgian National Institute for Disability and Health Insurance (NIDHI) budget.

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Abstract (215 words)

EBM Guidelines® is a comprehensive collection of point-of-care guideline summaries for primary care, produced by the Finnish Duodecim publishing company.

In Belgium they are disseminated by CEBAM, the Belgian branch of the Cochrane Collaboration, through the ebpracticenet website (https://www.ebpnet.be/) on behalf of the Belgian National Institute for Health and Disability Insurance (NIHDI).

In this article, the experience is shared, as gained during the translation of this corpus of almost 1000 summaries, (on average 4 A4-pages), during 4000 hours of translation and 2000 hours of medical proofread for the whole collection, for each language.

The processes of translation, medical proofread, and local contextualisation and publication are presented. In addition, this article gives an account of the comments on the guideline summaries, formulated by a medical proofreader (MJ), and shared with the Finnish editorial team. Subjects were grouped in 4 themes; the field of prevention, mental health, prescribing, and the vision on primary care. The exchange of these notes with the Finnish authors of the guidelines proved to be particularly interactive and fruitful.

The development of an interactive commentary mechanism for the medical proofreaders, the local editorial teams and the end users could enhance the quality and dynamism of this important resource.

MeSH: Family Practice; Vocational Education; Education, Medical, Continuing; Evidence Based Medicine; Guidelines as Topic; Translations

Key points of the article

- The Finnish point-of-care evidence summaries (EBM Guidelines®) are a valuable tool for the support of General Practice/Family Medicine.
- International dissemination implies translation into the mother tongue of practising physicians, medical proofread, and local contextualisation.
- A feedback system allowing interactivity between the medical proofreaders and local editorial teams and the original editors in Finland may contribute to the continuous improvement of this international body of evidence.

Introduction (3832 words)

Over the past decades, the concept of Evidence-Based Medicine has emerged and circulated within medical communities, with varying success in different disciplines and different countries. General Practice and Family Medicine were quick to embrace the idea, and among the pioneers in developing guidelines, based on the EBM paradigm.

In Finland, the publishing company Duodecim (owned by the Scientific Medical Society and founded in 1881) has begun in 1989 a comprehensive series of point-of-care guideline summaries, covering a vast array of medical subjects with a minimum incidence and prevalence in general practice. This well-structured collection is focusing on primary care and is called EBM Guidelines®. It has grown to approx. 1,000 summaries, each 4 pages long on average, well-structured and easily navigable. This collection is designed to be consulted during routine practice. (see https://www.ebm-guidelines.com/ for the English version). The growth of this collection coincided with the growth of the Cochrane Collaboration, and can be considered as implementation effort of this world-wide knowledge base for health care.

The summaries are edited and maintained by an editorial team, comprised of a mix of professionals and general practitioners, working along the lines of a methodological handbook (1). The basis of each summary is usually one or more Cochrane reviews, represented by an extended abstract, known as an evidence summary. A collection of 4433 of these evidence summaries is intricately linked to the 1,000 EBM Guidelines® and indexed to Medical Subject Heading (MeSH), the International Classification of Diseases (ICD-10) and the International Classification of Primary Care (ICPC-2). Recommendations in each guideline summary are graded for strength of evidence. About one tenth of the guideline summaries are also inspired by local, more extensive EBM Guidelines®, provided by the Finnish Medical Society. EBM Guidelines® are available in Finland to all health care professionals. This resource is part of an EBM ecosystem, including a computerized decision support system integrated with electronic health records, and a population health tool. It is an example of a Learning Health Care System (2, 3)

The entire collection of EBM Guidelines® has been translated into English. It is one of the point-of-care evidence summaries ecosystems, evaluated positively by Moja et al (4).

A number of European countries have licensed this resource and translations are available in English, Finnish, Dutch, French, German, Estonian, Russian, Azerbaijani, Turkish and Ukrainian.

The EBM Guidelines® have been made available to Belgian healthcare personnel in French and Dutch by a grant of the Belgian National Institute for Health and Disability Insurance (NIHDI).

Iscientia, a scientific information broker company (https://www.iscientia.com/) is responsible for the technical maintenance of the ICT platform of the Digital Library of Health; for the contacts and contracts with international medical information sources; for the provision of EBM Guidelines® through the website (https://www.ebpnet.be/) in Belgium, and for translation and medical proof read of this collection.

The non-profit association Ebpracticenet is a consortium of EBM-producing organisations in Belgium. It was initiated by the Belgian Cochrane Centre for Evidence Based Medicine (CEBAM). Ebpracticenet is the local editorial team, responsible for integration of the local EBM production, and the contextualisation of the EBM Guidelines® to the Belgian context, and finally for publication through the website (https://www.ebpnet.be/).

Coordinating the cycles of translating, medical proofreading, contextualising to national situations, and updating this collection have proven to be difficult but feasible (5)

The aim of this article is to explain the translation process of the Finnish EBM Guidelines® in Belgium; to convey the experiences during the medical proofreading of the corpus; and to share the appraisal of the value of the Finnish EBM Guidelines® resource for Family Practice.

Methods

A narrative description is given of practical implementation of the translations of the Finnish EBM Guidelines® in the Belgian primary care setting.

The processes of translation, medical proofread, and contextualisation are described, with a flowchart of consecutive activities, and with information on workload and on the updating frequency of the collection.

Finally, illustrations are given of the comments generated during the medical proofread, and of the feedback from Finland (available in annex 1 as supplementary data).

Results

Implementation of the Finnish EBM Guidelines® in the Belgian primary care setting

In Belgium, the first edition of a Dutch and French version of the Duodecim guidelines was published in 2011.

Recently, the scope has been extended from General Practice to other disciplines in primary care (general practitioners, nurses, physiotherapists, dentists, dieticians, pharmacists, speech therapists, midwives, podiatrist and functional therapists), by adding relevant EBM information from Belgium (e.g. the national drug dictionary, Minerva), and international sources. The information on the website is cross-linked to bibliographic information in Pubmed and the Cochrane Collaboration.

The site is linked to the Belgian Digital Library for Health and to electronic medical software, via a single-sign-on (SSO) system. The general practitioner who is working in his electronic healthcare record (EHR) can link directly to the EBM Guidelines® information on the platform, without having to log in on the different platforms. International licences are also included so that the information on external sites like PubMed and Cochrane are directly accessible without having to log in twice.

Description of the processes of translation, medical proofreading, and contextualisation.

Translation

The translation from English to Dutch and French is performed by a team of professional translators, specialised in health-related texts, using a computer aided translation software, which makes it possible to save translations in a translation memory database; to reuse translations once validated for future versions; to create and update terminology per language; to make sure all persons involved in the translation and validation use the same terminology; to follow up and dispatch the handling of files; to manage the work of all translators and medical proofreaders; and to correctly quantify the work and calculate the cost of the translations and proofreads.

The EBM Guidelines® contain an average of 1,200 words per document (range 123 to 7,495 words).

Professional translation of the entire corpus needed 4,000 hours of work.

Medical proofreading

A team of medical experts (mainly general practitioners) reviews the translation from English into Dutch or French, in a bilingual Word® document, with the original English version in a left column, and the Dutch or French translation in a right column, to be corrected and/or annotated. The main focus is to verify whether the translation is correct; whether appropriate terminology is used; and whether the translation has not introduced errors with potential adverse medical impact. The work consists of checking translations, hunting for unusual sentence grammar, translation errors in medical terms or unusual acronyms.

Medical proofreading of the translations of the entire collection in one language took approximately 2,000 hours.

The contextualisation process

Contextualisation is the task whereby a member of the local editorial team Ebpracticenet (a medical expert, in this case a general practitioner) reviews the context of the translated guideline summary and verifies whether the original information is to be changed and supplemented with contextual information, in order to comply with national information in guidelines, regulations, differences in drug availability, cost and reimbursement of diagnostics and treatments (including drugs). In case a local EBM guideline exists for a specific topic, the translated EBM Guideline® is no longer used but replaced by a link to the local guideline. In addition, a summary of the local guideline, in the format of EBM Guidelines®, is integrated in the collection, with a clear indication of its local origin. In Belgium, there are about 130 articles that partially or completely replace the original article.

In case there is no national guideline, it is possible to add contextual adaptations. Since 2017, a total of 952 contextual adaptations to the Belgian context have been written in Dutch and in French, and published for a total of 516 guidelines. A methodological handbook for guidance in contextualization is under construction. Contextualization is handled, organized and paid for in the budget of Ebpracticenet.

See Fig. 1(at the bottom of this file) for a visual of the process flow translation / medical proofread / contextualization

Update frequency

The Duodecim point-of-care guideline summaries are continuously updated by the Finnish team of authors. All guidelines are reviewed at least once in a period of 3 years. Some guidelines get more regular updates, depending on the content and the health care situation in Finland, Europe and worldwide. A complete set of the renewed global corpus is delivered to the different countries every 3-4 months, with a clear indication of the changes in every update for translators, medical proofreaders, editors, and ultimately the readers. Since 2020, Duodecim provides information on the type of update; New EBM guideline; major update (>50%); moderate (>50%) or minor (a few sentences) update with/without clinical relevance; updates to metadata or supplementary files.

This information is used to prioritise the translation and review cycle, in combination with information on the frequency of consulting of the topic in Belgium.

Since March 2020, the guideline on the coronavirus, originally on the MERS virus, has been regularly updated due to the global COVID-19 pandemic. Between March and July 2020 a weekly update was delivered, between July and September a biweekly update, and since October 2020, a monthly update. A special effort was requested of the translators and medical proofreaders. In Belgium, the updates were translated and medically reviewed within 2 to 3 days (mostly during the weekend in the first weeks).

Feedback Cycle with regard to the content during medical proofread and contextualisation

The medical proofread as well as the contextualization can result in a content feedback cycle to the Duodecim editorial team. This can happen when new or other information in the evidence based literature is found or when the interpretation of evidence differs. This content feedback is handled by Duodecim and, if necessary, processed in a next update of the guideline summary. This feedback cycle on content

was started by the first author (MJ, a French-speaking GP, acting as medical proofreader) from 2017 to 2021. In a period of four years, content feedback issues have been reported to Duodecim. In the Annex with supplementary data, an overview of these formal observations about 163 guidelines is given (see: https://tinyurl.com/454djefe)

The Finnish editorial team responded to 80% of those remarks within a period of 2 to 3 months. These responses are incorporated in the annex. The information is structured by year (2017- 2021) and 4 themes and give access to the comments; EBM, primary health care policy; mental health; prescribing.

Later, the editorial team of Ebpracticenet proposed procedures for feedback on content and it was suggested that the feedback from the medical proof readers should be channelled to Finland through the local editorial team.

Discussion

Main points

This manuscript reports on the successful implementation of a comprehensive collection of point-of-care guideline summaries from Duodecim (Finland) into multilingual Belgium, focussing on the technical aspects of translation, medical proofreading and contextualisation. In addition, a “flavor” is given of formal observations on the content of the guideline summaries by a medical proofreader, and the subsequent reply of the Finnish Editorial Team, illustrating the power of international cooperation in the maintenance of a comprehensive EBM resource for Primary Care.

Critical reflections on the medical proofread

Economy of effort

In general, we found that professional translations are already of a good quality and the changes made by medical proofreading are essential but often minor.

Limits should be imposed on the expected literary quality of translation of professional medical texts. The grammar and relative position of the verbs and nouns is very subjective and may sometimes be altered

from the more medical perspective. Professional translators and medical doctors may have different opinions of what constitutes a good translation, and to what extent translations of technical information also need literary quality. Sometimes, the English text is unclear, and Duodecim is also notified of this.
The issue of acronyms is difficult to deal with when translating. Acronyms provide typographic economy, but also create jargon. Except for those acronyms that have become part of the everyday language of doctors, such as NSAIDs (Non-Steroidal Anti-Inflammatory Drugs), ECG (Electrocardiogram) or MS (Multiple Sclerosis), the use of acronyms should be minimal.
The translation work in Belgium for French also benefits the national implementation of EBM Guidelines® in France. Indeed, the French national insurer CNAM, following the example of the NIDHI, offers these same guidelines to French healthcare personnel, and profits from the Belgian Translation. The editorial team from the Collège de la Médecine Générale has fruitful contacts with the Belgian team of translators. Terminology issues concern medical terms that are used in Belgium but less frequently used or not used at all in France. A list of those terms is maintained in a separate terminology database and applied to the French or Belgian market, as needed.

Enriching meta-data with synonyms and lay terms

EBM Guidelines® are indexed with standardised keywords (ICD-10, ICPC-2, Mesh), but the use of synonyms and lay terms should be intensified to support the search for guidelines, and doctor-patient communication.

The handling of the terms with sensible epistemological content

From a terminological point of view, it is the translation of the term "evidence" that has provoked the most debate between Belgian and French translators and doctors. As we know, there is no consensus on the transposition into French of the EBM (Evidence Based Medicine) concept itself.
Another example is the translation of the English terms Transexualism and transexual. Based on the work of Motmans et al (6), the terms transidentité (instead of transexualisme) and transgenre (instead of transexuel) have been used.

Brief discussion of the comments on the content and the reply by the Finnish editorial team

The concept of Prevention

The Finnish editorial team uses only the traditional disease based concepts primary and secondary prevention introduced by Leavell & Clark in the 1950s and based on the stages of Syphilis (7). The World Organisation of Family Doctors (WONCA) proposed in the Dictionary of General Practice published in 2003 (8) to subdivide prevention into four areas with different definitions of primary, secondary and tertiary prevention, and including quaternary prevention (9), based on the work of McWynney and colleagues.(10) Quaternary prevention covers among others the concepts of overmedicalisation, overtreatment and overinformation and proposes that the main axis of ethical reflection on action should be first of all not to harm (11).

The Finnish editors were very sensitive to these observations. They consider this question to be highly relevant, but transforming the guidelines in this way would be a long-term task that cannot be envisaged in the immediate future, as the concepts of prevention are present in all the guidelines. This paradigmatic change may take some time to implement. (See annex 1 under Prevention tab)

About Mental Health

The texts on depression and dysthymia and, in general, the texts on mental health in these EBMGs seem to have been written by psychiatrists, rather than by family doctors. The concept of comorbidity is used in the texts in a very narrow sense, which is often criticised (12). Comorbidity in family medicine is much more complex than the simple association of problems in the mental sphere. The WONCA dictionary describes comorbidity as "*other illnesses or health problems in addition to those being studied or treated*"(8).

Depression and mental health disorders are presented here in a linear fashion, as if one led to the other. The reality of everyday life is that patients are often beset by multiple concurrent or successive problems,

sometimes over several generations, which interact with each other and close the door to possible solutions. Emotional problems, financial problems, esteem problems, social standing problems, family responsibility problems, legal problems, professional problems, mental health and addiction problems etc. form a network of factors (13) which are not only resolved by the administration of an antidepressant for "depression" or by dialectical cognitive psychotherapy. (See under Mental health tab on SD)

Prescribing

Appropriate prescribing is probably the most difficult issue to deal with in evidence-based medicine. The techniques for corrupting knowledge that have been developed in the name of health by the health market over the last thirty years are extensive (14-17). Therefore, the general practitioner should be encouraged to be an active agent of pharmacovigilance, to monitor special and new therapies and suspect a drug when faced with an unexplained symptom. The pitfalls of Evidence Based Medicine are not always identified and sometimes biased findings are perpetuated in original studies, systematic reviews and guidelines(18). As stated by Moynihan and all, "*Trustworthy evidence is required to enable well informed decisions about healthcare*"(19). As Umberto Eco points out, both authors and readers are involved in the dissemination of knowledge (20). Today's technology allows fast and factual exchanges between authors and readers. Point-of-care guideline summaries, such as EBM Guidelines® should be proposed as a dynamic resource in the evolution of knowledge, always open to question. This is the meaning of the feedback transmitted to the editorial team of these EBMGs by translators, medical proofreaders, local editorial teams, professional users, and hopefully also patients. (See annex 1 under the Prescribing tab)

EBM Guidelines® and Primary Health Care policy

EBM is the integration of clinical expertise, patient values and best evidence (21), while dealing with multimorbidity in the biopsychosocial context, which is at the heart of family medicine. This is why clinical practice recommendations must be prepared by field practitioners, who are able to seek out the finest meta-analyses and temper them with their clinical experience. It is because of this complexity and human interaction that it will be difficult for artificial intelligence to impose itself in this discipline (22).

We know that EBM training has "*some positive effects on the knowledge and skills of health professionals*"(23). But, as John P.A. Ioannidis puts it, in medicine "*As EBM became more influential, it was also hijacked to serve agendas different from what it originally aimed for."(24)* The practitioner must therefore be aware of this and double his efforts to do more good than harm. Several EBM Guidelines® discuss the relationship between hospital care and general practitioners. Although one can sense some discrepancies between the authors of different guidelines, it seems that the trend for hospitals to invade the field of primary care work has become international. Managed care and care pathway can easily become the antithesis of taking into account multimorbidity and anthropological complexity (25).

The rule should be that the general practitioner takes the advice of specialists and remains the treating physician. Then, if the patient is treated in hospital, the general practitioner remains the patient's representative, advises, guides and becomes the patient's advocate if necessary, bearing in mind that medicine can be dangerous to health (9) and that it in itself is a major contributor to mortality (26). (see annex 1 under the PHC policy tab)

Strengths

As Varonen et al. pointed out. "There *is evidence that guidelines are effective in changing the process and outcome of care*"(27). Nevertheless, because family medicine lies at the intersection of pathophysiological knowledge and anthropology, on the one hand, and because multimorbidity is the rule in practice, on the other hand, it is difficult to prepare and truly use operational guidelines at the point of care.

Numerous guidelines from different sources are published for most clinical topics. Each organisation tends to draw up its own, and in the end they manage more or less the same knowledge. The strength of EBM Guidelines® not only lies in its comprehensiveness for primary care, but also in the terminology management system, its availability in nine languages, its use in Europe and beyond (including Russia,

Turkey and Ukraine), the rapid and frequent updating, the management by general practitioners in agreement with their organisation, and, in our experience, in the ability to respond to their readers' suggestions and criticism.

The Finnish colleagues of the editorial team of the EBM Guidelines® are very receptive to the critical reactions. Interaction with the reader is an intrinsic part of their publishing philosophy.

The medical proofreading was not intended to be a systematic evaluation of the EBMGs. However, one medical proofreader (MJ) made formal observations to the Duodecim Editorial Team in one out of three of the about 500 EBMG summaries allocated to him for medical proofread. The Finnish authors took these observations very seriously. This positive reception to feedback helps improve the clarity of the medical information and gives the active reader and proofreader a way of helping clarify and reduce uncertainties in the medical profession.

Limitations

It is obviously difficult to assess the value of a collection of practice based recommendations summaries such as EBM Guidelines®.

Using the sophisticated AGREE II grid for the evaluation of this comprehensive resource of guideline summaries will inevitably not do justice to the whole of the resource. It should be stressed, with C. Smith, that "*Until now, the AGREE II instrument has not made it possible to clearly distinguish between high-quality and low-quality clinical practice guidelines*" (28). This system of evaluation is aimed at extensive, single-subject, stand-alone medical guidelines. A different evaluation methodology should be developed to assess the quality of comprehensive collections of point-of-care guideline summaries, such as EBM Guidelines®.

It is clear that the Finnish Point-of-care guideline summaries are sometimes too loosely based on Cochrane Reviews and on local guidelines, which may not be up to international standards. The recommendations in the guideline summaries are not always distinguishable from expert opinion, and only graded for the strength of evidence. There is not yet a full grading based on strength of evidence and on

strength of recommendation, using the Evidence to Decision methodology (29). Duodecim has engaged in but not completed yet a reconversion of the methodological approach and a tighter integration with other international resources such as Dynamed Plus and McMaster Alert systems (30). International collaboration with national editorial teams and local guideline producers, focussing on pico-driven development of recommendations based on evidence-to-decision tables may facilitate this transition.

Implications for EBM policy

It is important for national healthcare systems to provide for their healthcare workers comprehensive point-of-care trustworthy guideline summaries in the official language(s). International cooperation is needed in the production and dissemination of such resources.

Making evidence cross borders is a complex endeavour, necessitating performant technical processes of translation, medical proofreading, contextualisation, and feedback on the content. Although anticipated to be fundamental, the impact of the provision of such resources on the quality of care (including cost) needs to be ascertained.

Conclusion

The EBM Guidelines® show the considerable extension of the field of family medicine and the difficulty of finding "evidence" in a field that brings together biomathematical science and anthropological knowledge. Family medicine, as a profession is also subject to enormous variation in practices. The Finnish point-of-care guideline summaries (EBM Guidelines®) are a European product, based on real GPs' experience and produced by and for GPs. This resource supports and delimits the uncertainties of every day practice. Other primary care organisations in the world, focused on the solid production of evidence-based recommendations, could cooperate in an international editorial board. General practitioners throughout Europe and beyond are supporting this Finnish project. The development of an

interactive commentary mechanism implicating the end user could enhance the pertinence of the experience.

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Figure 1 : Business processes of translation, medical proofread, contextualisation, feedback, and publication of EBMGuidines® in Belgium.