

spectra

102



Vaccinations

2 Vaccination: preeminent in prevention

The principle of vaccination is ancient: As far back as the seventh century, Buddhists in India were drinking minute amounts of snake venom to protect themselves against the effects of snake bites. Even today, vaccination – administering small doses of a causative agent in a harmless form to achieve immunisation – is one of medicine's most important and most effective methods of preventing disease. What has been achieved thanks to vaccination programmes? What risks does their success entail? What still needs to be done? This edition of spectra provides answers.

4 Actionsanté: 5th annual conference

In what way can the business sector help solve society's health-related problems? What can it do to further the health of young people? And what needs to be done to encourage more physical activity at workplaces in Switzerland? These and other questions were discussed at the 5th annual conference of the "actionsanté" initiative in November 2013. Through actionsanté, the Federal Office of Public Health seeks to engage in partnership-based cooperation with enterprises that promote a healthy lifestyle.

4 FSVO: the newest federal office

Federal Food Safety and Veterinary Office – FSVO for short – is the name of the newly formed federal office scheduled to start work at the beginning of January 2014. It combines the former Federal Veterinary Office (FVO) and the Federal Office of Public Health's Food Safety Division and will constitute a new centre of excellence in food safety, nutrition, animal health, animal welfare and species conservation in the context of international trade. spectra talked to FSVO Director Hans Wyss.



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Home Affairs FDHA
Federal Office of Public Health FOPH

How is vaccination dealt with in Switzerland's prevention activities?

Lead article. Vaccinations are incontestably among the most effective means of prevention in the healthcare sector. Their history goes back a long way – but has very recent chapters as well.

The idea of protecting people against a fatal disease by inoculating a harmless form of the causative agent dates back as far as the seventh century, when Buddhists in India were already drinking snake venom to achieve immunity against snake bites. The immunisation technique of variolation is mentioned in Chinese documents dating from the tenth century and was also used in 16th century India. It involved the application of dried pus from smallpox pustules to scratches made on the skin. This form of inoculation was also practised in large parts of Turkey, from where it was exported to England in 1721. It was helpful in reducing the harmfulness of smallpox in the event of infection. But it was not risk-free – two to three per cent of patients thus treated died of the smallpox that had been inoculated into them by variolation. At the end of the 18th century, cattle breeders in Britain observed that people who had contracted cowpox – a disease that is harmless in human beings – were immune to smallpox. One of these farmers had inoculated members of his family with cowpox twenty years before the British physician Edward Jenner published his 1798 studies describing how this benign infection was able to provide protection against the frequently fatal smallpox

(which had a mortality rate of 30 to 96%, depending on the strain). Variolation with cowpox could be transferred from person to person, in order to protect additional people. But it was not without risks as other infections such as syphilis were occasionally transmitted as well. A standardised serum was eventually produced, and regularly used from 1890 on. It was made with material obtained from deliberately infected cows and was treated to eliminate any bacteria. This development constituted the actual birth of the first vaccine.

Breakthrough of modern vaccination

Relatively few new vaccines were produced in the 19th century. The method developed by Pasteur was originally intended to target animal diseases (fowl cholera, anthrax and rabies) and was predicated on reducing the virulence of the causative agents. In 1885 there was some resistance to the use of attenuated rabies virus in children who had been bitten by rabid dogs. If a child died, its death was not infrequently blamed on the vaccine rather than the fatal disease. But hundreds of lives were saved. In the meantime, the principle of vaccines employing killed microbes was discovered in the United States, enabling vaccines to be developed against typhus, cholera and plague.

In the 20th century, vaccines were developed against at least 20 other diseases – for instance diphtheria (1923) and tetanus (1926) – using inactivated bacterial toxin. In the second half of the

20th century, not only did development methods change significantly, in parallel with a greater understanding of immune response mechanisms, with the culturing of viruses, molecular biology and genetic engineering, but there was also considerable improvement in the scale of clinical studies, in standards of production quality and in safety monitoring.

An international success story

The implementation of large-scale vaccination programmes had an enormous and well documented effect on mortality and morbidity. Good examples include the programme against diphtheria in Canada in the 1920s, and the eradication of smallpox in 1980, which resulted in the cessation of routine smallpox vaccination. The WHO's "Expanded Programme on Immunisation", established in 1974, resulted in a decline in the number of worldwide cases of diphtheria from a million to fewer than 10,000. Average global vaccination coverage was 81 per cent for three doses administered by the age of one. On the other hand, the discontinuation or interruption of vaccination programmes regularly triggered a resurgence of the disease and fatalities, which goes to show how effective and useful vaccinations are. Such setbacks were caused by political unrest, for instance, or by loss of public confidence due to claims of serious side effects (whooping cough in Japan, 1975; measles in the United Kingdom, 1998) or even to suspicion of nefarious intent (poliomyelitis in Nigeria).

The effect of vaccinations extends beyond protection of the individuals who are vaccinated, when thanks to their immunity, they form a barrier to the spread of the causative agent, and therefore also protect non-vaccinated people or those in whom the vaccine is not effective.

Vaccinations in Switzerland: cooperation among different partners

In Switzerland, authorisation of vaccines and monitoring of adverse reactions are the responsibility of Swissmedic, the Swiss Agency for Therapeutic Products. The Federal Office of Public Health (FOPH) is responsible for issuing recommendations on vaccinations. These recommendations are summarised in the annual National Immunisation Schedule and, in cooperation with the Federal Commission on Vaccination Issues, continually updated to take the latest findings into account. Vaccinations are recommended on the basis of the anticipated benefit to the health of the community as a whole as well as that of individuals. They are divided into three categories. The recommended basic vaccinations are considered essential for individual wellbeing and public health. The recommended supplementary vaccinations are recommended for people who want to an optimal protection against well defined risks. The third category comprises vaccinations recommended for people with a high risk of exposure, transmission or complications. The costs incurred by recom-

Forum

Vaccinations? Let's talk about them!

As paediatricians who look after growing children, we concern ourselves particularly with the recommendations for and administration of the vaccines. We already broach the topic of vaccination at the first visit when infants are one month old. At the age of two months, now no longer protected by their mother's antibodies, infants receive their first doses of vaccine, particularly in order to build up immunity to whooping cough and Haemophilus infections, two diseases that can cause serious complications in young children. Between the ages of two and 48 months, children are vaccinated against ten infections in accordance with the Swiss Vaccination Schedule. Adolescents are immunised against hepatitis B, and girls additionally against the human papilloma virus (HPV). And it works! We no longer see children with meningitis due to meningococcus C or Haemophilus, or respiratory decompensation due to Haemophilus epiglottitis. But what happens? We immunise infants and young children, yet still see serious cases of whooping cough and measles... Children are now better protected

against meningitis, a disease that scares us, than against whooping cough or measles because these are still regarded as "harmless" illnesses. But they too can be life-threatening. Young adults are no longer protected against whooping cough by being vaccinated in childhood, and not all of them have received two doses of MMR (measles, mumps, rubella) vaccine.

We know what the solution is: it is not just babies that have to be properly vaccinated – immunisation has to be guaranteed in later years as well. We have to identify children and young people whose immunisation status has gaps in it and make good any past omissions – in our paediatric practices, maternity care centres, playgroups and kindergarten, schools, vocational training facilities – and, for healthcare and education professionals, on starting work. As paediatricians, we are in a position to catch up on the whooping cough vaccination recommended for young people and for the parents of infants under six months and administer the required doses of MMR vaccine. But still requiring attention are a number of healthcare and education professionals who are inadequately immunised

against whooping cough, measles and seasonal influenza. They are no longer of an age to consult a paediatrician and – because they are in good health – do not see any other doctor either. But they can infect as yet incompletely immunised infants with whooping cough or measles.

It is no longer sufficient to inform, recommend and advise – everyone involved must accept their own share of responsibility. Politicians must include protection of the Swiss population through vaccinations in their agendas. The health authorities must issue clear guidelines for the health and education sectors on how to check for and catch up on missed vaccinations in both children and adults.

A reference person must be appointed to supervise and coordinate implementation of the guidelines in the communities: it can be a public health nurse or school medical officer in the case of children attending kindergarten and school, and an occupational health nurse or medical officer in the case of healthcare and education professionals. The responsible childcare authority must guarantee the implementation of these guidelines. Childcare facilities should

refer to the guidelines when engaging new staff or accepting children into their facility.

Non-vaccinated healthcare and childcare professionals should be aware of the risks to which they expose the people they look after. Even if they do not want to have themselves vaccinated for their own protection, they should do so for their clients' sake. And we paediatricians? Our role is to share our knowledge and recommendations as widely as possible with all concerned and continue checking vaccination cards, providing information and administering vaccines in our practices and in hospitals or schools.



Nicole Pellaud, MD
FMH (Swiss Medical Association)
Specialist in Paediatrics,
President of the Swiss Society
of Paediatrics

mended vaccinations are generally reimbursed by the recipient's compulsory health insurance cover. This occurs in compliance with the conditions laid down in the Speciality List and the Ordinance of the FDHA on Services Covered by Compulsory Health Insurance, after each one has been assessed by the Federal Medicines Commission and the Federal Commission for General Services and Key Issues.

Working together to obtain better vaccination coverage rates

The cantons are responsible for implementing measures to achieve public health objectives. For instance, together with school medical services they organise information, checking of vaccination cards and, if necessary, vaccinations in schools. Vaccinations are performed either by physicians themselves or under their responsibility in domiciliary practices and in the framework of the public health service. As a result, broad and easy access is ensured. All members of the healthcare professions make a contribution in accordance with their professional responsibilities. Vaccination measures are evaluated jointly by the FOPH and the cantons. This occurs in the form of studies of the vaccination coverage rate and through mandatory reports of vaccine preventable diseases, and the mandatory adverse event reports that are collected by pharmacovigilance centres and analysed by Swissmedic.

High level of acceptance, but still room for improvement

The recommended basic vaccinations generally enjoy a very high level of ac-



ceptance in Switzerland: 95 to 96 per cent of children aged two have received three doses of the vaccine against diphtheria, tetanus, whooping cough (pertussis), poliomyelitis (infantile paralysis) and Haemophilus influenzae b (Hib). Certain vaccinations or boosters, however, are affected by delays and shortcomings: at two years of age, only 88 per cent of children have received their fourth dose of the above vaccine and only 86 per cent have received the two doses of the vaccine against measles, mumps and rubella (German measles) that are recommended between the 15th to the 24th month of life. At eight years of age, 95 per cent have received their fourth dose of DPT (diphtheria, pertussis, tetanus) vaccine, but only 80 per cent have also received the fifth dose

that is recommended for four to seven year olds. At 16 years of age, 95 per cent have received at least one dose of the anti-measles vaccine, but only 88 per cent have been given the second dose. Hepatitis B vaccination of young people is on target at an average of 70 per cent, but this is not the case with the HPV (human papilloma virus) vaccination of girls that protects against the risk of developing cervical cancer. The aim here is to achieve a vaccination coverage of 80 per cent, but in fact only about 54 per cent of girls are currently vaccinated. There is therefore room for improvement.

Contact: Virginie Masserey,
Head of the Vaccination Programmes
and Control Measures Section,
virginie.masserey@bag.admin.ch

Vaccination info box

The Federal Office of Public Health's website offers a wide range of information material on vaccinations:
www.sichimpfen.ch

You will find everything you need to know about measles and vaccination here:
www.stopmasern.ch/

The InfoVac website is an independent information service for questions about vaccination:
www.infovac.ch/

You can create your own electronic vaccination record on the following website:
www.meineimpfungen.ch/

The Federal Vaccination Commission (EKIF/CFV) has drawn up fact sheets on the subject of vaccination that can be downloaded from the following website:
www.bag.admin.ch/themen/medizin/00682/00685/03212/index.html?lang=de

Several vaccination-related flyers, brochures and fact sheets can be ordered free of charge at the Federal Publications Shop.
www.b2cshop.admin.ch/cshop_bbl/b2c/start.do

At first hand

The most recent vote on the Epidemics Act has once more demonstrated that the subject of vaccinations can arouse emotions and trigger debate. When an epidemic with a high mortality rate looms on the horizon, the loudest voices are those clamouring for vaccinations. At other times, they are those who fear vaccinations.

Vaccines no longer need to prove their worth. The fact that at least 95 per cent of children in Switzerland have been vaccinated is a clear sign that, as a preventive measure, vaccination is basically unchallenged. Yet because of the almost complete eradication of life-threatening diseases such as smallpox, diphtheria and polio and, even more so, the mere suggestion of a serious adverse reaction to vaccines, the benefits of vaccination tend to be forgotten.

Awareness of the benefits and risks of vaccination is off-balance, despite comprehensively available and reproducible statistics and analyses showing clearly that the benefits of recommended vaccinations far outweigh the possible drawbacks. The risks associated with vaccination are much less serious than those of the diseases that vaccines prevent.

Protecting individuals and the population as a whole and avoiding doing any harm are concerns shared by all the players involved and at all levels – from university lab research to industrial production, authorisation of a vaccine to postmarketing surveillance, development of recommendations to evaluation of effects, and communication of the recommendations to implementation by GPs. Numerous mechanisms guarantee the quality, safety and appropriateness of vaccines.

To ensure that the full potential of vaccinations can be realised and further developed, we have to take the concerns of the public seriously, underpin the credibility of players and communication, and continue working with appropriate structures and measures to support and document the positive effects of vaccines.

It is with this in mind that we want to implement the revised Epidemics Act and develop a National Vaccination Programme.



Daniel Koch,
Head of the Communicable Diseases
Division
Federal Office of Public Health

Credits • No. 102, January 2014

«spectra – Prevention and Health Promotion» is a newsletter of the Federal Office of Public Health published six times a year in German, French and English. Some of the views expressed in it may diverge from the official stance of the Federal Office of Public Health.

Published by: Federal Office of Public Health,
CH-3003 Berne, tel. +41 31 323 87 79,
fax +41 31 324 90 33

Produced by: Pressebüro Christoph Hoigné
Allmendstrasse 24, CH-3014 Berne
christoph.hoigne@la-cappella.ch
Head of Editorial Board: Adrian Kammer,
adrian.kammer@bag.admin.ch
Contributors: FOPH, Christoph Hoigné
Translation: BMP Translations AG, Basel
Photos: FOPH, Christoph Hoigné, iStockphoto
Layout: Lebrecht typ-o-grafik, 3006 Berne
Printed by: Bütiger AG, 4562 Biberist
Print-run: German: 6400, French: 3400,
English: 1050

Individual issues and free subscriptions to «spectra» can be ordered from: GEWA, Alpenstrasse 58,
Postfach, 3052 Zollikofen, tel. +41 31 919 13 13,
fax +41 31 919 13 14, service@gewa.ch

Next issue: March 2014

www.spectra.bag.admin.ch

"Actively promote human and animal health and wellbeing."

Five questions for Hans Wyss. To further tighten the cooperation between the Federal Veterinary Office (FVO) and the Food Safety Division of the Federal Office of Public Health (FOPH), the Federal Council (Swiss government) decided in 2012 to merge the two. Subsequently the new Federal Food Safety and Veterinary Office (FSVO) was created. It will be operational from January 2014 onwards and will be the centre of competency for food safety, nutrition, animal health, animal welfare as well as species and animal protection in international trade.



and threats. In this context, cooperation with cantonal implementation agencies and our partners at international level is also of great importance.

Nutrition had previously been a responsibility of the Federal Office of Public Health. Now a new Office will be dealing with issues relating to balanced nutrition for the Swiss population. In the past the cooperation with FOPH has been very close. What will this cooperation look like in the future?

Nutrition, i.e. consumption of food, is an important component of everyday life. The goal of the FSVO is to continue implementing the Swiss Nutrition Strategy and to see that the needs of the target groups involved are taken into account so as to protect their health and prevent any diet-related illnesses. As a new partner in the "National Programme on Diet and Physical Activity", the FSVO will be responsible for "Promoting balanced diets". The FSVO will continue to work closely with the FOPH.

What synergies and advantages will the new Office generate?

It will eliminate various existing overlaps between the FVO and the FOPH in the field of food safety. The merging of responsibilities along the food chain will improve efficiency and quality. The new

Office will facilitate coordination of uniform implementation of the Food Act in the cantons and simplify regulation in the food safety field. The reorganisation also reflects the growing importance of food safety against the background of global trade. It will furthermore facilitate cooperation with the EU and other international organisations.

Among all the players involved, cooperation will be easier simply because the establishment of the FSVO means that cantonal implementation agencies, the food industry, consumer protection organisations, but also the media and the Swiss public will now have only one single interlocutor at the federal level.

The new Office's internet banner visualises the food chain – from the stable to the table. What message is the FSVO aiming to communicate to the public?

The image reflects the breadth of the FSVO's tasks: food safety, animal health and animal welfare. In addition, where foodstuffs of animal origin are involved, food safety starts with the animal – therefore high-quality animal husbandry is the cornerstone of animal health. Animal health is in turn a prerequisite for food that is safe for human consumption. But the banner was also designed to express enjoyment and wellbeing, which ultimately is the basis of both animal and human health.

A new federal office has been inaugurated at the beginning of 2014. You will be the director of this new office. What were the considerations and visions that lead to the decision to create a new Food Safety and Veterinary Office?

For many years, the way food safety has been organised at the federal level was an issue. The transfer of the Federal Veterinary Office from the Federal Department of Economic Affairs (DEA) to the Federal Department of Home Affairs (DHA) at the beginning of 2012 was a decisive step towards strengthening cooperation between the FVO and the FOPH in order to make better use of syn-

ergies in the field of food safety. In the wake of this decision, the DHA considered various options for the future organisation of food safety. It became evident that if only a single federal office within the DHA were responsible for the entire food chain process, overlaps could be eliminated, enforcement in the cantons effectively strengthened, and regulation at the federal level simplified. Therefore, at the DHA's request, the Federal Council decided in 2012 to merge the existing FVO and the FOPH's Food Safety Division. As a result the new Federal Food Safety and Veterinary Office (FSVO) has been created and will begin its work in January 2014.

What do you see as the new Office's main tasks?

The Office's main task is to actively promote human and animal health and wellbeing. The cornerstones are food safety for people as well as welfare and health for animals. We also have to ensure that we are equipped to address new tasks

Working together to improve employee health and physical activity

2013 annual conference. The 2013 annual conference of "actionsanté", which was held in Berne's Kursaal on 5 November, focused on cooperation between the authorities and the private sector to improve employee health and physical activity, and on the views of young people on health-related topics.

In her opening address at the annual conference of "actionsanté", Maya Graf, President of the National Council, organic farmer and qualified social worker, emphasised the importance of the role that politics and the economy play in promoting health and physical activity at the workplace. "It is a key task of politicians to respond to developments in society. Business people, for their part, have a moral obligation to pull in the same direction," she stated. According to Rahel Mösch, from the Youth Session Forum and the "Social Security and Health" specialist group, the Youth Session of the Swiss Parliament also recently addressed the impact of the performance-oriented society and of diet on health. The youth parliamentarians drew up a project proposal aiming to reduce stress and overloading at the workplace – for instance by improving workplace design. Mösch also advocated offering young people in schools, universities and companies healthy meals at prices they could afford to pay.

Involving the business sector

According to Samuil Simeonov, project manager at Germany's Bertelsmann Foundation, sector-specific initiatives are a particularly effective means of involving the private sector in efforts to solve social problems. For such initiatives to be successful, he says, five conditions have to be satisfied: the campaigns should be predicated on a joint basis of public and private sector involvement, and they should aim for a high level of public and private sector participation, demonstrate their reliability by laying down achievable and measurable objectives, promote transparency and be planned so as to ensure sustainability of resources. For Samuil Simeonov, such campaigns can generate ecological added value and/or direct benefits, for instance by increasing a company's competitiveness.

Awareness instead of a guilty conscience

Didier Gasser, head of Health & Safety at the Workplace and of Human Resources at Migros Vaud, described how a company can, in relation to physical activity and diet, assume responsibility towards its employees and invest in health at the workplace. One of the key factors supporting an in-house health and physical activity campaign was, according to Didier Gasser, the high proportion of over-

weight employees at Migros stores. The result is the campaign for "Bonne Santé en Entreprise" (Good health at the workplace), which operates at two levels: training executive staff with the aim of closing the knowledge gaps concerning better health and more physical activity, and communication using the Dr PEPS mascot as an aid and targeting the entire workforce. The campaign kicked off three years ago with a set of interactive instructions for encouraging greater physical activity at the workplace and with the targeted provision of information. As Didier Gasser reported, employees are now more physically active, ill less frequently and work more efficiently.

More incentives, less regulation

The morning's topics were taken up again in three in-depth sessions, each one moderated by a different member of actionsanté's Expert Group. For instance, the involvement of the private sector in efforts to solve social problems was on the agenda for one of the three in-depth sessions. Companies should first determine their workforce's needs before drawing up their campaigns. Moreover, suitable infrastructure is required in order to ensure that more physical activity at the workplace is actually possible. Lukas Zahner, from the University of Basel's Institute of Sport and Sport Sciences and a member of the

actionsanté Expert Group, stated with regret that "Unfortunately, Switzerland still lacks flagship projects and opportunities for positive comparisons that demonstrate how health campaigns at the workplace impact on employees and their health and productivity".

Joint basis for successful cooperation

During the panel discussion, representatives from business, research and administration swapped views on companies' social responsibilities. Matthias Schneider, head of communications at Coca-Cola Switzerland, emphasised that the drinks manufacturer wanted to help resolve the growing problem of overweight and had already launched a number of initiatives to this end. Roland Charrière, Deputy Director of the Federal Office of Public Health (FOPH) and head of its Consumer Protection Directorate, underscored the importance of dialogue with the private sector, suggesting that actionsanté could take on a significant role as multiplier in this context.

www.actionsante.ch

Contact: Sandra Habegger,
Nutrition and Physical Activity Section,
sandra.habegger@bag.admin.ch