

Report: Patient safety interventions and their implementation: Current status and directions for the future (2021)

Authors: Annemarie Fridrich; Yvonne Pfeiffer; Andrea Niederhauser; David Schwappach

Executive summary

In order to be able to launch successful improvement programmes at national level, it is important to select the urgent topics in terms of content and to design adequate methods for improvement programmes with which changes in the healthcare system can be initiated as broadly as possible and implemented sustainably. In the present project, future programmes are to be prepared thematically and methodologically. Thus, this project aimed (1) to identify potentially effective fields of action and patient safety measures for national quality improvement projects from a content-thematic perspective, (2) to provide an overview of implementation practices and to assess their usefulness for the Swiss context, (3) to evaluate the progress! pilot programmes, and (4) to outline possible methods and contents of future patient safety intervention programmes.

The first aim of the project was to identify relevant topics and potentially effective patient safety actions for national intervention projects from a content-thematic perspective. In order to simultaneously incorporate content from science and practice, international and national findings, as well as established and innovative concepts, we used the following sources of information: The National Report on the Quality and Safety of Healthcare in Switzerland, the CIRNET database, activities/action plans in other countries, literature research, and the expert knowledge of the Swiss Patient Safety Foundation. It was not possible to compile a list of ready-made interventions to be implemented on a 1:1 basis, as the effectiveness of interventions is very much dependent on the context and the evaluation of promising interventions often has shortcomings. For example, methodological design is often poor, often it is not clear which parts of multi-component interventions are effective, information on cost-benefit evaluation is often missing, and long-term results are rarely reported. Moreover, there is often little empirical evidence for the Swiss context. Across all sources, one problem area emerged as particularly dominant: *medication safety* with the two sub-topics *prescription* and *administration* mentioned particularly frequently. Most studies focus on acute hospital care and aim primarily at changing individual clinician behaviour. This contrasts with national and international recommendations that also identify for example ambulatory care and mental health care as priority areas for action and emphasise the effectiveness of more systems-oriented measures. Further information on the most frequently identified interventions, problem areas, and populations are presented in Chapter one.

The second aim of the project was to explore relevant concepts, steps and tools for implementing future safety improvement programmes in Swiss healthcare. There are many steps to be taken starting from an initial idea, for example the identification of a useful *best practice*, which could be developed into an intervention, to its system-wide adoption: the practice needs to be thoroughly tested for its effectiveness in terms of improving clinical outcomes, and potential negative side effects need to be considered. In a next step, system-wide implementation needs to be prepared in identifying the most promising way of implementing the intervention in various contexts. Implementation quality needs to be rigorously

assessed, for being able to compare implementation approaches. In a final step, evaluation on various dimensions can be carried out, evaluating implementation and clinical effectiveness to draw conclusions for future improvement efforts. The goal of this whole process is a sustainable and long-term implementation, and, ultimately, the improvement of the safety and quality of the care delivered to patients. We identified a highly useful tool, which is designed to support efforts to sustainably implement evidence-based interventions: ImpRes (Implementation Science Research Development Tool). It supports many important decisions and concentrates guidance and tools to take informed decisions along the implementation process. We recommend using the EPIS (Exploration, Preparation, Implementation, Sustainment) framework in future programmes/implementation projects to structure the implementation process, factor important concepts, and to gain an understanding of the processes and influences crucial to implementation efforts. Chapter two discusses in detail the requirements for national improvement programmes, relevant tools, models and approaches that are recommended for future use.

Since 2012, the Swiss Patient Safety Foundation has been mandated by the Federal Office of Public Health to develop and conduct pilot programmes with the aim of improving patient safety in healthcare: the “progress!” programmes. For this project, the results and findings from the three completed pilot programmes progress! have been reviewed; experiences from the two current programmes have been integrated if appropriate. Furthermore, the pilot hospitals of the first three progress! programmes were contacted again by email/telephone. This information was complemented by findings from the literature, the National Report on the Quality and Safety of Healthcare in Switzerland as well as personal experiences of the internal project managers of the progress! programmes. Overall, it seems that the expectations and demands placed on the progress! programmes have moved further and further away from the initial mandate and intention of the programmes over time. While it was defined at the beginning that the progress! programmes should rely on evidence-based interventions and therefore focus on implementation outcomes rather than effectiveness outcomes, it became increasingly clear during the course of the programmes that there is not enough evidence for patient safety interventions in the Swiss setting and therefore both implementation and effectiveness need to be considered in such pilot programmes. In addition, a significant conceptual gap emerged: namely, that it was not defined how and by whom the findings from the pilot programmes were to be implemented at national level. We are convinced that the conceptual weaknesses of the progress! programmes can be overcome in future programmes through a revised and methodologically sound programme concept and the appropriate time and financial resources. Chapter three provides recommendations that should be incorporated into the design of future improvement programmes.

In the last two decades, there has been a great effort to improve healthcare quality globally. However, there is only little evidence that preventable patient harm has been considerably reduced. In the current situation it is difficult to disentangle what the main problem is: a) That we do not have sufficient and robust measurement of the effects of programmes and interventions, or b) that the interventions and programmes implemented are not sufficiently effective. It therefore is necessary to develop measures indicating whether a change has happened that complement national adverse event rates. Assessing and measuring progress in patient safety on various levels, e.g., national, or institutional, is an important undertaking that urgently needs to be tackled in order to provide the necessary resources for successful

improvement programmes. Successful implementation needs to rely on a systematic process, addressing barriers and facilitators to reach adoption of the intervention at the front-end of care.

Chapter four describes the implementation process of three different kinds of interventions to illustrate how potential programmes for patient safety improvements could be designed. Patient safety interventions targeting actual work practices at the front end (e.g., the safe administration of drugs) can be differentiated from interventions that aim at increasing competencies of the workforce relevant for safety (e.g., the ability to learn from errors as an individual and as an organisation). As a third kind of intervention, we illustrate a strong systems-oriented intervention to improve patient safety.

Furthermore, chapter four shows a range of relevant problem areas for Switzerland, categorised by the relevance of the problem (major vs. moderate) and the availability and feasibility of solutions (no or little vs. practicable solutions available). Based on the relevance of the problem and the availability, feasibility, and scope of solutions we give recommendations for action. We recommend approaching several problem areas from all three *problem-solution-combinations* at the same time to advance patient safety on a broad scale. The list covers interventions that aim at making clinical processes safer. For sustainably changing healthcare, investing in the development of a better safety culture and learning from errors throughout the whole system is crucial. i.e., programmes targeting meta-competencies should also be conducted.

Full report:

https://www.researchgate.net/publication/353379849_Patient_safety_interventions_and_their_implementation_Current_status_and_directions_for_the_future