

Smarter Health Care



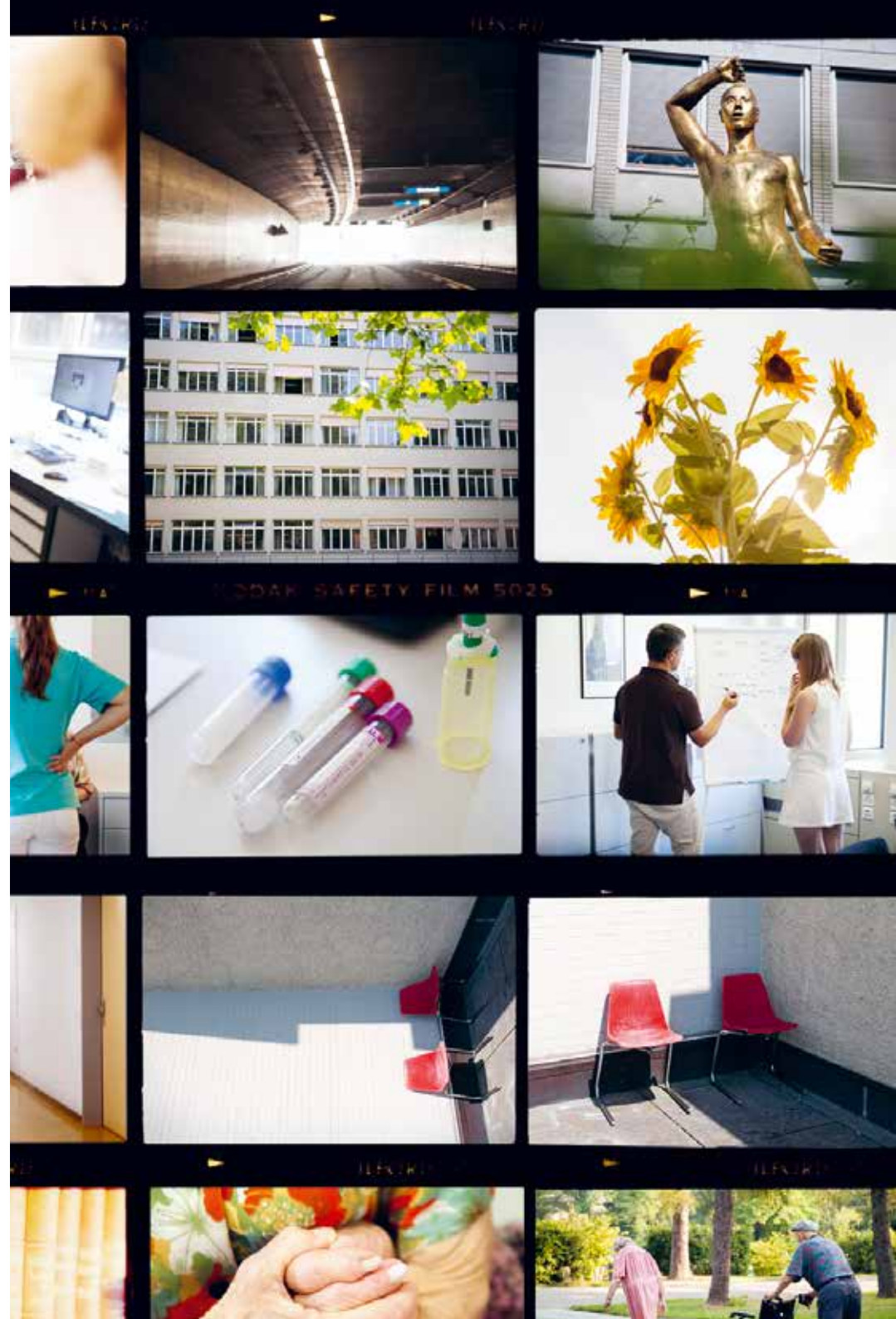
Smarter Health Care
National Research Programme

A brighter future for health care

The rise in chronic diseases in Switzerland is proving to be a serious challenge for the Swiss health care system. If we are to secure first-class «smart» health care over the long term, we need innovative models as well as evidence-based prevention, medicine and care that properly meet the needs of patients.

The National Research Programme «Smarter Health Care» aims at providing the scientific basis for this task. The Steering Committee is confident that the programme and the funded projects will make an important contribution to improving patient care in Switzerland.

**Milo Puhan, President of the NRP 74
«Smarter Health Care» Steering Committee**



Chronic diseases are our main concern

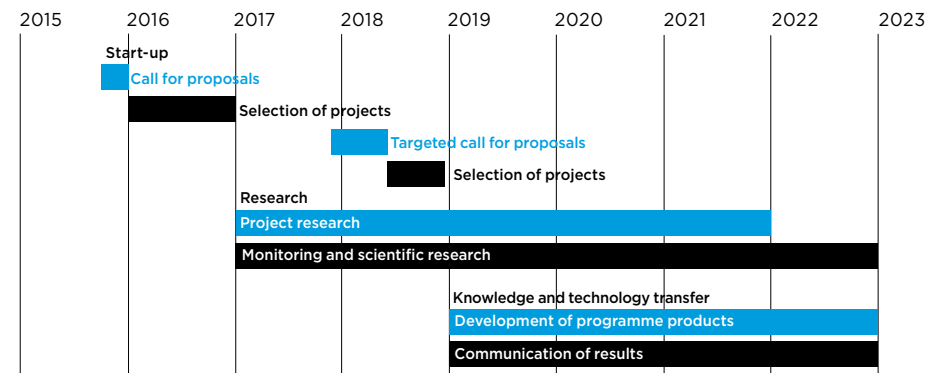
Today, chronic diseases are responsible for the largest share of Swiss health care costs; yet the health care system remains focused on the treatment of acute conditions. Health care needs to tackle new and important challenges: preventing unnecessary or even harmful treatment, improving collaborations between different professional groups and institutions, consolidating health data, and ensuring that everyone has equal access to health care. An evidence-based foundation is a necessary requirement for meeting these challenges.

The NRP 74 has three aims:

- generating knowledge about how best to improve the structure of health care and access to it in order to improve the health of patients;
- over the long term, optimising the availability, accessibility and linking of health data, and
- contributing towards building a strong research community that carries out world-leading health services research.

Widely supported and solidly funded

At the instigation of representatives of family medicine and internal medicine, the Swiss Academy of Medical Sciences and the health policy, a concept for strengthening health services research was developed in a broad-based consultation process. Members of the current NRP 74 Steering Committee subsequently developed a research programme that was approved by the Federal Council in 2015.



The NRP 74 has a budget of CHF20 million. The funded projects will commence at various research institutes across Switzerland in 2017. The first research results are expected in 2020. Publication of the programme synthesis report is planned for 2022. In order to strengthen and firmly establish health services research beyond the influence of NRP 74, specific measures will be implemented to support junior staff and encourage international cooperation.

Bridging the gap between research and practice

Like all NRP research results, those supplied by the NRP 74 will be relevant to the «real world» and of practical utility. We will therefore make the findings available to the government, to health policy decision-makers as well as to patient-facing health care professionals. We will encourage exchange between researchers, stakeholders and the general public and support knowledge dissemination to bridge the gap between research and practice.

The NRP 74 aims to sensitise stakeholders and the general public about the challenges of health care while at the same time creating a favourable framework for health care and health services research.

The projects: diversity on four levels

The researchers are looking into issues related to outpatient care, inpatient care and home care, as well as into issues related to health care across sectors. The issues are arranged on four different levels:

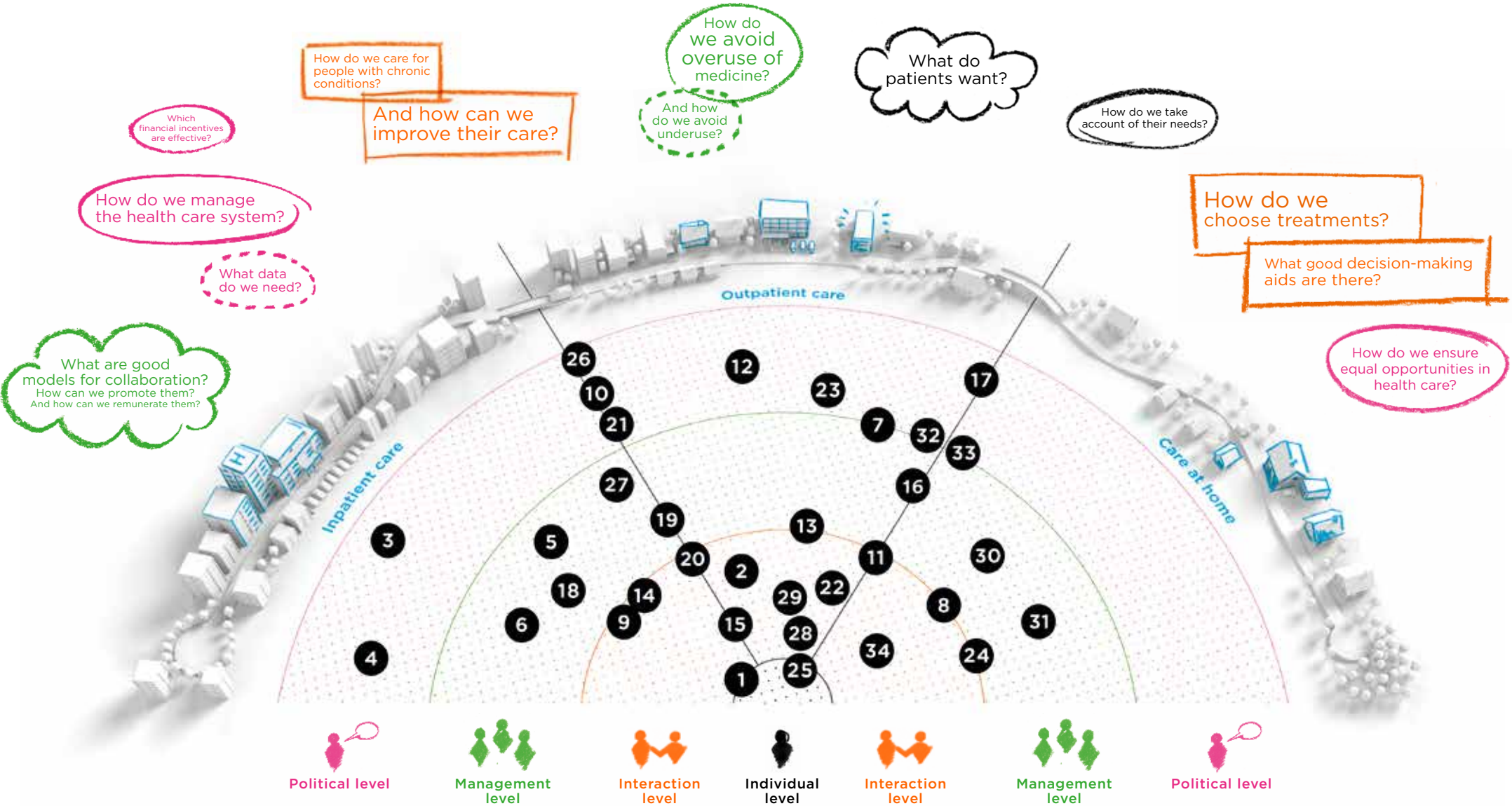
At the **individual level**, the preferences of different patient groups are being explored, with a view to improving patient access to care services as well as their actual treatment and care.

At the **interaction level** between health care professionals and patients, aspects of quality and choice of treatment are being explored. The research projects are investigating questions such as how to optimise the medication of patients with multiple chronic conditions, how to take greater account of patient preferences during treatment selection, and how to incorporate spirituality into the treatment of patients with chronic conditions.

At the **management level**, the focus is on optimising collaboration between health care professionals and optimising coordination within and between different health care sectors. For example, researchers are looking into how interprofessional collaboration can ensure that inpatient stays are not extended unnecessarily, as well as into how to optimise patient medication upon discharge from hospital. They will also be developing and testing interprofessional models in nursing homes and in palliative care situations.

At the **political level**, system issues are being examined. In order to optimise cost-efficiency, incentive systems and new health care models are being evaluated together with options for improving and harmonising data bases. The influence of factors such as social conditions and medical guidelines on the choice and quality of treatment is also being reviewed.

Research landscape and projects of NRP 74



1 Thomas Abel, Universität Bern **Learning from migrant women's experiences and improving healthcare services**

Swiss health policy aims to promote equity in healthcare services. This study analyses migrant women's experiences of healthcare services for chronic diseases and actively involves patients in the development of new approaches.

2 Reto Auer, Universität Bern **Promoting participatory medicine in colorectal cancer screening**

In Switzerland, only one in five persons in affected groups is screened for colon cancer. Most are not told they can be tested and can even choose between tests. If primary care providers are trained in participatory medicine they can ensure that patients make informed choices matching their values and preferences.

3 Drahomir Aujesky, Universität Bern **What factors affect the performance of elective interventions in Switzerland?**

Various factors determine whether non-vital medical interventions – referred to as elective interventions – are performed or not. The study will investigate regional and temporal variations affecting elective interventions in Switzerland and will look for possible explanations.

4 Lucy Bayer-Oglesby, Fachhochschule Nordwestschweiz **Social inequalities in the provision of in-patient healthcare in Switzerland**

The health of individuals is determined in part by their social status. In Switzerland, however, little is known about the interplay of socio-economic and social factors, poor health and the provision of healthcare. This is the starting point for the study.

5 Patrick Bodenmann, Université de Lausanne **Using case management to remove burden on emergency departments**

Most emergency departments (ED) in Switzerland are overloaded. This is explained in part by some patients making above-average use of EDs. Introducing a type of case management response should help improve this situation.

6 Olivier Bugnon, Université de Genève, Université de Lausanne **Optimising the medication of elderly persons living in nursing homes**

Elderly persons living in nursing homes often take potentially inappropriate medication. Stopping or reducing doses of medication – referred to as deprescribing – can improve their health and quality of life. This study seeks to develop an interprofessional approach to deprescribing in nursing homes.

7 Corinne Chmiel, Universität Zürich **Improving the data situation in out-patient healthcare**

The wide-ranging statistical basis that exists for the in-patient healthcare setting in Switzerland is not available for out-patient care. The study seeks to reinforce the standardised recording of routine data in general practitioners' practices in Switzerland.

8 Luca Crivelli, Scuola universitaria professionale della Svizzera italiana **Cost-effectiveness of home treatment for acute mental illness**

For 30 years, the growing trend has been to treat patients with acute mental illness at home. This practice increases satisfaction among the persons concerned and reduces relapses. Nevertheless, there is little data available on the cost-effectiveness and on the factors governing the success of this approach.

9 Chantal Csajka, Université de Genève, Université de Lausanne **Automatic detection of adverse drug events in geriatric care**

Elderly people are particularly exposed to adverse drug events. Developing tools to help detecting these adverse effects along with preventive procedures will help optimise medication safety in the elderly hospitalized population.

10 Bernice Simone Elger, Universität Basel **Promoting the merging of health data in Switzerland**

Linked health data provide an important basis for taking decisions on the continuing development of the Swiss health system. The intention is to make proposals for merging existing data from the out-patient and in-patient settings and from the insurance sector.

11 Steffen Eychmüller, Universität Bern **End of life: more quality and less suffering through better planning and coordination?**

Most people want to spend the end of their life in circumstances that they have chosen and in a familiar environment. The study investigates whether proactive planning of treatment and nursing care and optimal coordination can prevent patients having to be admitted to hospital even if their condition deteriorates.

12 Stefan Felder, Universität Basel **Less fee-for-services, more flat reimbursement: Does it work in the out-patient sector?**

Fee-for services reimbursement incentivizes physicians to diagnose and treat more – and more expensively – than necessary. The study investigates how changes to the way doctors are reimbursed affect services in the out-patient setting and health care costs.

13 Michael Gerfin, Universität Bern **What effects does the closure of general practices have on patients and the health service?**

Roughly half of the general practitioners currently working will retire in the course of the next ten years. The study examines how the closure of practices affects the use of medical services, costs and patients' health.

14 Angela Huttner, Université de Genève **Reliably determining optimal antibiotic durations**

If misused, antibiotics can have detrimental effects not only on the health of the patient concerned but also the entire population through the development of resistance. This study aims to determine the optimal duration of antibiotic therapy on the basis of data extracted from patients' electronic health records.

15 Oskar Jenni, Universität Zürich **Provision of care for children with developmental disorders in the canton of Zurich**

Little is known in Switzerland about the availability of demand for and efficacy of the care provided for children with developmental disorders and disabilities in the first years of life. The research project aims to fill this gap by analysing data from a central register in the canton of Zurich.

16 Brigitte Liebig, Fachhochschule Nordwestschweiz **Successful models of palliative care in Switzerland**

There is little validated knowledge in Switzerland about how palliative care networks operate. The study seeks to produce an overview of implementation models and guidelines for collaboration and the coordination of service providers in the palliative care sector.

17 Barbara Lucas, Haute école spécialisée de Suisse occidentale **Diagnosing dementia: cantonal policies and ethical issues**

Dementia diagnosis raises a range of political and normative questions. Its implementation involves both the health and social sectors and entails various ethical dilemmas. This study aims to identify how the Swiss cantons handle dementia diagnosis and related ethical issues.

18 Beat Müller, Universität Basel **Does systematic interprofessional collaboration shorten the length of hospital stays?**

Improved interprofessional collaboration is expected to shorten the time patients with multiple diseases spend in hospital with no reduction in successful treatment outcomes. The study will investigate the efficacy and general applicability of interprofessional instruments.

19 Stefan Neuner-Jehle, Universität Zürich **Optimised medication and communication at discharge**

The lists of drugs taken by patients are long. This results in adverse interactions and impairment of health. A systematic medication review on discharge from hospital and a standardised communication with the patients' general practitioners can help to improve this situation.

20 Simon Peng-Keller, Universität Zürich **The spiritual dimension of pain therapy**

Attention to the spiritual dimension in interprofessional therapy can contribute to more satisfactory management of patients with chronic pain. The study will generate a basis for this approach and tools for interprofessional training and clinical practice.

21 Gerold Stucki, Schweizer Paraplegiker-Forschung **Standardised reporting of functioning of people with chronic diseases**

Rehabilitation aims to optimise the functioning of chronically ill people. Functioning is tested and assessed using clinical tests and questionnaires. However, the absence of a standardised reporting system makes the task of comparing the data more difficult.

22 Sven Streit, Universität Bern **Optimising medication with electronic decision-making assistants in patients with multiple chronic illnesses**

Patients suffering from multiple chronic illnesses are often over-medicated or take medications with inappropriate indication. This study aims to establish whether electronic decision-making assistants designed for general practitioners (GPs) can improve prescription appropriateness and quality of life.

23 Thomas Rosemann, Universität Zürich **Do financial incentives improve the treatment of diabetes?**

Little validated knowledge is available about whether financial incentives for general practitioners improve the quality and outcomes of treatment provided for chronically ill patients. The study investigates this question as applied to general practices in Switzerland.

24 Julia Dratva, Zürcher Fachhochschule **Better data on the quality of home care**

Little is known in Switzerland about the availability, demand for and quality of home care services. This study aims to fill the gap. The study will analyse as well as develop a database operated by the Swiss Home Care Association (Spitex).

25 Brigitte Santos-Eggimann, Université de Lausanne **What are long-term care choices in the older population?**

Long-term care must be developed to meet the requirements of a growing number of elderly persons. Several options are possible, from care at home to institutional care. Which option does the older population, first concerned by chronic dependence, consider most appropriate?

26 Matthias Schwenkglenks, Universität Zürich **How do guidelines and recommendations influence medical treatment?**

Chronic diseases are treated differently in different regions. A number of factors affect the choice of treatment. The study will investigate the influence of clinical guidelines and recommendations and how their use can be optimised.

27 Michael Simon, Universität Basel **Development of a nurse-led care model for nursing homes**

Nurses and physicians are jointly developing and testing a nurse-led care model for people in nursing homes with the aim of reducing the number of unnecessary hospitalisations. The new model will use specifically trained nursing professionals to improve the medical and nursing care provided.

28 Philip Tarr, Universität Basel **Vaccine-sceptical patients and doctors in Switzerland**

An increasing number of parents in Switzerland are having their children vaccinated incompletely, later than recommended or not at all. This leads to underuse of vaccines in the population at large, because vaccines are effective and safe.

29 Birgit Watzke, Universität Zürich **Better identification and treatment of mental disorders in primary care**

Although a relatively large proportion of the population suffers from depression and anxiety, only a small number of those affected benefit from adequate and prompt diagnosis and treatment. This is the starting point of this research project.

30 Sabina De Geest, Universität Basel **Integrated community-based care for home-dwelling older people**

A strong long-term care system is needed to allow older people with functional dependencies to remain in their homes for as long as possible. The study implements and evaluates a nurse-led, integrated and community-based care model with the aim of improving the quality and efficiency of care at home.

31 Heidi Kaspar, Careum Hochschule Gesundheit **Development of caring communities for long-term care at home**

If more frail elderly people wish to remain at home in the future, new concepts will be needed. Working with elderly persons and their families, this study develops, implements and evaluates new «caring community» models in three regions of German-speaking Switzerland.

32 Joachim Marti, Université de Lausanne **How to improve care coordination for people with chronic conditions in Switzerland?**

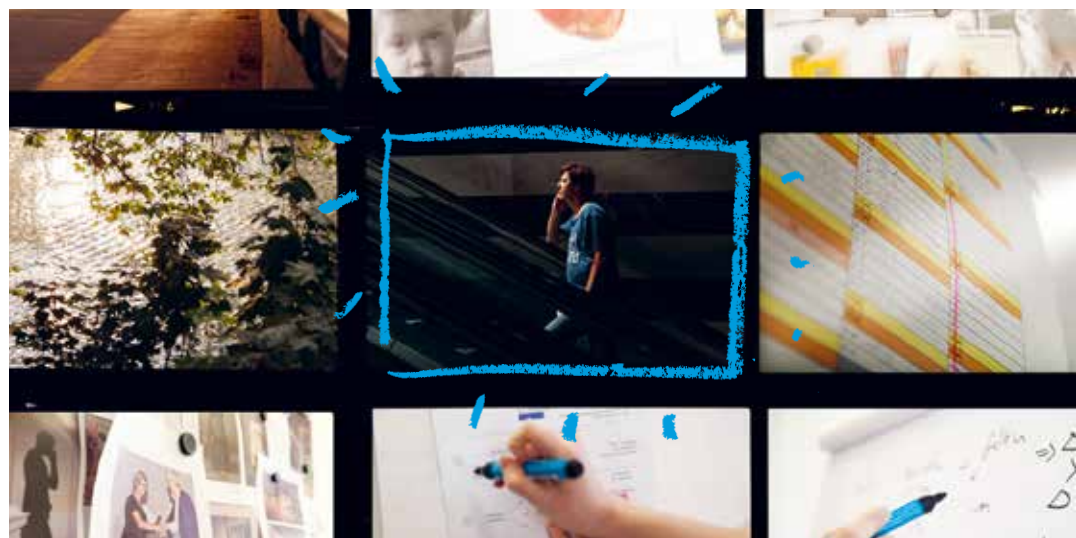
People with chronic conditions require coordinated care. This study analyses the potential for better care coordination in Switzerland and proposes new care models and financing mechanisms that are in line with the needs and preferences of the population.

33 Lukas Schönenberger, Berner Fachhochschule **Use of simulation modelling to improve care for patients with chronic conditions in Switzerland**

How can health care in Switzerland be optimally tailored to meet the needs of patients with chronic conditions? The study models the consequences of health policy decisions and formulates recommendations for a reorientation of the health care system.

34 Henk Verloo, HES-SO Valais-Wallis **Safer medication management for home-dwelling older adults**

Taking several medications at the same time can lead to adverse effects and dangerous situations for home-dwelling older adults with chronic conditions. The study investigates how medication management can be made safer for this patient group.



The National Research Programmes

The National Research Programmes (NRP) provide science-based solutions to urgent problems of national importance. The programmes are approved by the Federal Council and are provided with funding of between CHF10 to 20 million over a period of four to five years.

The NRPs are problem-oriented as well as inter- and transdisciplinary. Individual research projects and groups are coordinated within each programme with the aim of achieving a predefined overall objective.

The Swiss National Science Foundation

The Swiss National Science Foundation (SNSF) is the most important Swiss institution funding scientific research. Working on behalf of the Swiss Confederation, the SNSF supports fundamental research in all scientific disciplines, from philosophy, biology and medicine to the nanosciences. The main focus of its work is the scientific assessment of research projects. Each year, it supports more than 3'000 projects involving nearly 15'000 researchers at a cost of around CHF850 million.

Contact

Dr. Kathrin Peter
Programme Manager NRP 74
SNSF, Wildhainweg 3, CH-3001 Berne
Phone +41 (0)31 308 22 22
nrf74@snf.ch

Legal information

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Swiss National Science Foundation SNSF
Department IV, Programmes
National Research Programmes
Wildhainweg 3, Postfach 8232, CH-3001 Berne
Phone +41 (0)31 308 22 22
www.snf.ch / nrf@snf.ch

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Kathrin Peter, Milo Puhan

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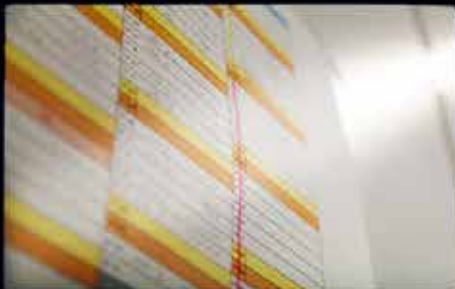
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