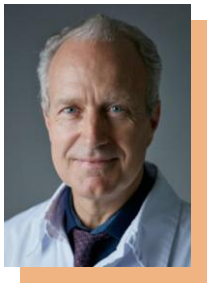
Country report Switzerland – October 2016

Report by:

Dr David Carballo
MD, MPH, Cardiologist, Geneva, Switzerland



Professor François Mach
MD, Cardiologist, National CVD Prevention Coordinator for Switzerland

Prepared for the EAPC "Country of the Month" initiative

For more information about the European Association of Preventive Cardiology (EAPC), visit our webpage

Baseline Information about Switzerland

Switzerland is a confederation of 26 cantons, with four national languages (German, French, Italian, and Romansh); health care legislation is governed at the federal and cantonal level. Access to healthcare is universal through compulsory private health insurance for all residents, regulated by the Swiss Federal Law on Health Insurance. As of the end of 2015, the Swiss permanent resident population was 8'325 million, accounting for a 1.1 population growth compared to 2014. In 2015 there were 702 (586 men and 116 women) cardiologists out of a total of 35325 physicians, accounting for 8.4 cardiologists per 100000 inhabitants.

I. Structure of Health care in Switzerland

Structure

Switzerland is a confederation of 26 cantons, with four national languages (German, French, Italian, and Romansh); health care legislation is governed at the federal and cantonal level. Access to healthcare is universal through compulsory private health insurance for all residents, regulated by the Swiss Federal Law on Health Insurance. Complementary insurance is available and enables access to treatment categories not covered by the basic insurance. As of the end of 2015, the Swiss permanent resident population was 8'325 million, which is 1.1 million more compared to 2014[i]. In 2015 there were 702 (586 men and 116 women) cardiologists[ii] out of a total of 35325 physicians, representing 8.4 cardiologists per 100'000 inhabitants.

Finances

Costs of medical treatment and hospitalisation are covered by the compulsory health insurance, contributions to which are tax deductible and are paid by the insured person. Total health expenditure in Switzerland in 2013 was estimated at 69.2 billion Swiss francs (CHF), representing 8'725 CHF per person, with a total expenditure accounting for 11.1 percent of gross domestic product (GDP)[iii]. In 2015, life expectancy at birth was 80.8 years for men and 84.9 years for women[iv]. In the Swiss system, patients incur a substantial out-of-pocket costs often corresponding to up to one third of health care spending[v].

II. Risk factor statistics

Cardiovascular Disease Mortality

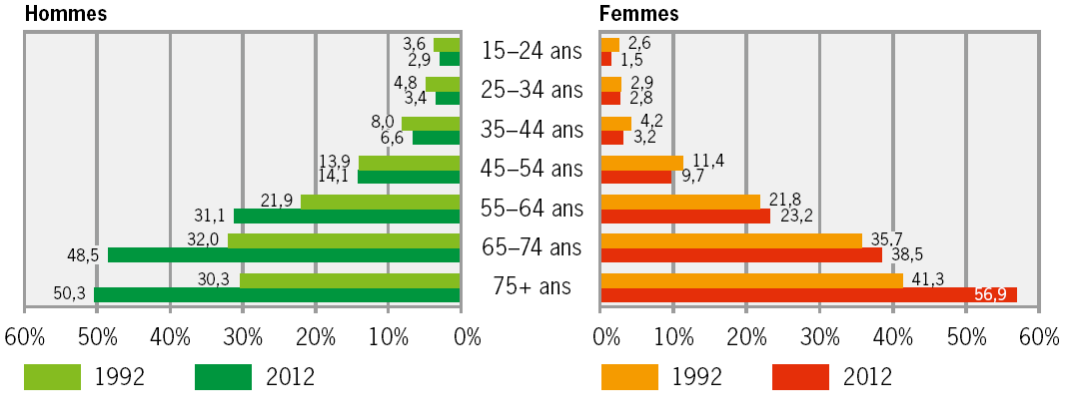
In 2013, in the 45 – 64 age group cardiovascular mortality represented 20.6% for men and 12.9% for women; in the 65 – 84 age group this rose to 29.2% for men and 28.1% for women; figures for the over 85 year-olds were 42% for men and 44.2% for women.

Main CVD risk factors 2013[vi]

	Men	Women
CVD related hospitalisations	61637	49788
CVD related mortality	9745	11929
Myocardial infarction	9080	4784
Stroke	7267	6935
Systemic Hypertension (2012)	18.5%	17.3%
High Cholesterol levels (2012)	12.1%	9.7%
Diabetes (2012)	5.5%	3.9%

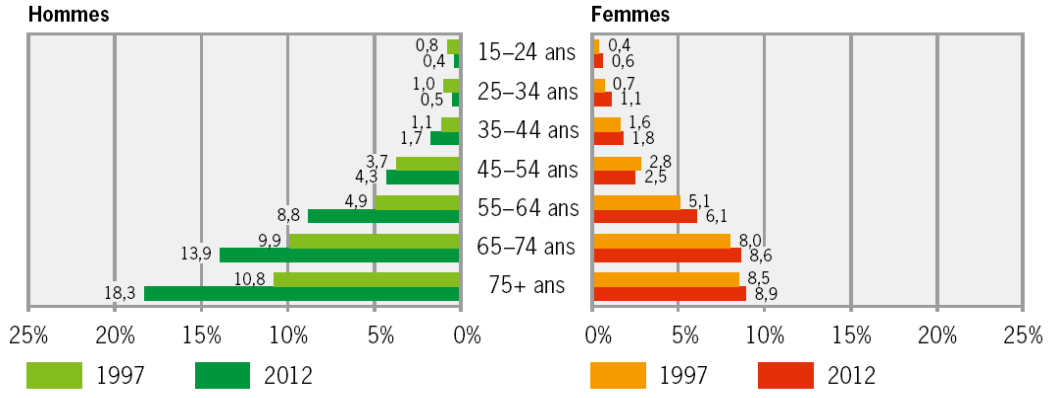
Source: Santé, Statistique de poche 2015, Office fédérale de la statistique 2015

Hypertension



Source: OFS – Enquête suisse sur la santé (ESS) © OFS, Neuchâtel 2015

Diabetes



Source: OFS – Enquête suisse sur la santé (ESS) © OFS, Neuchâtel 2015

Source: Santé, Statistique de poche 2015, Office fédérale de la statistique 2015
Legend: Hommes = men / Femmes = women / ans = years

Smoking

Current tobacco smoking among persons 15 years and over (population 7,030,000), for 2015: 21.6%

Reference:
WHO global report on trends in prevalence of tobacco smoking 2015, ISBN 978 92 4 156492 2

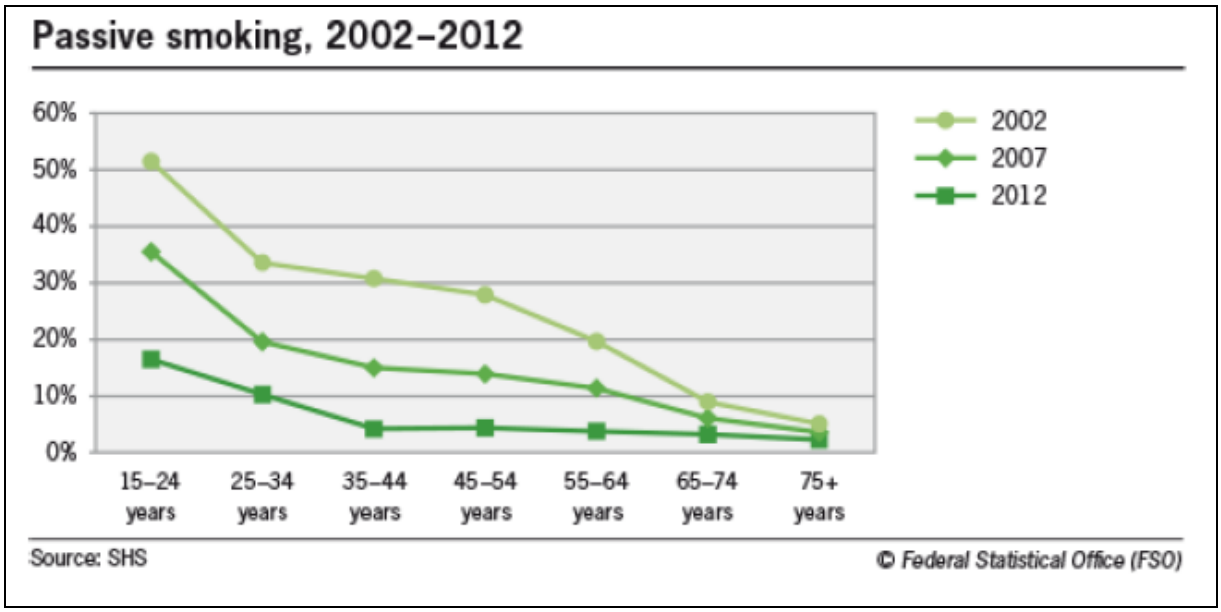
Tobacco consumption

2012, in % of population aged 15 years and over

	Smokers	Former smokers	Have never smoked
Total	**28.2**	**21.5**	**50.3**
By sex			
Men	32.4	24.6	43.0
Women	24.2	18.6	57.3
By age group			
15-24 years	36.1	3.4	60.6
25-34 years	37.1	15.4	47.5
35-44 years	32.3	18.4	49.3
45-54 years	29.2	23.2	47.6
55-64 years	27.1	29.5	43.3
65-74 years	17.7	34.9	47.4
75+ years	8.4	30.7	60.9
By language area			
German-speaking Switzerland	27.4	21.3	51.2
French-speaking Switzerland	30.0	21.8	48.1
Italian-speaking Switzerland	30.2	23.1	46.7
By level of education (25+ years)			
Compulsory education	27.3	22.1	50.7
Upper secondary level	28.4	25.3	46.3
Tertiary level	24.4	23.7	52.0

Source: FSO, Swiss Health Survey (SHS)

Source: Swiss Statistics, Federal Statistical Offic, Neuchatel 2016
http://www.bfs.admin.ch/bfs/portal/en/index/themen/14/02/02/key/03.html



Source: Swiss Statistics, Federal Statistical Offic, Neuchatel 2016
http://www.bfs.admin.ch/bfs/portal/en/index/themen/14/02/02/key/03.html

PCI Resources

In 2010, Switzerland counted 29 active interventional cardiology centers, of which 6 were university centers, 10 public, non-university, and 13 private institutions. A total of 42'648 coronary angiographies and 19'925 percutaneous coronary angiographies were performed in Switzerland, of which 79% comprised drug-eluting stents. The number of procedures for structural heart disease increased in 2010, mainly due to an increase in transcatheter aortic valve implantations, TAVI (382 performed in 11 centers)[vii].

Number of PCI centers and population per center[viii]

Country	All PCI centres	Population per any PCI centre	Primary PCI centres (non-stop, 24/7)	Population per primary PCI centre (24/7)
Austria	34	282 751	24	341 000
Belgium	36	294 015	30	352 817
Bulgaria	21	363 820	9	850 000
Croatia	10	449 331	8	561 664
Czech Republic	22	464 943	22	464 943
Denmark	7	781 160	5	1 093 624
Estonia	3	438 637	2	657 956
France	210	297 376	200	312 245
Finland	24	220 853	2	2 650 242
Germany	430	190 000	310	265 000
Greece	40	267 657	10	1 071 000
Hungary	16	622 257	13	765 854
Italy	242	240 270	164	354 559
Israel	22	333 500	16	458 563
Latvia	5	454 179	1	2 270 894
Lithuania	6	595 906	3	1 191 813
F.Y.R.Macedonia	3	683 204	3	683 204
The Netherlands	22	745 700	22	745 700
Norway	8	587 500	6	783 963
Poland	95	405 455	74	520 516
Portugal	19	560 158	9	1 182 555
Romania	12	1 856 338	0	N.A.
Serbia	9	822 222	1	7 400 000
Slovakia	6	916 666	4	1 375 000
Slovenia	5	401 849	2	1 004 745
Spain	129	349 743	56	805 658
Sweden	29	311 417	13	694 699
Switzerland	27	281 240	20	379 675
Turkey	157	449 592	35	2 016 742
UK	98	620 165	23	2 642 445

Primary PCI centre (24/7) was defined as PCI hospital not using thrombolysis for the treatment of STEMI patients, in other words hospital performing primary PCI in all STEMI patients, 24 h/day and 7 days/week.

Source: European Heart Journal (2010), 31, 943–957, doi:10.1093/eurheartj/ehp492, http://eurheartj.oxfordjournals.org/content/ehj/31/8/943.full.pdf

III. Main actors and prevention strategies

Who delivers?

Primary cardiovascular (CV) prevention is mainly provided by general practioner physicians whereas secondary CV prevention is provided by cardiologists, and health care providers such as nurses and physiotherapists. Specialised CV risk factor educational programs and smoking cessation programs are available in most University hospital settings.

Where?

Phase I secondary cardiovascular prevention is primarily delivered in the acute phase hospital setting during the five days following an acute coronary syndrome. Phase II cardiovascular prevention takes place in dedicated cardiac rehabilitation centers. According to the Swiss association of cardiovascular prevention and rehabilitation, there are 57 recognised ambulatory institutions and 12 stationary ones.

Guidance

European guidelines on cardiovascular prevention are endorsed by the Swiss Society of Cardiology and the Swiss Working Group on Atherosclerosis (AGLA). The latter also publishes national guidelines.

IV. Main Prevention activities

1. **ELIPS program: multi-dimEnsionaL preventIon Program after Acute coronary Syndromes (ACS)**

Important health and cardiovascular prevention projects have been instigated by various healthcare actors. One of these projects is the ELIPS program, a multi-dim**E**nsiona**L** prevent**I**on **P**rogram after Acute coronary **S**yndromes, aiming at improving the quality of care for post-ACS patients, thereby reducing related mortality and morbidity. ELIPS is part of a collaborative research project (covering Inflammation and acute coronary syndromes (ACS) – Novel strategies for prevention and clinical management) supported by the Swiss National Science Foundation in 4 Swiss university hospitals (Bern, Geneva, Lausanne and Zürich).

Description of the ELIPS intervention

The ELIPS intervention includes actions at the patient, healthcare provider and healthcare system levels aimed at improving patient outcomes through better adherence to post-ACS cardiac rehabilitation (CR) programs.

ELIPS at the patient level

At the patient level, ELIPS consists of a CR educational program delivered to the patient at appropriate timelines and intervals, based on individually defined needs during the post-ACS hospitalisation period. With the support of health professionals trained in motivational interviewing, patients are encouraged to achieve/adopt a healthy lifestyle. Motivational interviewing is a non-judgmental, patient-centred counselling approach aimed at eliciting and strengthening the motivation to change. Patients participating in this program are asked to self-evaluate their cardiovascular risk factors with the aid of an interactive wall chart and invited to watch a 27-minute film portraying the real life trajectory of a patient suffering from ACS. Patients also receive personalised educational lifestyle brochures and are discharged from hospital with a standardised treatment discharge card detailing the reasons for their prescriptions, as well as a summary of their targets in secondary prevention. A dedicated website (www.elips.ch, in German only) enables both patients and healthcare providers to remain up-to-date with the therapeutic education process and training program.

ELIPS at the healthcare provider level

At the healthcare provider level, dedicated nurses are trained in motivational interviewing and cardiovascular health education by certified specialist nurses (Motivational Interviewing Network of Trainers). Interviews are centred on the patient in order to resolve any ambivalent motivation while at the same time reinforcing intrinsic motivation for change.

ELIPS at the system level

At the system level, a series of educational sessions to support the implementation of the ELIPS intervention are regularly organised. The aforementioned standardised treatment

discharge cards are aimed at relaying follow-up information to family physicians or designated cardiologists.

Education

Secondary prevention rotations and training are an option during specialised post-graduate training in cardiology for trainees in Switzerland. For trained cardiologists and internists, there are continuous/on-going medical educational courses available through the Swiss Association of Cardiovascular Prevention and Rehabilitation.

2. "Counter Weight"

"Counter weight" is a health program aimed at preventing and treating obesity, while at the same time trying to positively contribute toward reducing the direct consequences obesity has on overall health and morbidity. Since obesity is becoming a major public health concern, the program is directed towards all patients who are overweight or obese, but also serves towards training health care providers and encouraging research. The program promotes physical activity and healthy eating habits. It was developed by the University Hospitals of Geneva and provides specialised consultations and therapeutic programs of variable durations but generally aimed at following patients throughout their development.

V. Cardiac rehabilitation

For whom

In accordance with both national and European guidelines, and in both ambulatory and stationary settings secondary cardiovascular programs are available for all patients who have experienced acute coronary syndromes. Patients with documented stable coronary artery disease post-PCI, post-cardiovascular surgical patients, as well as high-risk patients are eligible for these programs. A further category of eligible patients includes those with clinical heart failure for whom specially tailored rehabilitation programs are run.

The percentage of the concerned patient group who actually enter CR programs is not known, but small scale non-published data suggest approximately 64% of eligible patients entered a cardiac rehabilitation program in the canton of Geneva between 2009 and 2012

By whom and how

Cardiac rehabilitation is carried out by trained healthcare providers (physicians, nurses, physiotherapists), usually within the framework of Cardiovascular Rehabilitation institutions. These are public institutions (university hospitals), or public-private partnerships. Referral is most frequently made by acute setting hospitals in the immediate aftermath of hospitalisations and usually begins within two weeks of acute coronary syndromes. In the case of other aforementioned indications, referral is made by qualified physicians at other appropriate times during patient care.

Audit and costs

The duration of cardiac rehabilitation programs in Switzerland usually last from six to twelve weeks, depending on the indication and institution. Stationary programs are usually four weeks long, whereas ambulatory programs are generally longer, between six and twelve weeks. Formal quality control of CR is the responsibility of the Swiss Association of Cardiovascular Prevention and Rehabilitation, which carry out accreditation of CR centers.

Stationary programs cost approximately 330 CHF per day whereas ambulatory programs cost between 2700 and 3400 CHF for the entire duration.[ix] CR costs for patients are covered by compulsory health insurance, with a deductible that is paid by the insured person.

VI. Others

Without any judgment or ranking, there are of course also many other clinical research projects, such as a National registry following patients with atrial fibrillation (AF) and possible minimal stroke damages (brain magnetic resonance imaging [MRI] once a year); several registries for interventional procedures (stent emplacement, transcatheter aortic valve implantation [TAVI], patent foramen ovale [PFO]…); investigations on biomarkers for rule-out or rule in for patients with suspected ACS; multinational registry collecting information on Takotsubo patients; a National registry on sudden cardiac death, and how out-hospital protocols can be improved to save lives.

VII. The Future

Needs

Cardiovascular prevention in Switzerland primarily revolves around secondary prevention programs and cardiac rehabilitation centers. There is a need for more emphasis on primary prevention programs and upstream public health interventions aimed at influencing societal level determinants of health and promoting individual motivation towards adopting healthy lifestyles.

Possibilities

Promoting the implementation of current guidelines remains the major goal in Switzerland. Quality control, training of cardiologists in the field of cardiovascular prevention and proper certification are opportunities for the future.

Obstacles

Financial costs of primary prevention programs need to become a priority at the political level with the aim of being included in the basic insurance coverage available in Switzerland.

Plans

The further development of primary and secondary prevention programs should remain a priority with further public health campaigns promoting healthy lifestyles, such as smoking cessation and sustained and regular physical activity, as currently recommended by national and European guidelines and World Health Organization policy papers.

References:

[i] Federal Statistics Office- Population census, ESPOP, STATPOP, Neuchatel 2016
[ii] Bulletin des médecins Suisses 2016;97(12–13):448–453
[iii] Statistical Data on Health and Accident Insurance, 2015 Edition, Federal Office of Public Health FOPH
[iv] Federal Statistics Office- Neuchatel 2016
[v] N Engl J Med 373 ; 23 : 2193
[vi] Santé, Statistique de poche 2015, Office fédérale de la statistique 2015
[vii] Cardiovascular Medicine 2012;15(2):48–52
[viii] European Heart Journal (2010), 31, 943–957, doi:10.1093/eurheartj/ehp492, http://eurheartj.oxfordjournals.org/content/ehj/31/8/943.full.pdf
[ix] Revue Médicale Suisse – www.revmed.ch – 5 mars 2014