COMPETENCE NETWORK
HEALTH WORKFORCE

SYNTHESIS

CNHW

The workforce shortage of health care professions presents one of the most important challenges in providing good quality in health care for the Swiss population. Initiatives which promote the optimal utilization of human resources are in demand

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PREFACE CSS

Every government must be measured against the healthcare it provides to its population, while science and practice must provide evidence as to how to organize healthcare effectively and efficiently. One of those questions is how to make health professions attractive. That is what is offered by the Competence Network Health Workforce (CNHW), in which all Swiss Universities of Applied Sciences with a School of Health Professions participate. The CNHW focuses on all kinds of research that deals with questions such as the attractiveness of health professions or factors that contribute to practitioners remaining in a health profession in order to achieve greater impact.

Following four years of funding through project-related contributions, the CNHW will now stand on its own two feet under the umbrella of the Specialised Health Conference of Swiss Universities of Applied Sciences (CSS) and allow the positive experiences of the long-lasting cooperation, beyond language regions and universities, to continue to benefit the analysis of the shortage of skilled workers and measures to combat this. As a direct result of this cooperation, the increased exchange between practice and research has led to initiatives that have been directly implemented. With representatives from professional associations in the support group, the needs from practice could be picked up and ideas for future initiatives developed jointly and inter-professionally.

Something we all hope is that the CNHW will grow into a large and influential network that contributes to good working conditions for the health professions in the transformation process of the health system, and thus will ultimately contribute to good healthcare for everyone. We also hope that the research findings which the network has developed and is still developing will have an effect on the frameworks and legislation relevant to healthcare, to the same extent that politics requires scientific bases for decision-making.

Laurence Robatto and Andreas Gerber-Grote
Co-Presidents of CSS

PREFACE CNHW

Without an efficient workforce, nothing operates well in the healthcare system and patient safety is at high risk. The current pandemic situation brings this easy-to-understand rule to the point. Not only the healthcare system is affected by this rule. A well-developed and well-staffed long-term care system is very important to support or relieve the burden of the healthcare system, especially in an aging society like Switzerland. Additionally, informal caregivers make a major contribution to relieving the burden on the healthcare and long-term care system. However, this is the case only if health professionals and carers work together in full respect and partnership. In the past five years the CNHW has been successfully established and the “Strategie gegen den Fachkräftemangel in den Gesundheitsberufen [Strategy to counter staff shortages among health professions]” has addressed multiple challenges and trigger points which lead to unnecessary shortages of health professionals and the overload of informal caregivers. The aims of the CNHW were to provide missing data to support the retention of health professionals, to give advice to improve organizational structures and workplaces, education and further education for health professionals, and to establish knowledge about how informal caregivers might be supported more appropriately and in partnership. With this request, the CNHW provides profound knowledge for practice, education and policy makers and clearly shows the need for further research and development in the Swiss healthcare and long-term care system. As you can read in this synthesis, the CNHW has good cooperation between the participating Universities of Applied Sciences and the Steering Committee. Thanks to the support of our work by committed stakeholders and the critical reflection of our project, our ideas, and the results fully achieved its aims. This was only possible thanks to the trusting and very by the International Scientific Board we never lost sight of our goal. In the past five years we have achieved much and we now know what needs to be improved in education and the healthcare system for an efficient, effective and satisfied

formal workforce and for informal caregivers. Nevertheless, we now know that we are only at the beginning of these developments, and we are motivated to generate further knowledge and not to let up in order to drive developments for the benefit of the system-relevant healthcare professionals and carers, and thus also for the good of the patients.

Prof. Dr. Sabine Hahn
Project Leader

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ACKNOWLEDGEMENTS

The five universities of applied sciences: Bern University of Applied Sciences, HES-SO University of Applied Sciences and Arts Western Switzerland, the University of Applied Sciences and Arts of Southern Switzerland, the Eastern Switzerland University of Applied Sciences and Zurich University of Applied Sciences collaborated for the first time in a project on such a scale. This was possible thanks to the support of the directors of the Departments of Health Professions involved and the rectors of these Universities of Applied Sciences. The priority and support they gave to the issue were very important to achieve the aim of the project and the continuation and basic funding of the CNHW as an association. Many thanks for this trust in the topic and the project. The project would not have been so successful without the *Fachkonferenz Gesundheit der Fachhochschulen der Schweiz* (FKG/CSS), which has always been strongly committed to the project. A big thank you goes to the members of the steering committee, who were intensively involved in the coordination of the fifteen research projects and the development of the CNHW, and are committed to a continuation of the network. Thanks to them, the project was brought to a successful conclusion and the foundation for a continuation was laid. The benevolent and appreciative collaboration in the steering committee contributed to a working group that was able to achieve the ambitious goals of the project with little time available.

We would also like to thank the National Support Group, who critically examined our results and proposals on an annual basis and provided an important contribution to the CNHW with their feedback, enabling us to shape and follow our path.

The International Scientific Committee also provided us with advice and support, helping to shape the future of the CNHW. Thanks to their profound expertise, we had important discussions to improve the project results. Their engaged involvement in the two international conferences of the CNHW enabled us to hold two successful and exciting international events.

Finally, we would like to thank all the project collaborators in the total of fifteen research projects. Great work has been done in the past four years, which can already be seen in the number of publications and presentations. From some projects more will follow, which we will accompany with great pleasure as part of the CNHW.

CONTENT

ABOUT

Within the Competence Network Health Workforce, the five Swiss Universities of Applied Sciences in Health, cooperate to enhance job retention and promote sustainable working conditions in healthcare

1 SUMMARY

The project “Strategy to counter staff shortages among health professions” addressed a variety of topics to promote health professionals’ retention and support for informal caregivers in a total of fifteen research projects across the five participating universities of applied sciences. The research projects focussed on work-related stress, skill and grade-mix, diversity, career paths, interprofessional collaboration, new and innovative models of care, advanced practice roles, moral wellbeing, and ethical structures as well as the support of and collaboration with informal caregivers.

The CNHW, formed as part of the project, set up the necessary structures and processes to reach a synthesis of all the results with corresponding recommendations for practice, education, research and policy.

All research projects could be organized into three core topics: (1) Conditions needed to improve health professionals’ and informal caregivers’ well-being, (2) Development of innovative training and education, and (3) Identification and evaluation of new organizational structures and support. Each research project was assigned to one of the core topics and a synthesis was generated from the most recent results per core topic and the conclusions drawn from them. To promote staff retention, wellbeing, and support for and collaboration with family caregivers, sustainable measures are needed that have been evaluated for their expected effect. For this, a comprehensive database describing the conditions needed is fundamental. In addition, innovative and alternative approaches must always be considered. For example, new role or care models offer great potential to expand the existing range of health services for patients and their relatives on the one hand, and for the careers of healthcare professionals on the other.

Although the overall project has now come to an end, a variety of further results, which are still in the process of analysis and publication, can be expected from the project. The CNHW will continue this work and include other organizations to work together nationally on solutions for health professionals and informal caregivers. With this synthesis, the CNHW contributes to the urgently needed database and evaluation of suitable measures. Practice, politics, research and education receive an overview of the results and can transfer them into their fields of work.

2 BACKGROUND

Switzerland, like most European countries, is faced with a substantial shortage of health professionals. The main reasons for this shortage are the increasing needs of the aging population, because of the changing epidemiological situation, and the rising prevalence of chronic diseases. The Swiss Health Observatory (SHO) has estimated that between 2014 and 2030, 65,000 additional nurses will be needed to counter the increasing demand for health services [1]. The same challenge has been identified for other therapeutic professions, such as allied health professionals and midwives [2, 3]. Another main reason for the shortage is the unfavourable working conditions, which lead to health-related absences, career changes and resignations among health professionals [4-6].
The negative effect of the shortage is the reduced quality of care for all patients, especially for the aging population and people with chronic diseases [7, 8]. The lack of a qualified workforce negatively affects the health of informal caregivers by increasing their workload [9]. This jeopardizes their ability to support their sick relatives [10, 11], and undermines their economic situation [12]. The multiple roles of informal caregivers force them to make choices that will sometimes harm the people they care for or weaken their own health or well-being [10]. As the Covid-19 pandemic highlighted, without a healthy and functioning workforce in the healthcare system, and without informal caregivers, our society is not able to manage health challenges [13]. A shortage of health professionals, who are seen as relevant for the system, will negatively impact the Swiss economy, if the minimum requirements for quality of care are not met.
Attaining the necessary quantity, quality and skills of health professionals, and meeting their needs, will require that decisions on both the education and health labour markets are aligned with the evolving requirements [14]. Due to the complexity of the topic, there is a multitude of influencing factors regarding the job retention of health professionals, which need to be addressed now [15].

2.1. Measures taken so far

Over the last few years, the shortage of skilled staff in the health sector in Switzerland has been addressed in a variety of ways. For example, it was targeted through the development of new professions (e.g., *healthcare assistants* in

2002, [16]), through the obligation to train new health professionals (the "Ausbildungsverpflichtung"), through the provision of new academic career perspectives, and through the offering of support to women wishing to re-enter the profession. Most notably, however, especially since 2002 (introduction of the free movement of people from EU member states), the shortage of skilled staff has been reduced mainly through the employment of health professionals who have migrated to Switzerland [15].

> *"It has been a genuine pleasure participating on the International Scientific Committee for the CNHW, which has been an ambitious world-class initiative to grapple with the enormous complexities of health care system workforce planning. The massive body of evidence and insight that have derived from this Swiss-led collaboration will be a valuable resource for decades to come.*
>
> *– Sally Thorne,*
> *International Scientific Committee*

In addition to these measures, surveys have been conducted regularly (and still are being conducted regularly), in order to assess any current and future shortages, and to determine the required skills and competencies [2, 15, 17, 18]. The "*Masterplan Bildung Pflegeberufe*" of the State Secretariat for Education, Research and Innovation (SERI), was initiated to address the shortage of nurses. Between 2010 and 2015, this masterplan coordinated the necessary measures concerning the different stakeholders [19]. Within the framework of the masterplan, the Swiss Health Observatory (Obsan) was commissioned by the "*Schweizerische Konferenz der kantonalen Gesundheitsdirektorinnen und -direktoren*" (GDK) to reliably monitor the development of professional and aca-

demic diplomas, with respect to the expected number of health professionals and staff requirements. In this process, the hiring of foreign health professionals educated abroad was also taken into consideration. Parallel to the development of this monitoring, an independent consultant was contracted to define the elements that would allow the cantons to establish the efficient monitoring of skilled staff and health professionals [20, 21].

Although these measures have not yet been developed to their full extent, initiatives to relieve the burden of informal caregivers have recently been developed in Switzerland [10].The situation of informal caregivers and the risks they are exposed to, were recently addressed at different levels and by various organisations nationwide (public policies, national and cantonal research programmes). Measures to reduce caregivers' burdens and prevent the deterioration of their economic situation, to ensure that they are true partners of healthcare professionals in the provision of care, have been developed more in recent years [22-26].

Thus, considerable efforts have already been made to address the current staff shortages in the health system and the informal caregivers' risks and situation. In the future, some of these strategies are likely to no longer be available. Even in the unlikely case that the number of job candidates in the health professions increases substantially, the creation of new training places will possibly be a challenge [27]. The potential of foreign health professionals will also soon be limited due to political, economic and ethical reasons [15, 28-30]. Additionally, even if the training opportunities for women wishing to re-enter the professions were funded more adequately, this would still not suffice to remedy the shortages. At the same time, the valuable pool of resources that informal caregivers represent is not infinitely expandable, especially in unstable economic situations and given the socio-demographic changes in families.

The recent pandemic clearly demonstrated the limitations of a health system which relies massively on foreign health professionals and informal caregivers. This experience strongly supports the need to reconsider the effective deployment of health professionals, their partnership with informal caregivers, interprofessional collaboration, the efficient use of professionals educated to bachelor level, and the implementation of roles with new and broader responsibility (advanced practice roles) for professionals with master level qualifications in

the Swiss healthcare system.
Research and development in this field have not been coordinated nationally and the competencies of the key players have not been bundled. Thus, till 2018, the Universities of Applied Sciences (UAS) primarily operated in their catchment areas within their own networks, which were distinct from one another. Consequently, the UAS often had unfavourable conditions concerning the acquisition of national projects in this field, in comparison to profit-oriented research providers or established academic institutions. They were, therefore, prevented from undertaking one of their fundamental roles, which is to contribute to knowledge and the development of measures (and their adjusted transfer) to solve problems specific to Switzerland and its regions.

2.2. Contribution of the «Strategy to Counter Staff Shortage Among Health Professions»

The importance of continuing to investigate the current and future challenges to develop, implement and evaluate innovative strategies for approaching a sustainable workforce labour market in the health sector, to ensure responsible recourse to informal caregivers, and to guarantee high quality care for the Swiss population, was also recognised by the SERI [31]. Therefore, the national project of the UAS, the “Strategy to counter staff shortages among health professions” [32, 33], was funded from 2017 till 2021 by Swiss universities and the SERI. The UAS role was to develop recommendations for policies, practice, education and research within a national cooperation, and to strengthen the influence and the potential of the participating UAS.
The project “Strategy to counter staff shortages among health professions” aimed to enhance job attractiveness, retention and sustainable working conditions for health professionals, and supportive and collaborative solutions for informal caregivers, through the provision of data, educational content and services. This enables, facilitates and accompanies the implementation of state-of-the-art applied research and project evidence, into practice and education.
Although the problems regarding workforce shortages in healthcare and the support of informal caregivers are multiple, resources needed to be allocated to address the most pressing issues that lie within the field of influence of the UAS. Therefore, within the framework of the strategy, the following activities were

focused upon: efficient work organization and adequate deployment models for skilled health professions through the provision of data based knowledge,; improvement of the skills of health care managers through tailor-made education and further education for this important group,; development of ethics structures to reduce stress,; improvement of supportive and cooperative communication,; and new models of collaboration (e.g. with informal caregivers).
Thus, within the project, the consortium formed the Competence Network Health Workforce (CNHW), enabling effective collaboration across the participating UAS.

2.3. The CNHW

Since 2017, the CNHW (framework see Figure 1) has clearly demonstrated its strengths through the definition of a common aim and through the development of a structure and process, enabling sustainable cooperation in applied research [32, 34]. In fifteen sub-projects, measures and basic knowledge regarding job retention and the improvement of working conditions for health professionals and informal caregivers were developed and applied. This knowledge is being used at the participating UAS to improve education, daily practice and further education for health professionals. It also demonstrates the necessity for further research and builds the base for unique expertise. Additionally, 110 presentations, posters and publications have been conducted, designed or written (see www.cnhw.ch). More knowledge will be disseminated in the near future, including publications from merged data derived from the multiple projects. Together with international experts (CNHW International Scientific Committee) and national stakeholders (CNHW Support Group) chaired by the Health Conference (FKG/CSS), the CNHW has developed a strategy for the future network (see chapter 8: Sustainability).

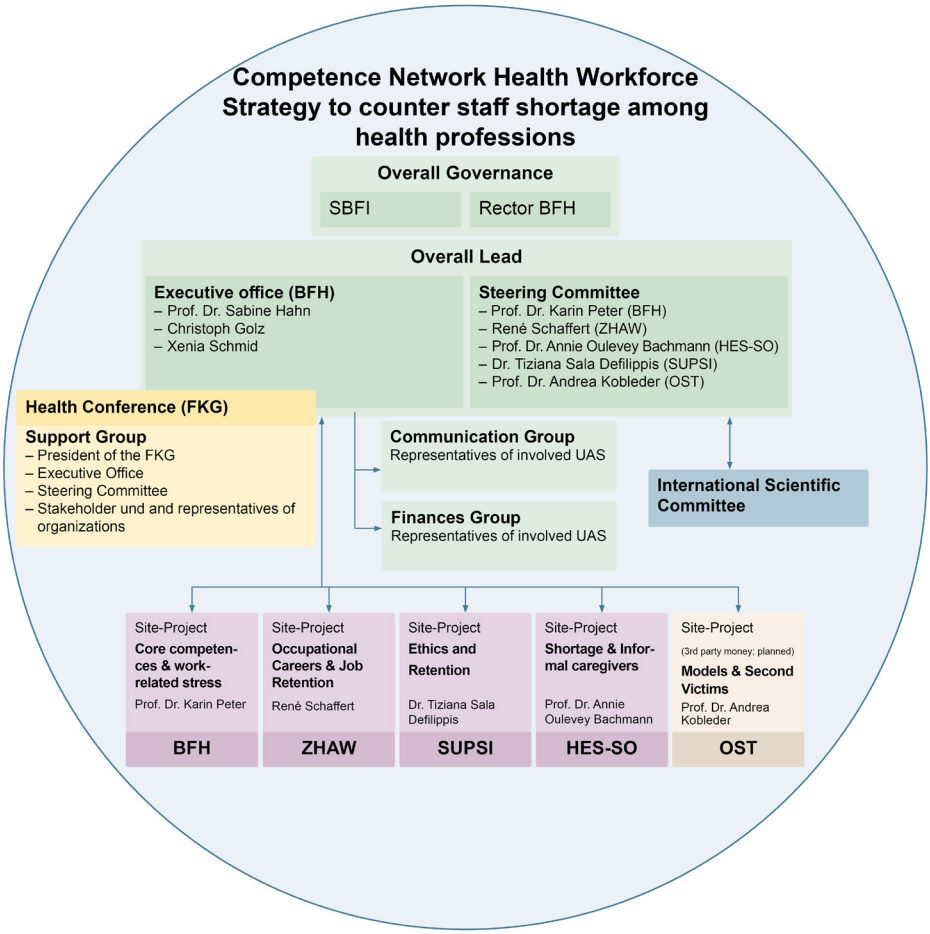

Figure 1: CNHW Framework

3 AIM

The aim of this synthesis is to aggregate relevant topics based on the fifteen sub-projects of the CNHW, and to conclude implications for research, education, practice and policy with respect to the health workforce in the healthcare system, and the support and integration of informal caregivers.

4 METHOD

To achieve the above aim, a method proposed by Defila, Di Giulio [34] was used to develop a synthesis in a joint project with various disciplines and partners. In this synthesis step, therefore, several approaches were combined. Firstly, the core topics were defined by the steering committee. Secondly, the contents of the core topics were aggregated together in group work by the sub-project leaders and the steering committee, to be finally recorded by a smaller team from the group and validated by the project management. The collaborative approach has always been important for the CNHW throughout the project. As Defila, Di Giulio [34] have pointed out, synthesis development is more successful when this is also seen as a joint task by all participants.

The basis for the synthesis is the common research topic that is given in the context of the project. In a two-day workshop in September 2019, conducted by the steering committee, three core topics emerged from the in-depth qualitative analysis of the themes and results of the fifteen sub-projects of the CNHW. The first topic focuses on the conditions needed to improve the well-being of health professionals and informal caregivers. The second topic comprises the development of innovative training and education. The third topic describes the identification and evaluation of new organizational structures and support. In a next step of the synthesis process, an agreement on common theories and concepts was reached, along with the connection of all sub-projects within the predefined core topics. For this, a web-meeting with the steering committee and all the project leaders of the fifteen sub-projects included was conducted in October 2020. As preparation, the project leaders could allocate their projects to one of the core topics defined. In groups per core topic, the overlapping and contradictory topics and results were visualized on a mind map and explained by one of the participants of each group. Finally, a smaller working group from each group on the core topics agreed to write the synthesis in an iterative exchange with the project management.

In the next three chapters each of the core topics of the synthesis is described, comprising the main results from the sub-projects included, and the conclusions for policy, practice, education and research.

5 CONDITIONS NEEDED TO IMPROVE HEALTH PROFESSIONALS' AND INFORMAL CAREGIVERS' WELL-BEING

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5.1. Introduction

The challenges for the Swiss healthcare system described in the chapters above demand a sustainable change in order to retain health professionals in their jobs and to support informal caregivers. For this change an extensive database is needed. Switzerland is lacking “databases for reliable and prospective health workforce planning” [35, S.161]. These data are important in order to identify influencing factors with the best leverage to improve the well-being of health professionals and informal caregivers. The data establishes a crucial basis for a successful, healthy, and satisfactory work/activity environment and context. Understanding the conditions required represents the key to designing and implementing suitable measures that aim at sustaining and strengthening the well-being and daily practices of formal and informal caregivers. By conditions we mean amongst others: working conditions, such as adequate pay, possibilities for development and ethical support, as well as environmental conditions, such as support and information for informal caregivers.

Within the project “Strategy to counter staff shortages among health professionals”, five sub-projects could be allocated to this topic, as they contributed to the identification of the conditions needed among health professionals and informal caregivers: (1) The sub-project “National graduate survey of health professionals from universities of applied sciences” (Nat-ABBE) was a multi-centre follow-up study, which focused on bachelor graduates in the health professions, who reported at the end of their studies and one year after entering the healthcare workforce about their health, competencies, professional expectations, experiences and future plans. (2) The sub-project “Professional careers – longitudinal study after career start” (Nursing Careers) surveyed nurses graduating in 2011/12 with follow-ups after one and six years following graduation, addressing continuing education, work field, type of activity, job function (e.g. bedside nursing, management, teaching), job percentages and past jobs, and past continuing education. (3) The sub-project “Ethical concerns and job satisfaction among healthcare professionals working with outpatients and home-based” (Ethics) was a mixed methods study aiming to understand the health professionals’ moral concerns and their need for ethical support in the outpatient and home-based setting. The qualitative part comprised semi-structured interviews

focusing on ethical concerns experienced in practice. The quantitative part focused on the inquiring data with the Effort-Reward Imbalance scale (ERI) [36] and the Moral Distress Scale-Revised (MDS-R) [37]. (4) The sub-project "MeetMyNeeds" aimed at improving the evaluation of needs among informal dementia caregivers, with the aim to promote more efficient use of healthcare resources. MeetMyNeeds comprised two parts: the first part described the current practices regarding needs evaluation among providers and the second part focused on the development of content and characteristics of an online platform to evaluate the needs of informal dementia caregivers. (5) The sub-project "PePA Psy" addressed informal caregivers in adult psychiatric care. Their perceived mental health, optimism and the degree to which they stigmatize the person being assisted were measured, as well as the mutual requirements of professionals and informal caregivers. More information about these five sub-projects and further publications are linked to our homepage www.cnhw.ch.

5.2. Synthesis of results

The projects examined different aspects of the conditions needed to improve the well-being of health professionals and informal caregivers, yet the results point to three themes that emerge from all the studies included here: work expectation and experience, preventive measures and adaptation to the role. These themes are described below and supplemented with results from the individual studies.

5.2.1. Work expectations and experiences

In order to improve health professionals' well-being, it could be suggested that looking at the gap between expectations and experience becomes crucial. For example, there is an expectation of having a lot of scope for making one's own decisions at work, while in contrast, in everyday working life this scope is largely lacking. Hence, large differences can indicate conditions that are currently insufficiently satisfied, both in healthcare practice and in health education and educational organizations. The Nursing-Careers project revealed results regarding a profound mismatch between expectations and reality in daily work in the healthcare system: to have enough time for private life is the most important expectation but also the last one when the nursing profession is assessed. To

be able to reconcile work and family life is the second most important expectation but one of the aspects least present in nursing. Earning a good salary ranges in the middle of the expectations but is assessed as the lowest aspect present in nursing. Looking at the conditions that should change in ten years in order to stay in the profession, a slightly different mix of priorities emerged. Among the participants from the Nursing-Careers project, 87% expected an improvement in their salary, 72% an improvement in the conditions for reconciling family and career, 63% a reduction of time pressure at work and 57% an improvement in the support from higher management [38]. However, these expectations do not seem to be fulfilled, as other projects in the CNHW describe.

A different approach was conducted in the Nat-ABBE project, in which the health professional students rated the importance of various conditions for their future work (expectations), and one year after entering the workforce, they indicated the extent to which these expectations had been fulfilled. These results also show an unsatisfactory tendency. The most negative mismatch was identified as having not enough time to work with clients and patients, followed by a mismatch of the expected and experienced good work-life balance, and a mismatch of the expected good management of the company versus the management experienced. Additionally, a lack of good opportunities for continuous education and training, and personal and professional development, and a good salary were mentioned.

The Ethics project adds to this from the ethical perspective, highlighting among health professionals caring for outpatients, that the level of moral distress perceived in the previous position is significantly ($p=0.002$) correlated with the decision to move to a new professional position. This might explain why they have decided to leave inpatients' care and to enter outpatients' care. Among all the participants of the Ethics project 33% believe that their efforts are not rewarded appropriately (ER-Ratio > 1). This shows a discrepancy between the expectation of being rewarded for the work performed and the reward experienced. Interestingly the overall score of efforts (ERI) was revealed to be positively related to the intention to leave. Further, according to logistic regression there is a positive association between the MDS-R and the ER-ratio.

In addition to this, the qualitative and quantitative results show that insufficient collaboration and in turn poor teamwork within the healthcare network represents one of the main sources for moral distress among the three healthcare professional groups. What this study clearly demonstrated is that moral concerns are strictly interrelated with economic constraints, bureaucratic workload and uncertainty about legal regulations.

For informal caregivers, the goal of MeetMyNeeds was to develop an online platform that would allow for a systematic, accurate and comprehensive assessment of the needs of informal dementia caregivers, in order to orient them according to the most relevant services corresponding to their situation. Through an iterative process, current practices in assessing the needs of this population were described by both professionals and relatives. Then, the relevance of the content of a questionnaire to assess their needs was tested by these two populations. Simultaneously, services were identified to meet these needs. Finally, the design of the platform was also co-defined with these two populations. The benefits of using such a tool to assist informal dementia caregivers in their decision-making process was emphasized by both groups of study participants.

5.2.2. Preventive measures

Measures to prevent resignations and position changes among health professionals or overloaded informal caregivers are the core focus of chapter 6. Also, the projects included in this chapter present aspects which should be considered for the well-being of health professionals and informal caregivers. Preventive measures should be included in the UAS curricula and at work in health organizations after graduation. The Nursing-Careers project presented the main reasons for nurses leaving the profession: from those having left the profession, 62% mentioned the working hours as the reason for leaving nursing, followed by the general conditions for reconciling family and career with 42%, psychological strain with 31% and physical strain with 27%.

The Nat-ABBE project showed that health professional students reported higher one-year prevalence of low back and neck pain than their siblings in the

average population (75%). The majority of the health professional students attributed the cause of their pain to either study or work conditions.

The results presented from the Ethics project highlight the need for preventive measures to balance the effort-reward among health professionals working in outpatient and home-based settings. Furthermore, the expected benefit from ethical structures and support are specific ideas to be evaluated as preventive measures with respect to resignation or position change, caused by ethical concerns. In the Ethics project, 80% of the health professionals working in the outpatient or home-based settings answered that they would find it useful to have an ethical structure. Additionally, 37% would take advantage of an ethical support service and 60% believed that attending education in ethics would be beneficial for their work. Participants added the suggestion of organising and offering continuing education in healthcare related to legal issues. Furthermore, the participants expressed the need for improving interprofessional collaboration among the health professionals in order to find and follow common therapeutic strategies for patient care. This finding is corroborated by analysis of the MDS-R which clearly showed that poor teamwork displays the highest score and therefore it represents the main source of moral distress, followed by deceptive communication.

5.2.3. Adaption of the roles

The results of the three projects presented in chapter 5 revealed the need to reflect the mismatch of present competencies and the competencies needed in daily work. Nat-ABBE showed that health professionals estimated the level of competencies acquired during their studies was lower compared to the level of competencies demanded in their first year of professional life, such as: obstetrics, therapy and care of patients, professional communication and relationship management, interprofessional teamwork, coping with physical and emotional stress, and the use of IT and health technology. On the other hand, competencies for providing evidence-based healthcare (researching for, evaluation, application and presentation of scientific results) were demanded less during the first professional year than the training would have allowed for. Thus, there is a different demand for competencies than the students bring with them from their

studies, at least in the early years.

Nursing-Careers adds the finding that those starting in positions with extended responsibilities more often kept their initial employment (61%) compared to those without extended responsibilities (13%) [39]. Furthermore, they revealed having higher job satisfaction than those without extended responsibilities ($p<0.05$).

There were also indications from MeetMyNeeds that the competencies of the healthcare providers and informal caregivers need to be adapted. As chapter 5.2.1 mentioned, only one third of the healthcare providers investigated used a systematic procedure to evaluate the needs, and none of the tools they used were both validated and specifically targeting the needs. This implies that either no suitable tool was available, or the healthcare providers miss important information regarding evidence-based assessments and how to apply them in daily practice as well as how to interpret the data and draw conclusions from them. Furthermore, to use digital tools in daily practice, respective competencies for the correct application are needed. It is questionable whether those competencies are already part of the health professionals' education, since Nat-ABBE mentioned that health professionals estimated their level of competence for the use of IT and health technology as lower than that demanded in their daily work. Finally, if informal caregivers are to use this type of orientation device in the future in order to facilitate their access to appropriate services, their digital literacy needs to be assessed and, if necessary, developed.

5.3. Conclusions and Recommendations

To improve education and practice in a challenged healthcare system, it is important to have an extensive database on which effective and sustainable measures can be established. The CNHW contributes to this needed database. However, there is still a lack of data for Switzerland on some aspects of health professionals' retention and support for informal caregivers. The Nat-ABBE and Nurse-Careers projects show how important it is to collect longitudinal data in order to be able to identify reasons for resignations and career paths over a longer period. The results of unmet and unsatisfied working conditions and poor

state of health, such as the finding of higher levels of back and neck pain among health professional students, calls for the improvement of working conditions and better health promotion during education for the students. Hence, not only the health organizations are asked to improve the conditions sustainably but also the educational organizations, which must both adapt the training to the required competencies in practice and potentially include new competencies in the curricula. However, in terms of competencies, it seems that it is not only up to the educational organizations to adapt them to the practice. Since it has been shown that nurses with more responsibility are more likely to stay in the job, health organizations would do well to assign their employees in a competency-based and supportive manner. It can thus be seen that more responsibility right at the beginning of entry into the world of work can be conducive to retention and job satisfaction. In addition, the Ethics project highlighted an area that has received little attention in the context of increasing rationing in healthcare. What is already a fact for the inpatient care setting (e.g. ethics structures and support) is to our knowledge non-existent for outpatient and home-based settings in Switzerland, and this in times when there is a strong tendency towards more outpatient and less inpatient care. This fact demands action on the part of the organization on the one hand, but also on the part of politics, in order to make such structures financially viable.

Furthermore, MeetMyNeeds highlighted the potential of digital tools to support health professionals and informal caregivers in their decision-making processes. The project revealed that assistive tools for the decision-making processes of informal caregivers can be beneficial for providers, informal caregivers and relatives with dementia. This project contributed to the development of systematic procedures for assessing the needs of informal caregivers. By conducting an iterative process, MeetMyNeeds once more highlighted the importance of inclusion of those affected in the development of assistive technologies. Such tools imply great possibilities to enhance the collaboration of healthcare providers and informal caregivers. It could thus lead to a reduction of quantitative demands for the healthcare providers. These assumptions need to be evaluated in further research. In addition, there must be a transfer of the ideas to other conditions, as it can be assumed that the informal caregivers of cognitively

healthy patients can involve them differently in an assessment.

Finally, at the time this synthesis was developed, not all analyses were available from all the projects. Further results will soon be found on our webpage cnhw.ch. For example, the Nat-ABBE will further analyse young health professionals' plans for their professional careers and continuous education, and their reasons for not working in the profession or their intention to leave. A comprehensive publication of the Nat-ABBE project is expected to be available in summer 2021.

In summary, the following recommendations can be derived from this chapter to improve the retention and job satisfaction of health professionals:

Suggestions to use in practice

- Assign employees in a competency-based and supportive manner.
- Establish ethics structures in outpatient settings to support ethical decision making.
- Integrate evaluated assistive technologies in daily practice.
- Integrate informal caregivers into daily practice with their expertise and support them. See chapter 6 for more implications.

Suggestions to use in policy

- Facts described and communicated from research must be included seriously in the political discourse and policy development.
- Enable financing for ethics structures in outpatient settings.

Suggestions to use in education

- Improve students' health promotion and evidence-based assessment during education.
- Adapt the curricula to the needs in practice, such as professional communication or interprofessional collaboration.
- Potentially adapt the curricula to future competencies, such as digital competence.
- We specifically focus on this topic in chapter 6.

Suggestions to use in research

- Conduct studies with longitudinal design to investigate the career paths of health professionals.
- Involve individuals from the target group in the tool development (iteratively).
- Evaluate the potential of assistive technology for both health professionals and informal caregivers.

> *This is such an excellent project examining the workforce shortage among health professionals. It is inspiring to see the collaboration across a number of universities in Switzerland bringing substantial evidence together to improve learning across the health care workforce. The sum is therefore greater than the parts*
>
> *– Jill Maben,*
> *International Scientific Committee*

6 DEVELOPMENT OF INNOVATIVE TRAINING AND EDUCATION

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6.1. Introduction

The healthcare system faces many changes on a regular basis, from the aging population to the increasing prevalence of chronic illnesses, shifts in outpatient cases, and a shortage of healthcare professionals [1, 40]. To keep up with this ever-evolving context, it is important to reassess the roles of various healthcare professionals (formal caregivers), but also the way in which healthcare institutions work [14, 15, 17]. Informal caregivers are not spared from these societal changes [41]. They find themselves taking on more and more tasks, for which they are not always trained or supported, and which could jeopardize their health [4, 42].

The challenges resulting from the shortage of healthcare professionals and the maintenance of public health have called for the development of innovative training programmes. These programmes ultimately aim to ensure that healthcare professionals and informal caregivers preserve their own health and maintain their quality of life, while remaining committed to the healthcare system. To this end, it is essential to identify and describe the skills to be developed in both initial and post-graduate training programmes for healthcare professionals, and to determine the knowledge and know-how that informal caregivers would also benefit from in developing their competence and literacy. New approaches to healthcare-related situations are also necessary if we are to foster effective and efficient collaboration between the various participants that make up the healthcare system and ensure satisfaction for all those concerned. Finally, it is equally important to assess the results and impact of these new training programmes in clinical practice and within the community.

6.2. Synthesis of results

This summary of the results of related studies is structured according to three steps, which aim to contribute to the development of training interventions.

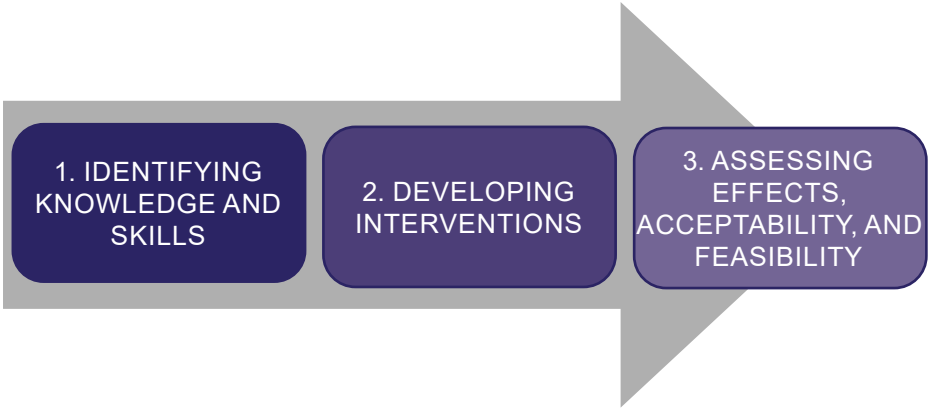

Figure 2: Three steps contributing to the development of training interventions

The results will thus be presented in the following order:

1) Those concerning the knowledge and skills of healthcare professionals and informal caregivers that are to be developed to preserve their health;
2) Those describing training programmes that would meet the needs previously identified;
3) Those presenting an assessment of the effects, acceptability, and feasibility of some of these training programmes.

6.2.1. Identifying the knowledge and skills necessary for healthcare professionals and informal caregivers to better preserve their health

In the context of the STRAIN (STRess Among health professionals IN Switzerland) project, the project team looked at work-related stressors among healthcare professionals, and their long-term effects and consequences. This study was carried out across the three linguistic regions of Switzerland and with healthcare professionals from all settings. Quantitative and qualitative data were collected over several phases, which led to the development of training courses for leaders in healthcare organizations. The aim was to teach health professional leaders how to deal with stressors at work and preserve the satisfaction and health at work of their employees.

The results describe that existing work–private life conflicts, lack of opportunities for development and the behaviour of the direct line manager were relevant

ties for development and the behaviour of the direct line manager were relevant stressors at work, and were associated with health professionals‘ stress symptoms, job satisfaction, health and motivation to remain at work [43]. In addition, significant perceptual differences existed between healthcare professionals with few to no responsibilities and upper or middle hierarchical levels in terms of various stressors, their job satisfaction, and health [6].

The EQUI project aimed to develop a Grade Mix model for long-term care. The first two phases highlighted the following points. A review of the literature led to the development of an evidence-based Grade Mix model which presupposes that the composition of teams must be context-dependent. It underlines the importance of integrating both “situational level” environmental factors and “structural level” internal factors in the most logical way, so as to optimize the satisfaction of residents, patients, and healthcare professionals, in keeping with the best possible cost-benefit ratio. One unique aspect of the proposed frame of reference is its focus not only on patient satisfaction, but also that of the healthcare teams [44].
Then, a situation analysis was carried out by means of an electronic survey, interviews with the heads of long-term acute care institutions, and through the examination of documents considered by these institutions as descriptive of their Grade Mix. This analysis revealed that institutions often have very few formalized descriptions of their Grade Mix: the documents they do have are written descriptions in varying detail of the duties, tasks, skills, and responsibilities expected of their personnel. It is therefore difficult to glean how their Grade Mix is implemented in practice. The interviews attested to senior nurses’ abilities to deploy healthcare teams in line with the skills and strengths of their members. However, according to the participants, hiring and funding issues represent the biggest hurdles to be overcome in order to implement the desired Grade Mix [45].

The KiPA action research project focused on informal caregivers within the community and the role that church-based volunteers could play in supporting them and providing respite. Indeed, an increasing need for informal caregivers has been observed, and the healthcare system does not have sufficient resources

to provide them with the necessary assistance to prevent their exhaustion and social isolation. Exploration and intervention phases were used to clarify the respective needs of informal caregivers and church-based volunteers, in particular the need for spiritual support expressed by caregivers, and the best way to devise and offer training for both groups. One of the objectives of the training devised for church-based volunteers was to teach them how to provide respite care in a way that is safe for both the informal caregivers and for themselves.

As part of a mixed method research project, the PAuSES programme focused on analysing the highest priority needs in terms of respite for in-home informal caregivers, and on evaluating the existing resources. The authors carried out this analysis across three phases. First, they conducted interviews with informal caregivers and representatives of family support services. The analysis of the data collected made it possible to identify both the unmet needs of informal caregivers, and the limitations, costs, lack of resources and inadequate adaptation of existing support services that tend to focus solely on the patient and less so on their informal caregivers. This analysis also clarified future beneficiaries' expectations and the direction that the prospective training programme would need to take. All this data was used as the foundation for the development of the PAuSES programme (see chapter 6.2.2).

Emergency hospitalization exposes elderly patients to the risk of suffering from delirium. The literature shows that one way to prevent delirium is by mobilizing the expertise of patients' informal caregivers. The IntEC project conducted a case study to explore participants' perceptions of the role that informal caregivers of elderly patients hospitalized for orthopaedic surgery could play in preventing delirium (e.g. sharing information, making decisions, providing care and comfort). Two main themes emerged when analysing the interviews. Firstly, informal caregivers are present and available to support their hospitalized relatives, both physically and psychologically. Secondly, while caregivers communicate with the nurses, these nurses do not necessarily recognize the role that caregivers play, and thus do not include them in the care process. Having these informal caregivers by their side helps elderly patients to feel reassured and relaxed. For healthcare professionals and institutions, integrating informal

caregivers into care processes would entail: (1) engaging in a care solution that focuses on both the patient and their caregiver; and (2) adapting institutional policies to support such an approach. All healthcare professionals must be able to develop the skills that would allow them to work in partnership with informal caregivers. These professionals would also require formal training to fully implement this new approach. Based on the results obtained, training projects are currently under development, as is an update to nursing interventions to include the informal caregivers of elderly hospitalized patients in their care processes.

To sum up, given the current societal context, it is essential to delve further into the ever-changing role of healthcare professionals, but also that of informal caregivers. To usher in positive changes, it is imperative to identify the training needs of healthcare professionals and informal caregivers alike. Training programmes are necessary to develop the knowledge and skills essential to rethinking these roles. Specifically, these programmes should enable both professionals and caregivers to evolve in their respective roles and activities, while also safeguarding their own health.

6.2.2. Devising and describing training programmes that will allow healthcare professionals and informal caregivers to develop their skills

Various projects have made proposals for training courses for either healthcare professionals or informal caregivers. The STRAIN project has developed a training course for health professional leaders working in lower, middle and upper management positions. The aim of the education programme is to empower health professional leaders, so as to effectively decrease work stressors among their employees. This two-day training course focuses on ways of reducing stress; improving employees' work-life balance; matching the right people with the right tasks, skills, and available resources; optimizing leadership qualities; clarifying roles and the range of skills needed to handle any associated assignments; and promoting good communication and active collaboration within organizations. This training course has been tested in various types of care settings. The assessment of its effects will be available soon.

Thanks to the knowledge developed in the first two phases of the EQUI research project, one long-term acute care facility with full-time residents and another facility that offers centre-based day respite have both implemented a Grade Mix concept. The assessment of this concept is underway and the results will be available shortly.

The KiPA project implemented a training programme co-created by informal caregivers, church-based volunteers, and members of a research team. One of its peculiarities is its focus on the spiritual aspect of health. Its content was defined based on a review of the literature and an analysis of the interviews conducted with the participants at various stages of the research project. Participants undertook a three-day vocational training course with two mini-internships. The training covered such points as how to find information on existing support structures for informal caregivers, as well as knowledge of how to deal with fragility, spiritual distress, exhaustion, resilience, different forms of dementia, and stress management strategies. Participants were split into two-person teams, each with one informal caregiver and one volunteer, who then came up with ideas for respite activities (e.g. walking, reading, assistance with adminis-

trative procedures). The assessment of the training and mini-internships was conducted through interviews with the various participants (see chapter 6.2.3).

In order to afford informal caregivers the time to rest, relax and rejuvenate, PAuSES retained three ideas for activities that students could offer to provide respite: accompaniment during activities (with or without the presence of the caregiver), help with looking up useful information, and impromptu assistance in the case of unforeseen events.
Student volunteers undertook an initial two-day training course. During this module, they were made aware of the situations faced by informal caregivers and their needs, then taught about the support services available to them. Those students who decided to pursue this avenue and fully enrol in the PAuSES programme attended additional in-depth courses. Informal caregivers interested in the programme then chose the ideal student for their needs, based on the students' profiles. Once the students had been paired with their informal caregivers and they had met for the first time, the activities expected of the students were detailed further, and a maximum duration of 40 hours was set. Throughout the programme, the students were supervised and evaluated over three half-days of group practice. A pre-test was performed with four pairs of informal caregivers and students to fine-tune the PAuSES programme (see chapter 6.2.3).

6.2.3. Assessing the effects, acceptability, and feasibility of certain training programmes

The KiPA research project set out to identify the risks of the physical, psychological, social and spiritual burdens that befall informal caregivers, and to determine the means of alleviating them. After their training, church-based volunteers were able to provide support based on the identified risks. Through their intervention, informal caregivers felt that their self-management, resilience, and ability to avoid burnout had improved. In addition, all participants (caregivers and volunteers alike) agreed that they were better able to attend to their own health while also providing care for others. By bringing church-based volunteers in to assist with healthcare, the KiPA project provides a promising alternative to support informal caregivers while meeting their spiritual care needs.

Preliminary results from the pre-test of the PAuSES community service training programme showed that the students viewed this project as a formative experience that taught them many things, and they believe that they are now more aware of the role played by informal caregivers. They have broadened their communication skills and gained knowledge about the health of the people they care for. Some noted that some informal caregivers acted as "mentors" for them. Finally, they disclosed that 40 hours of service are insufficient to fully meet the caregivers' needs. The informal caregivers found the PAuSES programme largely satisfactory and easily accessible, especially when seeking urgent assistance. They also highlighted the rapidly established relationship of trust with the students, and the ability of the latter to adapt. However, they also mentioned that the availability and ability of some students to react to certain complex situations were subject to fluctuations. Three out of the four informal caregivers indicated that they would recommend this programme. These initial findings indicated that the PAuSES programme shows great promise as a way to meet the needs of informal caregivers and contribute to the training of future healthcare professionals.

6.3. Conclusions and Recommendations

Various research projects of the CNHW have identified the knowledge and skills necessary for healthcare professionals and informal caregivers to better preserve their health despite the risks to which the latter are exposed.

In addition to the importance of finding effective solutions to keep health professionals satisfied with their work, it is also crucial to empower informal caregivers to maintain their contribution to the healthcare system and to support them when necessary. Addressing these challenges requires not only research that evaluates the effectiveness of measures, but also the corresponding framework conditions (political and economic), supportive policies in healthcare organizations and for informal caregivers, and pre- and post-graduate training for healthcare professionals. The studies included in this chapter contribute to these points. The results make various suggestions for practice, public policy, education and research.

Suggestions for use in practice

- Acquire knowledge and develop skills about stressors at work, tailored to specific healthcare professionals (e.g. nurses, midwives, physicians).
- Develop an institutional culture that makes it easier to include and partner with the informal caregivers of elderly hospitalized patients to administer care solutions.
- Develop inter-professional and multi-disciplinary collaboration skills.
- Recognize and share lay expertise with healthcare professionals.
- Identify and share the needs and limitations of informal caregivers with healthcare professionals.

Suggestions to use in policy

- Advocate to amend working conditions that cause stress.
- Specify the respective roles and scopes of practice for healthcare professionals.
- Implement measures which support the development of an institutional culture that integrates other disciplinary perspectives and thus complements biomedical approaches, so as to address the complexity of certain care-related situations.
- Implement measures that encourage healthcare professionals to recognize the lay expertise of informal caregivers, while preserving their health.
- Fund training and research programmes targeting the development of skills for healthcare professionals and informal caregivers (see the implications for use in practice and training).

Suggestions to use in education

- Develop pre- and post-graduate training courses whose curriculum incorporates specific knowledge that reinforces the commitment of healthcare professionals and acknowledges their occupational health (e.g. stress management, Grade Mix concept, leadership, communication, cooperation).

- Develop pre- and post-graduate training courses whose curriculum incorporates specific knowledge that supports the systematic inclusion of informal caregivers in care processes, while preserving their health.
- Co-design training programmes in partnership with healthcare professionals to reinforce informal caregivers' commitment to healthcare.

Suggestions to use in research

- Continue and deepen research to refine pre- and post-graduate training content for healthcare professionals that focuses on preserving their health.
- Continue and deepen research to establish and enrich partnerships with informal caregivers.
- Continue and deepen research to explore and implement innovative respite strategies for informal caregivers.
- Develop intervention research to assess the effects of pre- and post-graduate training programmes that focus on preserving the health of (future) healthcare professionals.
- Develop intervention research to assess the effects of pre- and post-graduate training programmes that focus on establishing and enriching partnerships with informal caregivers.
- Develop implementation and evaluation research for projects that focus on the described Grade Mix concept.
- Design, implement, and assess the effects of a Grade Mix concept (e.g. inter-professional cooperation, economic impact).

7 IDENTIFICATION AND EVALUATION OF NEW ORGANIZATIONAL STRUCTURES AND SUPPORT

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7.1. Introduction

Improving the working conditions and reducing stressors at work may enhance job retention in healthcare and make health professions more attractive as career options. This may necessitate the development, implementation and evaluation of alternative organizational structures, new care models and support structures, new or expanded roles for healthcare professionals, and reforms of reimbursement within the Swiss healthcare system.

Such new structures, improved interprofessional collaboration and expanded roles are hoped to improve working conditions for healthcare professionals, improve quality and efficiency in healthcare provision, [46] and save costs [47]. Haddara and Lingard [48] described these two aspects with regard to interprofessional collaboration as constituting a utilitarian discourse, i.e., new organizational structures should improve quality and efficiency; and an emancipatory discourse, i.e., new organizational structures should empower health professionals who are not medical doctors. It has been posited that more autonomy and control over one's work can act as a buffer for workplace stress [49]. At the moment, these types of innovation are still in their early stages in Switzerland.

Four CNHW projects conducted at the Zurich University of Applied Sciences aimed at compiling knowledge, providing insights and identifying ways to counteract the drain of health professionals through their own research projects.

The sub-project from the *Institute of Occupational Therapy* named "Innovative models of interprofessional collaboration in community-based care" (IMC) aimed at identifying new models of interprofessional collaboration in outpatient care and examined their acceptability and feasibility among different stakeholders in Switzerland. The project "Improvement of job satisfaction among midwives through the implementation of innovative models for midwifery practice care in clinical settings" (JSM) was conducted by the *Institute of Midwifery.* It compiled an inventory of the professional situation of midwives at public and private maternity care units in the canton of Zurich, and aimed to develop, implement and evaluate a project which included aspects of midwife-led care that encompasses an expansion of the professional role. The *Institute of Physiotherapy* investigated the current experiences of Swiss physiotherapists with advanced practice roles in healthcare, and the stakeholder's visions and ideas about this role in the project called "Development of advanced practice models

for physiotherapy in Switzerland" (APP). The project "Promotion of interprofessional collaboration in practice" (ICP) was carried out by the *Institute of Health Sciences*. It aimed at drawing a concept for team diagnostics and one for individualizable training to promote and support interprofessional cooperation and to establish an interprofessional network of different care and education settings in Switzerland.

7.2. Synthesis of results

As laid out above, innovative approaches are needed to face the current challenges. Projects included in this chapter focus on three levels: (1) on the macro level, organizational structures of healthcare delivery; (2) on the meso level, advanced roles of health professionals; and (3) on the micro level, improving interprofessional cooperation though team analytics and training.

7.2.1. Macro level: New organizational structures for healthcare delivery

Focus groups and interviews with nurses, general practitioners, physiotherapists, occupational therapists and other stakeholders in outpatient care showed a general awareness of the challenges of the Swiss healthcare system and the need for structural and functional changes. At the same time there is an openness from health professionals and organizations towards these necessary changes. Health professionals felt strongly that changes in organizational structure and cooperation should come from within the healthcare system and that their professions should take an active role in the transformation (IMC). As outpatient care is increasing with the federal strategy of "outpatient care before inpatient care" ("Ambulant vor Stationär") [50] and more complex cases, they see the need for closer cooperation amongst the professions involved, a care manager function and advanced roles that for example could take over such a role (IMC).

7.2.2. Meso level: Advanced or enriched roles

Interviews and a survey targeting physiotherapists further showed that great potential is seen in advanced practice roles to reach the goals already mentioned, such as high-quality healthcare, job satisfaction and retention (APP). It showed that advanced practice roles, though not officially introduced in Switzerland, are

already being carried out by physiotherapists in the Swiss healthcare system (APP).

Results from the sub-project “Improvement of job satisfaction among midwives through the implementation of innovative models for midwifery practice care in clinical settings” (JSM) showed that advanced or expanded roles lead to better client experience through continuous care (JSM, [51]), and fewer unnecessary interventions (JSM, [52]). New mothers who had taken part in the project reported positive experiences with the new service promoting continuous care with a de-briefing after the birth that was introduced by the project (JSM). However, the midwives involved reported reduced job satisfaction after the implementation of enriched roles (JSM, [53]). They perceived their new tasks as additional stressors, as new and more tasks had to be taken care of in the same amount of time (JSM, [53]). This illustrates that advanced or expanded roles do not directly lead to greater job satisfaction if there are no additional support or resources for carrying out the tasks.

Other health professionals who already carry out advanced practice tasks face similar obstacles. For instance, while it has been shown that some physiotherapists already perform such advanced tasks (APP), it has also been shown that reimbursement for tasks such as consultations with other health professionals about mutual patients and their treatment plans are entirely missing for this profession (IMC). Also, in the focus groups and interviews carried out in the project “Innovative models of interprofessional collaboration in community-based care”, several health professionals pointed out that when working in outpatient care, they are sometimes faced with complex situations and problems outside their explicit work domain. These may be the social problems of their clients or the coordination of services and treatments, which they have to attend to out of immediate concern for their patients’ wellbeing. However, these are often tasks for which they cannot be reimbursed under the current legislation (IMC) but are vital for the patients’ health and quality of care.

Increased responsibility and autonomy must therefore be adequately reimbursed, time for such vital tasks allocated, appropriate structures for interprofessional exchange established, and further education provided to prepare health professionals for such advanced roles.

7.2.3. Micro level: Training and education

At the micro level, health professionals have to work together in providing high quality care for their patients. Interprofessional collaboration is defined as a process in which different professional groups work together to positively impact healthcare. Interprofessional collaboration therefore plays a vital part in the successful treatment of patients. However, as professionals with different backgrounds work together, friction in their day to day work can occur, such as poor communication patterns, lack of understanding of one‘s own and others‘ roles and responsibilities, and conflicts due to varied approaches to patient care [54]. The project “Promotion of interprofessional collaboration in practice” identified a tool to analyse problems in an interprofessional team. Furthermore, the Patient-Oriented Team Training in Rehabilitation – PATENT by Körner, Dinius [55], was identified as a suitable team training programme to improve interprofessional cooperation and thus improve the working climate and possibly job satisfaction.

7.2.4. Legal and political issues

The development and implementation of new organizational structures or advanced practice roles are desirable to secure good care in the future. However, such goals can be hampered by existing political and legal frameworks. Examples of this are, when it comes to shifting competencies and decision-making power from medical doctors to other health professionals, or the challenges of reimbursement for tasks related to new roles, and coordination or communication tasks.

Also, as has been stated above, the promotion of new organizational structures will require adequate resources to be allocated to such endeavours (IMC). As of now, several initiatives are underway in Switzerland in terms of fostering research and practice in integrated care and interprofessional collaboration, namely by the Swiss Academy of Medical Sciences, the Federal Office of Public Health, and the CNHW itself. Additionally, a new network was created out of the sub-project “Promotion of interprofessional collaboration in practice”. The focus of this network is to develop a Swiss framework for interprofessional competencies. Members of this network come from practice, education, and research. Similarly, several local and regional initiatives are tackling these challenges.

Exchanges between such initiatives and between research and practice are still somewhat lacking.

7.3. Conclusions and Recommendations

The results of the sub-projects contain valuable lessons pertaining to the implementation of new organizational structures. It seems that when developing and implementing new organizational structures, such as innovative models or new professional roles, an approach that combines bottom-up and top-down strategies is best suited.

The bottom-up aspect of this approach pertains to three points. The first point is the fact that the health professionals that actually work in a specific context are best equipped to judge the ramifications of organizational changes on their everyday working lives and the impact on service delivery.

The second point is that specific contexts differ, and therefore there is no one-size-fits-all approach. For instance, new advanced practice organizational models that may have already been implemented successfully in other countries cannot be expected to be automatically relevant in the Swiss context, as they have often been developed in very different societal, legal and political contexts. Even within Switzerland, contexts differ considerably, partly due to the federalist nature of the Swiss healthcare system, and economic, cultural, and structural differences between the communities in charge. New organizational structures must build on existing structures, incorporate local stakeholders and be relevant to local contexts and needs.

A third point is that involving all the stakeholders (including clients/patients) in developing and implementing new organizational structures makes it more likely that the innovations will be accepted, will meet an actual need, and will be maintained long-term.

This process can require a large amount of time and resources, which can only be provided through top-down measures. It is imperative that there is political and institutional support for these processes. This includes ideological support, e.g. formulating political and institutional guidelines that are in line with the structural change. It also includes providing adequate resources, be it in the form of public funding for the development and implementation of new forms of collaboration on a community level, or of institutional funding for changes within

organizations. The two aspects, bottom-up and top-down, are interdependent.

Furthermore, a synthesis of the results from sub-projects points to a number of topics to be addressed: Firstly, Swiss health professionals see a need for reforms in outpatient care to address the multiple challenges the Swiss healthcare system is facing. This is necessary to meet the needs in the growing field of outpatient care and the increasing complexity of cases. They are open towards changes, be it to take up advanced roles, or participating in new organizational structures and close collaboration with colleagues from other health professions. At the same time health professionals wish to maintain their professional autonomy or expand it, e.g. in enriched or advanced practice roles. However, new roles and new models of care delivery can lead to new challenges; therefore their implementation needs to be accompanied by the provision of adequate resources and support, e.g. in terms of reimbursement, time allocated, training, and available structures for interprofessional exchange.

Secondly, the development and implementation of new organizational models should be underpinned by an approach that involves all the stakeholders to provide good care, smooth transition, meet local needs, and ensure motivated and committed health professionals.

Lastly, there are legal and political impediments to the development and implementation of new organizational structures in the Swiss context, especially in terms of reimbursement and the shifting of competencies from medical doctors to other health professionals. To support this transition, it is necessary to secure reimbursement for advanced practice roles and for care coordination tasks in all healthcare professions.

More research is needed to determine whether taking on advanced practice roles and /or working within innovative interprofessional models and training in interprofessional collaboration improve job satisfaction and lead to increased job retention for health professionals. Evaluation of these measures should also include their effect on the quality of care and patient satisfaction, and their economic impact.

In summary, the following recommendations can be derived from this chapter to contribute to the identification and evaluation of new organizational structures and support in healthcare:

Suggestions to use in practice

- Combine bottom-up with top-down approaches for the implementation of new roles and models.
- Provide adequate resources and support for the implementation.
- Involve all stakeholders in the development and implementation of new roles, tasks and organizational models.

Suggestions to use in policy

- Secure adequate reimbursement for coordination tasks for all health professionals.
- Secure adequate support for the implementation and evaluation of new models and advanced roles.
- Promote the shifting of competencies from medical doctors to other health professionals, where indicated.

> *The Competence Network Health Workforce is leading the way on how to network, expand and exchange evidence to counter the workforce shortage in the healthcare professions.*
>
> *– Mélanie Lavoie-Tremblay,*
> *International Scientific Committee*

Suggestions to use in education

- Empower health professional students in health policy discourses to achieve change with convincing arguments.
- Educate health professional students in interprofessional collaboration and collaboration with professionals from the social sector. We specifically focus on this topic in chapter 6.

Suggestions to use in research

- Research into the effect on the quality of care and patient satisfaction, and the economic benefits for healthcare and society through new organizational structures and models.
- Evaluate the effect of innovative interprofessional models on job satisfaction and job retention.
- Evaluate the effect of advanced practice roles on job satisfaction and job retention.

8 SUSTAINABILITY

Sustainable solutions are needed to retain health professionals and support informal caregivers in the Swiss healthcare system. The CNHW has made an important contribution to this within the framework of the project “Strategy to counter staff shortages among health professions”. On the one hand, the conditions needed to improve the well-being of professionals and informal caregivers were assessed and described from several perspectives. On the other hand, innovative training and education were developed in order to evaluate the effect of these measures. The effort is only justifiable if there is a proven effect on the defined outcome. Furthermore, other paths must be taken to achieve sustainable solutions. Therefore, some projects focused on the identification and evaluation of new organizational structures and support. Of course, not all topics were covered by the CNHW. The topics of workforce shortage in healthcare and support of informal caregivers are very multifaceted and require further research in the same areas but also in others. For this reason, one of the overall project goals was also the development of a structure for the CNHW, under which it could be continued after the end of this project financed by Swiss universities. The continuation of the CNHW as an association lays an important foundation for this research area in Switzerland in order to develop and evaluate sustainable solutions in the longer term. First, the association will start with the existing team from the five public universities of applied sciences across all linguistic regions of Switzerland. In time, other members will follow nationally and internationally to work together on the urgently needed solutions, and to transfer them into practice, education and policies.

All the activities of the CNHW association will be research-based. In this way, it aims to contribute to the health of the Swiss population and the development of a sustainable healthcare system – as called for by the Swiss Academy of Medical Sciences [56]. The association will bundle competencies and evolve into a contact point for practice, research, education and policies. It pursues four goals:

- Evidence regarding the health professional labour market and informal caregiver environment
- Effective, efficient and economic measures for sustainable human resources and collaborations with informal caregivers
- The transfer of knowledge and measures for practice
- Dissemination of knowledge to the public

The CNHW offers a unique opportunity to collaborate profitably between the members, and at the same time, strengthen the profile of the organizations involved, both internally and externally. This correlates with the requirements of funding agencies and Swiss universities, and bundles competencies at the national level. The members will join a network with great potential for an excellent and national network with international charisma. Practice, research, education and policy will profit from the CNHW in terms of a contact point for questions regarding health professionals' retention and the support of informal caregivers.

More information is available on our website: www.cnhw.ch

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10 SUPPORT GROUP

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11 INTERNATIONAL SCIENTIFIC COMMITTEE

ANN GALLAGHER, PhD (UK), University of Surrey

is Professor of Ethics and Care, International Care Ethics Observatory, University of Surrey, UK. Ann trained as a general nurse at the Royal Victoria Hospital in Belfast during ‚the Troubles'. She moved to England to take a post-registration qualification in mental health nursing. Following practice experience in elder care and adolescent psychiatry, Ann completed a degree in philosophy and health studies in London and went on to complete post-graduate qualifications in applied ethics in Wales. Her PhD study on the theme of ‚Professional education and virtue ethics' was supervised by Professor Ruth Chadwick. Ann has published on, and researched, a wide range of topics relating to ethics and care, for example, on dignity in care, compassion in the NHS, professional regulation, professionalism in paramedic practice, love in professional life, slow ethics and ethics education. She is Editor of the international journal Nursing Ethics and a member of the Nuffield Council on Bioethics. Ann is co-chair of a hospice ethics committee and chair of her university's Animal Ethics and Welfare Board. She was Fulbright Scholar-in-Residence, at the National Bioethics Center, Tuskegee University, USA in 2017. Ann is a Fellow of the Royal College of Nursing.

MÉLANIE LAVOIE-TREMBLAY, PhD (CAN), University Mc Gill

is associate professor at the Ingram School of Nursing, University Mc Gill. Her programme of research focuses on the nursing workforce and on work environments in health care. Various organizations in Canada and other countries identified this area of research as the top priority for the last decade and for the future. Her programme is unique for its research into the new generation of nurses (Generation Y) and strategies to foster their retention at the beginning of their career, as well as innovative strategies to improve nursing work environments. Through her research projects and publications, she has set up international collaborations in in Australia, England, United States and Switzerland.

JILL MABEN, PhD (UK), University of Surrey

is Professor of Health Services Research and Nursing at the University of Surrey, United Kingdom. She is a nurse and social scientist and her research focuses on supporting staff to care well. Jill trained as a nurse at Addenbrookes hospital, Cambridge, before leaving to study History at University College London. Jill reconnected with nursing and worked as staff nurses in Melbourne, Australia, before undertaking her MSc and PhD at King's College London and the University of Southampton. Jill was Deputy Director and Director of the National Nursing Research Unit at Kings College London 2007-2014 and had led several national and international studies. She undertook one of the first studies to demonstrate relationships between staff wellbeing and patient experience at the team and individual level. In 2014 Jill completed the first national evaluation of the impact of 100% single rooms in hospitals on patient and staff experience and care quality outcomes in the UK which is being replicated in Denmark, The Netherlands and Australia. In 2013 Jill was in the Health Services Journal 'Top 100 leaders' and was also included on Health Service Journal's inaugural list of Most Inspirational Women in Healthcare the same year.

ANNE MARIE RAFFERTY, PhD (UK), King's College London

is Professor of Nursing Policy, former Dean of the Florence Nightingale Faculty of Nursing and Midwifery, King's College London and Visiting Professor at Imperial College's Patient Safety Translational Research Centre. She graduated (BSc) SocSci Nursing Studies (Edinburgh University), MPhil (Surgery) (Nottingham University) and DPhil Modern History from Oxford University. She won a Harkness Fellowship in Health Policy to the University of Pennsylvania and was seconded to the Department of Health to work with Lord Ara Darzi on the Next Stage Review of the NHS. She was awarded a CBE in 2008 and appointed to the Prime Minister's Commission on the Future of Nursing and Midwifery 2009-10 and been recipient of various awards; Nursing times Leadership Award in 2014 and Health Services Journal Top 100 Clinical Leaders Award in 2015; Sigma Theta Tau International Hall of Fame 2016. She holds fellowships from the Royal College of Nursing, American Academy of Nursing and is a member of the Parliamentary Review of the Welsh Health and Social Care Service.

RENÉ SCHWENDIMANN, PhD (CH), University of Basel

is Chief Patient Safety Officer of the University Hospital Basel, former Director of Education at the Institute of Nursing Science, University of Basel (Switzerland) and Consulting Professor in the Duke University School of Nursing, Durham (USA). His role consisted of managing and developing the study program Master of Science in Nursing as well as conducting various research projects in the area of nurse workforce and outcomes, long-term care and patient safety. He has also worked in clinical and managerial positions in acute and long-term care settings. Schwendimann studied psychiatric nursing, nursing management and nursing science in Zurich, Aarau, Maastricht (NL) and Basel. After graduating with a MSc and PhD in Nursing Science he carried postdoctoral studies at the Duke University Health System, USA and based on his research in patient safety, he received the Venia Docendi of the University of Basel.

SALLY THORNE, PhD (UK), University of British Columbia

is Professor at the University of British Columbia, School of Nursing. She studies patient experience in serious and life-limiting conditions such as chronic disease and cancer, most recently focusing on palliative approaches to care delivery across sectors and nurses' experiences with medical assistance in dying. In addition to advising various professional and policy organizations, she actively fosters nursing scholarship development through her philosophical and methodological activities and in her role as Associate Editor of the journal Qualitative Health Research and Editor-in-Chief of Nursing Inquiry.

URSULA WALKENHORST, PhD (GER), University of Osnabrück

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ANDREAS XYRICHIS, PhD (UK), King‘s College London

is an academic researcher at King’s College London, having previously held clinical, research and policy posts in London and Brussels. His training has been in nursing, research methodology, health policy and sociology; and he holds a BSc, a MSc and a PhD all from King’s. Andreas’ interests and expertise lie in interprofessional practice, education and research. His research is supported by the National Institute for Health Research and other international funders to investigate interprofessional, team-based practice interventions for patient safety and quality improvement. Andreas is a Trustee and Director of the UK Centre for the Advancement of Interprofessional Education (CAIPE) and Editor-in-Chief for the international Journal of Interprofessional Care.

12 REFERENCES

1. Merçay, C., L. Burla, and M. Widmer, Gesundheitspersonal in der Schweiz. Bestandesaufnahme und Prognosen bis 2030 (Obsan Bericht 71). 2016, Schweizerisches Gesundheitsobservatorium: Neuchâtel.
2. Rüesch, P., et al., Prognose Gesundheitsberufe. Ergotherapie, Hebamme, Physiotherapie 2025. Series Health No. 3. 2014, Winterthur: ZHAW Health Department
3. Hahn, S., et al., Panorama Gesundheitsberufe 2030. [Panorama Health Care Professionals 2030.]. 2013, Public Health and Social Welfare Directorate Bern, Bern University of Applied Sciences: Bern.
4. Hämmig, O., Explaining burnout and the intention to leave the profession among health professionals–a cross-sectional study in a hospital setting in Switzerland. BMC health services research, 2018. 18(1): p. 785.
5. Lobsiger, M. and W. Kägi, Analyse der Strukturerhebung und Berechnung von Knappheitsindikatoren zum Gesundheitspersonal (Obsan Dossier 53). 2016, Schweizerisches Gesundheitsobservatorium: Neuchâtel.
6. Peter, K.A., et al., Investigating work-related stress among health professionals at different hierarchical levels: A cross-sectional study. Nursing Open, 2020. 00: p. 1-11.
7. Ducharme, F., Famille et soins aux personnes âgées. Enjeux, défis et stratégies. [Family and care for elderly. Questions, challenges and strategies.]. 2006, Montréal: Beauchemin.
8. Bachmann, N., L. Burla, and D. Kohler, La santé en suisse - Le point sur les maladies choniques, ed. OBSAN, et al. 2015, Berne: Hogrefe Verlag.
9. Confédération suisse, Soutien aux proches aidants: Analyse de la situation et mesures requises pour la Suisse. 2014, Confédération suisse: Bern.
10. Der Bundesrat, Unterstützung für betreuende und pflegende Angehörige. Situationsanalyse und Handlungsbedarf für die Schweiz. [Support for informal caregiver - Situation analysis and need for action for Switzerland.]. 2014, Swiss Confederation: Bern.
11. Chambers, H.G. and J.A. Chambers, Effects of caregiving on the families of children and adults with disabilities. Phys Med Rehabil Clin N Am, 2015. 26(1): p. 1-19.

12. Perrig-Chiello, P., F. Höpflinger, and B. Schnegg, Wer pflegt und betreut ältere Meschen daheim? [Who cares for and looks after the elderly at home?]. 2010, home care (Spitex): Bern.
13. Pappa, S., et al., Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. Brain, Behavior, and Immunity, 2020. 88: p. 901-907.
14. WHO, Global strategy on human resources for health: workforce 2030. 2016, World Health Organization: Geneva.
15. Dolder, P. and A. Grünig, Nationaler Versorgungsbericht für die Gesundheitsberufe 2016. 2016, Schweizerische Konferenz der kantonalen Gesundheitsdirektorinnen und -direktoren (GDK) und Nationale Dachorganisationen der Arbeitswelt Gesundheit (OdASanté): Bern.
16. The Swiss Conference of the Cantonal Ministers of Public Health, Medienmitteilung Berufsbildung: Jahrestagung der Schweizerischen Sanitätsdirektorenkonferenz vom 6.Juni 2002 in Herisau. [Media release vocational training.]. 2002, Schweizerische Sanitätsdirektorenkonferenz: Bern.
17. Hahn, S., et al., Panorama Gesundheitsberufe 2030. 2013, Berner Fachhochschule: Bern.
18. Kägi, W., et al., Fachkräftemangel in der Schweiz - Ein Indikatorensystem zur Beurteilung der Fachkräftenachfrage in verschiedenen Berufsfeldern. [Shortage of qualified employees in Switzerland.]. 2014, Staatssekretariat für Wirtschaft (SECO): Basel.
19. Swiss State Secretariat for education research and innovation (SBFI), Masterplan education in nursing profession.
20. The Swiss Conference of the Cantonal Ministers of Public Health, Monitoring Personalentwicklung und Nachwuchsbedarf für Mitarbeitende in nicht universitären Gesundheitsberufen - Datenkonzept für die Planung und Steuerung der Versorgung mit Personal in nicht universitären Gesundheitsberufen. [Monitoring human resources development and need of new employees in non-university health professions.]. 2014, GDK: Bern.
21. Laila, B., S. Vilpert, and M. Widmer, Monitoring des Personals der nicht ärztlichen Gesundheitsberufe - 1.Teil: Pflegepersonal. [Monitoring of non-medical health professions - 1.Part: nursing staff.]. 2014, Obsan im Auftrag der GDK: Neuchâtel.

22. Eurofamcare. Eurofamcare. Publications. 2016; Available from: https://www.uke.de/extern/eurofamcare/publikationen.php.
23. Administration for Community Living. National Family Caregiver Support Program. 2019; Available from: https://acl.gov/programs/support-caregivers/national-family-caregiver-support-program.
24. Bundesamt für Gesundheit. Förderprogramm «Entlastungsangebote für betreuende Angehörige 2017-2020» 2017; Available from: https://www.bag.admin.ch/bag/de/home/strategie-und-politik/nationale-gesundheitspolitik/foerderprogramme-der-fachkraefteinitiative-plus/foerderprogramme-entlastung-angehoerige.html.
25. proches aidants. journée des proches aidant-e-s. 2019; Available from: https://www.journee-proches-aidants.ch/.
26. État de vaud. Informations, conseils, répit, relève à domicile, formations. 2019; Available from: https://www.vd.ch/themes/soutien-social-et-aides-financieres/proches-aidants/informations-conseils-repit-releve-a-domicile-formations/.
27. Rectors' Conference of the Swiss Universities of Applied Sciences and The Swiss Conference of the Cantonal Ministers of Public Health, Schaffung von Praktikumsplätzen in privaten Praxen und weiteren ausserklinischen Settings. Argumentarium. [Establishment of traineeships in private practices and further outpatient settings.]. 2014, Rectors' Conference of the Swiss Universities of Applied Sciences: Bern.
28. Siyam, A. and M.R. Dal Poz, Migration of health workers: The WHO Code of Practice and the Global Economic Crisis. 2014, WHO: Geneva.
29. Balthasar, A., Politikwissenschaftliche Überlegungen zur Personalrekrutierung und Migration im Gesundheitsbereich. Beitrag anlässlich der Arbeitstagung Nationale Gesundheitspolitik vom 11. November 2010 in Bern. [Considerations in political science about staff recruitment and migration in healthcare.]. 2010, Interface: Lucerne.
30. Federal Department of Foreign Affairs (FDFA) and Federal Department of Home Affairs (FDHA), Schweizerische Gesundheitsaussenpolitik. [Swiss foreign affairs in health.]. 2012, Federal Office of Public Health: Bern.

31. Schweizerische Eidgenossenschaft, Schlussbericht Masterplan Bildung Pflegeberufe - Bericht des Bundesrates. 2016, Schweizerische Eidgenossenschaft: Bern.
32. Competence Network Health Workforce. Strategy to Counter Staff Shortage Among Health Professions. 2018 19.03.2018]; Available from: www.cnhw.ch.
33. Hahn, S. and S. Wassilevski-Seiler, Projektantrag. Strategie gegen den Fachkräftemangel in den Gesundheitsberufen. 2017, Swissuniversities: Bern.
34. Defila, R., A. Di Giulio, and M. Scheuermann, Forschungsverbundmanagement: Handbuch für die Gestaltung inter-und transdisziplinärer Projekte. 2006: vdf Hochschulverlag AG.
35. Schwendimann, R., et al., Switzerland, in Strengthening health systems through nursing: Evidence from 14 European countries, A.M. Rafferty, et al., Editors. 2019, European Observatory on Health Systems and Policies; 2019. (Health Policy Series, No. 52.): Copenhagen.
36. Siegrist, J., J. Li, and D. Montano, Psychometric properties of the effort-reward imbalance questionnaire. Department of Medical Sociology, Faculty of Medicine, Duesseldorf University, Germany, 2014.
37. Hamric, A.B., C.T. Borchers, and E.G. Epstein, Development and testing of an instrument to measure moral distress in healthcare professionals. AJOB Primary Research, 2012. 3(2): p. 1-9.
38. Schaffert, R. and D. Robin, Was Pflegefachpersonen erwarten, um langfristig im Beruf zu bleiben. Krankenpflege Soins Infirmiers, 2019. 6: p. 25-7.
39. Schaffert, R. and A. Bänziger, Early professional careers in nursing in Switzerland : results from a longitudinal study after career start. 2021: In: 2nd International CNHW Conference 2021 : «Effective Measures to keep our Treasures – How to care for Health Professionals and Family Caregivers», Online Conference, 29-30 April 2021. https://digitalcollection.zhaw.ch/handle/11475/22563.
40. Marć, M., et al., A nursing shortage–a prospect of global and local policies. International nursing review, 2019. 66(1): p. 9-16.

41. von Wartburg, R., F.M. Gamez, and S. Greyerz, Programme de promotion « Offres visant à décharger les proches aidants 2017 – 2020 ». 2020, Office fédéral de la santé publique (OFSP): Berne.
42. Lee, Y.W., et al., Quality of work life, nurses' intention to leave the profession, and nurses leaving the profession: A one-year prospective survey. Journal of Nursing Scholarship, 2017. 49(4): p. 438-444.
43. Peter, K.A., et al., Work-related stress among health professionals in Swiss acute care and rehabilitation hospitals–a cross-sectional study. Journal of Clinical Nursing, 2020.
44. Lipp, I., S. Hahn, and J. Schellinger, Grademix in der Schweizer Langzeitpflege: Konzepte, Einflussfaktoren und Umsetzung NOVAcura: Das Fachmagazin für Pflege und Betreuung, 2019. 7(19): p. 13-17.
45. Lipp, I., B. Bacso, and S. Hahn, Verschiedene Generationen im Pflege- und Betreuungsteam: Erste Ergebnisse eines Projekts der Berner Fachhochschule NOVAcura : Das Fachmagazin für Pflege und Betreuung, 2020. 5(20): p. 13-16.
46. Federal Office of Public Health, Förderprogramm Interprofessionalität im Gesundheitswesen 2017 - 2020. 2017, Bundesamt für Gesundheit: Bern.
47. Saxon, R.L., M.A. Gray, and F.I. Oprescu, Extended roles for allied health professionals: an updated systematic review of the evidence. Journal of multidisciplinary healthcare, 2014. 7: p. 479.
48. Haddara, W. and L. Lingard, Are we all on the same page? A discourse analysis of interprofessional collaboration. Academic Medicine, 2013. 88(10): p. 1509-1515.
49. Karasek, R. and T. Theorell, Healthy Work: Stress, Productivity, and the Reconstruction of Working Life. 1990, New York: Basic Books.
50. Federal Office of Public Health, Faktenblatt Regelung „ambulant vor stationär". 2019, Federal Office of Public Health: Bern.
51. Grylka, S., et al., Geburt durch telefonische Nachgespräche verarbeiten. Obstetrica, 2020. 3/2020: p. 56-59.
52. Grylka, S., B. Borner, and J. Pehlke-Milde, Occupational Situation of Midwives in Institutions with and without Midwife-led Care in in a Swiss Canton. Zeitschrift für Geburtshilfe Und Neonatologie, 2020.

53. Grylka, S., et al., Machen telefonische Nachgespräche die Hebammen zufriedener? Obstetrica, 2019. 2019(1/2).
54. Zwarenstein, M., J. Goldman, and S. Reeves, Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes. Cochrane database of systematic reviews, 2009(3).
55. Körner, M., et al., Manual zur Patientenorientierten Teamentwicklung in der Rehabilitation. 2016: Universität.
56. Schweizerische Akademie der Medizinischen Wissenschaften, Nachhaltige Entwicklung des Gesundheitssystems. Positionspapier der Schweizerischen Akademie der Medizinischen Wissenschaften. 2019, Schweizerische Akademie der Medizinischen Wissenschaften: Bern.

13 CNHW PUBLICATIONS

Aeberli, R., La Marca-Ghaemmaghami, P., Pehlke-Milde, J., & Grylka, S. (2019, January). Entwicklung, Einführung und Evaluation der telefonischen Nachgespräche mit Wöchnerinnen am Universitätsspital Zürich [Conference Paper]. 5. Winterthurer Hebammensymposium, Winterthur, Switzerland.

Aeberli, R., Meier Käppeli, B., Günthard, B.,Pehlke-Milde, J., Grylka, S., & La Marca-Ghaemmaghami, P. (2019, November). Die Hebamme am Telefon... telefonische Nachgespräche als Intervention zur Förderung der Geburtsverarbeitung : ein Erfahrungsbericht [Conference Paper]. 29. Kongress der Deutschen Gesellschaft für Perinatale Medizin, Berlin, Deutschland.

Aeberli, R., Meier Käppeli, B., La Marca-Ghaemmaghaghami, P., Günthard, B., Zimmermann, R., Pehlke-Milde, J., et al. (2018, May). Telefonisches Nachgespräch durch die Hebamme. Ein Hebammenprojekt mit Evaluation der Gebärabteilung des Universitätsspitals Zürich [Poster]. Schweizerischer Perinatalkongress, Baden, Switzerland.

Ballmer, T., & Meidert, U. (2019, August). Innovative Modelle der ambulanten verschiedener Akteure: Perspektiven [Conference Paper]. Dreiländerkongress der Gesundheits- und Medizinsoziologie, Winterthur, Switzerland.

Bélanger, L., Bernier, R., & Cohen, C. (2019, October). Storytelling pour la diffusion des résultats de recherches qualitatives : défis et bénéfices [Conference Paper]. Conférence-midi pour le GDAR, Fribourg, Switzerland.

Bellagamba, D. (2019, septembre 7). Proches Aidant-e-s : Un Service des Étudiant-e-s en Santé (PAuSES), un projet innovant d'apprentissage par le service communautaire [Conference paper]. Congrès suisse d'ergothérapie « ergo5.0 - stars of daily living », Locarno, Switzerland.

Bellagamba, D., Kühne, N., Tétreault, S., Vaucher, P., Ducommun, D., Meyer, S., et al. (2019, septembre). Personnes proches aidantes et apprentissage par le service communautaire : Quels sont les besoins qui pourraient être comblés par des étudiant·e·s en ergothérapie ? [Poster]. Congrès suisse d'ergothérapie « ergo5.0 - stars of daily living », Locarno, Switzerland.

Bischoff, A. (2018, October). Church-based Volunteers in Community Care: Offering Support to Informal Caregivers [Conference Paper]. 1st international CNHW conference, Bern, Switzerland.

Bischoff, A., Koch, S., & Kunz, R. (in press). L'accompagnement spirituel pour alléger les quotidiens difficiles : une communauté paroissiale en soutien aux personnes proches aidantes.

Bischoff, A., Kunz, R., & Koch, S. (2017, October). Kirchliche Freiwillige in der Gemeindepflege: Entlastungsangebot für pflegende Angehörige [Conference Workshop]. Jahrestagung der Internationalen Gesellschaft für Gesundheit und Spiritualität 2017 „Spiritual Care im Kontext chronischer Erkrankungen und Schmerzen", Zürich, Switzerland.

Breaud, A. (2019). Les Hautes écoles vent debout contre la pénurie de soignants. Soins infirmiers [Krankenpflege], 1, 54-57.

Bucher, T., Bischofberger, I., Dönnges, G., Guinchard, B., Mahlstein, A., Scascighini, L., et al. (2018, October). Bachelors entering their professional career – a long term study of health professionals graduating from a university of applied sciences in Switzerland [Conference Paper]. 1st international CNHW conference, Bern, Switzerland.

Bucher, T., Mahlstein, A., Zeller, H., Bischofberger, I., Scascighini, L., & Guinchard, B. (2017). Befragung der Bachelor-Absolventinnen und -Absolventen am Ende des Studiums. Zusammenfassung der Ergebnisse für die Absolventinnen und Absolventen vom Sommer 2016. Zürich: Zürcher Hochschule für Angewandte Wissenschaften ZHAW.

Bucher, T., Mahlstein, A., Zeller, H., Bischofberger, I., Scascighini, L., & Guinchard, B. (2018). Befragung der Bachelor-Absolventinnen und -Absolventen am Ende des Studiums. Zusammenfassung der Ergebnisse für die Absolventinnen und Absolventen vom Sommer 2017. Zürich: Zürcher Hochschule für Angewandte Wissenschaften ZHAW.

Bucher, T., Mahlstein, A., Zeller, H., Bischofberger, I., Scascighini, L., & Guinchard, B. (2019). Befragung der Bachelor-Absolventinnen und -Absolventen am Ende des Studiums. Zusammenfassung der Ergebnisse für die Absolventinnen und Absolventen vom Sommer 2018. Zurich: Zurich University of Applied Sciences ZHAW.

CNHW (2017, December). The first year in the project «Strategy to counter staff shortage among health professions»: Conclusion. CNHW Newsletter, 2.

CNHW (2017, May). Project «Strategy to counter Staff Shortage among Health Professions». CNHW Newsletter, 1.

CNHW (2018, May). Networking - Countering Staff Shortage among Health Professions CNHW Newsletter, 1.

CNHW (2019, January). Review of a successful project year 2018 for the national project «Strategy to counter staff shortage among health professions». CNHW Newsletter, 1.

CNHW (2019, July). «Strategy to counter staff shortage among health professionals»: Know-how for the retention of health professionals. CNHW Newsletter, 2.

CNHW (2020, January) «Strategy to counter Staff Shortage among Health Professionals» : Giving a voice to family caregivers. CNHW Newsletter, 1.

CNHW (2021, January). The future of the Competence Network Health Workforce CNHW Newsletter, 1.

Cohen, C., Bélanger, L., Peirera, F., & Kampel, T. (2018, October). Integrating Family Caregivers' Involvement in Care Measures to Prevent Delirium in older inpatients for Orthopedic Surgery [Poster]. 1st international CNHW conference, Bern, Switzerland.

Cohen, C., Kampel, T., Pereira, F., & Bélanger, L. (2018, June). L'Intégration des proches-aidants dans les mesures de prévention de l'Etat Confusionnel chez des personnes âgées hospitalisées en chirurgie orthopédique. Paper presented at the Congrès mondial des infirmières et infirmiers francophones (SIDIIEF) 2018, Bordeaux, France.

Cohen, C., Kampel, T., Pereira, F., & Belanger, L. (2019, November). Mesures de prévention de l'état confusionnel chez des personnes âgées hospitalisées en chirurgie orthopédique, quel partenariat avec les proches ? [Paper presentation]. Présentation des résultats aux membres du groupe de soutien PePA, Lausanne, Switzerland.

Cohen, C., Pereira, F., Kampel, T., & Belanger, L. (2019). Understanding the integration of family caregivers in delirium prevention care for hospitalized older adults: A case study protocol. Journal of Advanced Nursing, 75(8), 1782-1791. doi:10.1111/jan.14009

Cohen, C., Pereira, F., Kampel, T., & Bélanger, L. (2021). Integration of family caregivers in delirium prevention care for hospitalized older adults: A case study analysis. Journal of Advanced Nursing, 77(1), 318-330. doi:10.1111/jan.14593

Crawford, R. J., Volken, T., Schaffert, R., & Bucher, T. (2018). Higher low back and neck pain in final year Swiss health professions' students: worrying susceptibilities identified in a multi-centre comparison to the national population. BMC Public Health, 18, 1188. doi: 10.1186/s12889-018-6105-2

Gesundheitspolitische Informationen GPI (2018, March 31). Neue Initiative gegen den Fachkräftemangel. Retrieved from www.sggp.ch

Golz, C. (2018, June 13). Schön wärs, wären nur fünf Berufsgruppen betroffen [Letter to the editor]. Aargauer Zeitung. Retrieved from www.aargauerzeitung.ch

Golz, C. (2018, September 27). Fachkräftemangel: Gemeinsam zu einem gesunden Gesundheitssystem [Blog post]. Retrieved from https://www.knoten-maschen.ch/fachkraeftemangel-gemeinsam-zu-einem-gesunden-gesundheitssystem/

Golz, C. (2018). Einzigartig, innovativ, kooperativ: Gemeinsam gegen den Fachkräftemangel in den Gesundheitsberufen. frequenz Juni, 2, 34-35. Retrieved from: https://www.bfh.ch/dam/jcr:cfd226d6-6a3c-4054-94d3-8b7947cedd5b/berner-fachhochschule-gesundheit-frequenz-juni-2018.pdf

Golz, C. (2019, May 28). Die Pflegeinitiative als Katalysator dringend benötigter Diskurse [Blog post]. Retrieved from www.knoten-maschen.ch/die-pflege-einitiative-als-katalysator-dringend-benoetigter-diskurse/

Golz, C., & Hahn, S. (2019, Mai). Gemeinsam den Personalverbleib stärken. Paper presented at the SBK-Kongress, Basel, Switzerland.

Golz, C., & Hahn, S. (2019). Gemeinsam gegen den Fachkräftemangel. NOVA-cura, 50(7), 18-21.

Golz, C., & Hahn, S. (2019). Personalerhalt beginnt in der Ausbildung. Spitex Magazin, 5, 43-45.

Golz, C., & Hahn, S. (2020, July 5). Nachhaltige Lösungen zum Personalerhalt in der Pflege sind nötig. [Blog post]. Retrieved from https://blog-cnhw.ch/nachhaltige-loesungen/

Golz, C., & Hahn, S. (2021). Verein sichert das Engagement für den Personalverbleib. frequenz, 2, 21-22. Retrieved from: https://www.bfh.ch/dam/jcr:-b4e178f6-a53e-4d0e-8333-79391255d0b7/2021_05_BFH_frequenz_02_v14_web.pdf

Golz, C., & Hahn, S. (2021). «Pflexit» - Gratulation! Twitter als Stimmungsbarometer. frequenz, 2, 23-24. Retrieved from: https://www.bfh.ch/dam/jcr:-b4e178f6-a53e-4d0e-8333-79391255d0b7/2021_05_BFH_frequenz_02_v14_web.pdf

Golz, C., & Hahn, S. (2021). Mit vereinter Brain-Power gegen den Fachkräftemangel in den Gesundheitsberufen. frequenz, 2, 12-13. Retrieved from: https://www.bfh.ch/dam/jcr:b4e178f6-a53e-4d0e-8333-79391255d0b7/2021_05_BFH_frequenz_02_v14_web.pdf

Golz, C., & Peter, K. A. (2017, June 30). Wie kriegt das Gesundheitswesen die Arbeitsbelastung in den Griff? [Blog post]. Retrieved from https://www.knoten-maschen.ch/wie-kriegt-gesundheitswesen-arbeitsbelastung-in-den-griff/

Golz, C., & Ziegler, A. (2018). Erste Ergebnisse im Kampf gegen den Fachkräftemangel. Spitex Magazin, 4.

Golz, C., Beck, M., & Peter, K. A. (2017). Projekte gegen den Fachkräftemangel in den Spitex-Organisationen. Spitex Magazin, 5, 44-45.

Golz, C., Gurtner, C., Peter, K. A., & Hahn, S. (2017). Work-related stress among health professionals in Switzerland [Poster]. 25th Florence Network Annual Meeting, Bern, Switzerland.

Golz, C., Peter, K. A., & Hahn, S. (2016). Arbeitsbezogene psychosoziale Belastung bei Gesundheitsfachpersonen in der Schweiz - Ein Studienprotokoll [Poster]. Pflegekongress, Vienna, Austria.

Golz, C., Peter, K. A., & Hahn, S. (2018). Cognitive Pretesting and pretest of the STRAIN questionnaire to elaborate work-related stress of health care staff in Switzerland. International Journal of Health Professions, 5(1), 109-120. doi:10.2478/ijhp-2018-0011

Grylka-Baeschlin, S., & Aeberli, R. (2019, August). Telefonische Geburtsnachgespräche mit Wöchnerinnen [Conference Paper]. Konferenz Leitende Hebammen (KLH), Olten, Switzerland.

Grylka-Baeschlin, S., & Pehlke-Milde, J. (2018, September). Frauenzerntrierte Betreuung in Zürcher Geburtenabteilungen [Poster]. Swiss Congress for Health Professions, Zürich, Switzerland. doi: 10.21256/zhaw-4009

Grylka-Baeschlin, S., Aeberli, R., Günthard, B., Meier Käppeli, B. K., Leutenegger, V., & Pehlke-Milde, J. (2019, May). Evaluation der telefonischen Nachgespräche mit Wöchnerinnen. Poster presented at the Schweizerischer Hebammenkongress, Lucerne, Switzerland. doi: 10.21256/zhaw-2799

Grylka-Baeschlin, S., Aeberli, R., Günthard, B., Meier Käppeli, B. K., Leutenegger, V., & Pehlke-Milde, J. (2019, November). Berufszufriedenheit rund um die Einführung eines von Hebammen initiierten und geleiteten Projekts. Poster presented at the 29. Deutscher Kongress für Perinatale Medizin. Deutsche Gesellschaft für Perinatale Medizin (DGPM) – „Hinterm Horizont geht‘s weiter, zusammen sind wir stark“, Berlin, Germany. doi: 10.21256/zhaw-18992

Grylka-Baeschlin, S., Borner, B., & Pehlke-Milde, J. (2018, February). Bestandsaufnahme zur Berufssituation der Hebammen in einem Schweizer Kanton. Poster presented at the Fachtagung Deutsche Gesellschaft für Hebammenwissenschaft DGHW, Mainz, Germany. doi: 10.3205/18dghwi15

Grylka-Baeschlin, S., Borner, B., & Pehlke-Milde, J. (2018, May). Bestandsaufnahme zur Berufssituation der Hebammen im Kanton Zürich. Poster presented at the Schweizerischer Perinatalkongress, Baden, Switzerland.

Grylka-Baeschlin, S., et al. (2018, October). Job satisfaction of midwives. Paper presented at the 1st international CNHW conference, Bern, Switzerland.

Grylka-Bäschlin, S., Aeberli, R., Meier Käppeli, B., & Pehlke-Milde, J. (2019). Machen telefonische Nachgespräche die Hebammen zufriedener? Obstetrica, 1, 8-13.

Grylka, S., Aeberli, R., Maute, M., Günthard, B., Meier Käppeli, B., Leutenegger, V., et al. (2020). Geburt durch telefonische Nachgespräche verarbeiten. Obstetrica, 3, 56-59. Retrieved from: https://digitalcollection.zhaw.ch/handle/11475/19772

Grylka, S., Borner, B. & Pehlke-Milde, J. (2020). Berufssituation der Hebammen in Einrichtungen mit und ohne hebammengeleitete Geburtshilfe in einem Schweizer Kanton. Zeitschrift für Geburtshilfe und Neonatologie, 1, 5-46. Retrieved from: https://digitalcollection.zhaw.ch/handle/11475/19769

Hahn, S. (2021) Akademisierung fördert den Personalerhalt in der Pflege. hsg-magazin. Retrieved from magazin.hs-gesundheit.de/wissen-austauschen/akademisierung-foerdert-den-personalerhalt-in-der-pflege/

Hahn, S., Senn, B., Oulevey Bachmann, A., Sala Defilippis, T., Schaffert, R., & Golz, C. (2017). Strategie gegen den Fachkräftemangel in den Gesundheitsberufen. Paper presented at the SBK-Kongress, Bern, Switzerland.

Kobleder, A., Mayer, H., & Senn, B. (2018, June). Advanced Practice Nursing in Gynaecological Oncology – Development of an evidence-based concept. Paper presented at the MASCC Conference 2018, Vienna, Austria.

Kobleder, A., Mayer, H., & Senn, B. (2018, October). Ein Schritt in Richtung Harmonisierung - die Entwicklung eines institutionsübergreifenden APN-Konzepts für die gynäkologische Onkologie. Paper presented at the 2. Zentralschweizer Pflegekongress, Lucerne, Switzerland.

Kobleder, A., Mayer, H., Gehrig, L., Ott, S., & Senn, B. (2017). Wirksamkeit von APN-Interventionen in der gynäkologischen Onkologie. Eine systematische Literaturübersicht. Klinische Pflegeforschung, 3, 85-101. doi: 10.6094/KlinPfleg.3.85

Kobleder, A., Mayer, H., Lauk, L., & Senn, B. (2018). Die Advanced Practice Nurse in der gynäkologischen Onkologie. In: B. Senn, & H. Mayer (Eds.), Gynäkologisch-onkologische Pflege. Bedürfnisse der Patientinnen und interprofessionelle Praxis (pp. 113–125). Bern: Hogrefe AG.

Koch, S. (2016, November). Pflegende Angehörige in der Pflegeberatung. Ergebnisse eines Modellprojekts mit Pflegeberater/-innen der gesetzlichen Pflegekassen [Conference Paper]. Robert-Bosch-Krankenhaus Stuttgart/ Eberhard Karls Universität Tübingen, Berlin, Germany.

Koch, S. (2020, November). Projekt „Kirchliche Freiwillige in der Gemeindepflege: Entlastungsangebot für pflegende Angehörige“ [Conference Paper]. Arbeitskreis Religionsgerontologie, Universität Zürich/Institut Neumünster, online.

Kühne, N., Vaucher, P., Ducommun, D., Tétreault, S., Meyer, S., Bertrand Leiser, M., et al. (2018, May). Development and feasibility study of a service learning program involving students to support caregivers in Switzerland (PAuSES) Proches-Aidant·e·s: un Service des Étudiant·e·s en Santé. Poster presented at the WFOT Congress 2018, Cape Town, South Africa.

Kunz, R. (2018). Pflegende Angehörige. Community Care als Gelegenheit für Kirchgemeinden. Pastoraltheologie, 107(12), 515-528.

Kunz, R., & Bischoff, A. (2018, May). Church-based Volunteers in Community Care: Offering Support to Informal Caregivers [Conference Paper]. 6th European Conference on Religion, Spirituality and Health and 5th International Conference of the British Association for the Study of Spirituality, Coventry, United Kingdom.

Kunz, R., Koch, S., Kohn, J., & Matter, C. (2017, November). Spiritual Care für pflegende Angehörige mit Fokus auf Kirche und jüdische Gemeinde [Conference Paper]. Arbeitskreis Religionsgerontologie, Universität Zürich/Institut Neumünster, Zürich, Switzerland.

Lê Van, K. et al. (2018, October). An approach to assess adequacy of the support offerings with the real needs of informal caregivers of persons suffering from mental illness. Paper presented at the 1st international CNHW conference, Bern, Switzerland.

Lipp, I. (2019). «Grademix» in der Langzeitpflege und mögliche Einflussfaktoren. [Blog post]. Retrieved from https://www.knoten-maschen.ch/grademix-in-der-langzeitpflege-und-moegliche-einflussfaktoren/

Lipp, I., & Hahn, S. (2019). Integration von Zugewanderten und Flüchtlingen mit einer Pflegefachausbildung im Heimatland in ein Pflege- und Betreuungsteam im Aufnahmeland. pflegenetz, 1(19), 4-9.

Lipp, I., Bacso, B., & Hahn, S. (2020). Verschiedene Generationen im Pflege- und Betreuungsteam: Erste Ergebnisse eines Projekts der Berner Fachhochschule. NOVAcura: Das Fachmagazin für Pflege und Betreuung, 5(20),13-16.

Lipp, I., Beck, M., & Hahn, S. (2017). Zugewanderte Pflegefachpersonen integrieren. Competence, 10, 18-19.

Lipp, I., Hahn, S., & Schellinger, J. (2019). Grademix in der Schweizer Langzeitpflege: Konzepte, Einflussfaktoren und Umsetzung. NOVAcura: Das Fachmagazin für Pflege und Betreuung, 7(19), 13-17.

Lipp, I., Schellinger, J., Wettstein, M., & Hahn, S. (2021). Innovative Grademix-Konzepte gegen den Fachkräftemangel in der Langzeitpflege. frequenz, 2, 19-20. Retrieved from: https://www.bfh.ch/dam/jcr:b4e178f6-a53e-4d0e-8333-79391255d0b7/2021_05_BFH_frequenz_02_v14_web.pdf

Lipp, I., Wettstein, M., Bacso, B., Schellinger, J., Stäubli, M., & Hahn, S. (2018, October). EQUI - Grademix und Diversität im stabilen Gleichgewicht. Poster presented at the 1st international CNHW conference, Bern, Switzerland.

MEDINSIDE (2018, February 2). Neue Initiative gegen den Fachkräftemangel. Retrieved from https://www.medinside.ch/de/post/neue-initiative-gegen-den-fachkraeftemangel

Meidert, U., Kolmar, A., & Becker, H. (2018, May). Cooperatives for Therapists – an Innovative Approach for Current Challenges in Professional Independence. Poster presented at the World Congress of Occupational Therapy, Capetown, South Africa.

Meyer, S., & Bellagamba, D. (2019). Former des étudiant-e-s au quotidien des proches-aidant-e-s. In Expérience en ergothérapie (32ème série, p. 131-137). Montpellier: Sauramps Medical.

Nägeli, B. (2018, December 17). Innovation aus Kanada für einen starken Pflegenachwuchs [Blog post]. Retrieved from https://www.knoten-maschen.ch/innovation-aus-kanada-fuer-einen-starken-pflegenachwuchs/

Nägeli, B. (2018). Innovation aus Kanada für einen starken Pflegenachwuchs. frequenz, 3, 28-29. Retrieved from: https://www.bfh.ch/dam/jcr:0110dd7c-f8b9-4bcb-88c0-debdf6caced2/berner-fachhochschule-gesundheit-frequenz-dezember-2018.pdf

Nägeli, B. (2018). An innovation from Canada for a strong future generation of nurses. Interview Mélanie Lavoie-Tremblay.

Nast, I. (2018, June). Erfahrungen aus dem In- und Ausland mit Job-Profilen von Advanced Practice in der Rehabilitation. Paper presented at the SAR-Forum, Bad Zurzarch, Switzerland.

Nast, I., Scheermesser, M., Bruderer-Hofstetter, M., Heinzmann Stettler, C., Horvath, C., Huber, M., et al. (2018, October). Enhancing Professional Perspectives: Development of Physiotherapy Advanced Practice Models in Switzerland. Paper presented at the 1st international CNHW conference, Bern, Switzerland.

OTX World (2018, May 17). Fachkräftemangel wird unterschätzt. Retrieved from www.otxworld.ch

Oulevey Bachmann, A., & Kampel, T. (2018, June). Développement d'un programme de recherche: opportunités pour exercer un leadership infirmier. Paper presented at the Congrès mondial des infirmières et infirmiers francophones (SIDIIEF) 2018, Bordeaux, France.

Pasquier, N., & Pihet, S. (2020, October). How do support providers assess the needs of informal caregivers of persons with dementia? [Conference Paper]. 30th Alzheimer Europe Conference, online.

Paxmann, E. (2020, September 10). Pflegefachkräfte dringend gesucht: Was tun gegen den Personalmangel? [Blog post]. Retrieved from https://blog.klinik-wissen-managen.de/pflegefachkraefte-dringend-gesucht-was-tun-gegen-den-personalmangel/

Paxmann, E. (2020, September 17). Pflegefachkräfte dringend gesucht: Wie werden Kliniken attraktiv für Mitarbeiter? [Blog post]. Retrieved from https://blog.klinik-wissen-managen.de/pflegefachkraefte-dringend-gesucht-wie-werden-kliniken-attraktiv-fuer-mitarbeiter/

Peter, K. A. (2019, October 9). Arbeitsbelastung in den Gesundheitsberufen: Was können Führungskräfte tun? [Blog post]. Retrieved from https://www.knoten-maschen.ch/arbeitsbelastung-in-den-gesundheitsberufen-was-koennen-fuehrungskraefte-tun/

Peter, K. A. (2020). Work-related stress among health professionals working in Swiss hospitals, nursing homes and home care organisations: an analysis of stressors, stress reactions and long-term consequences of stress at work among Swiss health professionals. Ridderprint. doi: 10.26481/dis.20200922kp

Peter, K. A. (2021). Rahmenbedingungen im Gesundheitswesen optimieren – nationale Interventionsstudie. frequenz, 2, 15-18. Retrieved from: https://www.bfh.ch/dam/jcr:b4e178f6-a53e-4d0e-8333-79391255d0b7/2021_05_BFH_frequenz_02_v14_web.pdf

Peter, K. A., & Hahn, S. (2020, May 11). Wie belastbar ist das Schweizer Gesundheitssystem in Krisensituationen? [Blog post]. Retrieved from https://blog-cnhw.ch/blogbeitrag-strain/

Peter, K. A., Golz, C., & Hahn, S. (2017, May). Arbeitsbedingte Belastung bei Gesundheitsfachpersonen: Ein Studienprotokoll. Poster presented at the SBK-Kongress, Bern, Switzerland.

Peter, K. A., Golz, C., & Hahn, S. (2018, October). STRAIN Study - assessing and reducing workrelated stress among health professionals in Switzerland – a study protocol. Poster presented at the 1st international CNHW conference, Bern, Switzerland.

Peter, K. A., Hahn, S., Schols, J., & Halfens, R. J. G. (2020). Work-related stress among health professionals in Swiss acute care and rehabilitation hospitals-A cross-sectional study. Journal of clinical nursing, 29, 3064-3081. doi: 10.1111/jocn.15340

Peter, K. A., Hahn, S., Stadelmann, E., Halfens, R., & Schols, J. (2020). Assessing Work Stressors in the Health Care Sector by Combining External Observation and Health Professionals' Self-report in a Cross-sectional Study Design. Occupational Medicine & Health Affairs, 8(1), 303-309.

Peter, K. A., Schols, J. M. G. A., Halfens, R. J. G., & Hahn, S. (2020). Investigating work-related stress among health professionals at different hierarchical levels: A cross-sectional study. Nursing Open, 7(4), 969-979. doi:10.1002/nop2.469

Peter, K. A., Voirol, C., & Oulevey Bachmann, A. (2021). Travail et santé mentale chez les professionnels suisses de la santé : premiers résultats de l'étude nationale STRAIN. Journal La Source, 1, 6-8.

Peter, K., Grylka, S., Golz, C., & Hahn, S. (2020). Nachhaltiges Personalmanagement in Zeiten knapper Ressourcen. Obstetrica, 12, 8-13.

Pihet, S., & Pasquier, N. (2020, December). Évaluer Les Besoins Des Proches Aidant-e-s D'une Personne Avec Démence : Pratiques Actuelles Du Réseau Socio-sanitaire Fribourgeois Et Développement D'une Plateforme En Ligne. [Paper Presentation]. ScienceCafé - HEdS-FR, Fribourg, Switzerland.

Pihet, S., & Pasquier, N. (2020, October). An Online Tool to Assess the Needs of Informal Dementia Caregivers and Refer Them to the Relevant Support Services [Conference Paper]. 30th Alzheimer Europe Conference, online. Recording

Pihet, S., Pasquier, N., Tétreault, S., Cotting, A., & Carrard, I. (in press). Une plateforme en ligne pour évaluer les besoins et faciliter l'orientation des personnes proches aidantes d'individus avec démence.

Prati, A., Scascighini, L., & Sala Defilippis, T. (2018, October). Ethical concerns among nurses, physiotherapists and physicians. Poster presented at the 1st international CNHW conference, Bern, Switzerland.

Schaffert, R. (2018, October). Should I stay or should I go: Nursing careers in the first years after graduation. Paper presented at the 1st international CNHW conference, Bern, Switzerland.

Schaffert, R. & Golz, C. (2020). Es ist Zeit, Pflegefachpersonen im Beruf zu halten. Spitex Magazin, 6, 40-44.

Schaffert, R., & Robin, D. (2019). Was Pflegefachpersonen erwarten, um langfristig im Beruf zu bleiben. Krankenpflege Soins Infirmiers, 6, 25-27.

Schiess, C., Nikolic, N., Wolfensberger, F., Kobleder, A., Lehmann, A., & Senn, B. (2017). Wie effektiv ist Skill-Grade-Mix? Krankenpflege, 1, 14-17.

Schiess, C., Schwappach, D., Schwendimann, R., Vanhaecht, K., Burgstaller, M., & Senn, B. (2018). A Transactional „Second-Victim“ Model-Experiences of Affected Healthcare Professionals in Acute-Somatic Inpatient Settings: A Qualitative Metasynthesis. Journal of patient safety. doi: 10.1097/PTS.0000000000000461

Schiess, C., Schwappach, D., Schwendimann, R., Vanhaecht. K., Burgstaller, M., & Senn, B. (2018, April). Ein transaktionales «Second Victim»-Modell – Erfahrungen von betroffenen Gesundheitsfachpersonen im akutstationären somatischen Setting: Eine qualitative Metasynthese. Paper presented at Forschungswelten 2018; 9. Internationaler wissenschaftlicher Kongress für Pflege- und Gesundheitsforschung. hpsmedia GmbH.

Schiess, C., Schwappach, D., Schwendimann, R., Vanhaecht. K., Burgstaller, M., & Senn, B. (2018, October). Continuing Professional Life after „Second Victim“-Experience: Insights from a Qualitative Metasynthesis. Paper presented at the 1st International CNHW Conference, Bern, Switzerland.

Senn, B., & Mayer, H. (2018). Gynäkologisch-onkologische Pflege. Bedürfnisse der Patientinnen und interprofessionelle Praxis (1st ed.). Bern: Hogrefe AG.

SRF 4 (2020, October 26). Das Pflegepersonal will nicht nur Applaus [Radio broadcast]. Radio SRF 4.

Wettstein, M., & Lipp, I. (2019). Generationen-Mix in Pflegeteams - aus Sicht der Leitungspersonen. frequenz - Das Magazin des Fachbereich Gesundheit, 2, 10-12.

Ziegler, A., Beck, M., & Hahn, S. (2018). Grademix und Diversität im stabilen Gleichgewicht. Krankenpflege, 5, 30-31.

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HEALTH WORKFORCE