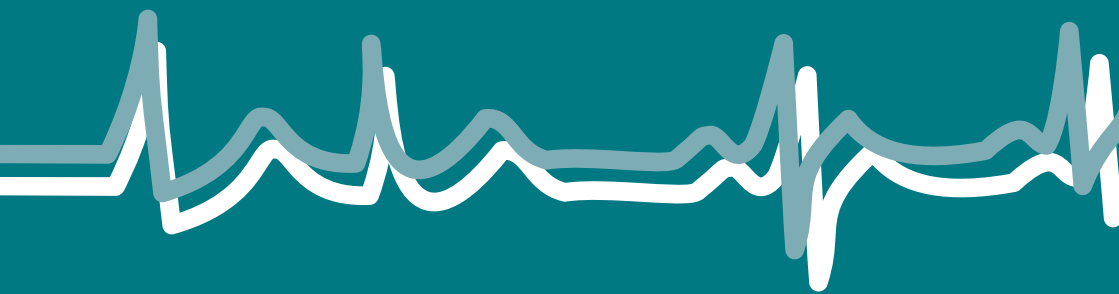


SLOVAKIA



1. Statistics

Age pyramid for Slovakia



* 1990 or last available

Healthcare data

Hospitals (per 100.000 population)	2,6	2011
Beds (per 100.000 population)	597,5	2011
Density of physicians (per 1.000 population)	3,0	2007
Density of nurses (per 1.000 population)	6,2	2011

Demographic information

Population	5.488.339	2013
Population annual growth rate (%)	0,1	2013
Life expectancy at birth	76	2013
Death rate (per 1.000 population)	9,8	2010
Live births (per 1.000 population)	11,1	2011

Economic information

Gross domestic product (U.S dollar-billions)	96,96	2013*
Gross domestic product per capita (U.S dollar-units)	17.929,23	2013*
Total expenditure on health as % of GDP	8,7	2011
General government expenditure on health as % of total expenditure on health	64,5	2010
Private expenditure on health as % of total expenditure on health	35,5	2010

* IMF estimative

2. Country

Proportion of deaths resulting from cardiovascular disease		
	2012	2013
	53%	47%

3. Healthcare System

National health system with universal health insurance coverage, major hospitals (incl. university hospitals) owned and operated by government, regional hospitals mostly non-profit organizations or privately owned. General practitioners and most specialists work in private offices (on the basis of agreements with insurance companies, no (or very little) cash contribution from the patients for medical services. There is no patient financial contribution for arrhythmia devices or interventions. However, significant co-payments for most cardiovascular drugs.

Basic insurance availability Yes

Requirements: citizenship or permanent residence, no further requirements, health insurance coverage is mandatory, for the unemployed population the coverage is guaranteed by the constitution and paid by the government.

Percentage of insured and uninsured citizens		
	2012	2013
Insured citizens	100%	100%
Uninsured citizens	0%	0%

Distribution of insurance modality		
	2012	2013
Public insurance company	72%	72%
Private insurance company	28%	28%
Private co-payment	0%	0%

Possibility to subscribing to private health insurance plans Yes

Co-payment necessary for the following therapy	
ICD devices	No
Pacemakers	No
Ablation	No

	Physician receives per process reimbursement	Physician does not receive reimbursement, but incentives (eg. more salary on the following year)	Physician does not receive reimbursement neither incentive	No answer	Hospital receives per process reimbursement	Hospital does not receive reimbursement, but incentives (eg. more budget on the following year)	Hospital does not receive reimbursement neither incentive	No answer
Internal loop recorders	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ICD primary prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ICD secondary prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CRT devices	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ablation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Treatment availability	
No restrictions	<input type="checkbox"/>
No restrictions, but the indications have to follow the ESC guidelines	<input type="checkbox"/>
No restrictions, but the indications have to follow the National guidelines	<input type="checkbox"/>
Restricted to certain number of treatments/budget	<input checked="" type="checkbox"/>
Not funded	<input type="checkbox"/>
No answer	<input type="checkbox"/>

4. Education

National certification availability					Official name
	Yes, it's required for practice	Yes, but it's not required for practice	No	No answer	
Device therapy	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Certified activity for implanting cardiac impulse generators (Ministry of Health)
Invasive electrophysiology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Allied professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Training centres	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



National Cardiac Society supporting EHRA certification system	
Yes, the Society demands EHRA certification for practice	<input type="checkbox"/>
Yes, the Society advises EHRA certification and homologates national certification	<input type="checkbox"/>
Yes, the Society advises EHRA certification, but it does not homologate national certification	<input checked="" type="checkbox"/>
No	<input type="checkbox"/>
No answer	<input type="checkbox"/>

Specialist required for		
	Specialist	
Catheter ablation	Yes	Cardiologist
ICD or pacemaker implants	Yes	Cardiologist, surgeon

Official national competency guidelines for electrophysiological studies or catheter ablation **No**

Required period of training to perform implantations **No**

Suggested period of training to perform implantations **No**

Training centres availability	
Pacemaker	3
ICD implantation	3
CRT implantation	3
Electrophysiological studies and catheter ablation	3
Atrial fibrillation ablation	1

Number of universities (Schools of Medicine) **4**

Percentage of academic centres among all practicing EP centres **66%**

Percentage of academic centres among all practicing implanting devices centres **50%**

5. Pacemakers

Pacemaker units implanted and number of implanting centres		
	2012	2013
Implanting centres	13	14
Total Pacemaker units implanted	3,111	3,456
Thereof, New implants	2,579	2,837
Thereof, Replacements	532	619

Specialist performing implants		
Cardiologists	Yes	65%
Surgeons	Yes	35%

6. Cardiac resynchronization therapy devices

CRT units implanted and number of implanting centres		
	2012	2013
Implanting centres	4	5
Total CRT units implanted	332	452
Thereof, CRT pacemaker	70	110
Thereof, CRT ICD	262	342

Specialist performing implants		
Cardiologists	Yes	100%
Surgeons	No	0%

7. Implantable Cardiac Defibrillator

ICD units implanted and number of implanting centres		
	2012	2013
Implanting centres	4	4
Total ICD units implanted	577	591
Thereof, Single chamber	455	434
Thereof, Dual chamber	122	157
First implants	500	470
Replacements	77	121

Specialist performing implants		
Cardiologists	Yes	100%
Surgeons	No	0%

8. Loop recorders

Loop recorders implanted and number of implanting centres		
	2012	2013
Implanting centres	6	5
Total loop recorders implanted	89	101

Specialist performing implants		
Cardiologists	Yes	100%
Surgeons	No	0%

9. Lead extractions

Lead extractions procedures and number of centers that performed lead extractions		
	2012	2013
Hospitals performed lead extractions	3	3
Total lead extraction procedures	136	108

Specialist performing lead extractions		
Cardiologists	Yes	98%
Surgeons	Yes	2%

10. Device specific

Availability of remote monitoring of devices		Yes

National registry for		
	Official name	
ICD	Yes	SLOVIMPULZ
Pacing	Yes	SLOVIMPULZ
Electrophysiology	Yes	SLOVABLO

Availability of a national quality insurance system or complication registry		No

Availability of a national institution coordinating and guiding device recalls and complications related to lead extractions		No

11. Interventional electrophysiology

Number of ablations performed and number of centres		
	2012	2013
Number of ablation centres	3	4
Number of ablations performed	922	1,071
Mean number of ablations per centre	307	268
Number of AF ablations	101	150
Number of ablation centres (> 50 AF ablations)	1	2
Number of ablation centres (> 10 VT ablations on structural heart diseases)	1	2

Availability of a national registry for interventional electrophysiology**Yes**

Official name: SLOVABLO

12. Guidelines**Guidelines adhered to ICD implants and pacemaker implants**

National	Yes
U.S.	Yes
European	Yes

Obstacles to guideline implementation**Ranking of importance***

	1	2	3	4	5	6	
Lack of centres	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4
Lack of reimbursement, limited financial resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3
Lack of referral	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6
Lack of trained personnel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
Low awareness of guidelines	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
Lack of operators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

1 = no obstacle

6 = great obstacle

* (1 = top; 6 = lowest)

13. Sources**Name of National Cardiac Society, National Working Group or arrhythmia body**

· Slovak Heart Rhythm Association (Slovenska asociacia srdcovych arytmií)

All sources that were used to fill out the questionnaire for the EHRA White Book 2014

- EHRA White Book 2013
- National Health Information Center
- National Registry SLOVIMPULZ
- National electronic registries SLOVIMPULZ and SLOVABLO operated by the Slovak Heart Rhythm Association
- Sales data