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Record keeping by Swiss physiotherapists

A national survey of knowledge regarding legal requirements

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Summary

PURPOSE: A national survey conducted in Switzerland aimed to evaluate the knowledge of physiotherapists regarding the legal requirements for record keeping and to collect their feedback about record keeping in general.
METHOD: Three physiotherapists from various professional practice groups and a lawyer specialised in health law developed a questionnaire that was sent to the 7,753 members of two existing national associations of physiotherapists. The questionnaire evaluated the participants' knowledge by calculating a score of legal knowledge, which had a maximum of 30 points.
RESULTS: We included 825 questionnaires in the analysis. The large majority (83.4%) of participants confessed an ignorance of the legal requirements concerning record keeping prior to the survey. The average score of legal compatibility was 8 points. The younger age of the physiotherapists was a significant predictor of having knowledge of the legal requirements for record keeping ($p < 0.001$).
CONCLUSION: The participants had an appreciation of the value of records, but they did not have the relevant knowledge regarding the legal requirements for keeping records. The participants blamed a lack of time and remuneration for their failure to keep records according to known requirements.
RECOMMENDATION: All practising allied health professionals should keep up-to-date and accurate records that conform to active legal requirements and existing international guidelines. In addition to the existing legal requirements, the emergence of e-health and the electronic era will trigger major changes in patient record management by physiotherapists.

Keywords: *quality of health care; professional issues; medical records systems: computerised; practice management*

Introduction

Physiotherapy, allied health and nursing professionals are usually charged with the same legal requirements for record keeping [1]. In the Swiss legal system, these requirements are applicable to all health professions and are described in the cantonal law texts. Any analysis of the legal requirements for record keeping therefore concerns all of these professions. Furthermore, knowledge of existing requirements regarding record keeping by physiotherapists and allied health and nursing professionals is a necessary step in the development of electronic patient records in accordance with the existing national e-health projects in Switzerland and other countries [2–7].
A literature review of major health databases (MEDLINE, PEDro (complete database), The Cochrane Library Online (complete database), CINAHL, and EMBASE) between 2008 and 2010 and physiotherapy publications in Switzerland revealed an absence of research and information regarding record keeping and legal requirements. We found no evidence about the current conditions for record keeping, the use of records, or the content of records kept by physiotherapists in Switzerland. In foreign countries, only audit studies, screening for the quality of records but without reference to participants' knowledge of legal requirements, were identified in Australia, the UK, and South Africa [8–10]. Systematic reviews of global health databases also revealed a lack of available evidence regarding record keeping in international peer-reviewed literature in physiotherapy [11, 12].
Due to the differences between health professions and the specific contents of their records, and existing professional recommendations and legal requirements, the focus of this study was kept to physiotherapists. However, there is a real need for all health professionals to have access to information regarding legal requirements for record keeping, particularly in the context of court issues with patients. Having the relevant information and good communication are the best preventive measures for court issues. National associations may have access to relevant research and documentation, and they may provide information and prevention measures. The main source of legal references was cantonal and federal law, and we found a reference regarding a recent federal law about medical professionals actively practising since September 1, 2007 [13]. Finally, we recently published an overview of the legal requirements for record

keeping for allied health and nursing professionals in the major Swiss cantons [1].

The lack of specific guidelines provided by the Swiss physiotherapy associations for the clinical documentation of patients raised the issue of the knowledge of physiotherapists about legal requirements. Furthermore, the announced onset of e-health in Switzerland raised the issue of record management in general by active physiotherapists. We conducted a national survey of Swiss physiotherapists who were members of the two existing national associations. The survey aimed to collect their opinions regarding record-keeping issues, identify their record-keeping habits, and assess their knowledge about legal requirements using an innovative scoring method. The availability of data regarding gender, age, domain of activity, professional status, type of records kept, and region of activity enabled the calculation of relevant statistical correlations in relation to the knowledge scores of participants. This survey also contained other dimensions such as what content participants would find useful and what content they would systematically include in their records. These dimensions will not be treated in this article.

Methods

A questionnaire was sent in November 2008 to the 7,753 members of the two national associations of physiotherapists registered in Switzerland.

Preparation of the questionnaire

There are three major professional practice groups described in physiotherapy practise, musculoskeletal, neuromuscular and internal system/cardio-pulmonary, and each has distinctive training and operational outcome measures. Equally as important as professional status (independent versus employed), the consideration of these practice groups was essential for the understanding of potential differences in the results of the survey.

In Swiss law, as in the law of other countries such as the USA, judges can make reference to professional standards of care as part of their judgement before the sentence is given (art. 398 of the Federal Act on the Amendment of the Swiss Civil Code; Sentences of the Swiss Federal Supreme Court 119 II 456, 120 II 248, 133 III 121) [14, 15]. In practical terms, this means that professional standards mentioning the minimum requirements for the documentation of patients have a potential legal impact in terms of professional liability. Therefore, it should be understood that both professional and legal requirements have to be considered in the context of the standardisation of records. The legal framework clearly indicates to physiotherapists what elements should be in the clinical record, but neither tells them how to include these elements, nor how to write and store them.

Three physiotherapists from different professional practice groups (musculoskeletal, neurology, and internal systems) and a lawyer specialising in health law developed the questionnaire in French (see Appendix I). The questionnaire included closed-ended, general questions about the population of physiotherapists and open-ended questions that allowed participants some space to elaborate on record keeping. The questionnaire was translated from French to German and Italian to meet the three official language requirements for a national survey in Switzerland. For budgetary reasons, an inverse re-translation was not performed. However, a consistent testing of the questionnaire compensated for this potential weakness.

Preparation of the legal knowledge table

The questionnaire included a table with items reflecting generic content that represented the strongest active Swiss laws and available professional requirements at national and international levels [1, 16, 17]. The elaboration of the table was based on the existing legal texts at the federal and cantonal levels, the professional quality assurance criteria available from the two national associations registered in Switzerland, and the professional requirements for record keeping available from the World Confederation for Physical Therapy (WCPT) [16]. An expert physiotherapist and an expert lawyer elaborated a list of minimal contents including specific and generic items required by law and by the standards of care (cf. Appendix II). Based on this list, a table featuring items potentially contained in clinical records, some required and others not required by law or professional guidelines (cf table 1), was created for the questionnaire. A score based on a specific methodological process was created in order to evaluate a score of legal compatibility for the participants. In order to achieve this, the expert lawyer related each of the items in the table to the law and defined a legal compatibility score of 30 points out of 36 items based on legal requirements. Finally, 2 items not required in records and 3 false items, the inclusion of which in records would make no sense, were randomly inserted in the table to test the attention and consistency of the participants (cf. table 1).

Testing of the questionnaire

To limit translation bias and to test validity and internal coherence, testing of the questionnaire was organised in the 3 national languages. Content validity was ensured by the use of a relevant literature review, and the analysis of experts in physiotherapy and in law. However, for a full completion of content validity, testing of the questionnaire with an analysis of the results had to be conducted. The first objective of the testing was to ensure that participants throughout the country would understand the questions and the prompts in the same way. The second objective was to confirm that the data collected from the testers would match expected data. Overall, 12 people participated in the testing of the questionnaire and 9 completed the questionnaire and returned it for data analysis. Three bilingual physiotherapists tested the semantic coherence and understanding of each question for each of the 3 languages. Three non-physiotherapists tested the coherence and clarity of the text in the questionnaire for each language. A corrected version of the questionnaire was sent back to them until no more feedback was returned. Three physiotherapists who represented the 3 professional practice groups (n = 9) were involved in the completion testing of the questionnaire. Among these physiotherapists, 3 were native speakers of each language region, 6 were independent workers, and there were 3 physiotherapists representing each group of practice. The average

duration until completion for the testers was 17 minutes. The answers of testers were subject to a coherence testing across related questions. Finally, the data collected from the testers were confirmed to match the expected answers, and were all extracted to join the global analysis.

Sending of questionnaires

Due in part to the kind collaboration of the two national associations, the questionnaires and relevant information and instructions were printed and sent to their members along with customary mailings. A prepaid commercial envelope was attached to the questionnaire to ensure full anonymity and free participation. The participants were informed that they could agree to participate in the study by completing the questionnaire. The participants who did not want to participate could either not complete the questionnaire or include a comment of their intent not to participate in the survey.

The two national associations respected the independence of the study and asked their members to complete the questionnaire, which was sent without conditions or modifications. The anonymity of the authors of the study was preserved to limit potential bias. However, the University of Applied Sciences, Western Switzerland and the Physiotherapy Department were mentioned to the participants in the attached information letter. The address on the prepaid envelope was an anonymous post office box to allow a non-physiotherapist research collaborator to independently pick up the envelopes and process the data in case some of the participants' information appeared on the envelopes.

Data collection

The data capture process was coordinated in advance between the data analyst and the data capturer, both non-physiotherapists. In some circumstances (incoherence or contradiction between answers), the information was either considered missing and coded "-99" or was interpreted according to the available explanations in the open-ended questions or according to previous or consecutive answers.

Table 1: Overview of the 36 items included in the questionnaire.

Items in the records	False item	Compulsory	Apart
Treated area(s)		X	
Billing information		X	
Patient's details		X	
Profession, patient profile and family status, and leisure		X	
Referrer's details		X	
Insurance details		X	
Banking details of the patient	X		
Private documents brought by the patient			X
Patient's expectations		X	
Mailing with professional equipment resellers	X		
Body chart, description and intensity of patient's symptoms/functional assessment		X	
Patient history (present and past)		X	
Information about general health, medical tests, surgery, laboratory analysis, precautions and contraindications (treatment and medication)		X	
Personal notes taken by the therapist			X
Information regarding irrelevant people (e.g., relatives and friends)	X		
Pictures, films, or audiovisual records of the patients		X	
Outcome measures or results of the patient's assessment (e.g., angle, muscle power, muscle length, symptom evaluations, and qualitative assessments)		X	
Written clinical reports		X	
Information transmitted orally to third parties (e.g., relatives, other health professionals, insurance companies, social situations, and organisations)		X	
Correspondence with patients		X	
Correspondence with insurance		X	
Correspondence with referrers		X	
Medical diagnosis		X	
Physiotherapy diagnosis		X	
Type of treatments		X	
Symptoms, behaviour, or characteristics		X	
Patient evolution/indications of repeated measures over time/results of functional assessment or outcome measures		X	
Prognosis (related to physiotherapy management)		X	
Home exercise, self management instructions		X	
Date of achieved treatments		X	
Number of achieved treatments		X	
Results of qualitative validated questionnaires (SF-36…)		X	
Oral or written informed consent of the patient for therapeutic options		X	
Achieved descriptions (codes)		X	
Physical traces of abuse (children or elderly)		X	
Other			

This procedure was applied with the best possible judgement and objectivity.

Data analysis

Preliminary procedure

The data in the questionnaires were captured using Microsoft Excel™ and were transferred to SPSS 17 (SPSS Inc.) for analysis. Searches for missing data were executed for each variable to locate the correct values if the problem was due to a data capture error. Due to the structure of the questionnaire, answering some questions was necessary only when a positive answer was given to another question. Therefore, the rate of missing answers was high in some variables, but this did not create interpretation issues. No imputation was performed for real missing data; therefore, the numbers of participants varied slightly from one analysis to another. The coherence of the answers was also verified. A univariate analysis provided none of the information necessary to enable verification of the validity of the answers. However, because some variables were linked, some verification could be achieved, which led to the correction of several errors in the database. In particular, we verified the coherence between the answers among people who indicated that they used a computer for their professional activities and the uses of a computer described in another question.

Data weighting

The questionnaire was sent to the members of both Swiss associations without prior stratification, so the characteristics of the respondents were not necessarily representative of the characteristics of all the association members. Therefore, it was necessary to conduct a post-stratification analysis to consider socio-demographic characteristics and to ensure a similar distribution in the survey sample. We accounted for four important criteria: sex, age (four categories: 18 to 25, 26 to 45, 46 to 60, and >60), linguistic region, and professional status (independent, employed, or mixed).

Score computation

The 30 point legal score was computed from the 36 items in table 1. Each score was an integer value between 0 and 30. The legal score represented the number of items out of the 30 items that were known to be legally required by physiotherapists (cf. table 1).

Results

Post-stratification analysis

Post-stratification analysis was necessary to consider socio-demographic characteristics and to ensure a similar distribution in the survey sample. We accounted for four criteria: sex, age (four categories: 18 to 25, 26 to 45, 46 to 60, and >60), linguistic region, and professional status (independent, employed, or mixed). The coherence testing for related questions in the questionnaire revealed no impossible answers from participants.

Participants

We received 843 (10.8%) questionnaires from the members of the associations. Of these, 7 (0.8%) explicitly indicated their intent to not participate in the study, and 11 (1.3%) were excluded due to missing data. Finally, 825 questionnaires were included in the study. Table 2 provides basic information about the participants.

Record-keeping issues

Most of the participants (99.2%) kept patient records. Only 5.7% of the participants reported using a computer to take notes during therapy sessions, and 15.1% reported recording measurements on a computer.

Among the 6 participants who reported not keeping records, the following explanations were provided:

– "Every session is organised like a treatment assessment, taking reference to immediate perceptions and in relation to participation objectives established during the first meetings"
– "Invoice as a proof; too small number of patients"

Table 2: Overview of the participants' characteristics (n = 825).

Characteristics	Options	Percentage
Gender	Males	27.3
	Females	72.7
Age	Mean (SD)	42.75 (10.64)
	Median	43
Linguistic region	Swiss German	75.3
	Swiss French	21.1
	Swiss Italian	3.6
Professional status	Employed	32.4
	Independent	65.2
	Combined	2.3
Physiotherapy practice group	Musculoskeletal	51.1
	Neuromuscular	3.1
	Internal system/cardio-pulmonary	45.8
Type of records	Physical records	60.5
	Electronic records	34.7
	Combined records	4.8
Use of a computer	Computer used to take notes	5.7
	Computer used to take measurements	15.1

– "Not enough time; patient data are memorised during treatment time"
– "No time to manage and update a record. I do only write a reminder of the first session with patient history, clinical status, objectives and planned treatments"
– "It is not organised in the practice where I work. Probably because of lack of time and lack of will from the employer. No administrative time is available"
– "At the moment, I do not treat patients, but as a researcher, I document my trials"

Evaluation of the content of records

The percentage of elements considered by the participants to be legally compulsory was relatively low, with patients' details (57.1%) considered to have the highest level of importance. In contrast, 44.3% of the participants could not identify as legally compulsory some elements of the patients' records, including pictures, films, and audiovisual records. It is also noteworthy that the three false items, which were inserted into the table to assess the attention of the participants, were identified as legally compulsory by only 2.1% of the participants as shown in table 3.

Calculation of legal scores

Only 1 participant reached the full score of legal compatibility (30 pts), whereas 223 participants (27%) scored 0 points. The average score was 8.1 points (standard deviation = 7.25), and the median was 8 points. A large majority of the participants confessed an ignorance of the legal requirements concerning record keeping prior to the survey (83.4%). Age was a significant predictor of having knowledge of the legal requirements for record keeping ($p < 0.001$); older physiotherapists were less aware of the legal requirements. In contrast, gender, linguistic region, professional status, physiotherapy practice group and working

Table 3: Summary of the assessment of participants from the legal perspective.

Items in the record	Legal perspective (%)		
	Compulsory	Not compulsory	Don't know
Treated area(s)	53.1	6.9	40.0
Billing information	36.9	12.8	50.3
Patient's details	57.1	6.6	36.3
Profession, patient profile and family status, leisure	8.3	43.5	48.2
Referrer's details	50.8	9.8	39.4
Insurance details	37.0	16.2	46.8
Banking details of the patient	*1.3**	*47.1**	*51.6**
Private documents brought by the patient	6.9Δ	42.2Δ	50.9Δ
Patient's expectations	11.1	37.9	51.0
Mailing with professional equipment resellers	*2.1**	*43.4**	*54.5**
Body chart, description and intensity of patient's symptoms/functional assessment	32.9	19.3	47.8
Patient history (present and past)	25.2	23.7	51.1
Information about general health, medical tests, surgery, laboratory analysis, precautions and contraindications (treatment and medication)	34.2	17.3	48.5
Personal notes taken by the therapist	5.9Δ	47.0Δ	47.1Δ
Information regarding irrelevant people (e.g., relatives and friends)	*1.6**	*50.4**	*48.0**
Pictures, films, or audiovisual records of the patients	5.2	44.3	50.5
Outcome measures or results of the patient's assessment (e.g., angle, muscle power, muscle length, symptom evaluations, and qualitative assessments)	15.1	9.8	75.1
Written clinical reports	25.6	20.1	54.3
Information transmitted orally to third parties (relatives, other health professionals, insurance companies, social situations, organisations, etc.)	11.4	33.3	55.3
Mailing with patients	15.1	26.7	58.2
Mailing with insurance	24.7	19.9	55.4
Mailing with referrers	12.6	28.9	58.5
Medical diagnosis	54.6	7.1	38.3
Physiotherapy diagnosis	27.0	25.1	47.9
Type of treatments	38.8	14.3	46.9
Symptoms, behaviour, or characteristics	18.1	27.8	54.1
Patient evolution/indications of repeated measures over time/results of functional assessment or outcome measures	30.9	18.2	50.9
Prognosis (related to physiotherapy management)	4.1	37.6	58.3
Home exercise, self management instructions	9.3	38.8	51.9
Date of achieved treatments	55.1	6.1	38.8
Number of achieved treatments	52.9	6.1	41.0
Results of qualitative validated questionnaires (SF-36…)	19.6	22.6	57.8
Oral or written informed consent of the patient for therapeutic options	12.1	20.9	67.0
Achieved descriptions (codes)	23.0	14.4	62.6
Physical traces of abuse (children or elderly)	22.2	12.5	65.3

** False questions are in italics*
Δ *Items apart from the record are highlighted in grey*

location (canton) were not significant predictors. The results regarding working location compared to legal scores were of no statistical relevance due to the very small number of responses in some cantons. No categorical item was considered missing from the 825 participants in the calculation of the score of legal compatibility. This level of completeness strengthened the relevance of the consensus work.

Discussion

Based on this single survey, which included no reminders in the study design, we considered the participation level to be satisfactory. The lack of reminders is one of the potential explanations for the low rate of response, however the most probable hypotheses are the sensitivity of the questions and associated fears, such as controls, repressive measures, and increasingly stringent demands, followed by the lack of interest in the questions, the lack of available time to answer, the lack of knowledge of answers to the questions in the table. We consider that the low rate of answers is therefore also a meaningful part of the results of this study.

The questionnaire testing did not feature an inverse retranslation due to financial limitations. This would have been ideal in terms of the validity of the questionnaire, but the various checks regarding the coherence of the answers indicates that questions were understood in the same way by participants.

The criteria for post-stratification (sex, age, linguistic region, and professional status) were chosen not only because they describe well the structure of the population being studied in the Swiss context, but mainly because we knew their real distribution at the overall Swiss level. This implies that after data weighting, the structure of our sample is similar to the whole population under study with regard to these four characteristics. In the absence of similar information about other important socio-demographic characteristics, we consider that our sample is as close to the real population as it could be.

Some participants confessed that they did not keep patient records for reasons such as "I have everything in mind and I don't need to keep up records." There are two cantons in Switzerland where keeping physiotherapy records is still not required [1]. Therefore, physiotherapy professionals in these two cantons may not invest the amount of time necessary to keep records. This makes sense except for professional purposes in the context of malpractice lawsuits. Vigilant barristers advise physiotherapists to keep records to attest that no professional fault has occurred.

The previous use of a computer might predict whether a physiotherapist will turn to computerized record keeping. The low level of computer usage among the study participants may indicate that, except for practice management, the existing applications do not meet the needs of physiotherapists or that the current administrative loads of physiotherapists and their incomes do not allow them to invest the time to transition to computer applications for keeping records. Based on the low rate of electronic record use, we assume that the need for and existence of such applications might be lowered by the lack of knowledge of the current legal requirements for record keeping [1]. However, it will be more important to determine the extent of physiotherapists' use of computer applications for note taking and the results of external audits to analyse the existing conditions of patient records. We expect that, due to the probable insufficient legal compatibility of the existing records and a strengthening of the requirements due to operational e-health projects as 2015 nears (Swiss Confederation operational deadline), the most attractive option for physiotherapists seeking time-saving solutions will be an investment in reliable software applications for note taking during therapy sessions [2]. These applications must therefore be developed in accordance with legal and professional requirements, as well as the technical requirements of e-health interoperability [18].

Predictors of the knowledge of legal and professional requirements

The physiotherapists' gender, age, and professional status were analysed in this study. Age was strongly correlated with professional experience ($r = 0.95$, $p < 0.001$). Age appeared to be the only predictor of knowing the legal and professional requirements for record keeping. Younger physiotherapists were more likely to have a good knowledge of record-keeping requirements than older physiotherapists. This interesting result implies a link between the knowledge of legal requirements and undergraduate training rather than professional experience. This result supports the importance of including legal knowledge regarding record keeping in undergraduate training and the necessity of providing regularly updated continuing education. Indicating the centrality of computer sciences to the health professions, Wilkinson (2010) with reference to the International Medical Informatics Association (IMIA) advocates allocating 25% of the time of the total educational programme to health informatics [19]. We support the inclusion of health information technologies as a fundamental domain of education, including legal requirements for record keeping. Furthermore, we hypothesised that independent physiotherapists who had experience managing a practice would have a better knowledge of the requirements; therefore, professional status would be a significant predictor. However, we found that both employed and independent physiotherapists had similar knowledge levels, most likely from their identical professional training programmes.

Statistical difference or underlying difference of scores

The scores of legal compatibility for the studied clusters were analysed. Interestingly, the only significant difference between the independent physiotherapists and the other population clusters appeared to be in relation to what they included in their records. This result suggests that independent physiotherapists tend to be more aware of what is actually recorded in their records. Their systematic note taking may also reflect a sense of individual responsibility in independent physiotherapists who may have to be more personally accountable for their own business. In contrast, employed physiotherapists may feel less responsible for what is recorded in their files, and this attitude may be independent of knowing what should be in the records from a legal and professional perspective. However, some parti-

cipants reported that "Working in hospitals, we have time available for record keeping and more requirements…" It is clear that independent physiotherapists are concerned about time investment without specific financial benefit from record-keeping activities: "Record keeping is necessary. The question is: should we integrate the time required as part of the treatment time or make it after hours and be refunded for it?"

Content of clinical records

The finding of a lack of important information in clinical records according to the answers given by participants in the study requires caution. Keeping detailed records is recommended to prevent conflict situations with patients and to provide sufficient information on interactions with patients and their treatment. Based on the difference between what was systematically included in their records and what the participants in this study considered useful, we formulated some hypotheses. When the percentage of inclusion is higher than the percentage of usefulness, then the participants are including the information for legal reasons. In contrast, when the percentage of usefulness is higher than the percentage of systematic inclusion, then the participants are not meeting existing requirements.

Average legal compatibility scores of participants

We calculated the average score of the participants in this study based on professional and legal requirements that limited the legal compatibility of records at 30 points. The average score was low (8.1 points), which was expected considering the lack of existing guidelines, the lack of legal analysis and information, and the existence of 24 different cantons with the same number of health application laws. This result reflected the perception of the participants who were questioned about the existing requirements (only 16.6% reported to know the legal requirements).

This situation must be improved, and professional associations should prepare more detailed and specific guidelines and standards for record keeping. One major question emerging from this result is the following: How can physiotherapists spend more time on improving their notes and related patient management without specific, dedicated financial benefits outlined by existing laws? Answers to this question are necessary in countries such as Switzerland where there is a lack of guidelines for record keeping, or else the future of physiotherapy might be threatened at the dawn of the electronic health records era.

Due to the growing amount of information to manage in health care, computer assistance is often presented as the main solution, although it has unidentified benefits and disadvantages [12, 20–24]. Today, based on increasing quality requirements and e-health governmental projects aimed at reducing the costs of health care around the world, the question seems to be when instead of if computers will invade therapy cubicles.

The opinions of the participants

The participants were asked to give their opinions on record-keeping requirements in Question 9 of the questionnaire (cf. Appendix I). This question triggered a massive call for remuneration and complaints about lack of time, which revealed the difficult practical conditions for the practice of physiotherapy. Raising the issue of legal requirements for record keeping is sometimes perceived as a potential enemy of the practice of physiotherapy: "Generally, I have no documentation in my records (working only with private insurance). If we make all of these record-keeping issues compulsory by law, we are playing against ourselves".

Many physiotherapists are afraid of possible repressive actions or audits that would evaluate their records: "The clinical record is mine and will not be accessed by other people"; "Recommendations and guidelines are necessary. However, I'm afraid that health insurance will take advantage of this"; "If it becomes compulsory, I'm afraid that it will become an unbearable load for practitioners. Anyway, there is no more money available! I prefer to spend more time with patients". Others are convinced that legal requirements must be clearly available to physiotherapists and will contribute to the improvement of the quality in the profession: "There should be clear guidelines available for record-keeping contents…"; "Patient records are useful for treatment quality and the improvement of communication with doctors and of quality in general"; "Record keeping is a benefit for quality, it avoids formatted therapeutic attitudes and improves the follow up and the evaluation of outcomes".

Participants strongly expressed the need for time and remuneration based on their difficulty in finding the time and corresponding remuneration to meet the existing requirements: "Record keeping is good and useful. Unfortunately, there is currently a lack of paid time. I don't want to make reports during the time dedicated to patients". Some participants were aware of possible solutions to finding time-management strategies, such as using specific software applications for record keeping: "Record keeping is important and useful; however the use of electronic records would be more adaptable, faster and enable precious time saving".

The knowledge of requirements

The participants knew some of the content items required by law and did refer to the knowledge acquired during their physiotherapy education or from their professional association, but they rarely gave any reference to law articles. Some easily recognised their ignorance of the legal requirements: "Record keeping seems crucial to me, but I don't really know what we are legally supposed to write or not." Clearly, the issue here is related to the absence of specific detailed guidelines and the difficulty of identifying legal requirements due to the complexity of the Swiss cantonal laws, multiplied by the number of cantons. The issue of organising repression and controls was never intended by authorities yet, and this would not make sense, taking into consideration the current financial conditions and incomes for the practice of physiotherapy. However, the emergence of e-health emphasises that legal requirements are a part of the process of standardisation of records, although these legal requirements are supposed to be a reflection of a constructive rather than a repressive context. The benefits and barriers of electronic record keeping must be balanced and approached with objectivity. Only a few studies have investigated the socio-technical barriers and the support and

training costs of e-health [24]. As with all new and exciting eras, overoptimistic forecasts tend to dominate, creating a potential risk of minimisation of the negative aspects of using electronic records.

Limits of the study

The major limit to the study is the low rate of answers limiting the calculation of reliable correlations. Furthermore, an inverse re-translation of the questionnaire would have increased the internal validity of the questionnaire, although consistent testing minimised the likelihood of any problems arising from this.

Conclusion

Only a few of the participants in our survey were aware of the legal requirements for record keeping in Switzerland. We interpret these results to imply that under current circumstances, the participant's knowledge of legal and professional requirements regarding patient records is poor. Although the participants could appreciate the value of the records' content, they did not have sufficient knowledge of the legal requirements. They pointed to the lack of time and necessary remuneration to keep records according to current requirements. These results will be compared by the forthcoming results of an external audit study of the patient records of Swiss physiotherapists in accordance with existing laws; it will be interesting to see if the analysis of the audited records will reflect similar results concerning the legal compatibility scores.

Based on this study, not only do professional associations need to inform their members, but stakeholders and physiotherapists must also consider that the administrative time required to meet legal and professional requirements for record keeping is part of the quality management of patients. In addition to the existing legal requirements, the emergence of e-health and the electronic era will trigger major changes in patient record management by physiotherapists.

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References

1 Ayer A, Richoz C. Les exigences en matière de tenue de dossier des professionnels de la santé [The mandate of maintenance of medical records by health professionals]. Rev Med Suisse. 2010;6(260):1615–8.

2 Swiss Confederation. Cyberhealth strategy (eHealth) in Switzerland: Federal Office of Public Health. 2007.

3 National EHealth Transition Authority. NEHTA Strategic Plan 2009 to 2012. Sydney. 2009.

4 Ministère de la Santé et des Sports. Le dossier médical personnel (DMP). 2010 [18.01.2011]; Available from: http://www.sante-sports.gouv.fr/colloque-sur-la-relance-du-dossier-medical-personnel-dmp-discours-de-madame-roselyne-bachelot-narquin.html.

5 Health Canada. Health Care System: eHealth. 2010 [22.01.10]; Available from: http://www.hc-sc.gc.ca/hcs-sss/ehealth-esante/index-eng.php.

6 EHealth Suisse. Cybersanté Suisse: Recommandations des projets partiels: Swiss Confederation. Conférence suisse des directrices et directeurs cantonaux de la santé. 2009.

7 Commission of the European Communities. Communication from the commission to the council. The European Parliament. The European economic and social committee and the committee of the regions. e-Health – making healthcare better for European citizens: An action plan for a European e-Health Area. 2004 [January 2011]; Available from: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2004:0356:FIN:EN:PDF.

8 Sumner M, Mead J, ten Hove R. Audit and re-audit of the CSP core standards of physiotherapy practice. Physiotherapy. 2000;86(10):512–6.

9 Phillips A, Stiller K, Williams M. Medical record documentation: The quality of physiotherapy entries. The Internet Journal of Allied Health Sciences and Practice. 2006;4:1–18.

10 M'Kumbuzi VRP, Eales CJ, Steward A. An analysis of the completion of physiotherapy clinical records in gauteng province. The South African Journal of Physiotherapy. 2002;58(1):18–27.

11 Richoz C, Weidemann DJ. Descriptive systematic review of physical therapy record-keeping knowledge. To submit. 2011.

12 Vreeman DJ, Taggard SL, Rhine MD, Worrel TW. Evidence for electronic health record systems in physical therapy. Physical Therapy. 2006;86(3):434–46.

13 Loi fédérale du 23 juin 2006 sur les professions médicales universitaires (RS 811.11), (2006).

14 Federal act on the amendment of the Swiss Civil Code, SR 220 (1971).

15 Sentences of the Swiss Federal Supreme Court [Arrêts du Tribunal Fédéral – French], 119 II 456, 120 II 248, 133 III 121.

16 European Region of the World Confederation for Physical Therapy. European core standards of physical practice. General meeting of the WCPT; May 11; Budapest 2002.

17 World Confederation for Physical Therapy. Position statements – standards of physical therapy practice. Vancouver. 2007 June 12.

18 Fernandes-Breis JT, Menarguez-Tortosa M, Moner D, Valencia-Garcia R, Maldonado JA, Vivancos-Vicente PJ, et al. An ontological infrastructure for the semantic integration of clinical archetypes. Lecture Notes in Computer Science. 2006;4303:156–67.

19 Wilkinson SG, Chevan J, Vreeman D. Establishing the centrality of health informatics in physical therapist education: If not now, when? Journal of Physical Therapy Education. 2010;24(3):10–5.

20 Barry C, Jones MA, Grimmer K. Electronic clinical records for physiotherapists. The Internet journal of allied health sciences and practice. 2006;4(1):1–8.

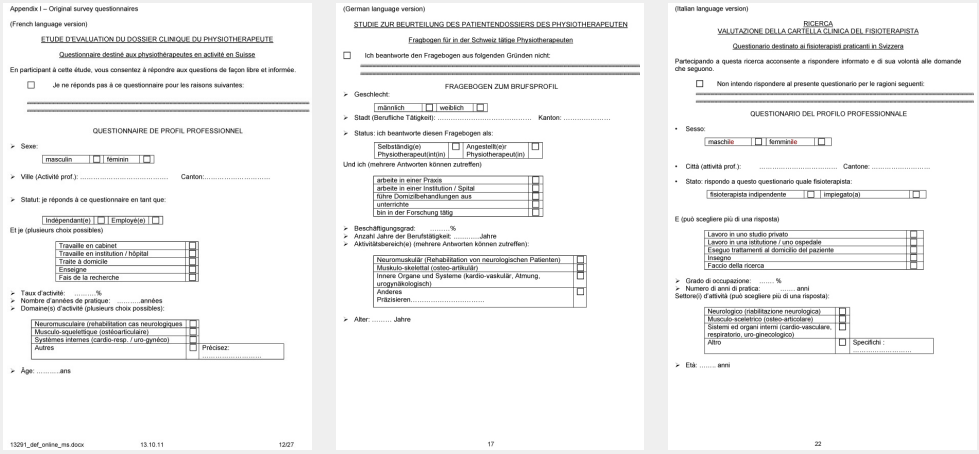
21 Kaur K, Forducey PG, Glueckauf RL. Prototype database for telerehabilitation. Telemedicine Journal and e-Health. 2004;10(2):213–22.

22 Vargas GR. The electronic medical record is becoming a Reality. Are you ready for it? Advance for Directors in Rehabilitation. 2002;11(5):63–6.

23 Shekelle PG, Morton SC, Keeler EB. Costs and benefits of health information technology. Evidence report/technology assessment No. 132. (Prepared by the southern California evidence-based practice center under contract no. 290-02-0003. AHRQ publication No.06-E006. Rockville, MD: Agency for Healthcare Research and Quality. 2006 [January 2011]; Available from: http://www.ahrq.gov/downloads/pub/evidence/pdf/hitsyscosts/hitsys.pdf.

24 Harrison MI, Koppel R, Bar-Lev S. Unintended consequences of information technologies in health care. An interactive sociotechnical analysis. J Am Med Inform Assoc. 2007;14(5):542–9.

Appendix I – Original survey questionnaires



Appendix I – Original survey questionnaires

(French language version)

ETUDE D'EVALUATION DU DOSSIER CLINIQUE DU PHYSIOTHERAPEUTE

Questionnaire destiné aux physiothérapeutes en activité en Suisse

En participant à cette étude, vous consentez à répondre aux questions de façon libre et informée.

☐ Je ne réponds pas à ce questionnaire pour les raisons suivantes:

QUESTIONNAIRE DE PROFIL PROFESSIONNEL

➢ Sexe:

masculin ☐ féminin ☐

➢ Ville (Activité prof.): ..... Canton:.....

➢ Statut: je réponds à ce questionnaire en tant que:

Indépendant(e) ☐ Employé(e) ☐

Et je (plusieurs choix possibles)

Travaille en cabinet	☐
Travaille en institution / hôpital	☐
Traite à domicile	☐
Enseigne	☐
Fais de la recherche	☐

➢ Taux d'activité: .....%
➢ Nombre d'années de pratique: .....années
➢ Domaine(s) d'activité (plusieurs choix possibles):

Neuromusculaire (rehabilitation cas neurologiques	☐
Musculo-squelettique (ostéoarticulaire)	☐
Systèmes internes (cardio-resp. / uro-gynéco)	☐
Autres	☐ Précisez: .....

➢ Âge: .....ans

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(German language version)

STUDIE ZUR BEURTEILUNG DES PATIENTENDOSSIERS DES PHYSIOTHERAPEUTEN

Fragbogen für in der Schweiz tätige Physiotherapeuten

☐ Ich beantworte den Fragebogen aus folgenden Gründen nicht:

FRAGEBOGEN ZUM BRUFSPROFIL

➢ Geschlecht:

männlich ☐ weiblich ☐

➢ Stadt (Berufliche Tätigkeit): ..... Kanton: .....

➢ Status: ich beantworte diesen Fragebogen als:

Selbständig(e) Physiotherapeut(in/in) ☐ Angestellt(e)r Physiotherapeut(in) ☐

Und ich (mehrere Antworten können zutreffen)

arbeite in einer Praxis	☐
arbeite in einer Institution / Spital	☐
führe Domizilbehandlungen aus	☐
unterrichte	☐
bin in der Forschung tätig	☐

➢ Beschäftigungsgrad: .....%
➢ Anzahl Jahre der Berufstätigkeit: .....Jahre
➢ Aktivitätsbereich(e) (mehrere Antworten können zutreffen):

Neuromuskulär (Rehabilitation von neurologischen Patienten)	☐
Muskulo-skelettal (osteo-artikulär)	☐
Innere Organe und Systeme (kardio-vaskulär, Atmung, urogynäkologisch)	☐
Anderes Präzisieren.....	☐

➢ Alter: ..... Jahre

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(Italian language version)

RICERCA

VALUTAZIONE DELLA CARTELLA CLINICA DEL FISIOTERAPISTA

Questionario destinato ai fisioterapisti praticanti in Svizzera

Partecipando a questa ricerca acconsente a rispondere informato e di sua volontà alle domande che seguono.

☐ Non intendo rispondere al presente questionario per le ragioni seguenti:

QUESTIONARIO DEL PROFILO PROFESSIONNALE

• Sesso:

maschile ☐ femminile ☐

• Città (attività prof.): ..... Cantone: .....

• Stato: rispondo a questo questionario quale fisioterapista:

fisioterapista indipendente ☐ impiegato(a) ☐

E (può scegliere più di una risposta)

Lavoro in uno studio privato	☐
Lavoro in una istituzione / uno ospedale	☐
Eseguo trattamenti al domicilio del paziente	☐
Insegno	☐
Faccio della ricerca	☐

➢ Grado di occupazione: .....%
➢ Numero di anni di pratica: .....anni
Settore(i) d'attività (può scegliere più di una risposta):

Neurologico (riabilitazione neurologica)	☐
Musculo-scheletrico (osteo-articolare)	☐
Sistemi ed organi interni (cardio-vascolare, respiratorio, uro-ginecologico)	☐
Altro	☐ Specifichi : .....

➢ Età: .....anni

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Appendix I

Questionnaires as PDF-file (french / german / italian)

Appendix II – Consensual list of minimal contents for the clinical records of physiotherapists based on international professional guidelines and strongest active Swiss laws

1	Treated region(s)
2	Patient details
3	Patient expectations
4	Symptoms localisation and description (symptoms intensity, behaviour / or at least activity evaluation)
5	Patient history
6	General health information (medical tests, lab tests, surgery interventions, precautions & contraindications, medication, …)
7	Results of measurements made on patients (distance, angles, force, tissues extensibility, pain scales, qualitative evaluation, …)
8	Physical therapy/physiotherapy diagnosis
9	Description of treatments applied to the patient
10	Number of sessions of treatment
11	Date of sessions
12	Outcome measures, patient evolution and goal achievements
13	Description of given home exercises, information about self management
14	Referrers' details (if applicable)
15	Patients' photos, films or audiovisual records (in the presence of clues in the notes)
16	Information given orally to third parties (family, other health professionals, insurance, stakeholders, social institutions, organisations, …) (in the presence of clues in the notes)
17	Written clinical reports (in the presence of clues in the notes)
18	Correspondence and communication to patients (in the presence of clues in the notes)
19	Correspondence with insurers and stakeholders (in the presence of clues in the notes)
20	Correspondence with referrers (in the presence of clues in the notes)
21	Explicit prognosis (in the presence of clues in the notes)
22	Results of validated questionnaires (SF-36, Roland-Morris, …) (in the presence of clues in the notes)
23	Oral or written patient consent for therapeutic options (in the presence of clues in the notes)
24	In the presence of a prescription without medical diagnosis, presence of any diagnosis from the physiotherapist