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The updated clinical guideline development process in Estonia is an efficient method for developing evidence-based guidelines

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Abstract

Clinical practice guidelines are one of the tools available to improve the quality of health care. However, it may be difficult for countries to develop their own national guidelines ''from scratch'' because of limitations in time, expertise, and financial resources. The Estonian Health Insurance Fund (EHIF), in collaboration with other stakeholders, has launched a national effort to develop and implement evidence-based clinical practice guidelines aimed at improving the quality of care. Although the first EHIF handbook for preparing guidelines was published in 2004, there has been wide variation in the format and quality of guidelines prepared by medical specialty societies, EHIF, and other organizations in Estonia. An additional challenge to guideline development in Estonia is that it is a country with limited human resources. Therefore, revision of the Estonian guideline process was aimed at developing an efficient method for adapting current high-quality guidelines to the Estonian setting without compromising their quality. In 2010, a comprehensive assessment of guideline development in Estonia was made by the World Health Organization, EHIF, the Medical Faculty at the University of Tartu, and selected national and international experts in an effort to streamline and harmonize the principles and processes of guideline development in Estonia. This study summarizes the evaluation of and revisions to the process. Estonia has made substantial changes in its processes of clinical practice guideline development and implementation as part of an overall program aiming for systematic quality improvement in health care. This experience may be relevant to other small or resource-limited countries.

Keywords: Clinical practice guideline; Guideline development; Low-income country; Middle-income country; Estonia; Quality assurance; Evidence-based medicine

1. Introduction—the Estonian context

Estonia has revised its national clinical guideline development process as part of an overall program of quality improvement in health care. Clinical practice guidelines are recognized as one of the tools for improving the quality of health care [1] and are made available in many high-income country health systems as part of universal coverage programs. In Estonia, almost all citizens (95%) are entitled to access health services purchased by the Estonian Health Insurance Fund (EHIF), a mandatory social health insurance funded by a social solidarity tax [2].

The EHIF is run by a Supervisory Board chaired by the Minister of Social Affairs and has an annual budget of around 700,000 euros [3]. Estonia's health expenditure as a proportion of GDP (gross domestic product; even after growth in past years) is significantly lower than that of other European Union (EU) member states, which, in 2009, was 7.0% compared with 9.9% in EU-27 and per person being $1,393 in Estonia compared with $3,248 in EU-27 [4]. In Estonia, primary health care is provided by family doctors and allied health care professionals, including nurses, and specialist services in outpatient and inpatient settings. There were 4,200 doctors and 8,700 nurses in Estonia in 2009. One-fourth of doctors work in primary care, and almost all are trained by the only medical faculty at the University of Tartu. Nurses and other support staff are trained in two Medical Colleges.

Since 1992, there have been numerous health care reforms in Estonia in the transition from a ''centralized

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What is new?

- Although a number of investigators have reported processes for *implementing* international guidelines in low-resource settings, few have described processes for *developing* guidelines in low-resource settings.
- Although Estonia has many assets needed for guideline development and implementation, such as a functioning health system, advanced adaptation of information and communication technology, and e-health development, it has a population of approximately 1.3 million and, thus, limited technical and human capacity for conducting systematic reviews or developing guidelines de novo.
- This paper describes the revision of the Estonian guideline development process that was aimed at developing an efficient and affordable system.

Soviet'' medical care system to a western European model with introduction of family medicine−based primary care, reorganizing the hospital sector, modernizing the training curricula for doctors and nurses to be aligned with the EU, and building sound public institutions in the health sector to cover various topics as health insurance, medicines, and public health [2,5,6]. These reforms are now increasingly focusing on strategies to improve quality of care, including use of clinical guidelines [7]. An initial handbook for preparing guidelines was published in 2004 by the EHIF [8], and over 90 guidelines on topics relevant to family medicine, cardiology, neurology, and oncology have been developed and published on the EHIF Web site. Other quality initiatives of the EHIF include clinical audits, benchmarking and comparison of providers, and a voluntary quality bonus system for primary care doctors.

This paper describes the approach that has been taken in Estonia to improve the national clinical guideline development process. It takes account of the challenges of developing and implementing evidence-based guideline development in a resource-constrained environment. The Estonian experience and lessons learned may be useful to other countries embarking on a similar process.

2. Guideline adaptation

The methods for development and implementation of clinical practice guidelines have been the subject of numerous studies and systematic reviews. The most effective practice guidelines appear to be (1) developed with input from the end users, (2) based on evidence, (3) adapted to local conditions, including costs and values, and (4) presented in a way that is easy to use and supports the day-to-day practice of health care professionals [9]. Effective implementation of guidelines requires a comprehensive strategy beyond simply publishing and disseminating documents and involves a combination of approaches tailored to the needs of the users [10].

As noted by others [11], it may be difficult for countries to develop their own national guidelines ''from scratch'' because of limitations in time, expertise, and financial resources. Therefore, we conducted a literature review to identify published case studies or descriptions of guideline development in countries with limited resources in terms of capacity for conducting systematic reviews and guideline development, as well as limited economic resources (see Appendix).

Our literature search identified few case examples of guideline adaptation, and most of these were in high-resource settings. A 2006 systematic review conducted by the ADAPTE group identified only four publications describing how guidelines were adapted as a substitute for de novo guideline development, and none of these were done in resource-constrained settings [12]. The process proposed by the ADAPTE working group describes the steps needed for preparation, including establishing a committee of stakeholders and identifying needed resources and skills. The process of clarifying the scope and specific questions for the guideline is described, as well as methods for identifying and evaluating existing relevant guidelines. The ADAPTE process describes adaptation of recommendations, external review, and adoption, endorsement, and implementation of the recommendations. Processes for guideline adaptation proposed by ADAPTE and the Alberta Ambassador Program have been recently tested in the Canadian context [11,13]. However, neither of these processes specifically address options for developing guidelines in low-resource settings, nor do they consider how to link guideline development and implementation with other strategies to improve quality of health care.

Although a number of investigators have reported processes for *implementing* international guidelines in low-resource settings [14−16], few have described processes for *developing* guidelines in low-resource settings. The adaptation of National Comprehensive Cancer Network guidelines for the Middle East and North Africa Region [17] and the development of hypertension guidelines in Latin American have been described [18]. Both these processes were based on expert opinion and discussion. Researchers in Kenya have pointed out that one of the most significant problems with guideline development in low-resource settings has been the uncritical adoption of guidelines that are not evidence based [19]. Therefore, English and Opiyo suggest that guidelines should be developed based on high-quality reviews of the evidence, such as those provided by The Cochrane Collaboration. However, they note that such reviews may not be relevant to countries where the research was not conducted and that it may not be feasible for countries with limited resources to conduct their own reviews and develop guidelines using rigorous approaches, such as the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach. They point out the