Conceptualisation and Content Design of the PflegeWiki. A Knowledge Platform for Caregivers in Germany

Kathrin EBERTSCH[a][1], Lisa DAUFRATSHOFER[a], Sabrina TILMES[a], Ann-Kathrin WAIBEL[b], Anna ROTHENHAEUSLER[b], Walter SWOBODA[b] and Andreas MAHLER[a]

[a] *University Hospital, Augsburg, GERMANY*
[b] *University of Applied Science, Neu-Ulm, GERMANY*

Abstract. The demand for knowledge in nursing has increased due to new care requirements, but there's a lack of suitable digital knowledge platforms. For this reason, the PflegeWiki is being developed as part of the CARE REGIO collaborative project in Germany. It provides care-related content for nursing professionals, trainees in the nursing professions, students and informal caregivers in Germany. The following paper aims to establish a standardized procedure for the development of a wiki and its content. Based on a target group specific quantitative online survey and literature research, the content and design of the PflegeWiki as well as an evaluation procedure for the contributions were identified. Relevant content is generated by external authors as well as the project team itself. All submissions are evaluated by an editorial committee based on evaluation criteria. The PflegeWiki could provide a platform for the acquisition of knowledge in order to support everyday care.

Keywords. Knowledge platform, evidence-based care, informal caregivers, professional caregivers

1. Introduction

The need for knowledge on nursing topics has increased due to the many new requirements for nursing care [1]. Evidence-based care is an important point here as it is essential for nursing practice and correlates with a high quality of care an patient safety [2,3]. However, paid services, uncertainty about the reliability of sources and high time expenditure are reasons for dissatisfaction when searching nursing relevant information [4]. This means there is no suitable digital knowledge platforms in which evidence-based nursing knowledge is gathered. A wiki is one way of providing reliable information at a low-threshold [5]. Studies confirm the potential of wikis in terms of faster research results, improved clinical evidence and increased satisfaction [6,7,8]. To close this gap, a German online platform called PflegeWiki (https://wiki.care-regio.de) is being developed as one part of the CARE REGIO joint project, which is funded by the Bavarian State Ministry for Health, Care and Prevention. In close cooperation with Neu-Ulm University of Applied Sciences (HNU), Augsburg University Hospital (UKA) is playing

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[1] Corresponding Author: Kathrin Ebertsch, kathrin.ebertsch@care-regio.de

a leading role in the development of the PflegeWiki. The target groups are informal and professional caregivers, trainees and students. As there is no scientific knowledge about how such a platform for evidence-based care should be realised, the goal of the study was to establish a standardized procedure for the development of a Wiki and to make it accessible to others. This included identifying the desired content, structure and didactics, especially formats and topics, as well as the way in which the contributions should be created. In addition, relevant content had to be acquired, reviewed and published on the PflegeWiki to provide accessible, reliable infomation. To ensure that the content is evidence-based, a review process and evaluation criteria needed to be developed for reviewing contributions. In order to ensure long-term successful utilization, the needs of the target groups were focused on in this research project. An evaluation of the PflegeWiki was not part of the study.

2. Methods

The methods for developing the PflegeWiki are summarized in Figure 1 and described in this chapter.
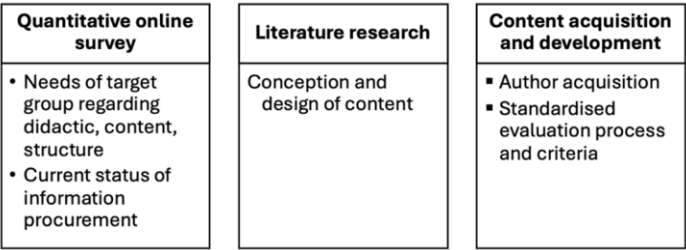

Figure 1. Overview of the methods used to develop the PflegeWiki (own illustration)

2.1. Quantitative online survey

A quantitative cross-sectional study was carried out before the start of development to ascertain the target group specific needs and wishes for an online care platform in terms of didactic, content and structure. In addition, the current status of the frequency and type of information procurement of the PflegeWiki's target groups as well as the origin of these information and satisfaction with it were identified to take this also into account in the development of the PflegeWiki. The questionnaire was constructed partly on the basis of literature-based knowledge and in iterative loops by the project team. The final survey instrument was divided into the areas of socio-demographic data, information gathering and the needs and wishes for the development of the PflegeWiki and contained open and closed questions. The answers were partly predefined and the four-point likert scale was used. In order to reach as many caregivers as possible, the quantitative research design was selected. The online survey targeted people of legal age who provide professional and/or informal care in Germany, regardless of the level of care required. The study population included also nursing students and trainees. Participation in the survey was called for via notices at Augsburg University Hospital and via e-mails to private and work-related contacts of the project team. The data were collected anonymously in the period from 15 May to 21 June 2021. A favourable ethics vote from

the GEHBA (202103-V-019) is available. After the survey, the data were analyzed with the statistical program IBM Statisticial Package for Social Sciences [4].

2.2. Literature research for the conception and design of the content

In addition, a literature research was conducted to find out how content should be written and designed in an understandable and simple way. For this purpose, various databases, in particular Google scholar, were used. Research was conducted using the keywords in German and English language on the topics "wording" ("simple", "low-threshold", "comprehensible", "expression"), "structure" ("text", "outline", "design", "information"), "model" ("approach", "criteria", "evaluation") which were combined with each other in various constellations.

2.3. Content acquisition and development

Contributions are generated both by the project team itself and by building up a network of authors with expertise in the care sector. The acquisition takes place by contacting universities and presenting the PflegeWiki in lectures, for example. The project is also demonstrated at various congresses where the submission of articles for the PflegeWiki is encouraged. It is possible to become an author directly via the PflegeWiki, i.e. articles or student research projects can be easily created. A process was developed for authors to submit articles to the PflegeWiki. In order to ensure the quality of the submitted contributions, a literature analysis was carried out with regard to standardised evaluation criteria.

3. Results

This chapter presents the results of the quantitative online survey as well as the conception and design of the content and the content acquisition and development.

3.1. Quantitative online survey

The results of the quantitative online survey, regarding the didactic form of content preparation, were that respondents (n=156) would like to see the following formats: practical examples (n=111), short summaries (n=101), instructional videos (n=96), evidence-based studies (n=80) and podcasts (n=49). With regard to the structure, layout and content of the PflegeWiki, respondents also asked among others for clarity (n=34), self-explanatory use with a search function (n=32), a structured layout (n=21), evidence-based content (n=15) and simple language (n=14). The desired topics with more than 70 mentions are listed as followed: communication (n=98), preventive measures (n=98), support during the last phase of life (n=88), wound care (n=87), prophylaxis in care (n=80), expert standards in care (n=78), working with probes and drains (n=74), mobility (n=74). In general, respondents obtain information from digital reference books and articles (n=147), analogue reference books (n=89), further education and training courses (n=78) and from their professional environment (n=75), among other sources. Professional caregivers get their information more frequently than informal caregivers. Reasons for dissatisfaction when searching for care-related information on the internet

are as follows: no accurate information (n=16) , problems in obtaining information (n=10), time-consuming research (n=7), uncertainty about the reliability of the information (n=6) and paid services (n=4) [4].

3.2. Literature research for the conception and design of the content

The literature research showed that there are few models for the conception and design of content for a wiki. The "Hamburger Verständlichkeitsmodell" (Hamburg model of comprehensibility) was selected, as it focusses on the comprehensibility of texts, which is an important point for the target group. It emphasizes to four characteristics: Firstly, texts must be formulated using short sentences, descriptive and familiar wording with an explanation of technical terms (linguistic simplicity). Secondly, a sensible sequence of information must be chosen so that a common thread is recognizable. Another important aspect is the division into sections and subheadings. Key content can be emphasized by highlighting relevant keywords (structure/order). Concise wording is also an important aspect. The length of the text must be suitable to the information content. Digression from the core of the topic must be avoided (brevity/conciseness). To arouse the reader's interest the fourth characteristic is to use literal speeches, rhetorical questions, examples and a varied design of the text passages is useful here [9]. Van Dijk also emphasizes that it is necessary to reduce information to the essentials. He refers to the three design principles: simplicity, openness and user activation [10].

3.3. Content acquisition and development

Contributions have been generated by the external network and by UKA experts. All newly submitted articles are reviewed and approved by an implemented editorial expert committee using a developed standardized evaluation criteria. For this purpose, a standardized evaluation form has been designed by the editorial board on the basis of the literature research and in collaboration with the nursing science department of the UKA to ensure the quality of the submitted contributions. 138 articles and thirteen podcasts have already been published on the PflegeWiki. Based on the topics requested by users, articles were published on subjects such as communication, preventive measures, wound care and more. Most of the desired articles have already been published on the PflegeWiki.

4. Discussion

The aim of the study was to establish a procedure for developing a PflegeWiki in terms of content, structure, didactics, content acquisition and evaluation of contributions. Various nursing topics were identified and prioritised through the survey, most of which are already published on the PflegeWiki and reviewed using a standardized evaluation criteria. The content was created by acquired authors on the basis of the "Hamburger Verständlichkeitsmodell" [9]. The limitations of the study are that the results of the online survey cannot be transferred to other countries, as it was conducted in Germany. There is also a selection bias on the respondents of the survey because it is to be expected that the digital affinity of the respondents is higher and that they are more likely to have different wishes regarding a wiki [4]. The standardised evaluation form and the guidelines for the conception and design of the contributions are more easily transferable

to other countries and sectors, as the literature research was also conducted with English keywords and independently of the topic of evidence-based nursing. In future, the various methods mentioned could be combined and a comprehensive literature research and survey could be carried out to make the development of such a knowledge platform more efficient.

5. Conclusion

The PflegeWiki was successfully developed on the basis of user needs and scientific literature regarding content, structure, design and content acquisition. It provides free access to reliable information on the care sector at a low-threshold. Nevertheless, it is necessary to adapt the content to the changing requirements in nursing care in order to ensure that the topics are up to date [1]. An evaluation at the end of the project will identify potential for improvement and show the extent to which the PflegeWiki is being used as well how it supports daily nursing care.

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