Nurses use and ways of understanding web-based national guidelines for child healthcare

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Abstract

The national *Rikshandboken* for child healthcare, is a web-based guideline for child healthcare in Sweden containing knowledge- and methodological guidance and a national child healthcare program in progress to be implemented. The aim with the study was to examine child healthcare nurses´ use and ways of understanding the web-based national guidelines for child healthcare, *Rikshandboken*. Mixed method with sequential explanatory design in two phases was used; a web-survey with descriptive statistic followed by telephone interviews with phenomenographic analysis. The study showed variations in use and contribute with deeper knowledge of child healthcare nurse´s ways of understanding the unit RHB whose varied parts interact with each other. To be reliable, useful and relevant for nurses in their context, *Rikshandboken* must be kept updated and involve the end-users in the development process. Access to technical devices and optimal use of the possibilities with information and communication technology, the web-based national *Rikshandboken* can be a resource for continuing learning and a tool in everyday work and a possible determinant to an equal child healthcare. The study contributes with valuable knowledge when designing web-based guidelines for healthcare, making them useful and relevant for the end-users.

Keywords: Child healthcare nurses, national guidelines, information and communication technology, mixed method, phenomenography

Background

Information and Communication Technology (ICT) has the potential to improve accessibility to guidelines (1), even if the effectiveness isn't entirely clear (2). The Web is a form of ICT often used for guidelines in healthcare. Web-based national guidelines for personnel in child healthcare (CHC) in Sweden, is *Rikshandboken* (RHB); www.rikshandboken-bhv.se), a unit with knowledge support, methodological guidelines and a national CHC-program integrated. The CHC-program is in progress to be implemented in county councils and regions. Implementation of web- based guidelines could be a challenge and are affected by various factors related to the ICT-solution itself, the context it should be used in and the user's individual characteristics (2- 5). Thus, for a successful implementation, a bottom-up approach with end-user's involvement is crucial to make web-based guidelines relevant to whom it is intended to serve (3-5). Accordingly, follow-up studies of CHC-personnel's use and ways of understanding RHB are essential in the development and implementation process of web- based guidelines in healthcare.

Implementation of web- based guidelines

Swedish CHC- nurses need to keep abreast of new knowledge, be able to work in accordance with current guidelines and have access to timely information (6, 7). CPG:s aims to reduce variability and to decrease the gap between research and current practice; translating research and expert opinions to recommendations in everyday work for professionals (8, 9). Traditional printed guidelines are resource intensive and become

quickly outdated while web-based have potential to improve accessibility and credibility by keeping them continuously reviewed, updated and widely disseminated (1, 2, 10). Implementation of ICT and guidelines in healthcare are influenced by various factors (3-5) When looking at the use from an organisational perspective, key components for successful adoption in healthcare is management engagement and support, structural and electronic resources and a supportive culture and environment with implementation facilitators (3- 5). From an end-user´s perspective content, format, design, usability and easy access are crucial factors in the acceptance and use of ICT (4, 5). The web-based guidelines must match professional consensus and needs and be seen as relevant by all (3- 5). Attitudes and perceptions could be both a barrier and facilitate use of ICT and guidelines (3- 5). Review studies show that end-user´s involvement in the development and a strong bottom-up approach reduce the discrepancies between functionality of the system and the ease of use (3, 4). However, web-based guidelines are often not implemented effectively (2, 3), an essential prerequisite for designing web- based guidelines for healthcare is to examine and follow the needs and abilities of potential users as well as the context of use (2, 4).

Child health care

In Sweden, CHC is an important health promotion setting as it provides universal and targeted interventions and the coverage is close to 100% of the children 0–5 years old. CHC aims to contribute to children´s physical, mental and social health, by promoting children´s health and development, preventing illness, identifying problems early and initiating actions to counteract such problems (11). CHC includes activities as health examination, health guidance, immunizations and parental support at CHC centres and via house calls. The work at the CHC-centre is led by CHC-nurses, who are specialists in either primary health care or paediatric care. Each county council/region runs a Main CHC-unit (MCHCU), with at least a chief medical officer and a CHC-coordinator (11). Their responsibility is to facilitate the implementation of the web-based RHB including the national CHC-program, improve the local CHC by education and support, monitor children´s health, conduct evaluations and develop methods (12, 11). CHC should be built on current CPG, best available evidence, proven experience and patient preferences; evidence- based practice, on equal terms (11). Lack of equality and equity in Swedish CHC (13, 14), led to a new national CHC- program, published on RHB in 2015 (12).

The web-based RHB

RHB was established in 2005 as a pass-word protected, knowledge- and methodological support for personnel in CHC, containing the Swedish earlier national CHC-program. A study of CHC-nurses' usage of RHB, conducted in 2013 (15), showed that RHB was widely used but regional differences and nurse's experiences in their profession affected its use. Since 2015, the new national CHC-program is a part of the updated unit RHB also containing knowledge and methodological guidance adapted to the CHC-program aiming to contribute to an equal and equitable CHC and evidence- based practice. RHB also contain links to regional documents and websites in different county council/regions. Since 2012, RHB is mobile compatible and open accessed produced by Inera AB, owned by the Swedish Association of Local Authorities and Regions in charge to coordinate and develop digital services for citizens, professionals and decision makers. The editors at RHB are supported by an editorial board consisting of representatives from the MCHCUs. The new CHC-program is in progress to be implemented in all county councils and regions, but the adoption is affected by local circumstances (12). According to Rogers (5) CHC-nurses could be in different stages in the adoption process of a web-based RHB. They have varied experiences, perceptions and needs, valuable to study to deepen the knowledge of how an ICT-based CPG best can be a useful support in CHC.

The aim of this study was to examine CHC-nurses´ use and ways of understanding the web-based national guidelines for CHC, RHB.

Methods

Study design

A mixed methods study with a sequential explanatory design in two phases was conducted following four procedural steps (16). A web- survey (17) was conducted in the first quantitative phase to get an overall picture of CHC-nurse's use and experiences of RHB, analyzed with descriptive statistics. In phase two, based on the results in phase one, a qualitative interview guide was constructed for telephone interviews, analysed with a phenomenographic approach (18). The qualitative results were used to explain the quantitative results in more depth for the purpose of complementarity (16).

Phase one- the web- survey

As a first step an information letter with an invitation to participate and a link to a web- survey was sent to 95 CHC-nurses (Figure 1) representing 20 of 21 county councils/regions in Sweden. They participated in a former study of RHB (13) and left their consent to be invited for a new study. 70 of the CHC-nurses were still working in CHC and 46 of them, from 15 county councils/regions, responded the web- survey after three reminders. A web questionnaire (17), created in the online survey tool Textalk Web Survey (Textalk AB, Mölndal, Sweden) was used. The questionnaire contained 16 questions with structured response options, including single, multiple choice and scale questions (17). It consisted of five parts: sociodemographic and clinical characteristics of CHC-nurses, their use and accessibility of RHB, experience of support and usability as well as development areas to improve RHB. Several questions in the questionnaire were taken or based on a website usability measurement instrument (19) , which strengthen the construct validity. The pilot test identified weaknesses and provided critical reflections which required minor changes in the questionnaire to strengthen the validity. Each questionnaire was coded with an identification number. The web survey was conducted during four months in 2017. It was analysed in Textalk Web Survey and Microsoft Excel using descriptive statistic with proportion analysis and crosstabs (20).

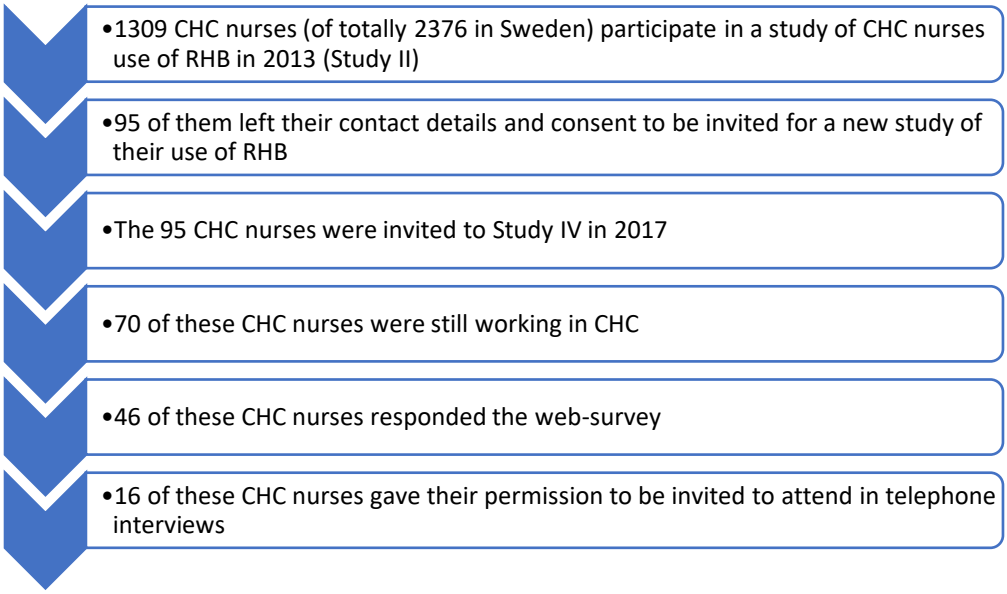

Figure 1. The sampling procedure.

Phase two- the telephone interviews

Semi-structured interviews with open-ended questions, a common data collection method in sequential explanatory design and in phenomenographic research (16, 18), was chosen to get insight in CHC-nurses varied ways of understanding RHB. In the web survey the respondents gave their contact details and permission to be invited to a follow-up telephone interview, which 16 CHC-nurses did. All invited nurses gave consent to participate. They represented different county councils/regions, had different background variables and could thereby contribute to a rich and varied picture of experiences and understandings of RHB. Unfortunately, one of the interviews couldn't be used due to a technical error during recording. In the second step the web survey result was used to create a semi-structured interview guide [21] including open questions about the CHC-nurses´ perceptions of the use of RHB in everyday work, RHB as a web-based guide, requests for support, opportunity to influence RHB and wishes of improvements. A pilot test of the interview guide and the technological equipment led to minor changes. In the third step the telephone interviews were carried out in between 16–40 minutes with a median of 26 minutes. They were conducted two months after the web survey, were audio-taped and thereafter verbatim transcribed.

Phenomenographic analysis (18) was chosen in phase two as the focus was to describe variations in how CHC-nurses perceive and understand RHB. Phenomenography are based on the assumption that a phenomenon can be understood by a group of people in a limited number of ways and each way of understanding expressing the relation between the subject and the phenomenon (18). The analysis was carried out according to the procedure of Larsson and Holmström (22). Each interview transcript was read and re- read to get an overall impression of the data. Preliminary descriptions of each respondent ways to perceive and understand RHB was marked and summarized. Thereafter the preliminary descriptions from all respondents were compiled, re-read and compared on similarities and differences. Similar statements were grouped into preliminary descriptive categories after a comparison to establish the boarders between them. To strengthen the credibility and transparency an overview (Table 1) of the phenomenographic analysis with regard to categories, statements and participating CHC-nurses are presented as well as direct quotes from the interviews. Finally, five descriptive categories emerged which constituted an outcome space (22) (Figure 2), which depicts the categories and the internal relationship between them. All authors had access to the data and were involved in the analysis process to reduce the risk of subjectivity. Findings in every step of the analysis were discussed and reflected by two of the authors to find consensus.

Table 1. Overview of phenomenographic analysis with regard to categories, statements, and participating CHC nurses (n=15)

Categories of descriptions and perceptions	No. of statements	Participants id-numbers
A tool that must be useful and relevant		
• Content that meets user needs	11	1, 3, 6, 10, 13–15
• Obtain the users views	10	1-2, 5, 7-8, 10, 13-15
• Develop and use of the possibilities with ICT	38	2-3, 5-15
A resource that must be reliable		
• Feel confident	9	1, 4, 6, 9, 11,13, 15
• Keep updated with current recommendations	16	1, 3, 8–11, 14–15
A resource for learning		
• Own learning	34	2, 4-5, 7-8, 10-15
• Supporting others learning	32	1–2, 4, 6, 9, 11, 13
• Learning together	8	3, 6–14
A tool in everyday work		
• Practice of use	28	2, 4-5, 7-8, 10-15
• Changes of use	9	1–2, 4, 6, 9, 11, 13
• Time aspects	15	3, 6–14
Contributing determinant to an equal CHC		
• National equivalence	15	1, 3, 7-11,13-15
• Regional differences	9	3, 5, 8-9, 14-15

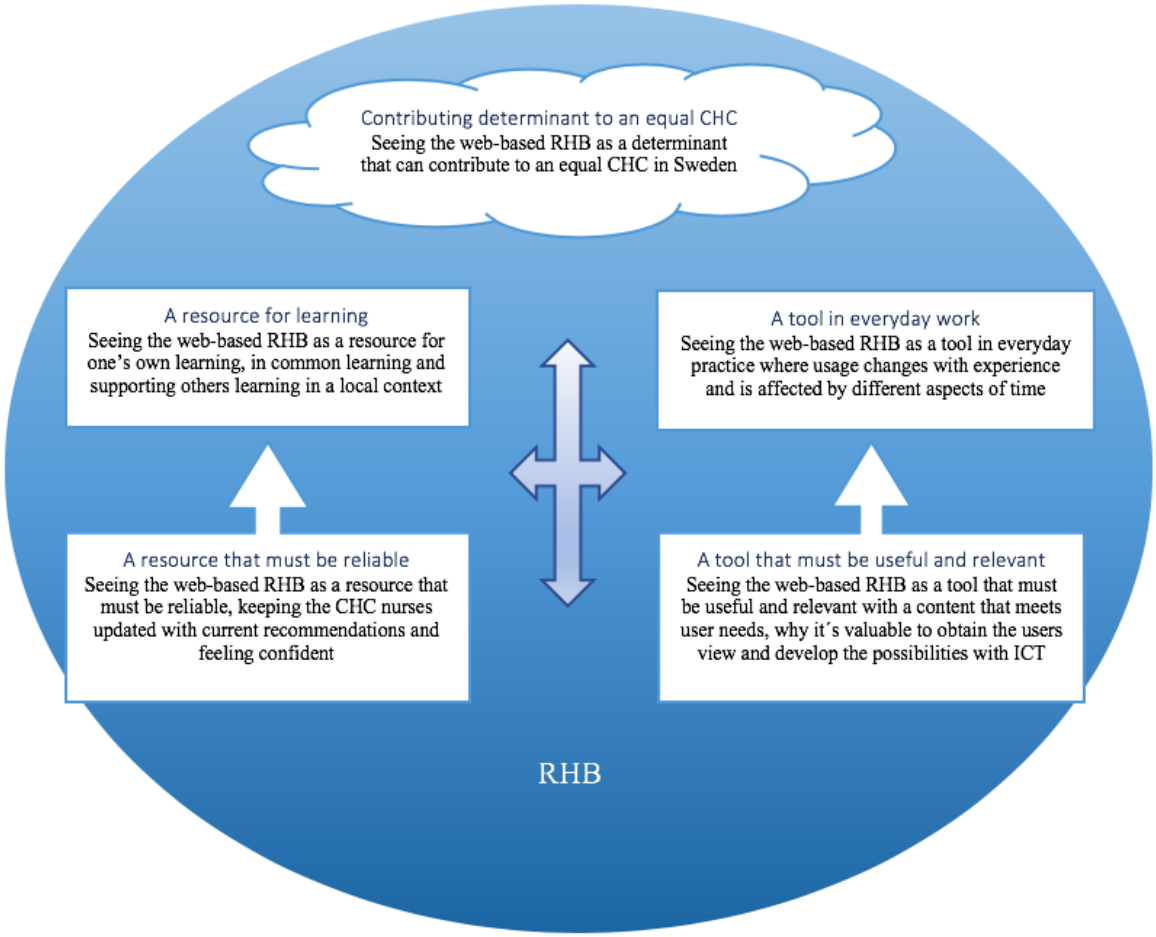

Figure 2. The outcome space- ways of understanding RHB among CHC-nurses.

Ethical considerations

The study was conducted in accordance with the ethical principles for the humanities and social science [23]. Basic ethical requirements for individual protection; information requirements, consent requirements, confidentiality and use requirements were considered. Before both phases in the study the participants received a letter with information about the study, confirming confidentiality and voluntary participation, which could be terminated at any time. Informed consent was obtained for each phase of the study separately. Before the interview started, the information was repeated, and the participant was asked for consent. An ethical self-evaluation was made, and an advisory statement was obtained from the Ethical Review Committee of the Southeast for the two different phases in the study (Dnr. EPK 442–2017, Dnr. EPK 451–2017).

Results

Phase one- the web survey

The questionnaire was answered by 46 CHC-nurses, from16 of 21 county councils/regions, a response rate of 66%. Only one of the respondents was male thus, no comparison between the sexes was made. A majority, 72%, of the respondents belongs to the age groups 31–60 and their experiences as a CHC-nurse ranged from less than 5 years to more than 20 years. 57% of the respondents stated that the national CHC-program was totally implemented in their county council/region, 39% that it was partially implemented and 4% did not know. RHB was used via computer by all the CHC-nurses in varying frequencies; several times a week to

several times per day (65%), several times a month to once a week (26%), once a month or less (9%). RHB was used via smartphone once a month or less of 26% of the CHC-nurses. 74% of the CHC-nurses had no access to smartphones via their employer and 22% used their own private smartphone in work. There was no significant difference in usage frequency or use of technical devices between age groups or groups of experience.

The result showed that most of the respondents were satisfied with RHB´s usability, content and design (table 2). Almost all, 46 respondents (93%), felt that they could trust that the content. Fewer CHC-nurses, 31 (67 %), considered that RHB contained needed information and 11 (24 %), considered the structure was difficult to overlook. The questions about development and improvements (table 3) showed that the CHC-nurses considered that RHB need to develop information about new research relevant to CHC and different support for learning. Search ability and the interactivity were also factors considered in need of development to improve RHB. Nearly half of the CHC-nurses considered that they need access to RHB via smartphones at work as well as time allocated at work to use RHB.

Table 2. CHC-nurses' satisfaction with usability, content and design of RHB

Satisfaction with usability, content and design	Agree completely or largely (n= 46), % (n)
RHB almost always contain the information that is needed	67 (31)
Technical assistance is needed to use RHB	11 (5)
RHB is likeable	83 (38)
There are things that are not consistent in RHB	13 (6)
RHB is designed so the content is easy to access	65 (30)
It is difficult to find requested information	26 (12)
Trust that the information on RHB is correct	93 (43)
The structure is difficult to overlook	24 (11)
The information is pedagogical and easy to interpret	78 (36)
RHB should be more interactive (such as movies, animations, pop-ups, audio, music)	44 (20)
Overall, satisfied with RHB	70 (32)

Table 3. Factors considered by CHC-nurses need to be developed to improve RHB

Factors at RHB	Considered have needs or large needs of development (n=46) % (n)
Website search function	63 (29)
Website interactivity (such as movies, animations, pop-ups, audio, music)	50 (23)
Information about new research relevant to CHC	59 (27)
E-learning	57 (26)
Pedagogical materials	70 (32)

Phase two- the telephone interviews

In the phenomenographic analysis five different ways of understanding RHB were identified among the CHC-nurses: as a tool that must be useful and relevant, as a resource that must be reliable, as a resource for learning, as a tool in everyday work, and as a contributing determinant to an equal CHC (figure 2). The CHC-nurses' variations of understanding RHB are presented in the outcome space in how they are related to each other; prerequisites that is needed for using RHB, how it is used in learning and in everyday work in a local

context, and as a contributing determinant in a national context. All descriptive categories interact with each other and together they give variations of understanding RHB as a unit.

A tool that must be useful and relevant

Content that meets user needs, to obtain the users views and to develop and use the possibilities with ICT was seen as important for a useful and relevant tool, focus in this category of understanding. Nurses with this way of understandings considered that the content must cover the complexity in CHC from situations in everyday work as well as in more rarely situations. They perceived that RHB needs to be regularly evaluated and developed in dialogues with the CHC-nurse´s so it is relevant and useful for them. This is proposed to be done through surveys, reference groups, mail, web-meetings and via the county councils MCHCUs. *"Dialogue is important… Our work is changing…There should be time allocated for those who work with RHB to meet us and discuss thoughts and ideas… We are working at the CHC-centre and meet current issues" (1).*

The understanding forming this category was that RHB as a web-based solution create opportunities that could not be possible if the CPG was printed. Some criticism emerged that the web-site structure was similar to a traditional book, with long sections of text, which could make it difficult to find information. Better use of the possibilities with ICT in the design was suggested to improve RHB. Even if the technique could pose challenges, nurses with these ways of understanding perceived that ICT is necessary to accept and learn. A prerequisite for using RHB was that the structure and search function make it easy to find timely information. Links directly from the medical journal to relevant information was suggested to make RHB more accessible and useful. Lack of access to technical devices as smartphones and tablets on work affected the usage and RHB was mainly used via computer at CHC-centre and to a lesser extent at house calls.

A resource that must be reliable

To feel confident and to be kept updated with current recommendations was important prerequisites for using RHB, described in this category of understanding. Instead, as before, asking colleagues or random search on Google, RHB was seen as a resource that could offer information based on evidence and proven experience. It was expressed that that the content must complies with the authorities and followed changes in the national CHC-program. If something in the content was found wrong or wasn't updated, the confidence was lost, and information was search from other websites instead. To be assured that the information is updated with new references and dates was perceived as important for credibility.*" Articles, new knowledge… That the content is updated. It is necessary. That you can feel that you can trust it. That you dare trust it" (9).*

A resource for learning

Different kind of learning was focus in this category of understandings; own learning, learning together, learning of others. This category proved to be the strongest with the most numbers of statements. RHB was understood as a resource, together with the MCHCUs, for new knowledge, to get old knowledge confirmed and to get methodological support. Access to methodological guidance related to a specific health visit in the national CHC-program, in-depth knowledge on specific topics and information about new research was expected of respondents with this way of understandings. RHB was used, read and discussed together with colleagues in a common learning, in learning of students and new colleagues and to show managers the complexity of CHC. It was also used as a second opinion to reflect on together with families. Making RHB more interactive with photos, audio recording, movies, webinars and discussion forum for learning was suggested to improve it in this category of understandings. *"In many CHC-centres you are not allowed to*

participate in so much education. And I think if there were webinars and e-learning on RHB…introduction-course and information about conferences... I mean, everything is recording and available at YouTube today. You should access this via RHB. It would be the future for RHB (15).

A tool in everyday work

Focus in this category was the ways of understanding RHB as a tool in everyday work; the practice of use, different aspects of time, and changes of use. RHB was used in practice before a meeting with a family at the CHC-centre or a house call, during and after the health visits, in telephone consulting and in parent groups. Different aspects of time were shown affected the use of RHB in everyday work; lack of time to use it, as the managements and the own responsibility to allocate time. RHB was seen as a "time saver" as it is web-based and not printed and the importance to fast find requested information, when it is needed, was highlighted. Nurses with this way of understanding described how the usage of RHB was changing with increasing time in the profession. As a novice, RHB was used frequently in everyday work while with more experience it was used more seldom on unusual issues and to read about up-dates and new research. Respondents with this way of understanding considered that content must meet both novice´s and experienced CHC-nurse´s needs. *"I used it more when I was novice, then I do today. When I was new I used it almost before every health visit… Now I don't use it at the same way, but still frequently. Now I know what I shall do, I have it in my head. Now I use it when I want to check up special issues, to read about changes or to show anyone else" (2).*

A contributing determinant to an equal CHC

Focus in this category was the ways of understanding RHB as a contributing determinant to a national equivalence and to reduce regional differences in CHC. The fact that the national CHC-program, knowledge and methodological guidance are embedded at RHB was seen as important to reach an equal CHC in Sweden. Information aimed to CHC-personnel on many different websites, as authorities and county councils/regions own websites, was considered confusing especially if they were contradictory to the content on RHB. The links from RHB to county councils/regions own websites was perceived of CHC-nurses with this way of understanding, as contributing with valuable local information and material but also to unequal CHC. It was suggested that the regional documents would be as few as possible and their content should be considered to be national if they were relevant in all county councils/regions. *"Sometimes we have different routines in our county councils and it is important that there not are too many. They can´t take over so all have own routines even though we have RHB. Then there may be times when it is needed, but the aim must be that it should be coherent for the country". (8)*

Integration of phase one and phase two

In the fourth step in the explanatory design procedure (16), the results from the web survey and the telephone interviews were summarized in what ways the qualitative findings with variations of understanding help to explain and complete the quantitative result. In the web survey, 67 % of the CHC-nurses agreed completely or largely with the assertion that RHB always contain the information they need. The interviews solidified that RHB must be useful and relevant for the CHC-nurses in their work, with the content they need, thus they require to be involved in development and improvement of RHB. Even if two third of the respondents in the web survey agreed completely or largely with the assertion that RHB is designed so the content is easy to access, CHC-nurses varied ways of understanding RHB revealed dissatisfaction with structure and design, suggesting better use of the possibilities with ICT to improve RHB.

Almost all CHC-nurses in the web survey considered that they trust the information on RHB. The collective way of understanding RHB as a resource that must be reliable confirmed these statements and the importance of being able to rely on that RHB is kept updated with current recommendations and based on evidence and proven experiences. More than half of the respondents in the web survey considered that information about new research was needed to be developed on RHB, and it also showed requests of a more interactive RHB for learning. The telephone interviews revealed an understanding of learning as a significant part of CHC-nurses work and their expectations on RHB as a resource for continuing learning.

The web-survey showed that RHB was used in different extent by CHC-nurses in the county councils/regions, but any differences could not be seen between the age groups or groups of experiences. It also pointed out CHC-nurses desire for time allocated for using RHB at work. In the interviews the collective way of understanding RHB as a tool in everyday work, reviled how CHC-nurses use of RHB is changing over time with increased experience. CHC-nurses with this way of understanding perceive that a shared responsibility with the manager and themselves is needed to allocate time to use RHB. RHB as a “time-saver” was also revealed in the interviews depending on that it is web-based and not in print. The web-survey showed that there are still regional differences in Swedish CHC, but the collective way of understanding RHB as a determinant to an equal CHC, revealed an intention to reduce these.

Discussion

The aim of this mixed method study was to examine CHC-nurses use and ways of understanding RHB. The result from phase one showed an overall picture of the CHC-nurses use of RHB while phase two revealed variations of ways to understand RHB in more depth. The outcome space showed the complex view of use and ways of understanding the unit RHB and how the different categories interact with each other. Learning and development appears in relation to all categories. These is needed to be aware of then it means that it is not possible to only make differences and development in one of the categories without affecting the others. Changing the content, structure and access on RHB is not enough, the prerequisites in the local context for CHC-nurses to use it must exist, and only then RHB can be a contributing determinant to an equal CHC. The importance of strong anchorage, facilitating factors and intermediate actors in the local context when implementing web-based guidelines is clear (3,4,5,12). It was emphasized that the content in RHB must cover the complexity in CHC and therefore CHC-nurses request for dialogue and participation in the development of RHB, a prerequisite for making the web-based guidelines useful and relevant for them. The result is consistent with previous studies (3, 5), showing that nurses must have an active role in development and implementation process of web- based guidelines for successful adoption. Therefore, in further development of RHB it is essential to pay attention on how the CHC-nurses best can be involved in the process to improve the web-based guidelines.

The CHC-nurses almost always used RHB via their desktop at the CHC-centre. RHB was more seldom used via other technical devices as smartphones and tablets meant that RHB was used to a lesser extent at house calls. The result differs from studies showing that the most common way to access internet in Sweden, 2017, was via smartphones (24) and the use of smartphones in healthcare has generally increased (25), thus it provides a mobile, easily accessible and effective method of delivering evidence practice recommendations (26). Access to RHB via smartphone can enable CHC-nurses to use their guidelines even if the desktop is not available for example in parent groups and at house calls. A possible consequence of having no smartphone at work is that CHC-nurses cannot reach needed methodological and knowledge support and fully do their work as ICT-tools are necessary and unavoidable in providing accessible and safe health care (10, 27).

Technical devices used and managed in optimal way has shown improve nurses working conditions and save time (10). The use of RHB was stated to save time for CHC-nurses, but time allocated as a supportive factor for using RHB was also emerged. Access to electronic resources, a supportive environment, management engagement and support are key components for successful implementation of web-based guidelines (3, 5). Even if national decisions and policy's as the Swedish National Strategy for e-Health (27), states the need for healthcare personnel to have access to well-functioning electronic decision support, changes must be made in the local context to make differences for the CHC-nurses in their everyday work.

The CHC-nurses' collective understanding of RHB as a resource for learning complies with earlier studies of CHC-nurses use of RHB (12,15) where access to research, pedagogical materials, instructional videos, discussion forums and e-learning were suggested as improvements of RHB. According to the Swedish Society of Nursing (6), CHC-nurses should be able to conduct education to individuals and groups of parents, students and colleagues. Therefore, it is necessary to create local conditions for nurses to conduct such education. ICT can be utilized for teaching and learning in different ways and create opportunities for flexible, efficient, learning in healthcare and offer a time-and cost-effective alternative method of education, (28, 29). ICT has shown support nurses continuing learning and professional development (10). The CHC-nurses needs and requests of learning and the role of RHB to improve the use of existing knowledge and to facilitate more effective acquisition of new knowledge need to be reflect on in further development of RHB.

An overall category was RHB as a contributing determinant to an equal CHC and national equivalence. The interviews revealed varied ways of understanding the value of the county councils/regions own websites and regional differences. They can contribute with local information but was also considered to led to unequal CHC. Tell et.al 2018 (12), emerged CHC-coordinators ambivalence about parts in the new CHC-program and to shutting down their local guidelines in favour of RHB. As the MCHCUs has shown to be the most commonly used source of knowledge and methodological guidance for CHC-nurse´s work (15) and are important facilitators in the implementation of the unit RHB (12) these are dilemmas needed to struggle with in county councils/regions. According to Wallby (14) varied interventions are needed to get an equitable CHC but they must not be at the expense of universal efforts. He also stresses the importance of clear national guidelines to ensure universal, selective and indicated interventions in CHC. (14). As ICT-based guidelines aims to reduce variability in practice (8-9) this knowledge is valuable to consider in the development of RHB, how to match professional consensus and needs and how RHB best can contribute to both an equal and equitable CHC (11, 14).

This study was conducted as a mixed method study. According to Creswell (16) a combination of two methods could provide a better understanding than a singular method can, strengthening each study and minimizing the weaknesses. A limitation of the study is that the questionnaire was answered by 46 CHC-nurses, a too small sample for making conclusions from statistical analyses or generalize the result. The nurses were all those who had given their consent to be invited, which could be seen as a weakness, as it did not become a randomized sample. 15 telephone interviews were made in this study. According to Larsson and Knutsson-Holmström (22), 20 participants are sufficient to identify different perceptions of phenomena. Thus, a strength is that the CHC-nurses represented all health care regions, have used RHB since at least 2013, worked during the implementation of the new national CHC-program which give a broad view of experiences. The interviews were rich and gave a varied picture of experiences of RHB. The use of purposeful sampling is common in explanatory studies, to show the range of different perspectives in a group of people (16). It is not claimed that the findings can be applied to CHC-nurses in general but the variation of ways to

understand RHB in a group of CHC-nurses. As CHC-nurses in Sweden have heterogeneous education and quit the same working context it might increase the transferability of findings to similar contexts. The main author has 12 years of experience as a CHC-coordinator, which includes involvement in the editorial board at RHB, which could be both a strength and a challenge in the research process. To ensure trustworthiness, every step in the study was discussed and reviewed by the three other authors.

Conclusions

The study, with both a web-survey and telephone interviews, contribute with deeper knowledge of CHC-nurses´ use and ways of understanding the unit RHB whose varied parts interact with each other. To be reliable, useful and relevant for nurses in their context, RHB must be kept updated and involve the end-users in the development process. Access to technical devices and optimal use of the possibilities with ICT, the national web-based RHB can be a resource for continuing learning and a tool in everyday work and an essential contributing determinant to an equal CHC. The study contributes with valuable knowledge when designing web-based guidelines for healthcare, making it useful and relevant for whom it is intended to serve. Further studies of how the varied categories of RHB could be developed to improve and strengthen the unit RHB and contribute to an equal and equitable CHC, and evidence- based practice, are suggested.

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