

Appendix 8.10 State of safety culture in the Swiss healthcare system (Review 1)

Authors, year	Name of questionnaire used	Swiss region	Sample size	Target group	Response rate	Settings	Results -Summary
Published literature							
Ausserhofer et al., 2012	Safety Organizing Scale (SOS)	German-, French- and Italian-speaking regions	35 hospitals/ 120 units/ 1'633 participants	Registered nurses	Between 40% and 100%	Hospitals	In 33 of the 120 units (27.5%), at least 60% of nurses reported a positive patient safety climate. Nurses in the German-speaking region reported a more positive patient safety climate than nurses in the French- and Italian-speaking language regions. The PSC variability between units and between hospitals was in general higher than the variability between medical or surgical units and between university/cantonal or regional hospitals.
Ederer et al., 2019	NA	German-speaking region (Switzerland), Austria, Germany	14 participants	Midwives - patient contact	NA	Midwifery (hospital and freelance)	The interviewed midwives provided insights into their thoughts and experiences on factors that promote and inhibit patient safety culture as well as superordinate topics related to patient safety culture in general. Their statements were assigned to seven main categories: (i) institutional circumstances, (ii) role of the management, (iii) interprofessional factors, (iv) meetings, (v) education and training, and (vi) psychosocial aspects. When analysing the individual codes in each category, it became clear that most of the statements related to one of the two overarching core categories, communication and knowledge/skills.
Gambashidze et al., 2021	Hospital Survey on Patient Safety Culture (HSPSC)	German-speaking region (Switzerland), Germany	1 Swiss institution, 2 German institution / 1786 participants (896 Swiss and 890 German participants, respectively)	Nurses and physicians	39.6% and 33.4%, respectively	University hospital	Participants' profession and managerial function had significant direct effect on perceptions of PSC. Although there was no significant direct effect of gender for most of the PSC dimensions, it had an indirect effect on PSC dimensions through statistically significant direct effects on profession and managerial function. We identified similarities and differences across participant groups concerning the impact of various PSC dimensions on Overall Perception of Patient Safety. Staffing and Organizational Learning had positive influence in most groups without managerial function, whereas Teamwork Within Unit, Feedback & Communication About Error, and Communication Openness had no significant effect. For female participants without managerial functions, Management Support for Patient Safety had a significant positive effect. Participant characteristics have significant effects on perceptions of PSC and thus should be accounted for in reporting, interpreting, and comparing results from different samples.
Gehring & Schwappach, 2014 Gehring & Schwappach, 2012	30-items questionnaire ¹ (based on SAQ, PC-QUEST and the FRASIK)	German-speaking region	630 participants	Physicians/MPAs ²	50%	Primary care offices	MPAs were less likely than doctors to agree that there was regular training in the most common emergency situations in their practice. MPAs also rated the situation in practices more negatively in terms of whether errors are discussed in the practice team and whether patients are asked about their current medication and side effects when they visit the practice. In the dimension of the safety climate 'team-based activities and strategies to prevent errors', differences were found according to professional group and type of practice. However, regular participation in quality circles and team meetings for all practice staff (at least monthly) were reported as the factors with the greatest influence on the safety climate.

¹ based on SAQ, PC-QUEST and the FRASIK, all items adapted to the Swiss health care system, culture and context. Nine items were newly developed.

² MPAs = Medical praxis assistants

							In terms of risks, the results of this study show that telephone triage is a relevant area of patient safety in primary care that has not been focused on, which has led to a new project and a triage guide for telephone triage in primary care offices.
Gehring et al., 2015	Safety Climate Survey (SCS)	French- and German-speaking parts	10 hospitals / 1845 participants (523 doctors and 1321 nurses)	all members of the OR teams (doctors, nurses, nurses with special education in anaesthesia nursing or intensive care, attendants for surgical positioning and surgical technicians) and ward staff (doctors, nurses, nursing assistants and further professionals)	63.40%	Operating rooms and related wards	The mean value of the Safety Climate Survey was 3.8 (SD = 0.53). At item level means ranged from 3.18 to 4.38. Comparing the mean scores at item level showed that items referring to the institutional level/hospital leadership were rated more negatively than items referring to the safety climate in the individual's work area. Nearly 12% of the HCPs reported a 'problematic safety climate' (PPR (percentage of 'problematic response' ³) 11.75%). At item level, 14 out of 21 items showed a PPR higher than 10%, and two items returned a PPR higher than 20% ('Management/leadership does not knowingly compromise safety concerns for productivity', 'I believe that most adverse events occur as a result of multiple system failures and are not attributable to one individual's action'). Group differences were analysed at the scale level and showed significant differences according to profession, managerial function, work area and time spent in direct patient care. Physicians rated the safety climate more positively than nurses, staff with a managerial role rated the safety climate more positively than staff without a managerial role, staff working in the operating room reported a more positive safety climate than staff working on the ward, and the ratings differed according to the time spent by HCPs in direct patient care.
Jossen et al., 2019	Adapted SafeQuest	German-speaking region	3 institutions/103 questionnaires	Employees as well as (co)owners of the services,	86%	Outpatient imaging services	Analysis for the entire sample revealed the highest scores for agreement with the statements: "The quality and safety of patient care in the service is taken seriously" (mean of 6.0 on a seven-point Likert scale); "The service is a good place to work" (mean score 5.9), and disagreement with the statement "Collaborators frequently disregard rules, protocols and procedures" (mean score 5.9). The overall results to positive response rates were very high for the items "The quality and safety of patient care in the service is taken seriously", (84%), "Collaborators frequently disregard rules, protocols and procedures", (84%) and "The service is a good place to work" (85%) with only the item "Collaborators treat each other with respect" scoring higher with 86% positive responses. In contrast to that, the statements "The service leadership communicates its long-term plans for the development of the service", "Collaborators always have enough time to complete work tasks safely" and "The opinions of all concerned collaborators are taken into account for the development of processes" scored lowest, with an overall result of 4.2 on a seven-point Likert scale, and also scored lowest for the positive response rates, with 46% for the item asking about participation in development processes and 48% for the two other items. The total mean score for the overall sample was 5.0, however safety climate scores varied significantly between services.
Pernegger et al., 2013	HSOPSC	French speaking part	1171 participants	All employees with at least 6 months of employment	74%	Hospital (Medicine and paediatrics, Surgery and gynaecology, Technical	Among the respondents, 5.3% (N=60) gave their work unit a global safety grade of 'excellent', 46.9% (N=530) said 'very good', 39.2% (N=443) said 'acceptable', 3.7% (N=42) said 'poor' and 4.8% (N=54) said 'failing'. The majority (61.1%, N=690) of respondents had not reported any event related to patient safety in the previous year; 25.0% (N=282) reported 1 or 2 events, 8.5% (N=96) reported 3–5 events, 3.4% (N=38) reported 6–10 events and 2.1% (N=23) reported 11 or more events. The mean percentage of positive

³ a PPR higher than 10% is assumed to be inconsistent with an optimal level of safety climate within an organization, which points to a need of enhancing safety climate

						(pharmacy, operating rooms, imaging, laboratories), Intensive care, emergency and anaesthesia, Several or other)	<p>responses ranged from 28.1% (hospital management support) to 79.4% (teamwork within hospital units) (table 2). When the scores were computed as simple means on a scale from 1 to 5, the pattern of the averages was similar.</p> <p>The summary scores obtained by the two computation methods from the same items were highly correlated: the Pearson correlation coefficients ranged from 0.82 (hospital management support) to 0.90 (feedback and communication about error). Missing score values were low for all scales except frequency of event reporting, for which 11% of respondents had missing values. For most scores, a greater proportion of variance was attributable to activity sectors (within hospital sites) than to hospital sites (table 2). The dimensions that had the highest levels of agreement within activity sectors were staffing (17.1% of variance) and overall perception of safety (14.2%)</p>
Ricklin et al., 2019	Hospital Survey on Patient Safety Culture HSOPSC	German-speaking region (Bern)	140 participants	Nurses and physicians	72% and 38%, respectively	Hospital (emergency department)	<p>The three composites with the highest average percent positive responses were “nonpunitive response to errors” with 78.7% positive answers, “teamwork within units” with 70.1% positive answers and “supervisor/manager expectations and actions promoting patient safety” with 67.9%. The three composites with the lowest average percent positive responses were “frequency of events reported” with 37.8% of positive answers, “teamwork across units” with 46.88% and “handoffs and transitions” with 47.4% positive responses.</p> <p>After the educational intervention, a second identical survey was distributed to assess, if patient safety culture improved. Using at-test we did not find any significant differences between the two time points. After the intervention, the positive response for “management support”, “staffing” and “organizational learning” increased by 11.8%, 10.2% and 6.7%, respectively. Nevertheless, positive perception of “supervisor expectations & actions” and “feedback & communication” decreased by 15% and 12%.</p>
Schwendimann et al., 2012	The Safety Attitudes Questionnaire (SAQ-Short Form)	German speaking part	2 Swiss and 10 US institutions /313 Swiss and 1057 US participants	clinicians involved in direct patient care (nurses and physicians)	Swiss : 79%/ US 85%	Medical and surgical units	<p>The mean scale score values for three of the six SAQ dimensions were significantly different between the US and Swiss hospital units, respectively (stress recognition: 57.3; 31.4, perceptions of unit management: 60.1; 41.5, and safety climate: 68.7; 58.4), whereas, teamwork climate, job satisfaction and working conditions were not significantly different</p> <p>Given the differences on the three safety dimensions between the US and Swiss hospital units, item-level analysis revealed more insights. First, the stress recognition dimension showed most between-country differences attributable to the items: ‘When my workload becomes excessive, my performance is impaired’ (USA: 76.7, CH (51.1; p<0.001) and ‘I am less effective at work when fatigued’ (USA: 78.0, CH: 60.9; p<0.001). Second, for the perceptions of unit management dimension, the item ‘Management supports my daily efforts’ attributed most to the between-country difference (USA: 78.8, CH: 64.9; p<0.005). Third, for the safety climate dimension it includes the items ‘In this clinical area, it is difficult to discuss errors’ (USA: 19.8, CH: 7.8; p<0.001) and ‘I receive appropriate feedback about my performance’ (USA: 78.0, CH: 62.9; p<0.001).</p>
Wangler et al.	German-speaking region	NA	260 in CH and 1258 in UK	chiropractors in Switzerland and 1258 UK member of the Royal College of Chiropractors	76% (in CH, 31% in UK	Chiropractors	<p>Degree of positive agreement among respondents with respect to six safety dimensions measured (Patient tracking/Follow-up, Communication openness, process and standardization. staff training, work pressure and teamwork). A score greater than 60% but less than 75% was arbitrarily considered to indicate that respondents were moderately positive about the given safety dimension. A score of 75% (indicated by the</p>

							dotted line), or greater, was arbitrarily considered to indicate that respondents were highly positive about the given safety dimension. Thus, it was established in this study that Swiss chiropractors were moderately positive about patient tracking/ follow-up, and highly positive about all other safety dimensions. UK chiropractors were highly positive about work pressure and teamwork and moderately positive about all other safety dimensions. However, some respondents also highlighted the fact that a high proportion of chiropractors (33% of UK respondents and 48% of Swiss respondents in our study) work alone, limiting opportunities for fostering a safety culture through activities such as teamwork.
Grey literature							
Arnold, 2023	All regions	NA	nurses	23438 participants (22 institutions)	NA	Hospitals	The team culture is perceived as becoming more cooperative each year. High use of digital potential is associated with higher quality of care, higher levels of innovation, and greater job satisfaction and motivation. The level of innovation achieved in the respective departments is still considered rather mediocre, with the lowest level in small hospitals. The suggestions made were mainly aimed at facilitating communication and collaboration, reorganising processes and developing interventions for patient care.
Asana Spital Menzikon (ohne Datum)	All regions	PaSKI	23 ambulance services	NA	UNK	Ambulance services	No detailed results available.
Association vaudoise d'aide et de soins à domicile (AVASAD), 2023	French speaking (Vaud)	Hospital Survey on Patient Safety Culture	560 participants	staff	58%	Home care	<p>Actions / priority areas at the end of the survey:</p> <ul style="list-style-type: none"> • Optimise cooperation and information transfer between teams (• Work on staffing and work organisation • -Just Culture training for managers, support for second victims and reporting of adverse events to customers • -improve and standardise the procedures for reporting and managing adverse events.
Cullati et al. ,2013	French speaking part(Geneva)	Hospital Survey on Patient Safety Culture	1475 participants	Healthcare professionals delivering care or interacting with patients	30.3%	University hospital	<ul style="list-style-type: none"> • The average level of safety culture is low • The safety culture is poor in terms of cooperation and coordination between services. • The perception that errors and error reports could be used against employees and that their errors could be recorded in their administrative files appears to be widespread among staff. • Hospital Top management is not perceived as an actor contributing to the development of a climate conducive to safe care. • The strong points where the safety culture is perceived positively (more than 60% of positive responses) are teamwork within unit, the dynamic towards continuous improvement of the safety of care and the commitment of managers in the care units. <p>There are relatively significant differences between the Departments in several dimensions of dimensions of safety culture, particularly in perceptions of the reporting of adverse events, the attitudes and actions of staff, the attitudes and actions of line managers with regard to the safety of care, the dynamics of continuous improvement in the safety of care, and the inter- and intra-unit communication of patient information.</p>
Cullati et al. ,2016	French speaking part (Geneva)	Hospital Survey on Patient Safety Culture	2917 participants	Healthcare professionals delivering care or	35.0%	University hospital	<ul style="list-style-type: none"> • The average level of care safety culture is 51.7%, an improvement on 2013 (47.4%). • Compared with 2013, the culture of safety in healthcare has improved on almost all dimensions: of the 10 dimensions, seven have improved in a statistically significant way (3.9% to 10.3% improvement), and two have improved but the difference was

				interacting with patients			<p>not statistically significant. Only one dimension (Learning Organisation and Continuous Improvement) remained stable between 2013 and 2016 (56.0% and 56.4%, respectively).</p> <ul style="list-style-type: none"> The perception of senior management support for healthcare safety (Management support for healthcare safety) is the dimension that has improved the most since 2013 (10.3% increase). In 2016, the care safety culture needs to be developed in the following areas: non-punitive response to error (33.6%), cooperation and coordination between departments (35.0%), staff resources to cope with workload (35.8%), management support for care safety (45.6%) and overall perception of care safety (49.1%). The points where the safety culture is most developed concern teamwork in the department/unit (73.2%), the perception of management commitment to care safety (66.6%) and the reporting of adverse events (64.3%). There are relatively large differences between departments. No dimension of safety culture is considered "developed" (80% and more of positive values) and five dimensions are considered "To improve" (50% to 79% of positive values)
Cullati et al. ,2018	French speaking part (Geneva)	Hospital Survey on Patient Safety Culture	3072 participants (2386 clinicians and 686 non-clinicians)	All staff	25.6% (clinicians: 27.6% and non-clinicians 20.4%)	University hospital	<ul style="list-style-type: none"> The average level of safety culture at the HUG is 48.7%. No aspect of safety culture is considered to be 'developed', i.e. with a positive response rate equal to or greater than 80%. With regard to incident reporting, the proportion of clinician staff stating that they have completed an incident report in the last 12 months has increased slightly over time (2013-2018) and is around 6 out of 10 care staff. Among non-clinician staff, the proportion is one in three (29.6%). There are relatively large differences between departments. Evolution 2013-2018: Among clinicians, the average level of safety culture was 49.1% in 2018, a slight decrease compared to 2016 (50.3%) but above the 2013 level (46.6%). Over the period 2013-2018, safety culture has improved in a statistically significant way on five out of ten dimensions. For the first time, one dimension - the learning organisation - has deteriorated (56.1%, 55.5%, 53.2%).
Cullati et al. ,2020	French speaking part (Geneva)	Hospital Survey on Patient Safety Culture	2428 participants (1633 clinicians and 795 non-clinicians)	All staff	18.1% (clinicians: 17.0% and non-clinicians 21.0%)	University hospital	<ul style="list-style-type: none"> The average level of safety culture at the HUG is 49.5%. No aspect of safety culture is considered to be 'developed', i.e. with a positive response rate equal to or greater than 80%. With regard to incident reporting, the proportion of clinician staff stating that they have completed an incident report in the last 12 months has decreased of 6% between 2018 (60.5%) and 2020 (54.6%). Among non-clinicians, this proportion is stable, one in three respondents (29.2%). There are relatively large differences between departments. Evolution 2013-2018: Among clinicians (2013-2020): the learning organisation dimension has declined slowly but steadily since 2013 (56.1%, 55.5%, 53.2%, 50.0%), while the non-punitive response to error has improved (29.4%, 32.8%, 32.8%, 37.0%). Among non-clinicians(2018-2020): Teamwork between departments is improving (32.5% to 36.6%).
Cullati et al. ,2023	French speaking part (Geneva)	Hospital Survey on Patient Safety Culture	2075 participants	All staff	14.7%	University hospital	<ul style="list-style-type: none"> The average level of safety culture at the HUG is 48.8%. No aspect of safety culture is considered to be 'developed', i.e. with a positive response rate equal to or greater than 80%.

							<ul style="list-style-type: none"> With regard to incident reporting, the proportion of clinician staff stating that they have completed an incident report in the last 12 months was 56.7%. Among non-clinicians, this proportion was 34.4% (29.2% in 2020). There are relatively large differences between departments. Among medical and nursing staff (2013-2023): the dimensions of learning organisation and reporting of incidents are decreasing, while the dimensions of non-punitive response to error, perception of management support, inter-departmental teamwork and expectations and actions of the line manager have increased. Among non-medical and nursing staff (2018-2023): reporting of incidents, teamwork within the unit, freedom of expression, non-punitive response to errors and perception of management support have increased.
De Biennassis & Klazinga, 2024 / Universitäre Medizien Schweiz (unimedsuisse)	Cantons Bern, Vaud, Basel, Zurich and Geneva	Hospital Survey on Patient Safety Culture	52,874 participants	All staff	23%	University hospitals	Teamwork: 48 (HSPSC v1 Average 58), Organizational Learning-Continuous improvement: 53 (HSPSC v1 Average 62), Supervisor, Manager, or Clinical Leader Support for Patient Safety: 66 (HSPSC v1 Average 65), Communication About Error 54 (HSPSC v1 Average 54), Communication Openness 59 (HSPSC v1 Average 54), Reporting Patient safety Events 53 (HSPSC v1 Average 54), Hospital Management Support for Patient safety 37 ((HSPSC v1 Average 52)
La Fédération des hôpitaux vaudois (FHV), 2019	French speaking part(Vaud)	Hospital Survey on Patient Safety Culture	10 institutions / 573 participants		60%	Hospitals	Frequency of incident reporting: 62.9%; Overall perception of safety: 48.5%; Line manager as safety vector: 67.7%; Organisational learning: 54.2%; Teamwork in the unit: 69.8%; Openness to internal communication, debate: 59.7%; Feedback and internal communication of errors: 54.7%; Non-punitive reaction to error: 39.5%; Staffing: 38.1%; Management support for patient safety: 38.8%; Collaboration between units/departments: 52.7%; Transfers and handovers: 36.5%.
Friedel, 2016	NA	NA	156 facilities with 402 units and 4307 direct care workers	direct care workers from all educational levels	NA	Hospitals	Registered nurses perceived their work environment as less positive than care workers in other nursing staff categories. Care workers in leadership positions perceived their work environments more positively than care workers without leadership positions. Conclusion: Strengthening the connection between leaders and not leading care workers seem to be a promising approach to provide a positive and supportive work environment. Differences in work environment of registered nurses with and without leadership positions need further exploration, to retain qualified nursing personnel and to ensure quality of care.
Martins et al., 2023	National study	Own questionnaire, with items from the Safety climate and Teamwork climate scales of the Safety Attitudes Questionnaire (SAQ)	88 institutions / 5897 participants	Managers, collaborators (with direct or indirect client contact), clients, relatives	73%	Home care	The topic of safety climate was covered by seven items, e.g. how mistakes, feedback and learning from mistakes are handled, with the item 'I know how to deal with customer safety issues' receiving the highest level of agreement (90.6%). Looking at the results per organisation, depending on the item, between 18 and 83 of the organisations surveyed achieved ≥ 80% agreement (this is an indicator of a 'very positive safety climate') and 0 to 26 organisations achieved less than 60% agreement (an indicator of a need for action). The item 'I know how to address client safety issues (e.g. protecting clients from medication errors, falls, infections)' has the highest number of organisations (n=83) with an agreement of 80% or more, while the item 'I receive appropriate feedback for my work' has the highest number of organisations (n=26) with an agreement of less than 60%. When the seven measured items are transferred to the safety climate scale of the Safety Attitudes Questionnaire (SAQ) instrument, both the median and the mean of the scale are above 4 in all groups, which corresponds to a positive perception of the safety climate. A comparison of the group results shows only minimal differences between private commercial and public sector organisations.

							Taking into account all responses from Spitex employees, the safety climate scale achieved a median of 4.3 [IQB 3.7-4.7] and a mean of 4.1 (SD 0.7). The SPOtNat mean for safety climate is thus higher than the comparable results of the SHURP 2018 nursing home study with a mean of 3.9 (SD 0.8), and when comparing the means of the individual Spitex organisations, all results are between 3.6 and 4.6. 20% (n=18) of the organisations have a mean score below 4 on the scale.
Zúñiga et al., 2013	all three language regions	SAQ	5323 participants	Pflege- und Betreuungspersonals	76%	Nursing home	<p>Respondents gave a mixed picture of the safety climate. Around three-quarters of care staff said they felt they were safe and well looked after as a resident in this home (74.0%). A further 19.1% said it was difficult to discuss mistakes at departmental level, with this being more common in French-speaking Switzerland and Ticino (D: 16.1%, F: 27.4%, I: 42.2%). On the other hand, employees in Ticino were more likely to receive appropriate feedback on their work (G: 67.1%, F: 59.2%, I: 72.4%) and employees in French-speaking Switzerland were more likely to be encouraged to report observations (G: 76.2%, F: 84.1%, I: 77.0%).</p> <p>Teamwork: Teamwork was rated as good overall by respondents. For example, 80.4% of nursing and care staff said that suggestions and ideas (e.g. about work organisation, care procedures) were welcome at departmental level. Just under a fifth (18.3%) of respondents reported that it was difficult to address a perceived problem in resident care at unit level, with differences between language regions (D: 16.6%, F: 23.5%, I: 29.9%).</p>
Zúñiga et al., 2018	German and French speaking part	SAQ	6309 participants in 118 institutions	Care staff, staff from other services (e.g. kitchen, housekeeping, technical services, therapies), department heads and nursing experts.		Nursing home	<p>Safety climate: Here, there are rather narrow ratings across all professional groups, with around two thirds of respondents stating that mistakes are dealt with appropriately in the department, that they receive appropriate feedback on their work, that it is easy to address mistakes and that the way people interact with each other makes it easy to learn from the mistakes of others. There are differences between nursing and care staff and other staff when it comes to the question of whether residents feel safe, cared for and well looked after.</p> <p>There is a difference between nursing and care staff and other staff when it comes to the question of whether they know how to proceed on the ward to ask questions about resident safety (88.1% and 77.3% respectively). The answers here also differ among the other staff, with 93.2% of the activation staff and 91.1% of the technical service agreeing here, for example, compared to only 62.5% of the therapy staff. It is understandable that the resident-related occupational groups are more likely to know how to ask questions about resident safety than other staff, although the result for therapy staff is surprising. Nursing and care staff are also more likely to be encouraged to report observations about resident safety than other staff (80.7% vs. 75.4%).</p>

