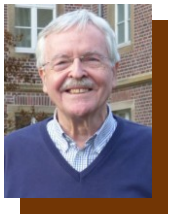
Country report Germany - December 2013

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Update on "**Prevention activities**" (Feb 2017)

I. Structure of Health Care in Germany

Germany has a compulsory health insurance system: every person residing in Germany has to be insured by an accredited health insurance company with full coverage of diagnosis and treatment of diseases, rehabilitation, maternity and also medical/surgical consequences of accidents.

There are **134 general legally accredited health insurance companies and 52 private health insurance companies (for persons with higher income)** competing for members by offering varying additional benefits; the insurance premium of 15.5% from the gross income up to an income of at present 3940€/month is deducted from the pay check (8.2 % is paid by the insured person and 7.3% contributed by the employer). The spouse (if without own income) and the children are also fully covered. About 90% of the population are covered by one of these legally accredited health insurance plans.

In the private health insurance company self-employed persons or persons with higher income (at present above 4465€/month) or state employees can become a member: a basic coverage (rehabilitation is optional) according to the legally accredited health insurance plan is required; for young and healthy single persons this is usually less expensive compared to a 15.5% deduction from the salary, but partners or children have to be insured additionally and individually; about 10% of the population are insured by this private health insurance scheme.

About 0.2% of the population has no health insurance.

The **general health care and consultation** is managed by physicians - general practitioners and specialists- in private practice. Both can refer patients to the appropriate hospital as deemed necessary. Management inside and outside the hospital is largely separated, which has been criticised to result in increased costs and less efficiency.

Hospital health care is –outside the university hospitals- largely provided by private and community (usually non-profit or subsidised) hospitals. The churches (protestant and catholic) are also functioning as organising institutions for their own hospitals.

Finances

Total health spending in Germany (without investments) accounted for 11.6% of GDP in 2010, more than 2 percentage points higher than the average of 9.5% in OECD countries. Only the United States (17.6%) and the Netherlands (12.0%) allocated more of their GDP to health than Germany.

Germany also ranks above the OECD average in terms of **total health spending per person and year**, at 4338 USD in 2010, compared with an OECD average of 3268 USD. Purchasing power parities (PPPs), expressed in US dollars provides a means of comparing spending between countries on a common base. Germany is - adjusted for PPPs - with 4495$ within a 50$ range to Austria, Denmark and Canada, after the US (8508$), Norway (5669$), Switzerland (5643$), the Netherlands (5099$), and Luxembourg (4755$). In Germany public resources cover 77% of these costs (OECD average: 73%).

The costs of cardiovascular diseases (CVD) amount to 15.1% of the total health related expenditure. CVD are the most important and costly diagnostic group. The ischemic heart disease mortality in 2009 was 110/100,000 inhabitants (OECD average: 117), the stroke mortality rate was 39/100,000 inhabitants (OECD Average: 53)

Life expectancy at birth in Germany is almost 81 years, one year higher than the OECD average of 80 years. Life expectancy for women is 83 years, compared with 78 years for men.

(References 1, 2, 3)

II. Risk factor statistics

Table 1: Lifestyle and overall Prevalence of Risk Factors for men and women in Germany

Source: (1) "Gesundheitsberichterstattung des Bundes" (German)

Lifestyle and Risk Factors	overall	male	female
Smoking Comments: higher % of smokers in groups with lower educational achievement and in the north-east region. There is a trend for decreasing smoking rates in the children & adolescent age groups.	30%	34%	26%
Overweight (BMI 25-<30) Comments: increasing with age and higher % in lower social classes	36%	44%	29%
Obesity (BMI >30) Comments: increasing with age and higher % in lower social classes	16%	16%	16%
Sports/physical activity (≥ 2hrs/week) Comments: higher % in higher social class; % decreasing with age	43%	46%	40%
Hypertension (>140/9o mmHg)			
age <44 yrs	11%	11%	11%
age 45-64	31%	33%	29%
age ≥65	55%	54%	57%
Type 2 Diabetes Comments: more diabetes in the eastern states	6.6%	6.7%	6.5%
Nutrition			
Fruits	340g/day		
Vegetables Comments: less than OECD average for fruits & vegetables; women, persons with higher income and non-smokers eat more fruits and vegetables	240g/day		
Salt intake/day		9g	6.5g
Childhood overweight or obesity		10.8%	8.5%
Alcohol consumption Comments: this is more than recommended in the ESC-Guidelines (20g/10g for m/f)	27g/day		
Risky alcohol consumption Comments: highest % in the 19-28yrs group (AUDIT C* > 5/4 points for males/females: m 45% vs. f 32%)		33%	22%

*Alcohol Use Disorders Identification Test (18)

Table 2: CVD Mortality

Source: (1) "Gesundheitsberichterstattung des Bundes" (German), modified by Helmut Gohlke

Total Mortality and CV-Mortality in Men and Women in Germany-Gender dependent highest and lowest Mortality in different States per 100 000 Inhabitants (2004)

	Men	Women
• Total	• 623 (542-741)	342 (299-414)
	(BW; Sachsen-Anhalt)	(BW; Saarland)
• CAD	149	81
• Cerebr.vasc. Dis.	52	44
• All CV Dis.	201	125
	201/623 = 32,3%	**125/342 = 36,5%**

BW= Baden-Württemberg

III. Main actors and prevention methods

General Physicians and Cardiologists

In 2011 there were 380 physicians per 100 000 inhabitants (OECD average: 320) working in the health care system, about half of these in private practice (2, 3). There are altogether 4.9 cardiologists per 100 000 inhabitants, of whom 1.5 are cardiologists working in private practice outside the hospital.

In the year 2008 almost 4.5 million persons (including non-physician, nurses, laboratory staff, allied health personnel and managing positions) were working in the health care system - about 10% of the overall workforce.

Nurse-based programmes

Ambulatory **nursing services** are provided for persons with disabilities or for the very elderly but not for basic preventive or medical services.

University-Hospitals and other Hospitals - Percutaneous coronary intervention (PCI) and CV-surgery resources

38 University hospitals with a department of cardiology and cardiovascular surgery and about 220 hospitals outside a university with a major department of cardiology and with additional 32 CV-surgery sites provide in hospital cardiovascular care.

The number of heart catheterisation laboratories in 2009 was 830 (approx. 10 per 1 million inhabitants), the number of PCIs in 2009 was 310,000 (3780/million).

The number of total procedures and procedure related mortality/morbidity data are collected on a voluntary basis. Mortality/morbidity data of individual hospitals are usually not published or available for patients or referring physicians. Prevention is rarely an important field of action.

Rehabilitation Hospitals

More than 160 rehabilitation hospitals offer residential CR; the German Society for Cardiovascular Prevention and Rehabilitation organises a yearly symposium and continuing education on prevention and rehabilitation.

Insurance companies

134 **general legally accredited health insurance companies and 52 private health insurance companies (for persons with higher income)** compete for members by offering varying benefits in addition to basic health coverage.

The **state and the ministry of health** have a limited interest in the health of the population (more than 110,000 tobacco related deaths/year have not been enough to work seriously on smoking bans or advertising restrictions). Rarely the minister of health has medical knowledge or is even a physician. Other interests seem to have greater importance and there are always more urgent problems than prevention.

Guidelines

The ESC-Guidelines (20) are generally endorsed by the German Cardiac Society; the pocket guidelines are translated with an editorial comment concerning recent changes and the specific situation in Germany.

IV. Prevention activities (updated February 2017)

By Helmut Gohlke, February 2nd 2017, D-79282 Ballrechten-Dottingen, Germany:

Concerted action of more than 100 Professors of Medicine and the German Heart Foundation (Deutsche Herzstiftung e.V.) against Tobacco advertising in Germany

Activities for prevention of smoking by state institutions or representatives of the state have been traditionally very limited in Germany because of close connections of the tobacco industry with the government - be it lead by the socialdemocratic party (SPD) or the conservative christian-democratic union (CDU/CSU). It is however unequivocally recognized – even in a recent letter by the minister of health to the members of parliament -that in Germany in the year 2013 more than 120.00 persons died from tobacco induced diseases1,5 ! However 14 billion € in taxes from tobacco sales apparently represent a significant force in favor of largely unrestricted tobacco sales.

On the other hand the direct costs of smoking mostly from treatment of tobacco induced diseases amount to 25 billion and the indirect costs from loss of work hours by absence from work,decreased payments into the social system (i.e. health insurance and retirement funds) or premature death add up to 53 billion2,3. Thus a total of 78 billion € of socioeconomic costs for the society confront the 14 billion of taxes for the state budget.

Although the German parliament has ratified the WHO Framework Convention on Tobacco Control (FCTC) already in March 2005,the contents of this convention have largely not been applied - in particular Article 13,dealing with Tobacco advertising, promotion and sponsorship.

Because of this discrepancy between the formal law and the practical application and the tremendous associated health consequences of smoking the "Aktionsbündnis Nicht-Rauchen" (Task Force Non-Smoking) organized an action in which more than 100 professors of medicine from different specialties (cardiology, pulmonology, oncology,gynecology, perinatal medicine, pediatric/adolescent medicine, occupational medicine and others) urged in an individually addressed letter in Octobre 2016 the members of parliament to put an end to the embarrassing situation that Germany is the only country in the EU where bill-board advertising for cigarettes is still allowed and widely practiced (despite ratification of the FCTC more than 10 years ago). This was a unique unprecedented action which was also referred to in the News Magazin "Der Spiegel".

In January 2017 the German Heart Foundation published an article in its Journal HERZ HEUTE (print run 150.000) explaining the long story of the inadequate application of the ratified FCTC with respect to advertising and the ensuing health risks particularly for youngsters4. The article was sent to all members of parliament with the request to end this situation by passing the adequate law to ban advertising for tobacco products in public places.

Of course it is still too early to know whether this will have an effect or whether these actions are only a "drop in the bucket". At least this initiative could raise the problem awareness for the members of the parliament many of whom were not members of the parliament more than two legislative periods ago when the FCTC was ratified. The future will tell.

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Primary Prevention in Germany

In 2008 the Health Consumer Power House in Stockholm compared among others the quality and intensity of preventive activities in the European countries. Germany received a very low rating comparable to the preventive efforts of countries with a much lower gross domestic product (GDP) like Bulgaria or Romania (4).

There is **no detectable governmental strategy** for cardiovascular prevention.
E.g. a law regulating prevention has been delayed between the political parties for many years for unclear but largely tactical reasons.

The Framework Convention on Tobacco Control (FCTC) e.g. of the WHO has been passed and ratified by parliament but the contents and requirements of the FCTC have not been implemented: unlike in other European countries advertising for cigarettes on billboards particularly addressing youngsters is still practiced.

Although the ban of tobacco advertising in public is a proclaimed goal of health policy by the ministry of health the minister vetoed against it when it came to the vote. And this with the undisputed knowledge of more than 110,000 tobacco related deaths per year in Germany (5). Very recently however (October 2013) the Marlboro "May be"-Campaign has been forbidden by a Bavarian court of justice because the campaign addresses particularly youngsters –thus violating existing laws. It is a hopeful sign that the courts pitch in for inadequate political concepts of prevention.
Even the tax revenues from illegal sales of cigarettes to youngsters (about 190 million €/year) are higher than the total amount of money spent for prevention by the federal government (6).

Counselling patients for improvement of risk factors (e.g. addictive smoking, inactivity, overweight) in the physician's office will not be paid for by the insurance companies because the law (§34 SGB V) regulates that lifestyle is everybody's personal responsibility and not a target of intervention by a physician or allied health professional! Thus the physician –motivated for prevention - has to donate his/her own time for preventive efforts without remuneration.

Many insurance companies offer for motivated patients or by referral through a physician programs for nutrition, weight loss or smoking cessation for which the patient usually has to pay a certain amount, part of which may be refunded if the patient attends the full course.

The lack of concern for preventive activities of the state could be explained by financial considerations: The tax revenues e.g. from cigarette consumption go immediately into the state budget, whereas the direct medical costs of inadequate prevention will be carried by the insurance companies and the indirect costs (loss of productivity) will be carried by the industry. Thus the state doesn't really care about myocardial infarctions and strokes in the population.

This is a major difference compared to a health care system that is run by the state. In addition there are traditionally strong connections between the tobacco industry and the politicians of all political parties which have been published in major medical journals like the Lancet (7).

At age 35 and every 2 years thereafter a check up with clinical exam and measurement of blood pressure, total cholesterol, glucose and urine status is recommended and paid by the insurance company.
Beyond that there is little interest in prevention on the side of the health insurance companies. Preventive efforts that don't pay out in the year of the investment are not considered cost-effective (8). Short term budgetary concerns appear more important than medium term planning.

Several non-governmental organisations (**NGOs)** however support preventive activities.
The **German Cardiac Society** (16) supports a "Task force Prevention" which tries to promote the implementation of cardiac prevention in daily life. The German Cardiac Society supports the ESC-Guidelines (20) and supported the translation of the pocket guidelines into German together with an editorial comment.

Preventive activities are also supported by the **German Heart Foundation** (GHF) (17), which represents the interests of 80,000 members, usually patients with heart or vascular disease. The GHF publishes short brochures for lay people summarising the preventive recommendations regarding nutrition, cholesterol, exercise and general life style but also optimal pharmacological secondary prevention.
The members of the GHF can also ask questions (by e-mail or letter) concerning their individual risk factors or general cardiac management; the questions are answered by cardiac specialists.

Each year in November the heart foundation launches a national educational campaign with one specific topic: The topics are concerning risk factors, prevention, and early

recognition of myocardial infarction, recognition of symptoms of heart failure, of valvular heart diseases or of rhythm disturbances in particular atrial fibrillation with its associated risks. More than 1200 seminars are offered without costs for interested lay people (mostly attended by patients or their relatives) throughout the country by local hospitals, rehabilitation clinics and local physicians - usually cardiologists. The seminars encompass usually four lectures over a period of 3 hours with time for questions and discussions. Between 100 and 700 persons attend one local seminar. This year's topic is: "The weak heart", dealing with prevention and management of heart failure.
Last year's topic was: "The heart in danger" - how to recognise and treat coronary heart disease, the year before it was "Heart under pressure" (i.e. Hypertension).
The campaigns which are also supported by the national and local news media are reaching some 40 million people.

The GHF **promotes physical activity** in schools for 8-10 year old children by running the project "Skipping Hearts", where workshops to teach rope skipping are organised by GHF's instructors and local competitions are organised. Students train for 2 hours and present training results to other classes, teachers and parents at the end of the workshop.
"Skipping Hearts" is run in 6 Federal States (about 60 instructors). So far "Skipping Hearts" has reached more than 3200 schools (exceeding 150,000 students).
The project is being evaluated scientifically in co-operation with GHF and could be implemented in the long run nationwide.

The GHF runs projects to **promote the Mediterranean diet**, e.g. by training canteen staff in hospitals and companies or advising restaurants how to incorporate more healthy meals in their menus.

Since 2002 the GHF supports the European non-smoking project "Be smart - don't start". This contest addresses 11 to 15 year old students who sign on not to smoke for 6 months.
Another anti-smoking approach is "Rauchzeichen" (smoke signals), a program developed by the GHF and run by physicians to address youngsters mentally as well as emotionally. The 12 to 13 year old students learn about smoking risks, cardiovascular disorders and how to resuscitate successfully. They are actively involved in these lectures by monitoring the heart using stethoscopes or interviewing a patient who has a smoking-related poor health condition.

The "**Task Force Non Smoking**" (Aktionsbündnis Nichtrauchen e.V.) (9) represents eleven German medical societies (cardiac, pulmonary, cancer, addiction, general prevention, physicians associations), dealing with the consequences of smoking; the Task Force tries to improve non-smokers rights by lobbying for a better legislation.

Prevention in the **medical curriculum** of students: in 2004 an interdisciplinary cross sectional topic of prevention and health promotion has been introduced as an obligatory part of teaching and the final examination: the large majority of currently practicing physicians has no formal training in prevention.

V. Cardiac Rehabilitation in Germany

In **1967** a first well-equipped, specialised institution for residential cardiac rehabilitation (CR) of patients with chronic cardiovascular disease, was opened and run by a retirement fund.

In **1974 phase II CR** after MI and other indications was guaranteed by law (14).
Traditionally a three week course of CR takes place in a residential setting with emphasis on exercise training, dietary instruction and counseling as well as educational sessions on risk factors and secondary prevention. In recent years however ambulatory CR is a well-established alternative method if the quality criteria of the residential setting are met. Currently there are 165 institutions that offer CR treatment for cardiovascular diseases with a total capacity for approximately 12,000 cardiac patients at any given time: i.e. for 208,000 Pts/year with a 3 week CR course (190,000 for inpatient and 18,000 for outpatient CR).
The current indications and requirements for phase II CR are listed in the table.

Table 3: Indications for phase II cardiac rehabilitation in Germany
Source: (14) European Journal of Preventive Cardiology, February 2007 vol. 14 no. 1 18-27, modified by Helmut Gohlke

Indications for phase II cardiac rehabilitation (CR) in Germany *

Indication	Requirements
Condition after **acute myocardial infarction** Coronary heart disease **without** AMI	no additional requirements Only after complicated, mostly unstable course of the disease – and after the acute situation is under control (interventional therapy is not by itself a phase II CR indication)
Condition after: **aortocoronary bypass operation** **valvular heart surgery** **surgical correction of congenital HD** **cardiac transplantation** **other heart surgeries** (such as aneurysmectomy, ICD implantation)	After conclusion of the postoperative treatment phase
Cardiomyopathies	Only **after complicated, mostly unstable** course of the disease, after management of the acute situation, **and** in cases in which medium-term course of the disease is expected to be stable

If alcoholism dominates an alcoholic cardiomyopathy, a priority application for withdrawal treatment has to be filed to the responsible retirement insurance provider –the retirement fond.

*Guidelines for hospitals for Phase 2 CR [in German]. Available at: http://www.deutsche-rentenversicherung-bund.de

It may sound unusual that in Germany the retirement funds finance cardiac rehabilitation; one part of the explanation is the following:

Early cardiac rehabilitation facilitates and fastens the return to work, prevents early retirement, and is cost effective from the perspective of the retirement fund!
The criteria for structural and process quality and the quality of the results of CR are controlled by the retirement fund.

The legal retirement age in Germany has been 65 years for the last 130 years; because of the aging population and increased life expectancy the retirement age is now slowly extended to 66 years by the year 2024 and to 67 years by the year 2031.
If the patient is already retired, cardiac rehabilitation will be paid for by the health insurance.

The task of cardiac rehabilitation is also to prevent or delay dependency and stay in a nursing home: in 2001 self-determined and independent participation in social life has been recognised as a goal of cardiac rehabilitation by law.
More than 50% of eligible patients participate in phase II and between 25% and 40% participate in a phase III cardiac rehabilitation programme (14, 15). With the early recanalisation of acute MI and a lesser feeling of sickness the need for CR after MI is perceived by patients to be less urgent and the participation rate is declining. The fear of prolonged absence from work is probably a contributing factor.

Phase III CR programs consist of regular exercise sessions –once or twice per week- directed by a physiotherapist and supervised by a physician with onsite availability of a defibrillator. Bicycle ergometer sessions, gymnastics and ball games are on the agenda. There are also occasional sessions with emphasis on risk factors, nutrition and medication. The exercise sessions are however predominant and favoured by the patients. Sessions are supported by the retirement fund or insurance company (if a physician is present) for a year or two after MI or CABG which can be prolonged upon application. The patient has to pay a contribution to the session. There is a predominance of male participants; women are underrepresented (even in relation to the lower number of eligible patients) in these sessions possibly because the ball games may become somewhat competitive, which is not so much liked by the (usually 10-15 year older) women. Attempts have been made to arrange Phase III programs for women in some larger cities, where an adequate number of participants can be reached.

VI. The future

Future tasks and activities

Smoking: Restriction of advertising - as outlined in the FCTC – has been agreed upon by the German parliament but the implementation is deficient. Additional activities are necessary to achieve full implementation.
Also the implementation of the new EU- Tobacco Products Directive has to be observed and supported or demanded accordingly.

A Lawsuit against the federal state before the Supreme Court is planned to assure that evidence based treatment for nicotine addicts as for other addicts is available. The current law –excluding nicotine addicts from such treatment - is not supported by the constitution, which requires equal treatment for all persons. Chances are good to win this lawsuit. Then the appropriate treatment would become law immediately without the need to go through the legislation process. The tobacco industry resents that smokers are labeled as addicts and will try to obstruct the course of the lawsuit in every way.

Smoking bans in other federal states need to be adjusted according to the highest standards recently achieved in North-Rhine-Westphalia. Politicians –many of them are smokers themselves - are somewhat reluctant to implement stricter and simpler smoking bans; they are also afraid of losing votes –although 70% of the population are non-smokers.

Nutrition: Fruit and vegetable consumption should be increased; trans fatty acids (TFAs) should be labeled as such and consumption reduced. In Austria and Denmark e.g. TFAs are banned from industrial products, which should also be implemented in Germany. Resistance from the food industry in the trans fatty acid issue will be high.

Salt consumption should be decreased to 3,5-6,0g/day which would decrease blood pressure and its consequences such as stroke and MI. This requires cooperation with the food industry and is a long term project. Slow reduction of the salt content e.g. of the bread is probably necessary for acceptance.

There is already a **"check-up 35" offered** by the insurance companies to identify risk factors. This should be complemented by a **"risk stratification"** to asses global risk and allow appropriate consultation and treatment.

Consultation and **advice for life style changes** should be paid for by the health insurance.

Obesity and **decreased physical activity in children** are progressing problems of the society.
Both factors overweight and inactivity are associated and should be approached by political, societal, educational and medical means.

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