



THE APHRS **WHITE BOOK** **2026**

Board Members

<i>President</i> -----	<i>Wei Hua, China</i>
<i>1st Vice President</i> -----	<i>Kyoko Soejima, Japan</i>
<i>2nd Vice President</i> -----	<i>Hung-Fat Tse, Hong Kong</i>
<i>1st Secretary General</i> -----	<i>Yung-Kuo Lin, Taiwan</i>
<i>2nd Secretary General</i> -----	<i>Chi Keong Ching, Singapore</i>
<i>Treasurer</i> -----	<i>Martin Stiles, New Zealand</i>
<i>Vice Treasurer</i> -----	<i>Anil Saxena, India</i>
<i>Scientific Program Chair</i> -----	<i>Jong-il Choi, Korea</i>
<i>Vice Scientific Program Chair</i> -----	<i>Yoga Yuniadi, Indonesia</i>
<i>Nomination Chair / Past President</i> -----	<i>Shih-Ann Chen, Taiwan</i>
<i>Chief Editor of the Official Journal / Past President</i> -----	<i>Young-Hoon Kim, Korea</i>
<i>Past President</i> -----	<i>Hui-Nam Pak, Korea</i>
<i>Past President</i> -----	<i>Wee Siong Teo, Singapore</i>
<i>Past President</i> -----	<i>Shu Zhang, China</i>
<i>Past President</i> -----	<i>Jonathan Kalman, Australia</i>
<i>Past President</i> -----	<i>Chu-Pak Lau, Hong Kong</i>
<i>Past President</i> -----	<i>Tachapong Ngarmukos, Thailand</i>
<i>Past President</i> -----	<i>Wataru Shimizu, Japan</i>

With our sincere appreciation to:

Deputy Editor, Dr Yung-Kuo Lin

Table of Contents

<u>Country / Region</u>	<u>Page</u>
<i>Australia</i> -----	3
<i>Bangladesh</i> -----	7
<i>Brunei Darussalam</i> -----	11
<i>Cambodia</i> -----	15
<i>China</i> -----	19
<i>Fiji</i> -----	23
<i>Hong Kong</i> -----	27
<i>India</i> -----	31
<i>Indonesia</i> -----	35
<i>Japan</i> -----	39
<i>Malaysia</i> -----	43
<i>Mongolia</i> -----	47
<i>Myanmar</i> -----	51
<i>New Zealand</i> -----	55
<i>Pakistan</i> -----	59
<i>Philippines</i> -----	64
<i>Singapore</i> -----	68
<i>South Korea</i> -----	72
<i>Sri Lanka</i> -----	76
<i>Taiwan</i> -----	80
<i>Thailand</i> -----	84
<i>Vietnam</i> -----	88

Country/Region: Australia

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	26,304	26,955	27,476	27,801
Hospitals	695		1333	1334
Beds	2.5 (65,760)		2.5 (65,100)	103300 (incl pub and private)
Physicians	111,908	116,610	142,569	
EP Fellows in Training				37
Pediatric EP Physicians				2
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses	372,759		349,040	416,605
GDP (US\$, Billions)	1,724.9	1,741.9	1,752.2	1,827.9
Total Expenditure on Health as % GDP	9.23%		9.9%	10.3%
Government Expenditure on Health (US\$)	159.27		252.5	270.5
Insured Citizens (%)			57.2%	55.1% (45.4% hospital cover)
SCD Patients				
Heart Failure Patients	69,154		511,000	146,000
AF Patients	72,281		544,000	560,000

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	18,984		27,026	27,409
New Implants				
Replacements				
Single-Chamber			4,739	5,017
Dual-Chamber			22,287	22,392
Leadless				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Branch Pacing				

Sick Sinus Syndrome				
AV Block				
Implanting Centers		240		
Implanting Physicians				
National Registry				
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs				
CRT-P			1,666	1,690
CRT-P New Implants				
CRT-P Replacements / Upgrade				
CRT-D			2,874	2,875
CRT-D New Implants				
CRT-D Replacements / Upgrade				
Ischemic				
Non-ischemic				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing				
Implanting Centers				
Implanting Physicians				
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	3,793		4,118	
ICD New Implants				
ICD Replacements				
Single-Chamber			1,488	1,615
Dual-Chamber			2,630	2,635
Subcutaneous				

Primary Prevention				
Secondary Prevention				
Implanting Centers		240		
Implanting Physicians				
National Registry				

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	342	376	418	
Hospitals Performing Lead Extraction	16	18	18	18
Cardiologists Performing Lead Extraction			10	10
Surgeons Performing Lead Extraction			5	5
National Registry	Yes	Yes	Yes	Yes

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures				
SVT Ablation Procedures				
AVNRT				
AVRT / WPW				
AFL (RA Isthmus Dependent)				
AT				
VT/VPC				
Idiopathic				
Structural				
AF Ablation Procedures				
Ablation Centers				
AF Ablation Centers				
Structural VT Ablation Centers				
Ablation Physicians				
AF Ablation Physicians				
Structural VT Ablation Physicians				
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- Dr Sandeep Prabu – APHRS Country Representative

Country/Region: Bangladesh

1. Statistics

	2022	2023	2024	2025
Population (Thousand)		172,954	173,998	175,700,000
Hospitals		5,816	5,816	5816 to 6000 Aprox.
Beds		0.790202 / 1000	0.790201 / 1000	1.010101 / 1000
Physicians		5.26 / 10,000	5.26 / 10,000	7.6266 / 10,000
EP Fellows in Training				Two (02)
Pediatric EP Physicians				Nil
Female EP Physicians				One
Surgeons Performing Maze Procedures				Nil
Nurses		73,043	73,043	1,17,173
GDP (US\$, Billions)		460	450.1	457
Total Expenditure on Health as % GDP		2.36%	2.35%	2.60%
Government Expenditure on Health (US\$)		35	35	35
Insured Citizens (%)		2.5%	2.5%	2.5%
SCD Patients		Approx. 65,000	Approx. 65,000	Approx. 65,200
Heart Failure Patients		Approx. 2,700,000	Approx. 2,700,000	Approx. 2,700,500
AF Patients		Approx. 2,594,314	Approx 4.1%	Prevalence Approx 4.1%

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers		1,474	1,490	2545
New Implants		944	951	1021
Replacements		566	572	1524
Single-Chamber		416	423	222
Dual-Chamber		1,057	1,117	2323
Leadless		1	0	2
Conduction System Pacing		4	12	21
Left Bundle Branch Pacing		3	12	21
His Bundle Branch Pacing		1	1	0

Sick Sinus Syndrome		290	297	507
AV Block		1,184	1,113	1901
Implanting Centers		15	25	26
Implanting Physicians		48	60	62
National Registry		No	No	Nil
SSS		290	292	507
AVN		1,184	1,189	1901
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs		51	70	113
CRT-P		9	9	12
CRT-P New Implants		7	7	9
CRT-P Replacements / Upgrade		2	2	3
CRT-D		42	42	101
CRT-D New Implants		35	35	74
CRT-D Replacements / Upgrade		7	7	27
Ischemic		32	32	72
Non-ischemic		19	19	41
Conduction System Pacing		6	12	22
Left Bundle Branch Pacing		5	12	22
His Bundle Pacing		1	0	0
Implanting Centers		6	25	26
Implanting Physicians		7	60	53
National Registry		No	No	Nil

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs		59	60	128
ICD New Implants		47	47	90
ICD Replacements		12	13	38
Single-Chamber		39	39	68
Dual-Chamber		20	20	60
Subcutaneous		0	0	Nil

Primary Prevention		10	18	38.4
Secondary Prevention		49	60	90
Implanting Centers		8	25	26
Implanting Physicians		12	20	20
National Registry		No	No	No

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures		12	10	9
Hospitals Performing Lead Extraction		4	4	5
Cardiologists Performing Lead Extraction		5	5	6
Surgeons Performing Lead Extraction		No	1	2
National Registry		No	No	No

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures		655	705	747
SVT Ablation Procedures		607	652	690
AVNRT		338	395	498
AVRT/WPW		230	330	299
AFL (RA Isthmus Dependent)		4	6	5
AT		10	15	10
VT/VPC		38	40	35
Idiopathic		38	38	35
Structural		0	0	0
AF Ablation Procedures		0	0	0
Ablation Centers		5	6	3
AF Ablation Centers		3	3	3
Structural VT Ablation Centers		3	3	0
Ablation Physicians		11	11	11
AF Ablation Physicians		3	7	3
Structural VT Ablation Physicians		3	4	3
National Registry		No	No	No

7. Management

National Certification for Physicians	✓PM	✓CRT	✓ICD	✓Ablation
National Accreditation for Centers	✓PM	✓CRT	✓ICD	✓Ablation
Guidelines Followed	✓National	✓U.S.	✓Europe	✓AP

Payment (%)	PM	ICD	CRT	Ablation
Government	20	20	20	20
Insurance	N0	N0	N0	N0
Public Insurance	N0	N0	N0	N0
Private Insurance	N0	N0	N0	N0
Individual	90% to 100% to pay	90% to 100% to pay	90% to 100% to pay	90% to 100% to pay

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	✓	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	✓	☐
Lack of Referral	☐	☐	✓	☐	☐
Lack of Trained Personnel	☐	☐	☐	✓	☐
Low Awareness of Guidelines	☐	☐	✓	☐	☐
Lack of Operators	☐	☐	✓	☐	☐

8. Source

- a) Bangladesh National Survey Records Data
- b) World Health Organization (WHO) Survey Records Data.
- c) Medtronic Medical Pacemaker and Device Company Records Data
- d) St Jude (Abbott) Medical Pacemaker and Device Company Records Data=+


Dr. S Mokaddas Hossain

APHRS Country Representative, Bangladesh
Labaid Cardiac Hospital
Dhaka, Bangladesh

Country/Region: Brunei Darussalam

1. Statistics

	2022	2023	2024	2025
Population (Thousand)		450	455	459
Hospitals		6	6	6
Beds				
Physicians				
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses				
GDP (US\$, Billions)		15	15.8	15.3
Total Expenditure on Health as % GDP				
Government Expenditure on Health (US\$)				
Insured Citizens (%)				
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	77	89	103	109
New Implants	53	65	84	87
Replacements	24	24	19	22
Single-Chamber	12	16	5	5
Dual-Chamber	63	63	88	82
Leadless	2	10	10	22
Conduction System Pacing	8	19	22	35
Left Bundle Branch Pacing	8	19	22	35
His Bundle Branch Pacing				
Sick Sinus Syndrome	39	50	58	53
AV Block	28	34	43	45
Implanting Centers	2	2	2	2
Implanting Physicians	5	5	6	6

National Registry				
SSS	39	50	58	53
AVN	28	34	43	45
Bi Nodal	9	1	1	2
Others	1	4	1	9

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	8	22	21	27
CRT-P	1	4	6	5
CRT-P New Implants	1	3	1	2
CRT-P Replacements / Upgrade	0	1	5	3
CRT-D	7	18	15	22
CRT-D New Implants	4	8	4	12
CRT-D Replacements / Upgrade	3	10	11	10
Ischemic	1	10	8	15
Non-ischemic	7	12	13	12
Conduction System Pacing	1	3	8	7
Left Bundle Branch Pacing	1	3	6	6
His Bundle Pacing			2	1
Implanting Centers	2	2	2	2
Implanting Physicians	1	1	1	1
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	29	29	29	36
ICD New Implants	21	24	23	30
ICD Replacements	8	5	6	6
Single-Chamber	7	1	1	
Dual-Chamber	22	18	18	28
Subcutaneous		10	10	8
Primary Prevention	16	20	22	19
Secondary Prevention	13	9	7	17
Implanting Centers	2	2	2	2
Implanting Physicians				

National Registry				
-------------------	--	--	--	--

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	4	12	6	5
Hospitals Performing Lead Extraction	1	1	1	1
Cardiologists Performing Lead Extraction	1	1	1	1
Surgeons Performing Lead Extraction	0	0	0	0
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	84	99	128	138
SVT Ablation Procedures	37	49	46	53
AVNRT	19	12	15	14
AVRT / WPW	5	14	10	9
AFL (RA Isthmus Dependent)	10	17	16	23
AT	3	5	5	6
VT/VPC	19	15	28	39
Idiopathic	17	13	24	30
Structural	2	2	4	9
AF Ablation Procedures	288	35	54	58
Ablation Centers				
AF Ablation Centers	1	1	1	1
Structural VT Ablation Centers	1	1	1	1
Ablation Physicians				
AF Ablation Physicians	1	1	1	1
Structural VT Ablation Physicians	1	1	1	1
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- <https://deps.mofe.gov.bn/national-accounts/>
- Dr Sofian Johar – APHRS Country Representative

Country/Region: Cambodia

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	16767	17120	17638	
Hospitals	148	575	1548	160 (Exclude Health Centres and Health Post) 1510 (Include Health Centres and Health Post)
Beds	13500	24500	137576	21000 (Include Health Centres, Health Post and Private Hospitals)
Physicians	1.4	1.9	3.5	3.8 (Thousand)
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses	9.5	10.1	125.2	17.9 (Thousand)
GDP (US\$, Billions)	28.54	29.5	46	49.3
Total Expenditure on Health as % GDP	7.5	7.5	6	4.8%
Government Expenditure on Health (US\$)	490	490	490	0.6 (US\$, Billions)
Insured Citizens (%)				50%
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	113	215	220	182
New Implants		204	208	182
Replacements		11	12	-
Single-Chamber		110	105	81
Dual-Chamber		105	115	101
Leadless		2	3	2
Conduction System Pacing			7	7
Left Bundle Branch Pacing			7	

His Bundle Branch Pacing				
Sick Sinus Syndrome	-	120	115	
AV Block	-	95	105	
Implanting Centers	6	7	9	5
Implanting Physicians	9	12	15	16
National Registry				
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs				2
CRT-P				
CRT-P New Implants				
CRT-P Replacements / Upgrade				
CRT-D			1	2
CRT-D New Implants			1	2
CRT-D Replacements / Upgrade				
Ischemic			1	2
Non-ischemic				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing				
Implanting Centers			2	1
Implanting Physicians			7	2
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	1	2	3	5
ICD New Implants	1	2		5
ICD Replacements				
Single-Chamber	1	1	1	3
Dual-Chamber		1	2	2

Subcutaneous				
Primary Prevention				
Secondary Prevention	1	2	3	5
Implanting Centers	5	3	4	2
Implanting Physicians	7	10	15	10
National Registry				

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures				
Hospitals Performing Lead Extraction				
Cardiologists Performing Lead Extraction				
Surgeons Performing Lead Extraction				
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	75	101	132	112
SVT Ablation Procedures			75	64
AVNRT		30	37	
AVRT / WPW		23	25	
AFL (RA Isthmus Dependent)		4	10	
AT			3	
VT/VPC		35	52	48
Idiopathic		35	52	
Structural				
AF Ablation Procedures		9	5	
Ablation Centers	3	3	3	3
AF Ablation Centers		1	3	2
Structural VT Ablation Centers				
Ablation Physicians	5	5	8	8
AF Ablation Physicians		1	3	3
Structural VT Ablation Physicians				
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Sources

1. *Building health workforce fit for the future Safe and healthy lives and well-being for all Cambodians November 2025, Ministry of Health of Cambodia.*
2. *ROADMAP TOWARDS UNIVERSAL HEALTH COVERAGE IN CAMBODIA 2024-2035, National Social Protection Council April, 2024.*
3. Chhim, S., Kowal, P., Ngor, C., Long, S., Walton, P., Maung, K. T., Marie Ku, G., Klipstein-Grobusch, K., Ng, N., Ir, P., Chhea, C., & Sopheab, H. (2025). Patterns and factors associated with healthcare utilisation in Cambodia: a cross-sectional study based on the World Health Survey Plus 2023. *BMJ public health*, 3(1), e001416. <https://doi.org/10.1136/bmjph-2024-001416>.
4. Sorn V. Universal health coverage in Cambodia: current status and future prospects. *J Glob Health*. 2025; 15:03016.
5. *Report of devices implantation and EP procedure from Preah Kossamak Hospital_2025.*
6. *Report of devices implantation and EP procedure from Calmette Hospital_2025.*
7. *Report of devices implantation and EP procedure from Khmer Soviet Friendship Hospital_2025.*
8. *Report of devices implantation and EP procedure from Preah Ketmealea Hospital_2025.*
9. *Report of devices implantation and EP procedure from Jayavarman VII Hospital and Siem Reap Angkor (Kantha Bopha III) Hospital_2025.*
10. Dr Sakhan Solida – APHRS Country Representative

Country/Region: PR. China

1. Statistics

	2022	2023	2024	2025
Population (thousand)	1,411,750	1,409,680	1,408,280	1,404,890
Hospitals	36,976	38,355	39,000	39,000
Beds (per 100,000 population)	691	723	818	799
Physicians (per 1,000 population)	3.15	3.20	3.61	3.2
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses (per 1,000 population)	3.71	4.00	4.17	3.8
GDP (US\$, Billions)	180,600	183,600	189,400	196,300
Total expenditure on health as % GDP	7.0%	7.0%	7.9%	8.9%
Government expenditure on health as %	28.2%	27.4%	26.7%	
Insured citizens (%)	70%	95%	95%	95%
SCD patients	540,000	970,000	540,000	700,000
Heart failure patients	4.5million	4.5million	12.1million	14.3million
AF patients	8million	20million	20million	20million

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	98,619	122,942	147,748	160,866
New Implants				
Replacements				
Single-Chamber	27,455	31,389	25,390	27,817
Dual-Chamber	71,164	91,553	122,358	133,049
Leadless			6,031	7,170
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Branch Pacing				
Sick Sinus Syndrome	52,958	46,772	76,578	88,742
AV Block	41,913	50,950	63,386	70,246
Implanting Centers	2,488	2,962	3,265	3,645
Implanting Physicians				

National Registry				
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	5,398	6,480	7,182	9,516
CRT-P	1,967	1,516	2,556	1,906
CRT-P New Implants				
CRT-P Replacements / Upgrade				
CRT-D	3,431	4,964	4,626	7,610
CRT-D New Implants				
CRT-D Replacements / Upgrade				
Ischemic				
Non-ischemic				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing				
Implanting Centers				
Implanting Physicians				
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	6,762	8,672	11,345	12,923
ICD New Implants				
ICD Replacements				
Single-Chamber	3,477	4,394	6,060	6,751
Dual-Chamber	3,282	4,278	4,800	6,172
Subcutaneous			485	683
Primary Prevention	2,732	4,220	5,872	7,149
Secondary Prevention	4,030	4,452	5,473	5,774
Implanting Centers				
Implanting Physicians				

National Registry				
-------------------	--	--	--	--

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	1,925	2,325	2,251	2,508
Hospitals Performing Lead Extraction			631	685
Cardiologists Performing Lead Extraction				
Surgeons Performing Lead Extraction				
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	203,984	288,230	385,000	460,000
SVT Ablation Procedures	63,535	89,000	119,000	129,000
AVNRT				
AVRT / WPW				
AFL (RA Isthmus Dependent)				
AT				
VT/VPC			63,000	76,000
Idiopathic				
Structural				
AF Ablation Procedures	82,763	125,120	203,000	255,000
Ablation Centers	1,834	2,318	2,932	3,408
AF Ablation Centers				
Structural VT Ablation Centers				
Ablation Physicians				
AF Ablation Physicians				
Structural VT Ablation Physicians				
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- Dr He Huang – APHRS Country Representative

Country/Region: Fiji

1. Statistics

	2022	2023	2024	2025
Population (Thousand)				940
Hospitals				
Beds				
Physicians				
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses				
GDP (US\$, billions)				
Total Expenditure on Health as % GDP				
Government Expenditure on Health (US\$)				
Insured Citizens (%)				
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers				35
New Implants				25
Replacements				10
Single-Chamber				
Dual-Chamber				
Leadless				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Branch Pacing				
Sick Sinus Syndrome				
AV Block				
Implanting Centers				1
Implanting Physicians				2

National Registry				Y
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs				0
CRT-P				
CRT-P New Implants				
CRT-P Replacements / Upgrade				
CRT-D				
CRT-D New Implants				
CRT-D Replacements / Upgrade				
Ischemic				
Non-ischemic				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing				
Implanting Centers				
Implanting Physicians				
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs				3
ICD New Implants				1
ICD Replacements				2
Single-Chamber				
Dual-Chamber				
Subcutaneous				
Primary Prevention				
Secondary Prevention				
Implanting Centers				
Implanting Physicians				

National Registry				
-------------------	--	--	--	--

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures				0
Hospitals Performing Lead Extraction				
Cardiologists Performing Lead Extraction				
Surgeons Performing Lead Extraction				
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures				6
SVT Ablation Procedures				6
AVNRT				
AVRT / WPW				
AFL (RA Isthmus Dependent)				
AT				
VT/VPC				
Idiopathic				
Structural				
AF Ablation Procedures				
Ablation Centers				
AF Ablation Centers				
Structural VT Ablation Centers				
Ablation Physicians				
AF Ablation Physicians				
Structural VT Ablation Physicians				
National Registry				Y

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- Pacific Islands Pacemaker Services
- Dr Geoffrey Clare – Country Representative

Country/Region: Hong Kong

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	7,333.2	7,503.1	7,496.7	7524.1
Hospitals	56	56	56	56
Beds	32,254	32,518	35,930	35,995
Physicians	15,815	16,180	16,533	16 905
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses	50,650	52,327	54,759	57,463
GDP (US\$, billions)	358.6	380.7	408.4	427.3
Total Expenditure on Health as % GDP	7.3%	8.5%	10.0%	8.3%
Government Expenditure on Health (US\$)	25,486mil	31,003mil	36,218mil	32,029mil
Insured Citizens (%)				
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	2,080 (including 519 leadless pacemak ers)	2,248 (including 703 leadless pacemak ers)	2,448 (including 816 leadless pacemak ers)	2,386 (including 689 leadless pacemak ers)
New Implants				
Replacements				
Single-Chamber				
Dual-Chamber				
Leadless				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Branch Pacing				

Sick Sinus Syndrome				
AV Block				
Implanting Centers				
Implanting Physicians				
National Registry				
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	200	156	198	186
CRT-P	43	1	50	42
CRT-P New Implants				
CRT-P Replacements / Upgrade				
CRT-D	157	155	148	144
CRT-D New Implants				
CRT-D Replacements / Upgrade				
Ischemic				
Non-ischemic				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing				
Implanting Centers				
Implanting Physicians				
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	314	310	381	349
ICD New Implants				
ICD Replacements				
Single-Chamber				
Dual-Chamber				
Subcutaneous				

Primary Prevention				
Secondary Prevention				
Implanting Centers				
Implanting Physicians				
National Registry				

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures			30	22
Hospitals Performing Lead Extraction				
Cardiologists Performing Lead Extraction				
Surgeons Performing Lead Extraction				
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	873	1,028	1294	1258
SVT Ablation Procedures				
AVNRT				
AVRT / WPW				
AFL (RA Isthmus Dependent)				
AT				
VT/VPC				
Idiopathic				
Structural				
AF Ablation Procedures				
Ablation Centers				
AF Ablation Centers				
Structural VT Ablation Centers				
Ablation Physicians				
AF Ablation Physicians				
Structural VT Ablation Physicians				
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- Dr Johnny Ho-Chuen Yuen – Country Representative

Country/Region: India

1. Statistics

	2022	2023	2024	2025
Population (Thousand)				1400000
Hospitals				70000
Beds				8500000
Physicians (Cardiologist)				6000
EP Fellows in Training				40
Pediatric EP Physicians				5
Female EP Physicians				24
Surgeons Performing Maze Procedures				40
Nurses				3500000
GDP (US\$, trillion)				4.15
Total Expenditure on Health as % GDP				3.37
Government Expenditure on Health (US\$)				84.69
Insured Citizens (%)				35
SCD Patients				10%
Heart Failure Patients				100000
AF Patients				5000000

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers				93000
New Implants				70000
Replacements				23000
Single-Chamber				26000
Dual-Chamber				67000
Leadless				300
Conduction System Pacing				22000
Left Bundle Branch Pacing				21800
His Bundle Branch Pacing				200
Sick Sinus Syndrome				25000
AV Block				68000
Implanting Centers				900
Implanting Physicians				600

National Registry				Yes
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs				8000
CRT-P				3000
CRT-P New Implants				2700
CRT-P Replacements / Upgrade				300
CRT-D				5000
CRT-D New Implants				4400
CRT-D Replacements / Upgrade				600
Ischemic				1500
Non-ischemic				6500
Conduction System Pacing				700
Left Bundle Branch Pacing				650
His Bundle Pacing				50
Implanting Centers				400
Implanting Physicians				300
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs				10800
ICD New Implants				9700
ICD Replacements				1100
Single-Chamber				4300
Dual-Chamber				6500
Subcutaneous				20
Primary Prevention				600
Secondary Prevention				10200
Implanting Centers				400
Implanting Physicians				300

National Registry				
-------------------	--	--	--	--

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures				400
Hospitals Performing Lead Extraction				15
Cardiologists Performing Lead Extraction				15
Surgeons Performing Lead Extraction				0
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures				70000
SVT Ablation Procedures				59500
AVNRT				40000
AVRT / WPW				17500
AFL (RA Isthmus Dependent)				800
AT				1200
VT/VPC				9000
Idiopathic				6500
Structural				2500
AF Ablation Procedures				1500
Ablation Centers				250
AF Ablation Centers				50
Structural VT Ablation Centers				50
Ablation Physicians				300
AF Ablation Physicians				60
Structural VT Ablation Physicians				100
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☒ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☒ U.S.	☒ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government	30	20	20	30
Insurance	30	50	50	50
Public Insurance	0	0	0	0
Private Insurance	30	50	50	50
Individual	40	30	30	20

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☒	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☒
Lack of Referral	☐	☐	☐	☒	☐
Lack of Trained Personnel	☐	☒	☐	☐	☐
Low Awareness of Guidelines	☐	☒	☐	☐	☐
Lack of Operators	☒	☐	☐	☐	☐

8. Source

- Dr Anoop Gupta – Country Representative

Country/Region: Indonesia

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	275,770	278,696	282,477	284,438
Hospitals	3,072	3,155	3,228	3,284
Beds	384,247	384,818	389,842	395,469
Physicians	206,346	262,679	263,076	±265,000
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses				
GDP (US\$, billions)	1,319	1,386	1,541	±1,600
Total Expenditure on Health as % GDP	2.9	2.9	3	3
Government Expenditure on Health (US\$)	15	17.2	16.5	16.5
Insured Citizens (%)	91	95	98	98
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	1,473	2,321	2,893	3,272
New Implants	1,326	2,113	2,623	2,987
Replacements	147	208	270	285
Single-Chamber	996	1,811	2,287	2,728
Dual-Chamber	477	516	582	544
Leadless	10	11	24	23
Conduction System Pacing	196	208	173	273
Left Bundle Branch Pacing	90	165	144	261
His Bundle Branch Pacing	106	43	29	12
Sick Sinus Syndrome	419	543	863	872
AV Block	1,002	1,313	2,030	2,300
Implanting Centers	95	126	151	152
Implanting Physicians	121	143	149	168

National Registry				
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	60	41	47	41
CRT-P	35	27	31	26
CRT-P New Implants	26	19	19	17
CRT-P Replacements / Upgrade	9	8	12	9
CRT-D	25	14	14	15
CRT-D New Implants	19	6	12	10
CRT-D Replacements / Upgrade	6	8	4	5
Ischemic	30	15	15	15
Non-ischemic	26	20	32	26
Conduction System Pacing			11	13
Left Bundle Branch Pacing			10	13
His Bundle Pacing			1	0
Implanting Centers	17	21	17	21
Implanting Physicians	31	33	29	32
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	84	73	87	82
ICD New Implants	74	65	77	75
ICD Replacements	10	8	10	7
Single-Chamber	56	52	66	65
Dual-Chamber	28	21	21	17
Subcutaneous	9	2	1	1
Primary Prevention	33	35	38	17
Secondary Prevention	43	34	49	55
Implanting Centers	23	27	33	31
Implanting Physicians	40	41	45	47

National Registry				
-------------------	--	--	--	--

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	13	29	44	47
Hospitals Performing Lead Extraction	11	20	18	26
Cardiologists Performing Lead Extraction	19	27	23	38
Surgeons Performing Lead Extraction	12	10	6	10
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	1,646	2,011	2,719	2,929
SVT Ablation Procedures	816	1,030	1,324	1,444
AVNRT	409	463	664	774
AVRT / WPW	294	433	500	522
AFL (RA Isthmus Dependent)	54	80	95	77
AT	59	54	65	71
VT/VPC	621	781	1,182	1,158
Idiopathic	596	743	1,154	1,106
Structural	25	38	28	52
AF Ablation Procedures	141	200	213	327
Ablation Centers	28	38	43	69
AF Ablation Centers	20	28	32	41
Structural VT Ablation Centers	13	27	11	17
Ablation Physicians	41	50	56	58
AF Ablation Physicians	40	44	49	51
Structural VT Ablation Physicians	33	38	30	37
National Registry				

7. Management

National Certification for Physicians	☒ PM	☒ CRT	☒ ICD	☒ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☒ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☒	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☒	☐
Lack of Referral	☐	☐	☒	☐	☐
Lack of Trained Personnel	☐	☐	☒	☐	☐
Low Awareness of Guidelines	☐	☐	☒	☐	☐
Lack of Operators	☐	☐	☒	☐	☐

8. Source

- Indonesian Heart Rhythm Society (InaHRS)
- Dr Erika Maharani – Country Representative

Country/Region: Japan

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	125,190	124,352	123,784	12376
Hospitals				
Beds	1,573,451	1,559,539	1,486,669	1,469,845
Physicians				
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses				
GDP (US\$, billions)	4,912.15	4,286.19	4,186,669	4,020,000
Total Expenditure on Health as % GDP				
Government Expenditure on Health (US\$)				
Insured Citizens (%)				
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	69,221	70,638	66,024	71,039
New Implants	44,582	46,078	44,133	
Replacements	24,639	24,560	21,891	
Single-Chamber	9,215	9,533		
Dual-Chamber	60,006	61,105		
Leadless				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Branch Pacing				
Sick Sinus Syndrome				
AV Block				
Implanting Centers				
Implanting Physicians				

National Registry				
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	5,563	5,929	5,901	5,956
CRT-P	1,815	2,123	2,148	2,033
CRT-P New Implants	1,343	1,569	1,521	
CRT-P Replacements / Upgrade	472	554	627	
CRT-D	3,748	3,806	3,753	3,923
CRT-D New Implants	2,189	2,278	2,327	
CRT-D Replacements / Upgrade	1,559	1,528	1,426	
Ischemic				
Non-ischemic				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing				
Implanting Centers				
Implanting Physicians				
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	6,440	7,338	7,281	8,062
ICD New Implants	3,770	4,106	4,384	
ICD Replacements	2,670	3,232	2,897	
Single-Chamber	1,794	2,066		
Dual-Chamber	4,646	5,272		
Subcutaneous				
Primary Prevention				
Secondary Prevention				
Implanting Centers				
Implanting Physicians				

National Registry				
-------------------	--	--	--	--

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	1,031	989	1,119	
Hospitals Performing Lead Extraction	98	101	103	
Cardiologists Performing Lead Extraction	NA	NA	NA	
Surgeons Performing Lead Extraction	NA	NA	NA	
National Registry	J-LEX	J-LEX	J-LEX	

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	109,008	103,954	102,584	126,077
SVT Ablation Procedures	11,200	10,078	10,235	
AVNRT	7,859	7,148	7,254	
AVRT / WPW	3,341	2,930	2,981	
AFL (RA Isthmus Dependent)	11,847	15,737(A FL+AT)	15,798 (AFL+AT)	
AT	6,869	15,737(A FL+AT)	15,798 (AFL+AT)	
VT/VPC	7,633	7,639	6,802	
Idiopathic	6,191	NA	NA	
Structural	1,442	NA	NA	
AF Ablation Procedures	81,750	77,451	78,196	
Ablation Centers	503	551	631	
AF Ablation Centers	490	NA	NA	
Structural VT Ablation Centers	NA	NA	NA	
Ablation Physicians	NA	NA	NA	
AF Ablation Physicians	NA	NA	NA	
Structural VT Ablation Physicians	NA	NA	NA	
National Registry	Yes	Yes	J-AB	

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- Dr Seiichiro Matsuo – Country Representative

Country/Region: Malaysia

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	34,695	35,126	35,558	35,978
Hospitals	358	361	365	370
Beds	63,000	65,000	67,000	68,000
Physicians	79,443	82,227	84,268	86,000
EP Fellows in Training			19	21
Pediatric EP Physicians	1	1	2	2
Female EP Physicians	6	6	6	6
Surgeons Performing Maze Procedures	2	2	2	2
Nurses	117,116	122,000	128,000	132,000
GDP (US\$, billions)	408	400	422	472
Total Expenditure on Health as % GDP	3.9	3.96	N/A	N/A
Government Expenditure on Health (US\$)	8.2	9.0	9.0	9.8
Insured Citizens (%)	46	50	53	55
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	1,411	1424	1767	1726
New Implants	993	1071	1374	1385
Replacements	411	253	387	320
Single-Chamber	246	276	277	301
Dual-Chamber	701	773	1120	1168
Leadless	160	148	176	256
Atrial leadless	0	0	0	16
Conduction System Pacing	120	216	204	304
Left Bundle Branch Pacing	134	185	393	496
His Bundle Branch Pacing	88	3	1	0
Bachmann Bundle Pacing	0	0	6	12
Sick Sinus Syndrome	508	558	604	656
AV Block	716	755	1092	986

Implanting Centers	11	11	11	11
Implanting Physicians				
National Registry	0	0	0	0

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	253	252	308	275
CRT-P	98	112	138	111
CRT-P New Implants	62	70	85	59
CRT-P Replacements / Upgrade	36	42	52	49
CRT-D	154	140	169	163
CRT-D New Implants	98	87	115	127
CRT-D Replacements / Upgrade	54	53	54	54
Ischemic	119	96	115	127
Non-ischemic	214	184	117	82
Conduction System Pacing	107	20	36	56
Left Bundle Branch Pacing	14	14	36	56
His Bundle Pacing	3	0	0	0
Implanting Centers	7	11	11	11
Implanting Physicians	15	26	26	27
National Registry	0	0	0	0

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	401	419	436	435
ICD New Implants	314	337	372	347
ICD Replacements	87	77	70	81
Single-Chamber	192	228	306	288
Dual-Chamber	78	82	99	114
Subcutaneous	9	15	25	15
Extravascular (EV-ICD)	0	0	10	25
Primary Prevention	152	152	127	126
Secondary Prevention	158	255	281	265
Implanting Centers	7	11	11	14
Implanting Physicians	28	35	35	35
National Registry	0	0	0	0

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	24	25	29	42
Hospitals Performing Lead Extraction	5	5	4	5
Cardiologists Performing Lead Extraction	6	10	11	14
Surgeons Performing Lead Extraction	3	3	3	3
National Registry	0	0	0	0

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	1,745	1917	2306	2554
SVT Ablation Procedures	966	994	1153	1284
AVNRT	398	403	534	580
AVRT / WPW	193	199	287	312
AFL (RA Isthmus Dependent)	139	122	164	178
AT	85	112	120	124
VT/VPC	347	413	574	544
Idiopathic	330	244	438	421
Structural	66	105	84	79
AF Ablation Procedures	324	431	558	747
Ablation Centers				
AF Ablation Centers	6	8	8	8
Structural VT Ablation Centers	6	8	8	8
Ablation Physicians	11	14	14	15
AF Ablation Physicians	14	14	14	15
Structural VT Ablation Physicians	14	14	14	15
National Registry	0	0	0	0

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☒ National	☒ U.S.	☒ Europe	☒ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☒
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☒
Lack of Referral	☐	☐	☒	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☒
Low Awareness of Guidelines	☐	☐	☒	☐	☐
Lack of Operators	☐	☐	☐	☐	☒

8. Source

- The source of information is compiled by Malaysian Heart Rhythm Society (MHRS), subsidiary society of National Heart Association of Malaysia (NHAM), and contributed by the National Heart Institute (IJN), Sultan Idris Shah Hospital, Sarawak Heart Centre (PJS), Cardiac Vascular Sentral Kuala Lumpur (CVSKL), Sultanah Bahiyah Hospital, Raja Permaisuri Bainun Hospital, Universiti Malaya Medical Centre, Queen Elizabeth II Hospital, Sultanah Aminah Hospital (Johor Bharu), Sultan Ahmad Shah Medical Centre@IIUM, University Sains Malaysia Hospital, Pulau Pinang Hospital, Raja Perempuan Zainab II Hospital and Hospital Canselor Tuanku Muhriz UKM.
- Dr Keng Tat Koh – Country Representative

Country/Region: Mongolia

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	3.457,5	3.504.7	3.544.83	3.591.1
Hospitals	57	57	59	319*
Beds	35,310	35,310	28,260	29,465
Physicians	12,970	13,983	15,973	16,093
EP Fellows in Training				1
Pediatric EP Physicians				none
Female EP Physicians				8
Surgeons Performing Maze Procedures				none
Nurses	13,473	13,947	14,494	15.152
GDP (US\$, billions)	16.81	4.71	23.59	26.11
Total Expenditure on Health as % GDP	4%	4%	2	6.9%
Government Expenditure on Health (US\$)		453,918		1.2 billion
Insured Citizens (%)		92.4%	92.5%	86.7
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	365	475	459	412
New Implants				
Replacements				
Single-Chamber				
Dual-Chamber		474	459	412
Leadless				1
Conduction System Pacing	12	56	50	20
Left Bundle Branch Pacing				
His Bundle Branch Pacing				
Sick Sinus Syndrome				
AV Block				
Implanting Centers		4	5	5
Implanting Physicians	8	8	15	17

National Registry				
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	12	10	8	6
CRT-P	12	10	8	6
CRT-P New Implants	12	10		
CRT-P Replacements / Upgrade				
CRT-D				1
CRT-D New Implants				1
CRT-D Replacements / Upgrade				
Ischemic				
Non-ischemic	12	12	8	7
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing				
Implanting Centers	1	1	1	1
Implanting Physicians	4	4	4	4
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	0	10	12	9
ICD New Implants		10	12	9
ICD Replacements				
Single-Chamber			7	2
Dual-Chamber			5	7
Subcutaneous				
Primary Prevention				
Secondary Prevention				
Implanting Centers		1	1	1
Implanting Physicians		4	4	4

National Registry				
-------------------	--	--	--	--

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	0	0	0	4
Hospitals Performing Lead Extraction		1	1	1
Cardiologists Performing Lead Extraction		3	3	3
Surgeons Performing Lead Extraction				
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	180	237	212	115
SVT Ablation Procedures	165	200	254	90
AVNRT				
AVRT / WPW				
AFL (RA Isthmus Dependent)				
AT				
VT/VPC	10	4	24	10
Idiopathic	10	4		
Structural				
AF Ablation Procedures	5	13	10	15
Ablation Centers	2	3	3	3
AF Ablation Centers	2	2	2	2
Structural VT Ablation Centers	1	1	1	1
Ablation Physicians	3	5	10	10
AF Ablation Physicians	1	3	3	5
Structural VT Ablation Physicians	1	1	1	1
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☒ National	☐ U.S.	☒ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☒	☒	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☒	☐
Lack of Referral	☐	☒	☐	☐	☐
Lack of Trained Personnel	☐	☒	☒	☐	☐
Low Awareness of Guidelines	☐	☐	☒	☐	☐
Lack of Operators	☐	☒	☐	☐	☐

8. Source

- Dr Saruul Tseveendee – Country Representative

Country/Region: Myanmar

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	54,000	54,000	54,000	54,000
Hospitals	12	12	12	14
Beds	-	-		
Physicians	-	-		
EP Fellows in Training				4
Pediatric EP Physicians				-
Female EP Physicians				6
Surgeons Performing Maze Procedures				
Nurses	-	-		
GDP (US\$, billions)	-	-		
Total Expenditure on Health as % GDP	-	-		
Government Expenditure on Health (US\$)	-	-		
Insured Citizens (%)	-	-		
SCD Patients	-	-		
Heart Failure Patients	-	-		
AF Patients	-	-		

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	927	974	1156	1321
New Implants	848	869	988	1129
Replacements	79	105	168	192
Single-Chamber	815	846	1014	1098
Dual-Chamber	112	128	130	223
Leadless	-	-	-	-
Conduction System Pacing	-	5	12	19
Left Bundle Branch Pacing	-	5	11	19
His Bundle Branch Pacing	-	-	1	-
Sick Sinus Syndrome	525	571	621	799
AV Block	402	403	535	522
Implanting Centers	12	12	12	14
Implanting Physicians	21	21	21	21

National Registry	-	-	-	-
SSS	-	-	621	799
AVN	-	-	535	522
Bi Nodal	-	-	-	-
Others	-	-	-	-

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	3	2	5	4
CRT-P	1	-	-	-
CRT-P New Implants	-	-	-	-
CRT-P Replacements / Upgrade	1	-	-	-
CRT-D	2	2	-	4
CRT-D New Implants	-	-	-	1
CRT-D Replacements / Upgrade	2	2	-	3
Ischemic	2	-	-	3
Non-ischemic	1	2	-	1
Conduction System Pacing	-	-	5	-
Left Bundle Branch Pacing	-	-	4	-
His Bundle Pacing	-	-	1	-
Implanting Centers	4	4	4	5
Implanting Physicians	15	15	15	15
National Registry	-	-	-	-

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	30	38	33	44
ICD New Implants	25	30	30	35
ICD Replacements	5	8	3	9
Single-Chamber	27	37	32	44
Dual-Chamber	3	1	1	-
Subcutaneous	-	-	-	-
Primary Prevention	21	18	14	23
Secondary Prevention	9	20	19	21
Implanting Centers	6	6	6	6
Implanting Physicians	15	15	15	15

National Registry	-	-	-	-
-------------------	---	---	---	---

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	1	-	-	-
Hospitals Performing Lead Extraction	1	-	-	-
Cardiologists Performing Lead Extraction	2	-	-	-
Surgeons Performing Lead Extraction	-	-	-	-
National Registry	-	-	-	-

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	823	1,005	1079	1106
SVT Ablation Procedures	747	983	966	997
AVNRT	400	542	504	593
AVRT / WPW	327	410	429	380
AFL (RA Isthmus Dependent)	15	11	12	5
AT	5	20	21	19
VT/VPC	76	22	113	108
Idiopathic	74	-	113	108
Structural	2	-	-	-
AF Ablation Procedures	-	-	-	1
Ablation Centers	6	6	6	8
AF Ablation Centers	1	1	1	1
Structural VT Ablation Centers	1	1	1	1
Ablation Physicians	13	13	14	18
AF Ablation Physicians	1	1	1	1
Structural VT Ablation Physicians	1	1	1	1
National Registry	-	-	-	-

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☒ U.S.	☒ Europe	☒ AP

Payment (%)	PM	ICD	CRT	Ablation
Government	80	-	-	100
Insurance				
Public Insurance	-	-	-	-
Private Insurance	-	-	-	-
Individual	20	100	100	-

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☒	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☒	☐
Lack of Referral	☐	☒	☐	☐	☐
Lack of Trained Personnel	☐	☒	☐	☐	☐
Low Awareness of Guidelines	☐	☒	☐	☐	☐
Lack of Operators	☐	☒	☐	☐	☐

8. Source

- Yangon General Hospital, North Okkalapa General Hospital, Mandalay General Hospital, 1000-bedded General Hospital (Naypyitaw) , Defence Services General Hospital (Mingalardon), Defence Services General Hospital (Naypyitaw), Private Hospitals
- Dr Nwe Nwe – Country Representative

Country/Region: New Zealand

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	5,000	5,200	5,300	5,400
Hospitals				
Beds				
Physicians				
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses				
GDP (US\$, billions)				
Total Expenditure on Health as % GDP				
Government Expenditure on Health (US\$)				
Insured Citizens (%)				
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	1624	2946	3137	3329
New Implants	1318	986	2587	2663
Replacements	284	235	537	666
Single-Chamber	237	219	651	639
Dual-Chamber	769	675	2272	2656
Leadless	10	6	35	70
Conduction System Pacing	40	166	572	590
Left Bundle Branch Pacing	35	165	566	590
His Bundle Branch Pacing	2	1	6	0
Sick Sinus Syndrome	167	129	896	781
AV Block	336	169	1835	1609
Implanting Centers	6	15	18	20
Implanting Physicians	21	55	36	38

National Registry		Y	Y	Y
SSS				
AVN				
Bi Nosal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	167	468	435	444
CRT-P	127	76	221	247
CRT-P New Implants	93	62	133	128
CRT-P Replacements / Upgrade	34	26	88	119
CRT-D	65	76	214	197
CRT-D New Implants	49	46	113	92
CRT-D Replacements / Upgrade	41	48	101	105
Ischemic	26	10	61	96
Non-ischemic	89	31	197	301
Conduction System Pacing	1	6	21	46
Left Bundle Branch Pacing	1	5	21	46
His Bundle Pacing	-	1	0	0
Implanting Centers	9	1	12	12
Implanting Physicians	25	20	25	25
National Registry	-	Y	Y	Y

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	358	627	606	600
ICD New Implants	281	158	443	427
ICD Replacements	67	48	163	173
Single-Chamber	64	77	316	347
Dual-Chamber	54	48	214	236
Subcutaneous	17	12	49	40
Primary Prevention	95	5	232	223
Secondary Prevention	54	23	264	271
Implanting Centers	1	14	14	14
Implanting Physicians	11	30	30	30

National Registry	-	Y	Y	Y
-------------------	---	---	---	---

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	53	59	56	62
Hospitals Performing Lead Extraction	1	1	1	1
Cardiologists Performing Lead Extraction	2	2	2	2
Surgeons Performing Lead Extraction	-	Support	Support	Support
National Registry	-	Y	Y	Y

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	1327	2663	2382	3067
SVT Ablation Procedures	704	365	1222	1332
AVNRT	166	92	405	377
AVRT / WPW	115	45	149	166
AFL (RA Isthmus Dependent)	336	179	508	601
AT	50	32	102	89
VT/VPC	93	51	112	135
Idiopathic	30	9	49	69
Structural	32	-	34	41
AF Ablation Procedures	544	429	1060	1515
Ablation Centers	5	10	10	10
AF Ablation Centers	5	8	9	10
Structural VT Ablation Centers	5	8	4	4
Ablation Physicians				
AF Ablation Physicians	15	18	18	18
Structural VT Ablation Physicians	15	18	18	15
National Registry	Incomp	N	N	N

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- ANZACS-QI Device registry plus survey of implanting and ablation hospitals collated by HRNZ chair
- Dr Geoffrey Clare – Country Representative

Country/Region: Pakistan

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	235,844	241,499	247,154	255,200
Hospitals	1,284	1,696	1,934	1934
Beds	151,661	167,947	173,971	
Physicians	282,383	299,113	319,572	336.582
EP Fellows in Training				20
Pediatric EP Physicians				3
Female EP Physicians				10
Surgeons Performing Maze Procedures				10-15
Nurses	127,855	134,708	138,391	
GDP (US\$, billions)	376	337	372	411
Total Expenditure on Health as % GDP	2.91			0.8%
Government Expenditure on Health (US\$)				3.37
Insured Citizens (%)				Please see below
SCD Patients				90000
Heart Failure Patients				Estimatec 3 million
AF Patients				Estimate 1.8-1.9 million (reference)

Insured citizen: No national estimate available; coverage through Sehat Sahulat/Federal Sehat Sahulat Program varies by province. Private health insurance covers <10 million people.

AF reference: Nasir A, Farooqi AT, Sattar S, Saeed Y. Prevalence and frequency of arrhythmias and electrocardiographic abnormalities in Pakistan: An outpatient ECG-based study. *Heart Rhythm O2*. 2025;6(4):489-498. doi:10.1016/j.hroo.2024.12.017.

The above data was taken from Pakistan Economic survey 2025.

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers				7596
New Implants				

Replacements				
Single-Chamber				3898
Dual-Chamber				3562
Leadless				
Conduction System Pacing				
Left Bundle Branch Pacing				100
His Bundle Branch Pacing				
Sick Sinus Syndrome				
AV Block				
Implanting Centers				40-50
Implanting Physicians				130-150
National Registry				Not available
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs				221
CRT-P				136
CRT-P New Implants				
CRT-P Replacements / Upgrade				
CRT-D				85
CRT-D New Implants				
CRT-D Replacements / Upgrade				
Ischemic				
Non-ischemic				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing				
Implanting Centers				10-12
Implanting Physicians				20
National Registry				Not available

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs				193
ICD New Implants				
ICD Replacements				
Single-Chamber				217
Dual-Chamber				104
Subcutaneous				
Primary Prevention				
Secondary Prevention				
Implanting Centers				10-12
Implanting Physicians				20
National Registry				Not available

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures				70
Hospitals Performing Lead Extraction				4
Cardiologists Performing Lead Extraction				10
Surgeons Performing Lead Extraction				10
National Registry				Not available

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures				2500-2800 estimated
SVT Ablation Procedures				
AVNRT				1100
AVRT / WPW				500
AFL (RA Isthmus Dependent)				120
AT				80
VT/VPC				170
Idiopathic				
Structural				
AF Ablation Procedures				160-190 estimate

Ablation Centers				
AF Ablation Centers				8
Structural VT Ablation Centers				8
Ablation Physicians				
AF Ablation Physicians				10
Structural VT Ablation Physicians				10
National Registry				Not available

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☒ U.S.	☒ Europe	☒ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				75
Insurance				20
Public Insurance				15
Private Insurance				5
Individual				5

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☒	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☒	☐	☐
Lack of Referral	☐	☐	☐	☒	☐
Lack of Trained Personnel	☐	☐	☒	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☒	☐
Lack of Operators	☐	☐	☒	☐	☐

8. Source

- The 2025 Pakistan electrophysiology dataset was compiled using a combination of **hospital-reported procedural data** and **manufacturer device sales data**. Procedural volumes from participating high-volume centres were used as the primary source whenever available. For centres that had not yet submitted complete data, procedural volumes were estimated based on the size of the electrophysiology program, historical activity, available

infrastructure, and expert consensus among the Pakistan Heart Rhythm Society investigators.

- Industry sales data from the major manufacturers (Medtronic, Abbott/St. Jude Medical, and Boston Scientific) were used only for cross-validation of national trends and **were not used directly as procedural counts** because device sales may differ from actual implants due to inventory, procurement cycles, and fiscal-year reporting. The final national figures therefore represent the **best available estimates for calendar year 2025** and will be updated as additional hospital data become available.
- Dr Yawar Saeed – Country Representative

Country/Region: Philippines

1. Statistics

	2022	2023	2024	2025
Population (thousand)	115,559	117,337	115,843	117,724
Hospitals	1,792	3,952	3,952	1341
Beds (per 100,000 population)	53.1	98	98	100
Physicians (per 1,000 population)		0.8	0.8	0.8
EP Fellows in Training				3
Pediatric EP Physicians				1
Female EP Physicians				33
Surgeons Performing Maze Procedures				
Nurses (per 1,000 population)	0.8	4.8	4.8	1.6
GDP (US\$, billions)	404.28	404.3	462	512.2
Total expenditure on health as % GDP	6%	5.5%	2.93	6.7
Government expenditure on health as %	17.3%			46.5%
Insured citizens (%)	69.7%	52%	83%	87
SCD patients				
Heart failure patients				
AF patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	1281	1060	1989	2303
New Implants	1092	910	1759	2000
Replacements	189	225	230	252
Single-Chamber	211	236	448	536
Dual-Chamber	734	550	1154	1550
Leadless	24	49	49	51
Conduction System Pacing				
Left Bundle Branch Pacing	30	83	82	248
His Bundle Branch Pacing				0
Sick Sinus Syndrome				
AV Block				
Implanting Centers			70	70
Implanting Physicians			65	67

National Registry			None	None
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	33	24	47	52
CRT-P		3		17
CRT-P New Implants	7	2	6	15
CRT-P Replacements / Upgrade	3			2
CRT-D		9		35
CRT-D New Implants	27	11	35	27
CRT-D Replacements / Upgrade	10	1	6	8
Ischemic				
Non-ischemic				
Conduction System Pacing				
Left Bundle Branch Pacing		13		22
His Bundle Pacing				
Implanting Centers		11	11	11
Implanting Physicians				
National Registry			None	None

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	78	85	213	217
ICD New Implants	60	32	192	186
ICD Replacements	18	20	21	31
Single-Chamber	50	22	88	97
Dual-Chamber	28	33	125	120
Subcutaneous				
Primary Prevention				
Secondary Prevention				
Implanting Centers		16	16	16
Implanting Physicians				

National Registry			None	None
-------------------	--	--	------	------

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures			7	4
Hospitals Performing Lead Extraction			3	3
Cardiologists Performing Lead Extraction			5	5
Surgeons Performing Lead Extraction			2	2
National Registry			None	None

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	141		325	
SVT Ablation Procedures	91	101	219	290
AVNRT	82		109	170
AVRT / WPW	48		81	69
AFL (RA Isthmus Dependent)	6		22	32
AT	5		7	14
VT/VPC	22		62	31
Idiopathic	20	23	60	30
Structural	2	4	2	1
AF Ablation Procedures	28	47	44	46
Ablation Centers		5		
AF Ablation Centers	4		8	5
Structural VT Ablation Centers	3		3	5
Ablation Physicians				
AF Ablation Physicians	12		11	42
Structural VT Ablation Physicians	6		8	8
National Registry	No		None	None

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				x

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☒
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☒
Lack of Referral	☐	☐	☐	☒	☐
Lack of Trained Personnel	☐	☐	☐	☒	☐
Low Awareness of Guidelines	☐	☐	☒	☐	☐
Lack of Operators	☐	☐	☐	☒	☐

8. Source:

- from individual centers and institutions, gathered by PHRS
- Dr Marcellus Francis L. Ramirez – Country Representative

Country/Region: Singapore

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	5,637.0	5,917.6	6,036.9	6,111.2
Hospitals	29	30	31	31
Beds	34,395	35,763	37,809	38,625
Physicians	16,009	16,753	17,582	n.a.
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses	43,772	46,344	50,389	n.a.
GDP (US\$, billions)				
Total Expenditure on Health as % GDP	2.5%	2.5%	2.4%	2.5%
Government Expenditure on Health (US\$, millions)	12,412.3	12,852.3	13,638.4	15,595.8
Insured Citizens (%)				
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	1,071	1,012	1,034	1,117
New Implants	657	624	765	828
Replacements	223	209	269	289
Single-Chamber	132	133	150	112
Dual-Chamber	759	735	839	954
Leadless			45	51
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Branch Pacing				
Sick Sinus Syndrome	430	401	398	404
AV Block	293	312	286	289
Implanting Centers	6	6	7	8

Implanting Physicians	Approx. 26	Approx. 31	Approx. 30	Approx. 40
National Registry	Yes	Yes	Yes	Yes
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	191	166	142	160
CRT-P	34	29	19	26
CRT-P New Implants	10	8	9	6
CRT-P Replacements / Upgrade	22	19	10	20
CRT-D	157	137	123	134
CRT-D New Implants	78	54	60	57
CRT-D Replacements / Upgrade	69	71	63	77
Ischemic	98	100	82	82
Non-ischemic	56	51	35	52
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing				
Implanting Centers	6	6	7	7
Implanting Physicians	Approx. 24	Approx. 23	Approx. 27	Approx. 29
National Registry	Yes	Yes	Yes	Yes

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	365	304	335	386
ICD New Implants	210	189	224	266
ICD Replacements	105	72	111	120
Single-Chamber	261	222	243	267
Dual-Chamber	71	56	72	99
Subcutaneous			20	20
Primary Prevention	224	184	204	205

Secondary Prevention	141	119	131	181
Implanting Centers	6	6	7	8
Implanting Physicians	Approx. 22	Approx. 27	Approx. 28	Approx. 37
National Registry	Yes	Yes	Yes	Yes

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	67	74	75	60
Hospitals Performing Lead Extraction	Approx. 4	Approx. 5	Approx. 3	Approx. 6
Cardiologists Performing Lead Extraction	Approx. 15	Approx. 17	Approx. 15	Approx. 17
Surgeons Performing Lead Extraction	Approx. 2	Approx. 2	Approx. 2	Approx. 2
National Registry	Yes	Yes	Yes	Yes

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	874	785	1,064	1,259
SVT Ablation Procedures				
AVNRT	209	166	N/A	228
AVRT / WPW	100	92	N/A	108
AFL (RA Isthmus Dependent)	192	161	N/A	242
AT	51	33	N/A	48
VT/VPC	95	89	N/A	168
Idiopathic				
Structural				
AF Ablation Procedures	201	226	N/A	384
Others	26	18	N/A	81
Ablation Centers	3	3	3	3
AF Ablation Centers	2	2	2	2
Structural VT Ablation Centers	2	2	2	2
Ablation Physicians	Approx. 19	Approx. 19	Approx. 19	Approx. 25
AF Ablation Physicians				
Structural VT Ablation Physicians				
National Registry	Yes	Yes	Yes	Yes

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- Dr Swee Chong Seow – Singapore

Country/Region: South Korea

1. Statistics

	2022	2023	2024	2025
Population (thousand)	51565	51542	51681	51615
Hospitals	41906	42587	1790	1814
Beds (per 1,000 population)	14.1	13.8	13.8	13.8
Physicians (per 1,000 population)	2.62	2.66	-	-
EP Fellows in Training				26
Pediatric EP Physicians				11
Female EP Physicians				37
Surgeons Performing Maze Procedures				-
Nurses (per 1,000 population)	9.1	9.49	9.8	-
GDP (US\$, billions)	1799.3	1844.8	1875.3	1872.3
Total expenditure on health as % GDP	8.8%	8.5%	8.4%	-
Government expenditure on health as %	5.62%	5.12%	5.01%	-
Insured citizens (%)	100	100	100	100
SCD patients				-
Heart failure patients	245,097	256,953	257,575	-
AF patients				-

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	8165	9116	8410	10929
New Implants	6367	7097	6589	7984
Replacements	1798	2019	1821	1851
Single-Chamber	1012	1291	730	1345
Dual-Chamber	5355	5806	5375	6639
Leadless			484	1094
Conduction System Pacing			1975	3052
Left Bundle Branch Pacing			1961	3052
His Bundle Branch Pacing			14	
Sick Sinus Syndrome	3415	3502	3101	3214
AV Block	4510	4401	3488	4815
Implanting Centers				
Implanting Physicians		273		

National Registry	Yes	Yes		
SSS				
AVN				
Bi Nodal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	502	568	448	642
CRT-P	74	76	70	100
CRT-P New Implants	37	39	39	42
CRT-P Replacements / Upgrade	37	37	31	58
CRT-D	428	492	378	542
CRT-D New Implants	291	294	235	329
CRT-D Replacements / Upgrade	137	198	143	213
Ischemic	130	129	57	151
Non-ischemic	372	439	217	290
Conduction System Pacing			96	177
Left Bundle Branch Pacing			95	177
His Bundle Pacing			1	
Implanting Centers				
Implanting Physicians		98		
National Registry	Yes	Yes		

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	1685	1841	1692	2089
ICD New Implants	1422	1563	1387	1459
ICD Replacements	263	278	305	485
Single-Chamber	821	702	614	665
Dual-Chamber	601	868	635	794
Subcutaneous			138	145
Primary Prevention	705	722	552	1002
Secondary Prevention	932	950	835	1087
Implanting Centers				
Implanting Physicians		124		

National Registry	Yes	Yes		
-------------------	-----	-----	--	--

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	150	155	160	193
Hospitals Performing Lead Extraction				
Cardiologists Performing Lead Extraction				
Surgeons Performing Lead Extraction				
National Registry		Yes		

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	10453	13548	14422	16728
SVT Ablation Procedures	4162	4856	4732	4876
AVNRT	1909	2002	1973	2121
AVRT / WPW	1124	1235	1129	1166
AFL (RA Isthmus Dependent)	882	1212	1132	1214
AT	259	407	498	375
VT/VPC	533	784	563	883
Idiopathic	400	643	453	627
Structural	133	141	110	256
AF Ablation Procedures	6991	7908	9127	10969
Ablation Centers				
AF Ablation Centers	45	58	68	50
Structural VT Ablation Centers	15	19	47	43
Ablation Physicians				
AF Ablation Physicians	87	117	130	135
Structural VT Ablation Physicians	78	89	106	110
National Registry	Yes	Yes	Yes	Yes

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☒	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☒	☐	☐
Lack of Referral	☐	☒	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☒	☐
Low Awareness of Guidelines	☐	☒	☐	☐	☐
Lack of Operators	☐	☐	☐	☒	☐

8. Source

- International Monetary Fund <https://www.imf.org/en/home>
- Korean Statistical Information Service <https://kosis.kr/index/index.do>
- Organisation for Economic Co-operation and Development <https://www.oecd.org/en.html>
- Health Insurance Review & Assessment Service <https://opendata.hira.or.kr/home.do>
- Dr Eue-Keun Choi – Country Representative

Country/Region: Sri Lanka

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	21919	21919	22120	23200
Hospitals	696	696	696	760
Beds	87280	87280	87280	91000
Physicians	21100	22600	23450	23000
EP Fellows in Training				6
Pediatric EP Physicians				1
Female EP Physicians				2
Surgeons Performing Maze Procedures				3
Nurses	45300	48200	49500	44000
GDP (US\$, billions)	75.3	84.4	98.9	109
Total Expenditure on Health as % GDP	5.63%	4.07%	4.36%	4.4%
Government Expenditure on Health (US\$)		1.34 billion	1.338 billion	1.8 billion
Insured Citizens (%)		1%	13%	15%
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	1501	2047	1917	2065
New Implants	1205	1711	1751	1804
Replacements	296	295	166	261
Single-Chamber	872	1159	1377	1260
Dual-Chamber	840	584	540	801
Leadless	0	0	0	0
Conduction System Pacing	0	3	0	3
Left Bundle Branch Pacing	0	0	0	0
His Bundle Branch Pacing	0	3	0	3
Sick Sinus Syndrome	541	739	963	666
AV Block	960	1270	654	1252
Implanting Centers	15	12	18	18

Implanting Physicians	10	10	12	11
National Registry				
SSS				666
AVN				1252
Bi Nosal				304
Others				0

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	71	27	49	68
CRT-P	57	24	40	63
CRT-P New Implants	50	20	34	53
CRT-P Replacements / Upgrade	7	4	6	10
CRT-D	14	7	6	5
CRT-D New Implants	10	5	5	4
CRT-D Replacements / Upgrade	4	2	4	1
Ischemic				
Non-ischemic				
Conduction System Pacing				
Left Bundle Branch Pacing				
His Bundle Pacing		3		
Implanting Centers	9	9	7	8
Implanting Physicians	9	8	8	9
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	169	185	214	249
ICD New Implants	146	166	188	231
ICD Replacements	23	17	26	18
Single-Chamber	93	153	182	145
Dual-Chamber	53	32	32	104
Subcutaneous				0
Primary Prevention				16
Secondary Prevention				233
Implanting Centers	9	9	7	9

Implanting Physicians	9	8	8	10
National Registry				

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	5	6	11	5
Hospitals Performing Lead Extraction	3	2	7	3
Cardiologists Performing Lead Extraction				0
Surgeons Performing Lead Extraction	8	6	4	5
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	681	650	501	712
SVT Ablation Procedures	360	381	287	450
AVNRT	251	307	178	314
AVRT / WPW	109	63	98	138
AFL (RA Isthmus Dependent)	2	11	5	13
AT	3	0	6	3
VT/VPC	315	269	214	221
Idiopathic	315	269	203	221
Structural			11	
AF Ablation Procedures				0
Ablation Centers	5	5	5	5
AF Ablation Centers				0
Structural VT Ablation Centers				1
Ablation Physicians	8	8	8	9
AF Ablation Physicians				0
Structural VT Ablation Physicians				0
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☒ U.S.	☒ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government	Yes	Yes	Yes	Yes
Insurance	Yes	Yes	Yes	Yes
Public Insurance	Yes	Yes	Yes	Yes
Private Insurance	Yes	Yes	Yes	Yes
Individual	Yes	Yes	Yes	Yes

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☒	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☒	☐
Lack of Referral	☐	☒	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☒	☐
Low Awareness of Guidelines	☒	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☒	☐

8. Source

- <https://www.health.gov.lk/health>
- Statistics from individual hospitals with EP & CIED implantation facilities
- Dr Manura Lekamwattage – Country Representative

Country/Region: Taiwan

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	23,265	23,413	23,328	23,253
Hospitals	475	471	463	463
Beds	139,441	171,717	170,659	170,659
Physicians	53,063	54,016	55,230	55,230
EP Fellows in Training				49
Pediatric EP Physicians				14
Female EP Physicians				23
Surgeons Performing Maze Procedures				31
Nurses	185,778	187,725	192,146	192,146
GDP (US\$, billions)	660.928	641.801	694.977	790.149
Total Expenditure on Health as % GDP				
Government Expenditure on Health (US\$)				
Insured Citizens (%)	99	99	99	99
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	7283	7510	7971	7806
New Implants	5785	5844	6249	6119
Replacements	1498	1664	1719	1687
Single-Chamber	1272	1350	1272	1187
Dual-Chamber	6011	4813	6699	6535
Leadless	202	316	359	452
Conduction System Pacing	495	1387	2282	2902
Left Bundle Branch Pacing	493	1837	2275	2902
His Bundle Branch Pacing	2	2	7	0
Sick Sinus Syndrome	4378	4088	4384	4308
AV Block	2905	3143	3587	3376
Implanting Centers	228	223	255	144
Implanting Physicians	643	655	712	596

National Registry	Y	Y	Y	Y
SSS				
AVN				
Bi Nosal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	335	353	314	343
CRT-P	240	252	218	253
CRT-P New Implants	112	120	97	129
CRT-P Replacements / Upgrade	128	132	121	124
CRT-D	95	102	79	100
CRT-D New Implants	44	39	39	42
CRT-D Replacements / Upgrade	51	63	40	58
Ischemic	109	112	110	131
Non-ischemic	201	229	203	212
Conduction System Pacing	2	63	1	84
Left Bundle Branch Pacing	2	60	1	84
His Bundle Pacing	-	1	0	0
Implanting Centers	84	63	70	67
Implanting Physicians	200	105	131	108
National Registry	Y	Y	Y	Y

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	861	839	870	981
ICD New Implants	682	690	663	738
ICD Replacements	179	149	207	243
Single-Chamber	327	259	277	275
Dual-Chamber	534	580	592	679
Subcutaneous		-	1	27
Primary Prevention	7	9	8	14
Secondary Prevention	854	788	862	967
Implanting Centers	121	112	121	73
Implanting Physicians	262	244	299	185

National Registry	Y	Y	Y	Y
-------------------	---	---	---	---

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	33	27	32	33
Hospitals Performing Lead Extraction	9	8	8	11
Cardiologists Performing Lead Extraction	19	12	13	16
Surgeons Performing Lead Extraction	9	6	2	12
National Registry	Y	Y	Y	Y

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures	6274	6611	7,029	6865
SVT Ablation Procedures	3263	3088	3,465	2995
AVNRT	1558	1693	1,742	1626
AVRT / WPW	679	689	635	656
AFL (RA Isthmus Dependent)	758	760	870	854
AT	224	200	222	230
VT/VPC	1048	1232	1,022	1044
Idiopathic	532	652	765	737
Structural	90	134	222	162
AF Ablation Procedures	1659	2107	2,528	2826
Ablation Centers	38	39	40	39
AF Ablation Centers	31	36	35	36
Structural VT Ablation Centers	15	36	23	16
Ablation Physicians	109	132	126	58
AF Ablation Physicians	100	120	114	50
Structural VT Ablation Physicians	54	110	91	41
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation
Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- Dr Ming-Hsiung Hsieh – Country Representative

Country/Region: Thailand

1. Statistics

	2022	2023	2024	2025
Population (Thousand)	66090	71801		
Hospitals	1367			
Beds	229			
Physicians	1:1680			
EP Fellows in Training				
Pediatric EP Physicians				
Female EP Physicians				
Surgeons Performing Maze Procedures				
Nurses	1:353			
GDP (US\$, billions)	495			
Total Expenditure on Health as % GDP				
Government Expenditure on Health (US\$)				
Insured Citizens (%)	99.87	99		
SCD Patients				
Heart Failure Patients				
AF Patients				

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers	5192	2687	3984	4689
New Implants	3963	2106	2978	3579
Replacements	1216	874	944	1085
Single-Chamber	1137	559	620	767
Dual-Chamber	3886	2128	3128	3591
Leadless	30	19		41
Conduction System Pacing	561	471		1879
Left Bundle Branch Pacing			1334	1879
His Bundle Branch Pacing			1238	
Sick Sinus Syndrome			1532	1687
AV Block				2171
Implanting Centers	27	28		47
Implanting Physicians		87		

National Registry				
SSS				
AVN				
Bi Nosal				
Others				

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs	539	433	608	667
CRT-P		75	102	116
CRT-P New Implants	50	26		47
CRT-P Replacements / Upgrade	52	49		74
CRT-D		358	387	525
CRT-D New Implants	321	214	352	337
CRT-D Replacements / Upgrade	110	144		193
Ischemic				213
Non-ischemic				297
Conduction System Pacing	6			63
Left Bundle Branch Pacing			111	63
His Bundle Pacing				
Implanting Centers	27			
Implanting Physicians				
National Registry				

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs	1313	744	1014	1075
ICD New Implants	1120	633	835	879
ICD Replacements	193	111	179	193
Single-Chamber	405	549	625	640
Dual-Chamber	151	183	266	367
Subcutaneous	9	12	4	33
Primary Prevention			358	354
Secondary Prevention			431	500
Implanting Centers	26	27		
Implanting Physicians				

National Registry				
-------------------	--	--	--	--

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures	62	62	39	40
Hospitals Performing Lead Extraction	13			
Cardiologists Performing Lead Extraction	62			
Surgeons Performing Lead Extraction	0			
National Registry				

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures			4703	5971
SVT Ablation Procedures			2866	3502
AVNRT	1173	1173	1528	1872
AVRT / WPW	554	505	703	771
AFL (RA Isthmus Dependent)	256		410	569
AT	125		216	241
VT/VPC		607	1065	1382
Idiopathic	591	544	1046	1188
Structural	53	63		90
AF Ablation Procedures	264 RF 31 Cryo	295	711	1045
Ablation Centers	27 (government)			
AF Ablation Centers	15			
Structural VT Ablation Centers	12			
Ablation Physicians				
AF Ablation Physicians				
Structural VT Ablation Physicians				
National Registry				

7. Management

National Certification for Physicians	☐ PM	☐ CRT	☐ ICD	☐ Ablation
National Accreditation for Centers	☐ PM	☐ CRT	☐ ICD	☐ Ablation

Guidelines Followed	☐ National	☐ U.S.	☐ Europe	☐ AP
---------------------	-----------------------------------	-------------------------------	---------------------------------	-----------------------------

Payment (%)	PM	ICD	CRT	Ablation
Government				
Insurance				
Public Insurance				
Private Insurance				
Individual				

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☐	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☐	☐	☐
Lack of Referral	☐	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☐	☐	☐
Low Awareness of Guidelines	☐	☐	☐	☐	☐
Lack of Operators	☐	☐	☐	☐	☐

8. Source

- Dr Thoranis Chantrarat – Country Representative

Country/Region: Vietnam

1. Statistics

	2022	2023	2024	2025
Population (Thousand)		98858	101113	102300
Hospitals		NA	1665	1645
Beds		NA	343,800	320,000
Physicians		NA	126,400	125,000
EP Fellows in Training		NA	NA	NA
Pediatric EP Physicians		NA	NA	NA
Female EP Physicians		NA	NA	NA
Surgeons Performing Maze Procedures		NA	NA	NA
Nurses		NA	NA	150,000
GDP (US\$, billions)		433.3	476.4	514
Total Expenditure on Health as % GDP		5.1	4.59	5.7
Government Expenditure on Health (US\$)		NA	8.21 (billion)	11.5 (Billion)
Insured Citizens (%)		93.3	94.2	95.2
SCD Patients		NA	NA	NA
Heart Failure Patients		NA	NA	NA
AF Patients		NA	NA	NA

2. Pacemaker

	2022	2023	2024	2025
Total Pacemakers		4105	5285	5858
New Implants		NA	NA	NA
Replacements		NA	NA	NA
Single-Chamber		1059	1210	1107
Dual-Chamber		3046	4075	4751
Leadless		NA	NA	NA
Conduction System Pacing		353	340	1124
Left Bundle Branch Pacing			340	1124
His Bundle Branch Pacing			0	0
Sick Sinus Syndrome		NA	NA	NA
AV Block		NA	NA	NA
Implanting Centers		50	55	60

Implanting Physicians		140	150	160
National Registry		NA	NA	NA
SSS		NA	NA	NA
AVN		NA	NA	NA
Bi Nosal		NA	NA	NA
Others		NA	NA	NA

3. Cardiac Resynchronization Therapy

	2022	2023	2024	2025
Total CRTs		110	141	143
CRT-P		64	69	80
CRT-P New Implants				
CRT-P Replacements / Upgrade				
CRT-D		46	72	63
CRT-D New Implants		NA	NA	NA
CRT-D Replacements / Upgrade		NA	NA	NA
Ischemic		NA	NA	NA
Non-ischemic		NA	NA	NA
Conduction System Pacing		NA	NA	NA
Left Bundle Branch Pacing		NA	NA	NA
His Bundle Pacing		NA	NA	NA
Implanting Centers		15	15	15
Implanting Physicians		32	32	32
National Registry		NA	NA	NA

4. Implantable Cardioverter Defibrillator

	2022	2023	2024	2025
Total ICDs		250	381	435
ICD New Implants		NA	NA	NA
ICD Replacements		NA	NA	NA
Single-Chamber		225	339	393
Dual-Chamber		25	42	42
Subcutaneous		NA	NA	NA
Primary Prevention		NA	NA	NA
Secondary Prevention		NA	NA	NA
Implanting Centers		19	20	20

Implanting Physicians		41	42	42
National Registry		NA	NA	NA

5. Lead Extraction

	2022	2023	2024	2025
Total Lead Extraction Procedures		3	5	NA
Hospitals Performing Lead Extraction		2	2	NA
Cardiologists Performing Lead Extraction		2	2	NA
Surgeons Performing Lead Extraction		1	2	NA
National Registry				NA

6. Interventional Electrophysiology

	2022	2023	2024	2025
Ablation Procedures		5211	6509	8273
SVT Ablation Procedures			3555	4404
AVNRT		1646	1984	2100
AVRT / WPW		947	1114	1641
AFL (RA Isthmus Dependent)		103	211	354
AT		195	246	309
VT/VPC		2103	2459	2913
Idiopathic			2450	2810
Structural			9	103
AF Ablation Procedures		217	495	956
Ablation Centers		23	23	23
AF Ablation Centers		8	8	10
Structural VT Ablation Centers		5	5	9
Ablation Physicians		50	55	87
AF Ablation Physicians		18	20	32
Structural VT Ablation Physicians		10	12	24
National Registry				NA

7. Management

National Certification for Physicians	☒ PM	☒ CRT	☒ ICD	☒ Ablation
National Accreditation for Centers	☐ PM	☒ CRT	☒ ICD	☒ Ablation
Guidelines Followed	☒ National	☒ U.S.	☒ Europe	☒ AP

Payment (%)	PM	ICD	CRT	Ablation
Government	NA	NA	NA	NA
Insurance	NA	NA	NA	NA
Public Insurance	NA	NA	NA	NA
Private Insurance	NA	NA	NA	NA
Individual	NA	NA	NA	NA

Obstacles to guideline implementation (1 = no obstacle, 5 = great obstacle)

	1	2	3	4	5
Lack of Centers	☐	☐	☐	☒	☐
Lack of Reimbursement, Limited Financial Resources	☐	☐	☒	☐	☐
Lack of Referral	☒	☐	☐	☐	☐
Lack of Trained Personnel	☐	☐	☒	☐	☐
Low Awareness of Guidelines	☒	☐	☐	☐	☐
Lack of Operators	☐	☐	☒	☐	☐

8. Source

- Vietnam Heart Rhythm Society (VNHRs).
- Linh Pham Tran MD, Long Vien Hoang MD, Tuan Duy Nguyen MD.