

**Supplementary Table 1: Definition of phases of cardiac rehabilitation internationally**

Country	Inpatient	Outpatient	Ongoing maintenance
<b>Countries with three-phase programs</b>			
<b>Australia<sup>1</sup></b>	<b>Phase I</b> Mobilisation Education for resumption of ADLs	<b>Phase II</b> Commences on discharge from hospital Supervised group or individual program in hospital, community health centre or general medical practice	<b>Phase III</b> Ongoing maintenance of healthy lifestyle changes
<b>Belgium<sup>2</sup></b>	<b>Phase I</b> Acute/subacute rehabilitation phase In-hospital mobilisation, education and referral (first days/weeks after admission)	<b>Phase II</b> Convalescence phase Reconditioning & early lifestyle modification	<b>Phase III</b> Long-term maintenance program
<b>Europe<sup>3-5</sup></b>	<b>Phase I</b> Inpatient hospital period, lasting 1-2 weeks	<b>Phase II</b> Early post-discharge program Includes structured exercise, educational activities, & encouragement of lifestyle changes High risk patients may require an initial hospital setting	<b>Phase III</b> Long-term maintenance program with less intense supervision
<b>France<sup>6,7</sup></b>	<b>Phase I</b> Acute hospital stage Early mobilisation	<b>Phase II</b> Post-discharge program May be provided as an inpatient (with complete weekday hospitalisation) or outpatient hospital program, or in a cardiac rehabilitation centre Reconditioning, lifestyle modification & promotion of return to employment	<b>Phase III</b> Long term maintenance of lifestyle changes Options include community-based Heart Health clubs
<b>Germany<sup>8</sup></b>	<b>Phase I</b> Acute hospital period, incorporating physical therapy & mobilisation	<b>Phase II</b> Post-discharge rehabilitation May be provided as inpatient or outpatient (5 hours/day) rehabilitation in medical practices or rehabilitation hospital Incorporates exercise, education & psychological elements	<b>Phase III</b> Maintenance of lifestyle changes Intensive aftercare programs, funded by retirement insurance, aim to re-integrate patients into employment Community heart groups are instructed by exercise therapists and include

				exercise, education & psychosocial elements
<b>Japan<sup>9</sup></b>	<b>Phase I</b> Acute phase (in ICU) Focus on functional mobilisation and information for return to daily life	<b>Phase II</b> Recovery phase, incorporating both time on general ward & in a supervised program at a rehabilitation centre Program focused on returning to society & establishing lifestyle changes Costs are covered by National Health Insurance	<b>Phase III</b> From month 6 onwards Located at community exercise centre with focus on prevention of recurrence & maintaining better lifestyle	
<b>New Zealand<sup>10</sup></b>	<b>Phase I</b> Early mobilisation and education	<b>Phase II</b> Begins as soon as possible after discharge Medically supervised program in either hospital-based, community care or home-based setting Includes exercise & education components	<b>Phase III</b> Long-term maintenance of lifestyle changes Primarily community-based	
<b>Netherlands<sup>11,12</sup></b>	<b>Preoperative phase</b> (if applicable) Inspiratory muscle training & exercise to preserve/improve physical fitness	<b>Phase I</b> Clinical phase, relative rest on ICU followed by functional mobilisation for resumption of ADLs	<b>Phase II</b> Commences as soon as possible after discharge Includes both exercise & education components Supervised program which may be conducted on an outpatient basis at a hospital, or at a rehabilitation centre or primary care physiotherapy practice	<b>Phase III</b> Post-rehabilitation phase Primary care exercise program recommended for those who are not yet able to maintain physically active lifestyle
<b>United States<sup>13,14</sup></b>	<b>Phase I</b> Treatment Initiation of secondary prevention treatments (e.g. supervised early mobilisation and education)	<b>Phase II</b> Commences on discharge from hospital Includes supervised exercise and other lifestyle modification interventions Programs may be hospital-based or located at outpatient facilities	<b>Phase III</b> Long term maintenance of lifestyle changes with periodic monitoring of symptoms, risk factors and medications by medical professionals	
<b>World Health Organisation<sup>15,16</sup></b>	<b>Phase I</b> Acute phase	<b>Phase II</b> Reconditioning phase Group program in community centre (basic), hospital (intermediate), or cardiac rehabilitation centre at a major	<b>Phase III</b> Maintenance phase	

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medical centre (advanced)

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**Countries with four-phase programs**

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<b>Austria<sup>17</sup></b>	<b>Phase I</b> Acute hospital stage Early mobilisation & preparation for further rehab	<b>Phase II</b> Supervised program conducted at a cardiac rehabilitation clinic (on either an inpatient or outpatient basis)	<b>Phase III</b> Supervised outpatient cardiac rehabilitation Reinforce results achieved in Phase II	<b>Phase IV</b> Long term cardiac rehabilitation Includes heart groups, sports clubs, home training
<b>Canada<sup>18</sup></b>	<b>Phase I</b> Immediately post-MI or prior to planned cardiovascular intervention Focus on education about diagnosis, CVD risk factors, symptom management, medications and early ambulation	<b>Phase II/III</b> Post-discharge program Provided by hospital or community-based providers in a variety of models, including on-site supervised sessions or home-based		<b>Phase IV</b> Long-term maintenance program Options include continuation in a structured program through hospital or community-based provider
<b>England<sup>19</sup></b>	<b>Phase I</b> Prior to discharge from hospital Includes assessment of cardiac rehabilitation needs & initial lifestyle advice	<b>Phase II</b> Early post discharge period Includes comprehensive assessment of cardiac risk, & continued provision of lifestyle advice & psychological interventions	<b>Phase III</b> Begins from 4 weeks after an acute cardiac event Includes structured exercise sessions to meet the assessed needs of individual patients & continued provision of lifestyle advice Typically conducted as group sessions but individual or home-based programs may be offered	<b>Phase IV</b> Long term maintenance Options include cardiac support group or follow-up through primary care Referral to specialist cardiac, behavioural (e.g. exercise, smoking cessation) or psychological services as clinically indicated.
<b>Ireland<sup>20</sup></b>	<b>Phase I</b> In-patient hospital period (average 2-5 days) Support and information, preparation of discharge activity plan	<b>Phase II</b> Post discharge period prior to commencing formal Phase III program Education & support, begin gradual activity & light-	<b>Phase III</b> Includes exercise prescription, education and counselling	<b>Phase IV</b> Long term maintenance of lifestyle changes Options include community-based exercise programs run by qualified Phase IV gym instructors

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intensity exercise once stable

<b>Northern Ireland<sup>21</sup></b>	<b>Phase I</b> Mobilisation, education and resumption of ADLs	<b>Phase II</b> Immediate post-discharge period Reinforcement of Phase I information	<b>Phase III</b> Includes exercise & education components Supervised program provided in a hospital or community-based setting	<b>Phase IV</b> Long-term maintenance of lifestyle changes
<b>Scotland<sup>22</sup></b>	<b>Phase I</b> Mobilisation & initial education	<b>Phase II</b> Early post-discharge period	<b>Phase III</b> Intermediate outpatient stage Structured group program in community or home-based setting, with high risk patients attending a hospital-based program	<b>Phase IV</b> Long term maintenance of lifestyle changes
<b>South America<sup>23</sup></b>	<b>Phase I</b> From 48 hours after the acute event until the time of hospital discharge Aim to prevent loss of physical capacity	<b>Phase II</b> Post-discharge rehabilitation, approximately 3 months Programs performed in gym or rehabilitation centre Aims to improve functional capacity & achieve risk factor changes	<b>Phase III</b> Early maintenance phase (still some supervision) 3-5 weekly sessions over 3-6 months	<b>Phase IV</b> Late maintenance phase Ongoing and essentially unsupervised
<b>United Kingdom<sup>24</sup></b>	<b>Phase I</b> Education and advice on lifestyle changes	<b>Phase II</b> Home convalescence Encouragement to increase physical activities	<b>Phase III</b> Commences 2-6 weeks following discharge Includes education & exercise components Supervised group rehabilitation in hospital, community or home-based program	<b>Phase IV</b> Long-term maintenance of lifestyle changes Options include programs in fitness centres with trained instructors

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**Wales**<sup>25,26</sup>

**Phase I**

Early contact while still in hospital, referral to cardiac rehabilitation within 2 days of diagnosis

**Phase II**

Following discharge, contacted within 7 days after discharge to offer advice and support and make arrangements for ongoing management

**Phase III**

Structured program in choice of hospital or community facility or home-based program

**Phase IV**

Long term maintenance of lifestyle changes

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Abbreviations: ADLs, activities of daily living; ICU, intensive care unit; MI, myocardial infarction; CVD, cardiovascular disease.

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**Supplementary Table 2.**

	<b>Patient eligibility</b>	<b>Personnel requirements</b>	<b>Patient evaluation prior to program commencement</b>	<b>Prescription and supervision of exercise</b>	<b>Education and psychological interventions</b>	<b>Long-term recommendations</b>
<b>World Health Organisation</b> (emphasis on developing countries) <sup>1</sup>	Acute MI Revascularisation procedures Hospitalisation for unstable angina Cardiomyopathy Rheumatic and congenital heart disease Chronic IHD patients commencing an exercise program	<b>Basic facility:</b> Community health worker (preferably health professional)  <b>Intermediate facility:</b> Physician (trained in cardiology, exercise physiology & testing, cardiac rehabilitation)  Nurse/allied health professional (exercise	Medical & cardiac history Risk factor assessment Physical examination Exercise & functional assessment	<b>Supervision</b> Close medical supervision recommended for medically complex patients with low functionality, however low-intensity, non-equipment based programs can also be utilised with minimal supervision	Heart disease education Risk factor management Nutritional education Smoking cessation Vocational counselling Medication adherence Physical activity counselling	Long-term programs recommended for all, to assist with retaining and reinforcing learned behaviours and providing motivation towards further progress

specialist, physical  
therapist, dietician)

**Advanced facility:**

Cardiologist  
Physical therapist  
Exercise physiologist  
Psychologist  
Dietician/nutritionist  
Occupational  
therapist/vocational  
counsellor

**Americas**

<b>Canada</b>	Acute MI	<b>Medical</b>	Medical & cardiac	<b>Staff: patient ratio</b> 1:5	Risk factor management	Availability of
(Canadian Association	Revascularisation	Medical director	history	for early post-discharge	Psychological	maintenance programs
of Cardiac	procedures	(physician)	Current symptoms	programs, with second	evaluation, education	provided by hospitals or
Rehabilitation) <sup>2</sup>	Stable angina	Nurse	Assessment of cardiac	staff member available	and counselling	community-based,
	Hospitalisation for		risk factors	for emergencies	Nutritional education	allowing for continued
	unstable angina	<b>Allied health</b>	Medication review	1:15 for intermediate	Smoking cessation	participation in a
	Chronic heart failure	Health educator	Physical examination	and maintenance	Physical activity	structured program
	Cardiac valve surgery	Exercise physiologist/	and blood profile	programs that do not use	counselling	

Cardiac transplantation	physiotherapist	Resting ECG	continuous ECG	Vocational counselling
ICD insertion	Dietician	Assessment of physical activity level	monitoring	Medication adherence
	Psychologist/social worker/psychiatrist	Exercise & functional assessment		Stress management
	Occupational therapist			
	Pharmacist			

<b>South America</b>	Acute MI	<b>Medical</b>	Medical & cardiac	<b>Supervision</b>	Risk factor management	Aerobic training should
(South American Society of Cardiology, Inter-American Committee of Cardiovascular Prevention & Rehabilitation) <sup>3</sup>	Revascularisation procedures	Cardiologist or exercise physician	history	Low risk patients -direct supervision for minimum of 6-18 sessions with gradual reduction	Psychological evaluation, education & counselling	be performed at 70-90% or HR <sub>max</sub> (determined by stress test) or 50-80% of HRR.
	Stable angina	Nurse	Assessment of cardiac risk factors	Moderate risk patients - direct supervision for minimum of 12-24 sessions with gradual reduction	Nutritional education	Resistance training performed in sets of 8-15 repetitions.
	Chronic heart failure		Medication information	Greater supervision required for high risk patients	Smoking cessation	Training program should last for 40-60 minutes on at least three days/week supplemented by daily physical activity
	Cardiac valve surgery	<b>Allied health</b>	Physical examination		Physical activity counselling	
	Cardiac transplantation	Physiotherapist	Exercise & functional assessment		Stress management	
	Peripheral artery disease	Psychologist				
	Asymptomatic coronary artery disease	Nutritionist				
	Patients at high CVD risk	Social worker				

<b>United States</b>	Acute MI	<b>Medical</b>	Medical & cardiac	<b>Prescription</b>	Risk factor management	Follow-up program
(American Heart Association, American Association of Cardiovascular & Pulmonary Rehabilitation) <sup>4,5</sup>	Revascularisation procedures	Medical director Registered nurse	history Assessment of cardiac risk factors	Physician (Medicare requirement)	Psychological evaluation, education and counselling	structured around individual exercise prescription
	Stable angina	<b>Allied health</b>	Current symptoms	<b>Supervision</b>	Nutritional education	Identification of
	Cardiac valve surgery	Exercise physiologist/ exercise specialist	Presence of comorbidities	Low risk patients -direct supervision for	Smoking cessation	community-based programs.
	Cardiac transplantation	Physical therapist	Physical examination	minimum of 6-18 sessions.	Physical activity counselling	
		Mental health professional	Resting ECG	Moderate risk patients - direct supervision for	Vocational counselling	
		Dietician	Exercise & functional assessment	minimum of 12-24 sessions.		
		Occupational therapist		High risk patients -direct supervision for		
		Health educator		minimum of 18-36 sessions.		
		Vocational counsellor				

## Asia

<b>Japan</b>	Acute MI	<b>Medical</b>	Medical & cardiac	<b>Staff: patient ratio</b>	Risk factor management	Recommended to
(Japanese Circulation Society) <sup>6</sup>	Revascularisation procedures	Certified cardiac rehabilitation specialist	history Current symptoms	1:20 for sessions conducted by physician.	Psychological evaluation, education	maintain exercise at anaerobic threshold

Stable angina	Nurse	Physical examination & blood profile	1:8 for sessions led by a physiotherapist or nurse.	and counselling
Chronic heart failure				Nutritional education
Cardiac transplantation	<b>Allied health</b>	Resting ECG		Smoking cessation
Peripheral artery disease	Physical therapist	Exercise & functional assessment		Stress management
	Health & fitness programmer			
	Clinical psychotherapist (consultant)			
	Dietician			
	Occupational therapist			
	Pharmacist (consultant)			

### Australasia

<b>Australia</b>	Acute MI	<b>Medical</b>	Medical & cardiac history	<b>Prescription</b>	Heart disease education	Encouraged to maintain regular physical activity and ongoing maintenance of other lifestyle changes
(National Heart Foundation of Australia, Australian Cardiovascular Health & Rehabilitation Association) <sup>7-14</sup>	Revascularisation procedures	Physician	Assessment of cardiac risk factors	Exercise physiologist or physiotherapist (NSW, SA, VIC).	Risk factor management	
	Stable angina	Nurse	Medication review		Psychological evaluation, education & counselling	
	Hospitalisation for unstable angina	<b>Allied health</b>	Physical examination (NSW, QLD, VIC only)	<b>Supervision</b>	Nutritional education	Referred to community based maintenance programs where available
	Chronic heart failure	Exercise physiologist	Blood profile	Health professional	Smoking cessation	
	Cardiac valve surgery	Psychologist	Resting ECG (NSW,	<b>Staff: patient ratio</b>	Physical activity counselling	
	Cardiac transplantation	Dietician/nutritionist				

Pacemaker/ICD insertion	Occupational therapist	VIC only)	1:10 for low-intensity program, second staff member required for moderate-intensity program or larger groups	Vocational counselling (QLD, VIC)
Cardiomyopathy	Pharmacist	Exercise & functional assessment		Stress management (QLD, VIC, WA)
Atrial fibrillation	Indigenous health worker (Aboriginal communities)			
High risk of coronary artery disease				
Other vascular or heart disease	Diabetes educator (SA, VIC only)			
	Vocational counsellor (VIC only)			

<b>New Zealand</b> (New Zealand Guidelines Group, National Heart Foundation of New Zealand) <sup>15</sup>	Acute MI	<b>Medical</b>	Medical & cardiac history	<b>Supervision</b>	Heart disease education	Cardiac clubs and support group networks available throughout New Zealand.
	Revascularisation procedures	Cardiologist/ physician	Exercise & functional assessment	Generally by physiotherapist, other staff should be trained in exercise prescription for cardiac populations.	Risk factor management	
	Stable angina	Nurse			Psychological evaluation, education and counselling	Personal instruction & continued support, continue with low to moderate-intensity exercise
	Hospitalisation for unstable angina	<b>Allied health</b>			Nutritional education	
	Cardiac valve surgery	Physiotherapist			Smoking cessation	
	Exercise physiologist				Physical activity counselling	
	Psychologist				Vocational counselling	
	Dietician				Stress management	
	Occupational therapist (consultant)					

Social worker  
 Maori disease state  
 management nurse

**Europe**

<b>Europe</b>	Acute MI	<b>Medical</b>	Medical & cardiac	<b>Staff: patient ratio</b>	Risk factor management	Encourage involvement
(European Association	Revascularisation	Cardiologist	history	Maximum of 1:10 with	Psychological	in enjoyable leisure
of Cardiovascular	procedures	Nurse	Current symptoms	two staff members	evaluation, education	activities and group
Prevention &	Chronic heart failure		Physical examination	present	and counselling	exercise training
Rehabilitation) <sup>16,17</sup>	Cardiac valve surgery	<b>Allied health</b>	and blood profile		Nutritional education	programs
	Cardiac transplantation	Physiotherapist	Resting ECG	Supervision/ monitoring	Smoking cessation	
	Peripheral artery disease	Exercise physiologist	Cardiac imaging	prolonged with new	Physical activity	
		(consultant)	Assessment of physical	signs and symptoms	counselling	
		Psychologist	activity level		Vocational counselling	
		Dietician	Exercise & functional			
		Occupational therapist	assessment			
		(consultant)				
		Social worker				
		(consultant)				
		Pharmacist (consultant)				

<b>Austria</b>	Acute MI	<b>Medical</b>	Medical & cardiac	<b>Supervision</b>	Heart disease education	Tailored home-based
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(Austrian Cardiac Society) <sup>18</sup>	Revascularisation procedures	Internal medicine and cardiology specialist	history	Sports scientist or physiotherapist (with a diploma in cardiac rehabilitation)	Risk factor management	training program designed by rehabilitation team and patient.
	Chronic heart failure	Nurse	Assessment of cardiac risk factors		Psychological evaluation, education & counselling	
	Cardiac transplantation				Nutritional education	
	Pacemaker/ICD insertion	<b>Allied health</b> Physiotherapist or sports scientist or (with a diploma in cardiac rehabilitation)	Physical examination	Resting ECG	Smoking cessation	Encouraged to join sports club or gym to increase physical activity and become involved in sports
	Peripheral artery disease	scientist or (with a diploma in cardiac rehabilitation)	Exercise & functional assessment		Stress management	
	Stable coronary heart disease	Psychologist (with a diploma in cardiac rehabilitation)			Relaxation program	
	Other surgeries of the heart & big vessels					
	Pulmonary hypertension					
	Electro-physiological intervention	Nutritionist Social worker				
	Haemodynamically stable arrhythmia					
	Sustained ventricular tachycardia or cardiac arrest					

<b>Belgium</b> (Belgian Society of	Acute MI Revascularisation	<b>Medical</b> Cardiologist (specialised	Medical & cardiac history	<b>Supervision</b> Cardiac rehabilitation	Risk factor management Psychological	Not regulated by law
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Cardiology) <sup>19</sup>	procedures	in cardiac rehabilitation)	Current symptoms	specialist must be	evaluation, education	
	Cardiac valve surgery		Assessment of cardiac	readily available if	and counselling	
	Cardiac transplantation	<b>Allied health</b>	risk factors	required (constant	Nutritional education	
	Cardiomyopathy with	Physical therapist	Medication information	medical supervision not	Smoking cessation	
	left ventricular	Psychologist	Physical examination	essential)	Vocational counselling	
	dysfunction	Dietician (consultant)	Exercise & functional		Stress management	
		Occupational therapist	assessment			
		(consultant)				
		Social worker				
<b>England</b>	Acute MI	Not reported	Medical & cardiac	Not reported	Heart disease education	Support for long-term
(Department of Health,	Revascularisation		history		Risk factor management	management of health,
National Institute for	procedures		Current symptoms		Psychological	including community-
Health & Care	Hospitalisation for		Assessment of cardiac		evaluation, education	based programs, leisure
Excellence, National	unstable angina		risk factors		and counselling	centre membership
Health Service) <sup>20-22</sup>	Chronic heart failure		Physical examination		Nutritional education	schemes, and cardiac
	Cardiac valve surgery		and blood profile		Smoking cessation	support groups
	Cardiac transplantation		Resting ECG		Vocational counselling	
	Pacemaker/ICD		Assessment of physical		Medication adherence	
	insertion		activity level		Physical activity	
	Confirmed diagnosis of		Exercise & functional		counselling	
	exertional angina		assessment		Stress management	

<b>France</b>	Acute MI	<b>Medical</b>	Medical & cardiac	<b>Supervision</b>	Heart disease education	Encouraged to maintain
(French Society of Cardiology) <sup>23</sup>	Revascularisation procedures	Cardiologist (preferably qualified in cardiac rehabilitation)	history Physical examination	Rehabilitation team, with cardiologist readily available if required.	Psychological evaluation, education and counselling	regular physical activity and ongoing maintenance of other
	Stable angina	Physical & rehabilitation medicine physician	Resting ECG Cardiac imaging		Nutritional education	lifestyle changes
	Chronic heart failure	Nurse	Exercise & functional assessment		Smoking cessation	Availability of Heart and Health Clubs run by the French Federation of Cardiology
	Cardiac valve surgery	Pneumologist				
	Cardiac transplantation	<b>Allied health</b>				
	Pacemaker/ICD insertion	Psychologist (consultant)				
	Peripheral artery disease	Dietician				
	Thoracic aorta surgery	Occupational therapist				
	Ventricular assist device	Social worker				
	Congenital cardiopathies in adulthood	Psychiatrist				
	High cardiovascular risk					
<b>Germany</b>	Acute MI	<b>Medical</b>	Medical & cardiac	<b>Supervision</b>	Psychological	Options include
(German Federation for Cardiovascular Prevention &	Revascularisation procedures	Cardiologist Physician	history Physical examination	Exercise therapist	evaluation, education and counselling	receiving further intensive rehabilitative
	Chronic heart failure	Nurse	Resting ECG		Nutritional education	treatment funded by

Rehabilitation) <sup>24,25</sup>	Cardiac valve surgery		Cardiac imaging		Smoking cessation	retirement insurance,
	Cardiac transplantation	<b>Allied health</b>	Exercise & functional		Stress management	with a focus on return to
	Pacemaker/ICD	Physiotherapist	assessment			employment
	insertion	Exercise therapist				Community based heart
	Unstable	Psychologist				groups promoting
	myocardiopathy	Nutritionist				physical activity,
	Social worker				education and	psychosocial elements
						are also available

<b>Ireland</b> (Irish Association of Cardiac Rehabilitation) <sup>26</sup>	Acute MI	<b>Medical</b>	Assessment of cardiac	<b>Supervision</b>	Heart disease education	Exercise programs
	Revascularisation	Cardiologist/ physician	risk factors	Low risk patients -direct	Risk factor management	organised by Phase IV
	procedures	Nurse	Exercise & functional	supervision for	Psychological	qualified gym instructors
	Stable angina		assessment	minimum of 6-18	evaluation, education	in community gyms
	Chronic heart failure	<b>Allied health</b>		sessions.	and counselling	
	Cardiac valve surgery	Physiotherapist		Moderate risk patients -	Nutritional education	
	Cardiac transplantation	Psychologist		direct supervision for	Smoking cessation	
	Pacemaker/ICD	Dietician		minimum of 12-24	Physical activity	
	insertion	Occupational therapist		sessions.	counselling	
	Peripheral artery disease	Social worker		High risk patients -direct	Vocational counselling	
	Cardiomyopathy	Pharmacist		supervision for	Stress management	
	Post cerebral vascular	Vocational and smoking		minimum of 18-36	Relaxation program	

disease cessation counsellors sessions.

At risk of coronary artery disease

**Staff: patient ratio**

Minimum of 1:5

**Netherlands**  
(Royal Dutch Society for Physical Therapy)<sup>27,28</sup>

Acute MI  
Revascularisation procedures  
Stable angina  
Hospitalisation for unstable angina  
Chronic heart failure  
Cardiac valve surgery

**Medical**  
Rehabilitation coordinator  
Cardiologist (cardiac rehabilitation specialist)  
Nurse

**Allied health**  
Physical therapist  
Psychologist  
Dietician  
Social worker  
Other professionals as required

Medical & cardiac history  
Current symptoms  
Presence of comorbidities  
Medication information  
Physical examination  
Assessment of physical activity level  
Exercise & functional assessment

**Supervision**  
Physiotherapist, with physician available on call if not present on-site

**Staff: patient ratio**  
Minimum of 1:5 for complex conditions

Heart disease education  
Risk factor management  
Psychological evaluation, education & counselling  
Vocational counselling  
Relaxation program

Maintain physical activity through home walking program, use of regular sports facilities or attendance at certified exercise facilities

**Northern Ireland**  
(Clinical Resource

Acute MI  
Revascularisation

**Medical**  
Nurse

Assessment of cardiac risk factors

**Supervision**  
Staff member with

Risk factor management  
Psychological

Provision of regular supervised training

Efficiency Support Team) <sup>29</sup>	procedures		Exercise & functional assessment	training in exercise physiology and prescription	evaluation, education and counselling	sessions
	Stable angina	<b>Allied health</b>				Individualised exercise prescriptions provided
	Chronic heart failure	Physiotherapist			Nutritional education	for individual home-based training.
		Clinical psychologist			Smoking cessation	
		Dietician		<b>Staff: patient ratio</b>	Vocational counselling	
		Pharmacist		Maximum of 1:5 with 2 trained staff present at all times		
<b>Scotland</b> (Scottish Intercollegiate Guidelines Network) <sup>30</sup>	Acute MI	<b>Medical</b>	Medical & cardiac history	<b>Staff: patient ratio</b>	Heart disease education	Maintain regular low- to moderate-intensity aerobic exercise 3-5 times per week
	Revascularisation procedures	Nurse	Physical examination	No less than 1:10	Psychological evaluation, education and counselling	
	Stable angina	<b>Allied health</b>	Resting ECG			Maintenance exercise programs are available and should be conducted by registered and qualified fitness instructors
	Chronic heart failure	Physiotherapist	Exercise & functional assessment		Nutritional education	
		Psychologist			Smoking cessation	
		Dietician				
		Pharmacist				
<b>United Kingdom</b> (Association of	Acute MI	<b>Medical</b>	Medical & cardiac history	<b>Supervision</b>	Heart disease education	Patients provided with advice for their long-
	Revascularisation	Cardiologist		Physiotherapist, sports	Risk factor management	

Chartered	procedures	Nurse	Assessment of cardiac	scientist, exercise	Psychological	term exercise
Physiotherapists in	Stable angina		risk factors	physiologist, or	evaluation, education	prescription and how to
Cardiac Rehabilitation,	Chronic heart failure	<b>Allied health</b>	Current symptoms	exercise/fitness	and counselling	modify it, as well as
British Association for	Cardiac valve surgery	Physiotherapist	Presence of	instructor with cardiac	Nutritional education	information on
Cardiovascular	Cardiac transplantation	Exercise specialist	comorbidities	disease rehabilitation	Smoking cessation	appropriate local
Prevention &	Pacemaker/ICD	Psychologist	Medication information	qualification	Physical activity	exercise classes and gym
Rehabilitation) <sup>31,32</sup>	insertion	Dietician	Physical examination &		counselling	programs, home exercise
	Peripheral artery disease	Occupational therapist	blood profile	<b>Staff: patient ratio</b>	Vocational counselling	or walking plans.
	Ventricular assist		Exercise & functional	Minimum of 1:5 during		Patients transferred to an
	devices		assessment	early rehabilitation,		appropriately qualified
	Grown-up congenital			decreasing as patients		exercise professional
	heart disease			become more		specialising in
	Other atherosclerotic			independent, with		cardiovascular
	diseases (e.g. transient			minimum of one		prevention and
	ischaemic attack)			qualified staff member		rehabilitation
				(two for early		
				rehabilitation)		
<b>Wales</b>	Acute MI	<b>Medical</b>	Medical & cardiac	<b>Staff: patient ratio</b>	Risk factor management	Choice of individualised
(Welsh Assembly	Revascularisation	Cardiologist (or	history	1:5 for community based	Psychological	self-directed program or
Government, Aneurin	procedures	physician with interest	Assessment of cardiac	programs	evaluation, education	supervised Phase IV
Bevan Health Board) <sup>33,34</sup>	Stable angina	in cardiac rehabilitation)	risk factors		and counselling	program with long term

Chronic heart failure	Nurse	Current symptoms	Generally hospital-based	Vocational counselling	review by primary care.
Cardiac valve surgery		Medication review	programs are for those	Stress management	Option to “self-refer”
Cardiac transplantation	<b>Allied health</b>	Exercise & functional	patients requiring higher		back to Phase III if
Pacemaker/ICD	Physiotherapist	assessment	supervision, while those		required
insertion	Exercise instructor		located in the		
Congenital heart disease	Clinical psychologist		community are for lower		
	Dietician		risk patients.		
	Occupational therapist				
	Pharmacist				

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Abbreviations: MI, myocardial infarction; IHD, ischaemic heart disease; ICD, implantable cardioverter-defibrillator; ECG, electrocardiogram; CVD; cardiovascular disease; HR<sub>max</sub>, maximum heart rate; HRR, heart rate reserve; SA, South Australia (Australian state); VIC, Victoria (Australian state); NSW, New South Wales (Australian state); QLD, Queensland (Australian state); WA, Western Australia (Australian state).

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