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Digital health literacy: What about the implementation of § 20k SGBV?

Summary

Background: Since 2019, the statutory health insurance funds (GKVn) have been obliged to promote the digital health literacy (dGK) of their insured persons according to § 20k SGB V. In view of an enormous variety of health information on the internet as well as new digital applications and procedures in health care, this obligation is becoming increasingly relevant.

Methodology: In order to answer the question to what extent the SHIs have implemented the legal obligation so far, an inventory was conducted. Competency-oriented dGK offers on the websites and YouTube channels of the SHIs were surveyed.

Results: The SHI providers offer a wide range of learning content on their websites and YouTube channels, which, however, often stands alone and does not always take into account all competence dimensions (knowledge, understanding, application, implementation). Learning success checks are rarely used. A possibility to critically reflect on current knowledge deficits does not exist to date.

Conclusion: The results suggest that there is a need to catch up in the implementation of dGK offers, especially with regard to the central findability and presentation of dGK offers including learning outcomes (added values), the integration of offers for self-reflection as well as encouraging learning success checks.

Schlüsselwörter

Digital health literacy, health literacy, statutory health insurances (SHI)

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With the introduction of the Digital Health Care Act (DVG) in 2019, the statutory health insurance funds (GKVn) have been given the legal mandate with §20k SGBV to offer their insureds ‚services to promote the self-determined health-oriented use of digital or telemedical applications and procedures'. The aim of the paragraph is to provide skills that enable the use of digital or telemedical applications and procedures. Every two years, the National Association of Health Insurance Funds (SpiBu) reports to the Federal Ministry of Health (BMG) on how and to what extent such measures have been implemented. In the first report (cut-off date 31.12.2021), it became clear that only 26% of SHI funds had developed or purchased such services (SpiBu 2021: 10). As early as 2018, the ‚National Health Literacy Action Plan' pointed out the enormous importance of promoting media literacy and the critical judgement of the population in dealing with digital health information (Schaeffer et al. 2018: 53). In this context, digital health literacy (dHC) includes people's knowledge, motivation and competences to find, understand, assess and apply relevant digital health information in different forms in order to make decisions about disease management, disease prevention and health promotion (Sørensen et al. 2012: 3). Although health literacy has improved since the beginning of the Covid 19 pandemic, the insured find it particularly difficult to assess (74.9%) and concretely apply health information (53.7%) (Schaeffer et al. 2021: 22 ff.). The central question is to what extent the SHI funds have implemented the legal obligation so far.

>> In order to survey the status quo (period July to mid-September 2022), the term ‚digital health literacy' (dGK) was specifically searched for on the websites of the GKVn (n = 97, SpiBu 2022) using the search function and the first and second search levels were taken into account. The search was validated by a Google check. Content was included that aimed to specifically promote dGK. General information (e.g. press releases) was not included.

Since many SHIs use social media platforms for competence promotion, an additional survey was conducted on the YouTube platform to gain a comprehensive insight into the existing learning content. The main YouTube channels of the SHIs were taken into account, not specific thematic channels (such as ‚TK-Presse & Politik').

In addition to the quantitative survey, a qualitative content analysis was carried out. For this purpose, rough categories were defined in order to categorise the content based on the online research and to quantify it.

Due to the low number of cases, the data was analysed descriptively. Community projects (e.g. www. gesund-digital.info) were not included in the analysis. Overall, it was possible to determine within the framework of the inventory that a total of 44 SHIs (45.5%) provide offers for the promotion of dGK on their homepage and/or YouTube channel.

- **Websites:** 16 of the 97 SHIs (16.5%) provide offers to increase dGK that can be found directly via the search functions from the perspective of the insured .
- **YouTube:** 41 of the 97 SHIs (42.3%) offer videos on increasing dGK through their YouTube channels .

Most of the content was targeted across populations. If target group-specific offers are initiated, they focus primarily on children and young people, parents, employees and employers, as well as older people and family caregivers (Fig. 1). Services aimed at migrants are a rarity. Only one SHI offers videos on the topic of dGK in English and Ukrainian on its YouTube channel.

Only a few dGK offers can be found quickly and centrally for insured persons on the websites of the SHI funds through a targeted search. Due to the medium, the situation is different on YouTube channels, where dGK topics are relatively easy to find. A systematic linking of the content (YouTube videos) is rarely carried out in order to use existing content sensibly in terms of resource-saving use of funds by the solidarity community.

With regard to the content, there are differences between the websites and the YouTube channels. While the YouTube channels tend to focus on digital process innovations (ePA, etc.) as well as negative side effects that can result from digitalisation for human health (e.g. social media addiction, media consumption among children and adolescents, cyberbullying, cyberchondria, body shaming), the homepages tend to concentrate on the topics of ePA, eGK, eRezept and digital prevention (Tab. 2).

Despite the high demand with regard to the ‚search for health information on the internet', which was identified in the study HLS-

GER 2 (Schaeffer et al. 2021), the SHIs currently seem to rather neglect this topic. On the internet pages, such content is predominantly presented in a text-based manner. There are also only a few explanatory videos on this important topic on the Youtube channels. Learning content related to the search for causes or symptoms of diseases in health portals is a rarity. In addition, many topics are viewed in isolation. For example, offers for the quality-related search of health-related information on the internet deal with the characteristics of serious and dubious sources, but the associated advantages (patient maturity, etc.) and disadvantages (cyberchondria, etc.) are not presented in an integrated way.

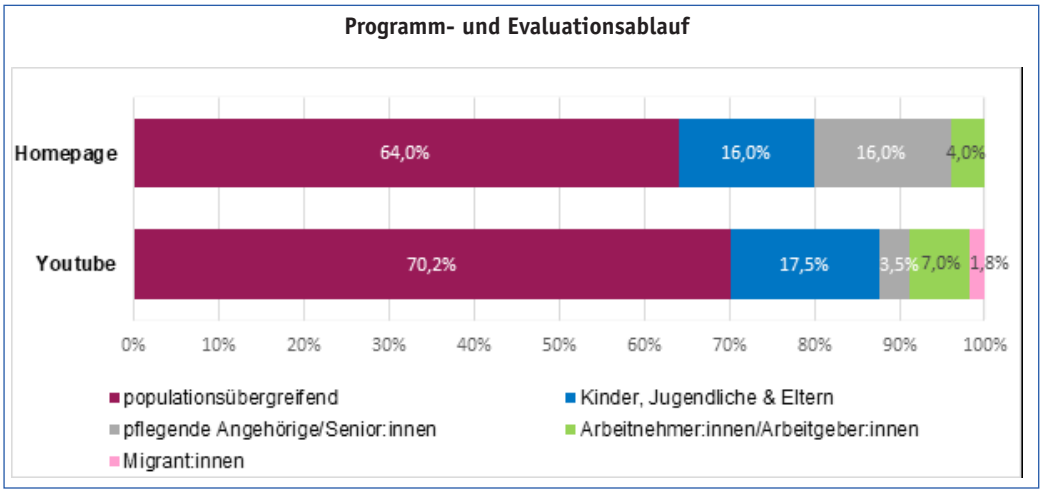


Fig 1: Percentage frequency of target group orientation. Own representation.

It is also noticeable that not all competence dimensions (knowledge, understanding, application, implementation) are addressed in the existing offers. A quantitative evaluation of the didactic media is not possible because the multiple use of personalised videos would lead to strong distortions. It became clear that text-based information often dominated on the internet pages. Interviews, podcasts and lectures are didactic media that were used least.

The qualitative analysis revealed for which different content-related purposes which didactic elements were used.

- **Animated explanatory videos:** Animated explanatory videos were used to present complex issues, contexts and processes in an easily understandable way. The knowledge transfer related in particular to the technical and associated procedural innovations of the health care system (e.g. eGK).

Ein- und Ausschlusskriterien.

	Einschlusskriterien	Ausschlusskriterien
Homepage	Angebote, die • mit der Suchfunktion der Homepage unter „digitale Gesundheitskompetenz“ identifiziert werden konnten und • eindeutig Wissens- oder Handlungskompetenzen vermitteln • Zeitraum: 18.08.2022 bis 15.09.2022	Angebote, die • nicht direkt durch die Stichworte „digitale Gesundheitskompetenz“ (1. und 2. Ebene) identifiziert werden konnten • keinen kompetenzvermittelnden Charakter aufwiesen (Pressemeldung etc.)
YouTube	Videos, die • sich im YouTube-Kanal befinden und • sich direkt, durch den Titel eindeutig ersichtlich, auf Themen im Bereich Gesundheit bzw. Gesundheitswesen und Digitalisierung beziehen und • eindeutig Wissens- oder Handlungskompetenzen vermitteln. • Zeitraum: 18.08.2022-13.09.2022	Videos, die • von Dritten erstellt und auf die verlinkt wird, • keinen Bezug zur Kompetenzbildung rund um die Themenbereiche Gesundheit bzw. Gesundheitswesen und Digitalisierung aufweisen, • die auf externe Videos verweisen oder • keinen kompetenzvermittelnden Charakter aufwiesen (z. B. reine Werbung)

Tab. 1: Inclusion and exclusion criteria.

- **Human explanation videos:** Human explanatory videos could not be clearly assigned to any topic area. The videos were performed by e.g. SHI employees or expert testimonials (e.g. Dr. Johannes Wimmer) in order to raise awareness and increase credibility.
- **Screen recordings:** Screen recordings with sound are used in particular to present websites (e.g. trustworthy health portals) and to explain the concrete use in dealing with them.
- **Lectures:** Recorded online lectures are a rarity and tend to be aimed at a specialist audience. Bookable online lectures (e.g. DAK startklar), which are offered, have the disadvantage that the insured persons are bound to fixed dates and must have technical equipment (e.g. microphone, camera). The advantage is the possibility to actively participate and to ask individual questions.
- **Interviews:** Interviews were used in the form of a critical discussion (dealing with social media etc.) as well as for experience-based information (e.g. benefits of digital health applications; DiGAs). Here, among other things, vicarious experiences of health laypersons are used to present personal experiences (e.g. with the use of health apps).
- **Podcasts and audio formats:** When podcasts are used, they often take the form of interviews on topics related to the use or decelerated use of digital media (e.g. Digital Detox). Up to now, audio formats have been very isolated, but in the future they could be used in modular offers to introduce topics, to present experience reports or to support visualisations (e.g. content classification or the explanation of procedures and processes). Podcasts are popular media that are used regardless of location (e.g. train, car). Such podcasts could be used in skills for voice assistants (Google Assistant, Amazon Alexa, etc.).
- **Text-based explanations (homepage):** Text-based explanations cannot be clearly assigned to any content-related topics and were used for overall clarification. It was noticeable that texts dominated and only few SHIs enriched them with visual elements (information graphics, illustrations, etc.) to enable brain-friendly learning. Visual elements with interaction elements (or click elements), where the insured must become active themselves, increase attention and promote motivation. Such interaction elements are rarely used so far. Moreover, visualisations are not set to music in order to facilitate the comprehensibility of the illustrations.

While most SHIs do not provide a central area for their compe-

Inhalte von Angeboten und Rangfolge		
Themen	**YouTube**	**Homepage**
Digitale Gesundheitskompetenz	5,7% (5)	6,2% (4)
Gesundheitsinformation im Internet	2,3% (2)	6,2% (4)
Digitalisierung im Gesundheitswesen	2,3% (2)	3,1% (2)
Elektronische Gesundheitskarte (eGK)	6,8% (6)	12,3% (8)
Elektronische Patientenakte (ePA)	42,0% (37)	16,9% (11)
Elektronisches Rezept (eRezept)	8,0% (7)	13,8% (9)
Medikamente aus Onlineapotheken	1,1% (1)	0,0% (0)
El. Arbeitsunfähigkeitsbeschreibung (eAU)	5,7% (5)	4,6% (3)
Elektronische Notfalldaten (eNFD)	0,0% (0)	1,5% (1)
Elektronischer Medikationsplan (eMP)	0,0% (0)	1,5% (1)
Digitale Medien und Gesundheit	10,3% (9)	6,2% (4)
Digitale Arbeit und Gesundheit	3,4% (3)	0,0% (0)
Digitale Prävention	9,2% (8)	13,8% (9)
Digitale Pflege	2,3% (2)	6,2% (4)
Telemedizin/Onlinesprechstunden	1,1% (1)	7,7% (5)
Anzahl Themenansprache	100,0% (88)	100,0% (65)

Tab. 2: Content of offerings and ranking. Own representation

tence-building content, four SHIs offer their own area with modular learning offers, in addition to the cooperation platform www.digital-gesund.info. Two offers were directed at their own insurance community (mhplus BKK: DiGi-Coach; TK: DisSK-Coach), while two offers are accessible to the general public (pronova BKK: digital mitreden; BKK mobil: digitales Gesundheitswesen). The learning objectives or learning outcomes are not precisely described in the existing offers with regard to the targeted competences. The personal benefit for the insured is therefore not recognisable at first glance. Also, not all competence dimensions (knowledge, understanding, application, implementation) are addressed in the offers. The possibility to critically reflect on the previously learned content with the help of a learning success check is currently only offered by two SHI providers (pronova BKK, BKK mobil), where the insured can pass or fail a quiz.

These differ depending on the timing of the learning success check, etc.:

1 Timing of the learning success check: in the case of the pronova BKK offer, the learning check takes place at the end of the overall module with a wide variety of learning content, while in the case of BKK mobil each sub-module ends with a quiz. It is known from the psychology of learning that immediate (i.e. as close to the time as possible) feedback has a positive effect on the motivation of the learner (Hattie 2014: 209 f.). Therefore, rather manageable and topic-related contents should be tested in order to enable direct learning reflection. It makes sense to implement smaller learning success checks at the end of a sub-module. Such learning success checks should be playful and low-threshold quizzes, as ‚tests' can sometimes evoke negative associations.

2 Content of learning outcome assessments: It is noticeable that not all dimensions ‚knowledge, understanding, application and implementation' were always tested. Also, the questions do not always refer to the topic area of the dGK and include, among other things, the query of abbreviations. Such learning success checks do not contribute to promoting independent actions of the insured through critical reflection in the future. Learning success checks should therefore not only take all dimensions into account, but also help to promote the transfer of what has been learned into everyday practice.

3 Number and form of learning success checks: The number of learning success checks varied according to the subject area and amounted to between two and five questions. The forms of the learning success checks also varied (e.g. multiple-choice questions, matching, marking, sequencing tasks, cloze tests).

4 Feedback: From the point of view of learning psychology, learning success checks should stimulate critical reflection and have an encouraging effect. Individual feedback on individual tasks as well as overall feedback are significant for the learning process and the continuation of the learning activity. Praise is an important motivator, but it should not be too general (e.g. ‚Right!'). Generalisations can have a negative effect on motivation because relevant information about one's own actions is missing. The learning success checks are currently partly very factual, feedbacks are very general and do not offer the insured, e.g. in the case of mistakes, any hints on how to improve their deficits. Simply pointing out mistakes is not pedagogically useful, as only encouraging results-oriented feedback with hints on solutions makes a positive learning experience possible (Jürg; Sandra 2021: 162). Feedback should be given regularly, e.g. after smaller learning units (Willert 2018: 5). As the type of feedback is important, feedback should be factual or criterion-referenced, understandable, benevolent, personal and not personally attacking (Willert 2018: 6). A positive example of result-oriented feedback is the interactive tool ‚CheckyourApp' by TK(tk-checkdieapp.de). In this knowledge test, young people receive supportive and encouraging feedback with result-oriented hints and reasons when test questions were not answered correctly.

So far, there are no possibilities on the websites of the GKVn for the insured to assess their current level of knowledge in advance with regard to the dGK themselves (subjective knowledge assessment) or/and to critically reflect on their current competence (objective knowledge reflection) in order to be able to specifically promote their competences on this basis.

Limitation

Despite the defined inclusion and exclusion criteria, the associated fluid areas between information and competence transfer and in view of the high dynamics, this snapshot can only provide a rough orientation of what is currently happening. Distortions result, for example, from the fact that many company health insurance funds (BKKn) refer to the same films (e.g. ePA), which have, however, been individualised and provided with the logo of the respective GKV. With regard to the media formats used, an additional qualitative analysis was carried out to gain insight into which topics were preferably implemented with which media formats. Due to the enormous comple-

xity and dynamics of the topic, it is not possible to provide an exact overview; nevertheless, the inventory analysis can provide assistance and suggestions for optimisation.

Conclusion and recommendations for action

The SpiBu has specified premises for development, which relate, for example, to target group-specific orientation, the comprehensibility of the methodological approach and the facilitated utilisation of disadvantaged groups (SpiBu 2020: 3f.), which should guide action. It can be assumed that compliance will be checked in the future, for example with the help of a dGK traffic light system (Merz et al. 2022: 39 ff.). The questionnaire from the SpiBu report on the status of the promotion of dGK (SpiBu, 2021: 19 ff.) also provides information on implementation.

Goals and target group should be clearly defined at the beginning. Newer pedagogical approaches advocate defining learning outcomes instead of learning objectives in order to take the learners' perspective more strongly and make the direct benefits visible.

While for some topics (e.g. eGK) a universal orientation makes sense, for other topics a precise addressing of target groups (e.g. age, health status) is appropriate. Lay and expert testimonials or vicarious experiences can also increase the experience of competence and self-efficacy through reflection on one's own experiences and sensitivities (Bandura 1997: 3 f.). Advantages as well as limitations in relation to one's own health should be presented in a layman's way.

The comprehensibility of the methodological approach results from the targeted competences, which are to be systematically increased through the use of sub-modules that build on each other. Depending on the intended learning outcome, different media (videos, animations, etc.) should be used. Learning success checks with encouraging feedback should be oriented towards the learning outcomes and selected according to whether, for example, it is a question of checking the knowledge of complex processes or the concrete use of digital applications and procedures in the health sector.

For disadvantaged target groups (e.g. older people, people with a migration background), take-up can be facilitated by orienting the offer towards the ‚weakest learner' and involving the target group in the development process. Knowledge should be able to be critically reflected in certain areas (knowledge, understanding, implementation, etc.). Easy-to-understand support in accessing services can be ensured through practical examples. Questions of understanding could be answered by accompanying learning elements (e.g. glossary, FAQs, chatbots).

Reference works (e.g. Wikipedia) are among the best-known and most frequent websites where health information is sought (Kolpatzik et al. 2020: 19). However, chatbots as learning companions are only as good as the database they are stored in.

Neutral references to characteristics as well as content-related, behavioural and technical limitations that are associated with the e.g. concrete use of digital applications and procedures (health apps, health portals, etc.) should not be limited to the presentation of negative consequences (cyberchondria, etc.), but should deliberately pick up on positive possibilities in order to promote personal responsibility and self-determination.

Disclosing the authors, editors and financiers can significantly increase the credibility and acceptance of the offer. It should be clear with whom (e.g. university, institute) and how the offer was developed. An interdisciplinary advisory board could help to critically reflect and improve the offer once or twice a year. <<

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Author's statement

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Zitationshinweis

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