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Experts´ Insights into eHealth-Legislation: Comparing Switzerland and Germany

Laura NAUMANN[a,1], Birgit BABITSCH[b] and Ursula HÜBNER[a]
[a] *Health Informatics Research Group, Hochschule Osnabrück, Germany*
[b] *Human Sciences, New Public Health, University Osnabrück, Germany*

Abstract. This prospective longitudinal study aims at better understanding eHealth success factors in different European nations, esp. the role of eHealth-legislation in Switzerland and Germany. Qualitative interviews with 39 matched experts from a large variety of institutions in both nations were conducted. The individual statements in the interviews and the overall satisfaction rating indicate a clear trend for a more optimistic attitude towards the law in Switzerland than in Germany. This result is not surprising given the history of a telematics infrastructure in Germany. Cross-country learning topics for German politicians are the inclusion of the in-patient sector and the focus on one major application. In a next step, interview results from Austria will be included and with that the scope of study findings enriched.

Keywords: Health care reform, eHealth, qualitative research, Switzerland, Germany

1. Introduction

Germany and Switzerland have adopted a new regulatory basis to foster nationwide eHealth in the last years. The Swiss EPDG ("*Elektronisches Patientendossier Gesetz*") is in force since 2017 [1], the German "*E-Health-Gesetz*" passed in December 2015 [2]. Although these initiatives pursue similar political goals (e.g. improving quality of care through better and faster information), the concepts for implementation differ (Table 1). For instance, while the Swiss approach concentrates on one application solely, the electronic patient dossier (*EPD*), and emphasizes the in-patient setting; the German law covers multiple elements, concentrating on the out-patient setting. Health policy plays a decisive role, the wider context contributes to the scale-up, spread and sustainability of new health-IT [3], such as do the involved players [4]. The design of policies in the field of eHealth (e.g. clear goals, with a useful framework, which leaves enough freedom) are considered important success factors for eHealth [5]. Contrasting different nations is a well-known method to reveal facilitators and barriers (see e.g. [5,6]). This prospective longitudinal study aims at better understanding success mechanisms in different European nations. Germany and Switzerland are two nations with different health care- and political systems and with a different history and approach to eHealth. Therefore, the research question at this stage of the investigations was: How is the current eHealth-legislation perceived by the variety of stakeholders in Germany and Switzerland?

[1] Corresponding Author, Laura Naumann, M.A., Hochschule Osnabrück, Caprivistraße 30a, 49076 Osnabrück, Germany; E-mail: l.naumann@hs-osnabrueck.de.

Table 1: Synopsis of the two eHealth-laws.

	***EPDG* [1]**	***E-Health Gesetz* [2]**
Applications	Electronic patient dossier (*EPD*) [in-patient care: implementation period of three resp. five years; voluntary participation of patients and out-patient health care provider (opt-in)]	Medication summary Telemedicine: e.g. x-ray councils Management of patient demographics Emergency data management Electronic patient record
Incentives	National, cantonal subsidies to create the necessary prerequisites for the *EPD*	Subsidy for sending/ receiving medical summaries electronically
Sanctions	Penalty in case of violation (e.g. unauthorized access to the *EPD*)	-1% of physician fee, in case the insurance data is not up to date
Interoperability	Legal obligation to certify, incl. which standards are to be used	Implementing an interoperability register

2. Methods

To address the research question a qualitative study design was chosen as it provides an in-depth understanding of the underlying mechanisms and values, and their complexity [7,8]. The first step was to identify relevant key players. A purposive sampling (using a snowball system) was applied targeting experts from different fields: health care provision (in-patient-, out-patient-care, nursing, telemedicine), industry (IT-provider, pharma industry), health care policy/ polity, and others (academia, data protection, patient organizations). For comparability between the Swiss and the German group a matching process was added. It was carried out with a focus on the professional background of each participant to obtain equal numbers of representatives in terms of specialty in both nations (Table 2). Potential experts were invited via E-Mail.

Table 2: Sample, matching, and data collection.

Sampling	**Switzerland**	**Germany**
Identified and contacted individuals	52	41
Response rate	36,5%	48,8%
Total number of participants	19	20
Matching		
Health care provision	10	10
Industry	4	4
Health care policy/ polity	3	3
Others	2	3
Data collection		
Interview period	12/2016-02/2017	06/2017-08/2017
Average interview duration	40min	38min

Both samples were nearly comparable regarding number of interviewees, background and interview duration. Initially, a preliminary interview guideline was developed: It was discussed with researchers of the field, tested with a selected group of experts of the field, pretested in a pilot, and modified accordingly. The resulting instrument was a structured interview guideline added by a few standardised questions covering: 1) the assessment of the national status quo, 2) country specific forces (potential barriers, facilitators), 3) the current, national eHealth-legislation, and 4) the prospective assessment of the development (expectations). Each expert was interviewed via telephone. All experts were asked to give their permission to record the conversation electronically. The audio material was transcribed. Afterwards, the experts were given the opportunity to review

the content. The collected material was analysed using *MAXQDA®*. A structured qualitative content analysis was carried out, starting with identifying categories openly and inductively, followed by a focused coding concentrating on the topic of eHealth-legislation [7,9]. Complementing the qualitative analysis, the standardized guideline questions were analysed descriptively.

3. Results

How and to what extent the eHealth-legislations were described by the experts indicates Figure 1. It shows the code-co-occurrence model resulting from the analysis for the Swiss and the German subsample, with the absolute number of coded interview segments as "facilitator", "barrier", "positive", "negative". The thickness of the lines between two codes marks how often these codes simultaneously appeared in the interviews. It demonstrates that the Swiss "*EPDG*" was classified as a "facilitator", "positive" more frequently compared to the German "*E-Health-Gesetz*". Though, there is a co-occurrence of "*E-Health-Gesetz*" and "facilitator" or "positive" in the German sample, the most frequent code overlap emerged for "*E-Health-Gesetz*" and "negative".

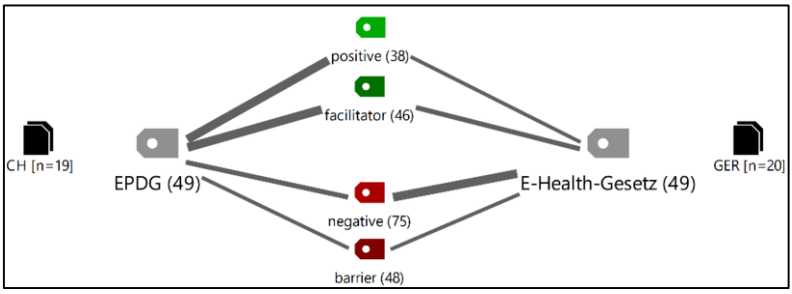

Figure 1: Code-co-occurrence model (*MAXQDA®*), assessment of the *EPDG* resp. *E-Health-Gesetz*. The thickness of the line between two codes indicates the frequency of the co-occurrence.

Many Swiss experts perceived the *EPDG* as a law that aimed at distinct objectives, e.g. efficiency or quality of care. Corresponding comments were made by 12 of the 19 Swiss experts. The perception of the *E-Health-Gesetz* varied and revealed an ambiguous perception among the German experts: 10 of the 20 experts named "political" goals, e.g. good publicity for the ministry of health. Often these perceptions were rather negative, e.g. politicking was implied. Distinct health care related objectives, e.g. quality of care, as named by the Swiss experts appeared only in 5 of the 20 German interviews. In addition, the experts were asked the standardized question: *On a scale from 1 to 10, how satisfied are you with the eHealth-legislation?* (1="not satisfied at all", 10="very satisfied"). The Swiss group showed a higher satisfaction with a median of CH=7 compared to GER=4.25 (Figure 2).

Despite these trends towards a more positive view of the Swiss experts, also multiple, highly differentiated perspectives emerged (Table 3). For instance, the Swiss *EPDG* was acknowledged for its possible harmonising effect (a); but it was also critized for its design focussing on the in-patient sector (b). Also, the German *E-Health-Gesetz* received partly positive appraisals recognising its attemps to promote transparency (c); yet, design flaws were mentioned due to the focus on the out-patient sector (d).

Table 3: Examples from the collected material (translated into English), all excerpts from different participants.

CH	**a)** *That is surely an important part or an important facilitator, looking at the EPDG; that something is developed, which can overcome the cantonal borders a little bit and bring about a certain degree of harmonisation.* **b)** *Regarding the legislative process, as you have seen with the Electronic Patient Dossier, how long it took us. And I think, one of the difficulties is, the way it had passed, there is only the mandatory participation for the hospitals, for the [out-patient] physicians and other health care professionals' participation, it remains voluntary. It protects the autonomy of individuals but inhibits a nationwide implementation.*
GER	**c)** *I believe, creating transparency (and the E-Health-Gesetz is a step forward with the interoperability register), creating transparency, it is surely something that should be demanded and promoted, because it offers all parties access to the market.* **d)** *We notice, the E-Health-Gesetz is concentrating solely on the out-patient sector, I don´t see a single application within the law, that has any connection with the in-patient sector. De facto, the in-patient sector does not take place in the law. And that with an innovation, which intends to break down borders offering opportunities to provide information beyond the borders of care. And we have zero incentives to do so.*

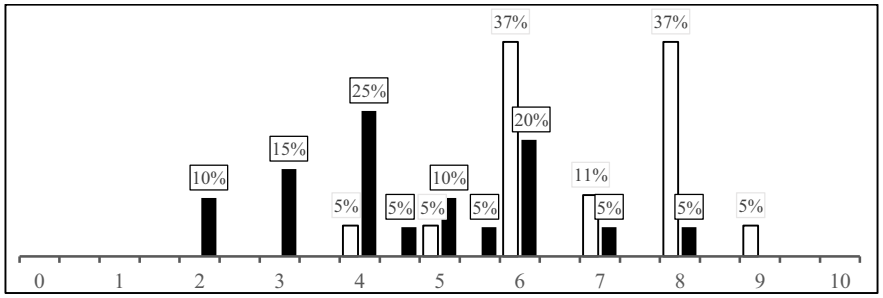

Figure 2: Satisfaction with the eHealth-legislation, 1="not satisfied at all", 10="very satisfied". Relative results, Swiss (n=19; white), German (n=20; black).

4. Discussion

This study compiled statements from two neighbouring nations on their view on eHealth-legislation. The individual statements in the interviews and the overall satisfaction rating indicate a clear trend for a more optimistic attitude towards the law in Switzerland than in Germany. The expert opinions and assessments in both samples are considering idiosyncrasies of their health care system as well as socio-cultural characteristics; therefore, the participants provided reflective, nuanced insights. In Germany, eHealth-legislation has a history dating back to the "Health Insurance Modernisation Act", which passed 2003 [10]. Yet, many expectations towards a health telematics infrastructure were not fulfilled [11]. This can explain the reserved attitude of the German interviewees towards the "new" attempt in terms of the *E-Health-Gesetz*. However, many other nations are facing similar challenges with eHealth and gained mixed experiences [6,12,13]. Therefore, it can be useful to listen to various voices. The combined analysis of the laws and the expert statements offered lessons and opportunities for consideration in German eHealth-legislation: 1) greater inclusion of the in-patient sector (as major IT-player), and 2) concentration on one key application, such as the *EPD* (focused, strategic approach). Due to the qualitative nature of this study, there are some limitations. However, this study explores a range of opinions of a diverse and relevant group of stakeholders. The matching process led to comparable groups, which is a major strength.

This part of the study is limited to Germany and Switzerland. However, interviews conducted in Austria are currently analysed to complete the picture in these neighbouring countries.

5. Conclusions

Although there are major differences between the Swiss and the German health care system, eHealth remains a highly complex topic in both nations. For health policy cross-country learning has a high potential by reflecting on the selected approaches and in pointing out available opportunities. While there is still need for further research, this study formalizes the approach and provides first contrasting findings.

6. Conflict of Interest

There are no competing interests.

7. Acknowledgements

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