Application for the SAMW Award “Interprofessionalität”

Categories: *Research* and *Implementation in practice*

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The Project OPTIMA – Best Practice of the Integrative and Inter-professional patient-centered Care.

For more than 15 years, supported by the Swiss National Science Foundation (SNF) and the “Swiss Academy of Medical Sciences” (SAMS/SAMW), our inter-professional, multicenter research group developed strategies for improving management and treatment of polymorbid medical patients. We optimized patient treatment (*keystone 1*), patient-centered care in consideration of limited health care personnel (*keystone 2*), resource allocation (*keystone 3*), and strengthened tasks and responsibilities of diverse stakeholders along the health care service continuum (*keystone 4*). These are the most relevant factors of a successful inter-professional collaboration, as outlined by the SAMW “Charta” in 2014. Below, we first summarize our track record specific to the different keystones of the SAMW “Charta”, and second highlight a “Best Practice” example implemented at Medical University Clinic of the Kantonsspital Aarau in the last two years.

Optimized treatment and patient-centered care (*Keystones 1 & 2*)

After revealing inter-professional barriers for earlier patient discharge in patients with respiratory infections [1-3], we focused on more heterogeneous, polymorbid medical inpatients [4-9]. We validated the post-acute care discharge (PACD) score [10] as a highly predictive nursing risk assessment tool to predict post-acute institutional care thereby allowing early involvement of social workers to facilitate transition [11, 12]. Similar results were also found in a very recent large prospective cohort study, investigating >1800 medical and neurological patients (Conca A., et al., submitted). We implemented successfully a Nurse Led Care (NLC) concept for medically stabilized patients with high nursing care needs [13-15], to achieve a better functional status, a higher psychological well-being, and a lower unplanned readmission rate [14, 16, 17], [Conca A. et al., poster award 3rd prize, SAMW, 2015, Berne].

Resource utilization & allocation (*Keystone 3*)

We have optimized resource use in the fields of emergency triage, antibiotic stewardship and malnutrition. Also, a main priority of our research was to optimize site of care decisions in the ED and reduce length of stay in the inpatient setting. In a secondary analysis of a Swiss-wide multicenter trial on antibiotic stewardship in respiratory tract infections (SNF 3200B0-116177, ProHOSP) [18], we found that even before 2012 Swiss hospitals with DRG based financing had a 20% shorter length of stay as compared to fee-for-service (FFS) hospitals without apparent harmful effects on patient outcomes, satisfaction and quality of life [19]. When looking at barriers for early discharge, independent of type and severity of disease, misperceived high severity and expected mortality were predominant reasons why treating physicians, nurses, patients and their relatives believed that inpatient management was necessary [1, 2]. We also reviewed psychological distress in medical patients seeking emergency care for somatic reasons [20]. Again supported by the SNF (32003B_135222, OPTIMA II study) and the Canton of Aargau (Departement für Gesundheit und Soziales, DGS AG), we validated an inter-professional risk assessment tool including clinical and biochemical parameters for an improved risk estimation in polymorbid patients with respiratory infections to safely increase the outpatient treatment rate and to reduce length of stay [21, 22].

Strengthened tasks and responsibilities of diverse stakeholders along the health care service continuum (*Keystone 4*)

Our research was undertaken in an inter-professional team of nurses, physicians and social care workers often in a multicenter setting, and including and addressing needs of patients and their relatives.
We frequently arrange meetings with internal and external health care system key players. Collaborators in the framework are representatives from different hospitals in the Canton of Aargau (physicians, nurses, social workers, information scientists, controllers, etc.), general practitioner responsible for out-patient and pre-hospital setting (ARGOMED, largest Swiss managed care network of general practitioners), post-acute care facilities, and health care authorities (DGS). This allowed us to build up a – on purpose - heterogeneous sounding board involving important stakeholders and authorities in a comprehensive health care process, including policies and financers. Based on this sounding board, we analyzed external environment and organization characteristics.

Best Practice in the past two years

Using our inter-professional expertise and up-to-date electronic medical chart technology, we developed and successfully implemented an inter-professional patient management tool (“Visitentool”, **Figure 1**) [Conca A. et al., poster presentation, CareART, 2014, Basel; Conca A. et al., poster presentation, Gesundheitssymposium, 2014, St. Gallen]. This platform includes information from (a) the initial patient assessment to improve decision regarding inpatient vs. outpatient care and for early prediction of post-acute care needs (“Ersterfassung”

including PACD score) and (b) daily patient-assessments on the ward to improve decisions regarding early patient discharge for safe transitions from hospital to home or to a post-acute care institution [23]. Using this platform, physicians, nurses and social workers – of course, adapted to needs and wishes of patients and relatives (*key element 1 of the SAMW Charta*), respectively - communicate discharge-relevant information daily using a simple, intuitive color code, including estimated date of discharge from point of view of each profession (*key element 7 of the SAMW Charta*). A comprehensive discharge instruction program including patient education and teach-back methodology [24] about relevant diagnoses and medication, instruction about follow-up procedure with coordination of appointments (physicians, nursing home) and clarification of logistic details (transport, location) is used for all patients [25], [Kutz A. et al., poster award 1st prize, SAMW, 2014, Berne; Kutz A. et al., Swiss Quality Award meeting, 2014, Solothurn].

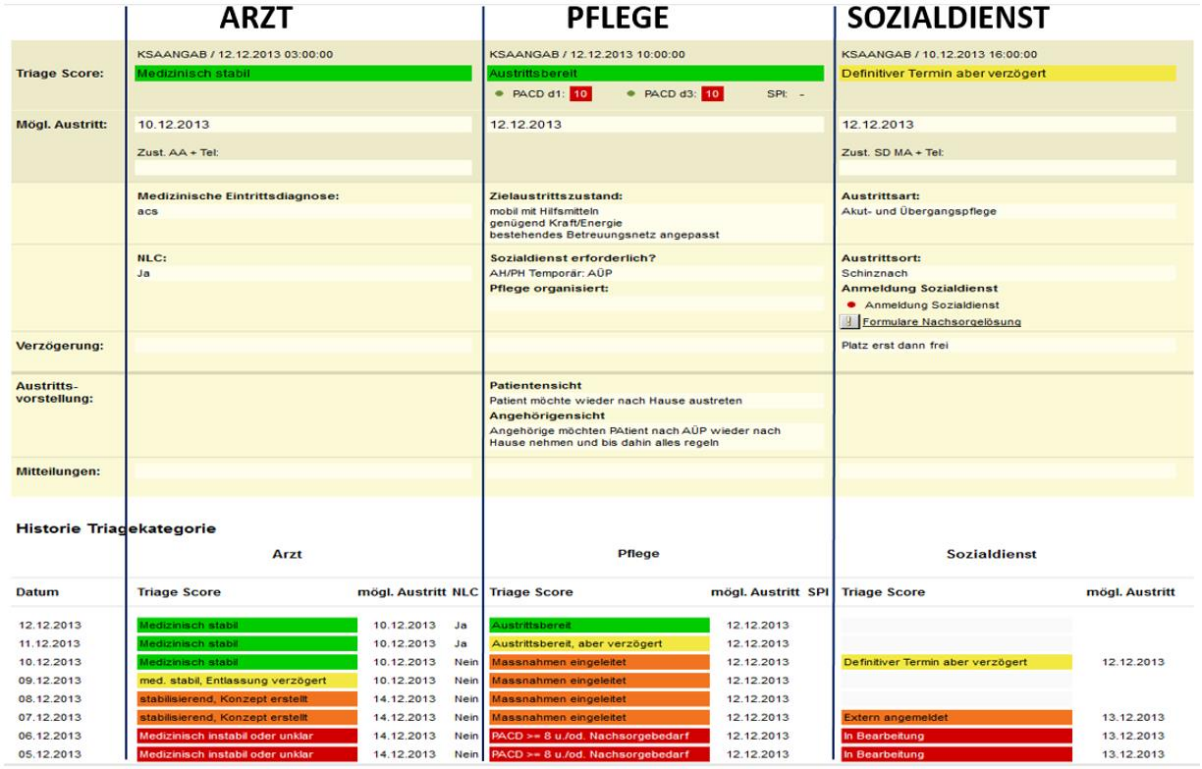

Figure 1. The “Visitentool” (german). Inter-professional collaboration via an electronical communication platform. Nursing and physician staff as well as social services daily assess the clinical , functional, and psychosocial situation about possible discharge (using simple, intuitive color coding) and propose possible discharge dates. Also, reasons for delays in discharge are being monitored. For medically stabilized patients with high nursing care needs we institute a Nurse Led Care (NLC) concept (*key element 8 of the SAMW Charta*).

In detail, upon emergency department (ED) admission, we perform two distinct triage assessments regarding medical and biopsychosocial risk. Physicians decide about initial site of care (need for in-hospital treatment versus outpatient treatment) and estimate the possible discharge date as a basis for further inter-professional daily medical ward re-assessments. ED nurses determine the inter-professional PACD score for estimating the need for post-acute care transition to a post-acute care institution, enabling early involvement of social workers in high-risk patients.

Physicians systematically collect delaying factors of the ED process.
For medical ward patients, we daily re-assess inter-professionally patient discharge management using the “Visitentool”. Physicians, nurses and social workers enter/modify the expected discharge date as well as information regarding clinical, functional, psychosocial stability, discharge readiness, and organizational status (using a color code). Documentation of factors responsible for delays in patient flow is part of the assessment.

The benefits of our inter-professional efforts became evident in a sub-analysis of the recent STEP-Study (SNF-Professorship to Prof. Mirjam Christ-Crain). After adjusting for disease severity in patients with pneumonia, the Kantonsspital Aarau had an adjusted 3-day shorter mean length of stay as compared to other Swiss cantonal and university hospitals with similar patient outcomes [26].

Benchmarking to advice health care authorities and stakeholders

We have also established an electronical monitoring and reporting system, enabling clinical user oriented benchmarking (“Nutzerorientierte Kennzahlen, NOK” (*key element 9 of the SAMW Charta*), **Figure 2**) to monitor hospital processes, quality, delays in hospital transition and barriers for discharge stratified by profession (i.e., physicians, nurses, social workers) [21, 27, 28]. For this purpose, we monitor patient outcome and satisfaction by telephone interviews 30 days after admission with ~16’000 patient interviews being done at our hospital between February 2013 and September 2015 with an exceptionally high follow-up rate of >90%. To date, we gathered data of >30`000 inpatients in a large observational database (OPTIMA-TRIAGE) within the last two years. Based on this dataset, several analyses have been published regarding outcomes of medical inpatients [20, 27, 29-32] [Kutz A. et al., poster award 2nd prize, 7th Symposium of the Swiss Clinical Trial Organisation, 2016, Lausanne]. We regularly report key measures of health care and patient outcomes to the hospital governing board and cantonal authorities. We are actively involved in the MIVAG-network (“Masterplan Integrierte Versorgung Aargau”), a pioneering cantonal initiative for integral collaboration of pre-, peri-, post-acute and chronic health care.

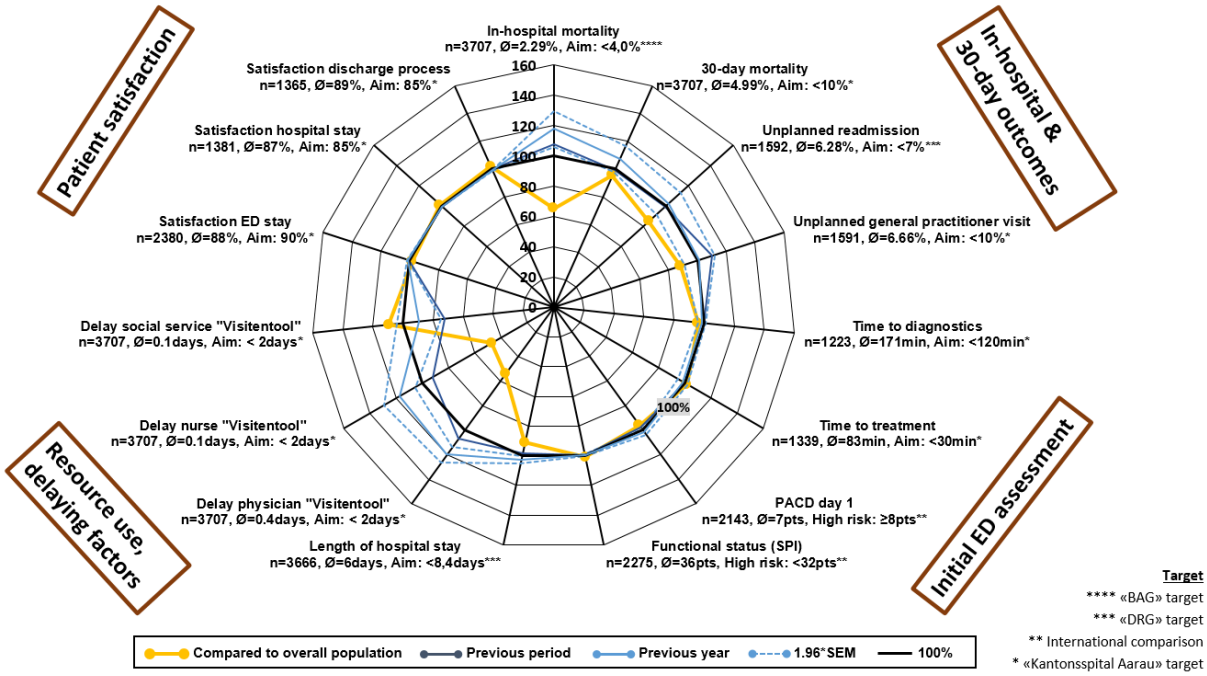

Figure 2. The “Cockpit”. For clinical user oriented benchmarking (Nutzerorientierte Kennzahlen) based on patient data from our own database including >30`000 medical patients. Quality data from different dimensions is displayed comparing different time periods. We report data about in-hospital and 30-day outcomes (i.e. in-hospital and 30-day mortality, unplanned readmissions or general practitioner / ED visits), initial ED assessment (i.e. PACD score, ED procedure delaying factors), resource use and delaying factors (i.e. ED and medical ward delaying factors, length of stay), and patient satisfaction (i.e. satisfaction with ED, ward, and discharge process).

Significance of this work in the field

Health care costs in Switzerland are high and rising due to the aging, polymorbid population. Scientific evidence regarding performance, safety and cost-effectiveness of specific integrative multi-professional care models tailored to the Swiss health care system is largely lacking. The “Visitentool” is an integrative multi-professional inpatient management tool that enables a better understanding of the multifaceted health care processes and will close this gap. Through a standardized but at the same time individualized approach (*key element 3 of the SAMW Charta*), we will further improve the inter-professional management of patients from ED admission to hospital discharge to home or a nursing care facility. This will translate into optimized transparency, resource use, patient outcome and satisfaction, functional, psychosocial status, and overall hospital costs. We expect that the effect of the “Visitentool” will be widely, directly and rapidly applied – and indeed, will contribute to a new standard of national health care.

Factors of success

Many years of intensified collaboration, trust, respectful communication are cornerstones of our success. Integrating different perspectives, involvement of internal and external stakeholders from diverse disciplines and professions were essential key factors to build up and strengthen our inter-professional team. To get all parties involved and sitting around the same table stimulated the awareness of interdependency. We moved away from the “classical” hierarchical model and experienced a cultural change. This allowed us an inter-professional participation in developing and implementing innovative projects, as well as feeling of success. The strong network of involved exponents from different professions allowed us a fast and

broader dissemination of our results into the target public. Finally, our previous research and clinical expertise comprised different elements important to the successful implementation of the “Visitentool”. We have acquired profound methodological know-how through playing key roles in the conduct of various multicenter trials involving several Swiss and international institutions with different professions involved [18, 26, 33-36].

Challenges

Health care processes are characterized by involvement of diverse internal and external professionals with individual strategies to coordinate, communicate, and collaborate in an inter-professional team. To rupture the hierarchical model and getting aware of interdependency were main challenges to generate our stimulating team spirit. In addition, the increasing complexity of mostly polymorbid patients forced us to design new strategies for a more individualized, patient oriented care (i.e. NLC). Weekly inter-professional meetings further aided to remove unnecessary parallelism and territorial silos.

Lessons learned

We have learned that interventions embedded into usual care have the potential to yield outcomes of great relevance to the institutions themselves and arouse interest to the health care system at large. The “Visitentool”, as an integrative multi-professional inpatient management tool, enabled a better understanding of the multifaceted health care processes in- and outside the hospital. Only by a close inter-professional collaboration we were able to better cope with the increasing patient complexity. This was also elementary to improve transparency and to better identify resource mis-use. Thus, networking is a prerequisite for improving sustainable patient-centered health care delivery. Aside from networking, a leadership is inevitable to exemplify this innovate and motivating team spirit.

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