Overview of Cardiac Rehabilitation in ESC member countries (OCRE)

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Efficient rehabilitation requires proper planning.

To do this we need health information systems to collect, process and manage relevant [rehabilitation] information.

Dr Rajitha Senaratne

Rehabilitation 2030: A Call for Action, Meeting Report WHO 2017
**Country of the month**

EAPC publishes CVD prevention reports, prepared by National CVD Prevention Coordinators (NCPCs), to facilitate the sharing of best practice and inspire health professionals in the field of preventive cardiology.

**Methodology**

The **first part (2017)** derived from the synthesis of 28 "Country of the Month" reports. It describes extensively phase II programmes Europe-wise, but short-came to represent all countries in every topic (reporting style was not a closed format). Results issued in 2017 can be found at EAPC website.

The **second part (2019)** derived from direct inquiry of national CVD prevention coordinators, mainly covering gaps or doubts from the first part.
Objective: to advance the knowledge about national cardiac rehabilitation (CR) settings in ESC member countries.


I - For whom is Cardiac Rehabilitation (CR) indicated?
Which categories of patients?

- A majority of patients after acute myocardial infarction (AMI), percutaneous coronary intervention (PCI) or cardiac surgery are offered CR.
- High referral rates defined as >30% eligible patients participating in phase II.
Which categories of patients?

- CR services to heart failure (HF) patients are still severely underused across Europe, although there are some good practice examples.
Ways of referral

- Patients are usually referred following a cardiologist assessment from either the discharging cardiac hospital, hospital-based clinics, community cardiologists or primary care physicians.

- So far, Sweden, Denmark and France seem to be the only members that adapted standardized referral via an automatic electronic medical record system. Malta has an online referral, too, working on an optional basis.
Referral

The general referral rates vary strongly across Europe
Uptake

The general uptake rates vary strongly across Europe.
II - Which Cardiac Rehabilitation (CR) programme is provided?
Which phase II components?

- Most OCRE countries agree on components to be delivered in phase II:
  - supervised exercise sessions with graduated circuit training
  - educational programmes including smoking cessation
  - risk factor management
  - nutritional and physical activity counselling
  - psychosocial support

- A minority of countries are not yet capable of delivering the full range of services
Pre-exercise CPET/EST?

- The majority of countries only sometimes perform cardiopulmonary/exercise stress test (CPT/EST) before CT
- Only 7 countries report always performing CPT (Egypt, Slovenia, Germany, Luxembourg, Bosnia and Herzegovina, Netherlands, United Kingdom)
- Republic of Malta reports never performing CPTs
Type of physical exercise training

• Several programmes also offer individual home-based exercise tools, such as the Heart Manual programme, for those not wishing or unable to attend group programmes.
Length

The outpatient programme duration varies between countries
Conversion to phase III

Following discharge from phase II the continuation to lifelong phase III rehabilitation still rates at less than desired numbers.
III - By whom is the Cardiac Rehabilitation (CR) programme conducted?
Team structure Coordination

- The multi-disciplinary structure of the CR team (usually comprising a physician, nurse, physiotherapist, dietician, psychologist and social worker) is relatively consistent across all countries.

- Cardiologists are usually the programme coordinators
Team structure Coordination

- Some countries also may also have rehabilitation specialists in the lead.
Team structure Coordination

- Non-medical coordination (nurses and/or physiotherapists) can also be seen
Education

- Some countries demand specific targeted CR education for the staff.
Education

Only a few countries include CR in the training of young doctors.
IV - Where is the Cardiac Rehabilitation (CR) programme offered?
CR format

- In general, hospital-linked or healthcare-linked CR programmes are more commonly used in the Western and Northern part of Europe.
- On the other hand, programmes at specialised institutions (like sanatoria) are more widespread in the Eastern countries, whereas some countries provide both alternatives.
In the majority of the reporting countries, phase II was available only as an outpatient service.

In Iceland, Germany, Norway, Hungary, France, Italy, Slovenia, Luxembourg, Estonia and Finland both inpatient and outpatient options are available according to patients’ preference, whereas in France and Croatia inpatient rehabilitation is only offered to post-surgical or high-risk patients in particular.

Mainly in-patient models are reported in Eastern countries, such as Poland, Latvia, Lithuania, Kazakhstan and Russia or Ukraine.
CR format

- With the assistance of telephone and/or computer monitoring programmes have been designed for CR at home
V - What is the quality and what are the costs?
Cost for patients, reimbursement

- In most countries CR is provided within the framework of national or regional health services.
- However, some countries also have a significant number of privately-run centres, mainly in the Mediterranean zone.
Audit and quality control

• Certain countries have already implemented specific accreditations attesting whether CR centres meet minimum standards
Surveys and databases

- Periodic national surveys on centre distribution, disease epidemiology, patient demographics and outcomes data have been informative in many countries.
Surveys and databases

- **Electronic database registries** are being increasingly applied throughout Europe: examples include Estonia, Slovenia, Hungary, Finland, Sweden (SWEDEHEART), Spain (R-EURCeCa), The Netherlands (CARDSS study group) and the United Kingdom (NACR).
OCRE part 2 - Survey

The Survey

51 ESC member countries with appointed NCPCs

42 valid survey answers

82% participation rate
Methodology

The second part (2019 the National CVD Prevention coordinators, overcame the issue of missing data), which originated from the results of a pan-European online survey served to take since valid participation required answering all 13 hot CR topics.

- Online survey
- 13 provision and quality indicators from the 6 components from part 1
- All questions mandatory to allow submission
- NCPCs reporting regarding 2018 based in published evidence (URL) or best estimate following national consensus
- Results were combined with data from previous Part 1 for identical topics, when possible for the 51 countries
- If conflicting data, the most recent was preferred
- Outputs in graphs and map cards
- Results were validated by participating National Coordinators prior to publication
Cardiovascular prevention and rehabilitation guidelines

- 67% follow European guidelines (45% ESC, 10% ESC-based, 11% ESC translated)
- 19% follow national guidelines
Major PATIENT-LEVEL barriers to implementation and use of cardiovascular prevention and rehabilitation guidelines

Top 4 obstacles (% OCRE countries)
• low economic status, older age, lack of benefits awareness, multiple comorbidities
Major STAFF-LEVEL barriers to implementation and use of cardiovascular prevention and rehabilitation guidelines

Top 4 obstacles (% OCRE countries)

- Lack of automatic referral system
- No financial incentives
- Lack of multidisciplinary teams
- Time consuming
Major HEALTHCARE-LEVEL barriers to implementation and use of cardiovascular prevention and rehabilitation guidelines

Top 4 obstacles (% OCRE countries)

- Reimbursement issues
- Lack of preventive culture
- Lack of specialized locations
- Geographical issues

Major barriers to implementation of CVD guidelines
HEALTHCARE LEVEL
Implementation of guidance documents

43% countries have guidance documents
OCR part 2

CR phase II uptake rate after myocardial infarction

17 countries: 0-25%
14 countries: 25-50%
7 countries: 50-75%
4 countries: 75-100%
OCR part 2

CR phase II dropout rate after myocardial infarction

22 countries: 0-25%
16 countries: 25-50%
2 countries: 50-75%
2 countries: 75-100%
CR phase II average start time after myocardial infarction

12 countries: 0-2 weeks
23 countries: 2-6 weeks
5 countries: 6-12 weeks
2 countries: >12 weeks

OCR part 2
CR phase II average duration of program after myocardial infarction

14 countries: 0-12 sessions
23 countries: 13-24 sessions
4 countries: 25-35 sessions
1 country: 36+ sessions
Percentage of CR phase II national programmes which rely on inpatient/residential services after myocardial infarction

28 countries: 0-25%
5 countries: 25-50%
4 countries: 50-75%
5 countries: 75-100%
National percentage of phase II CR programmes which are medically coordinated by a cardiologist

- 9 countries: 0-25%
- 8 countries: 25-50%
- 8 countries: 50-75%
- 17 countries: 75-100%
CR mandatory rotation in Cardiology training

8 countries: mandatory
13 countries: non-existent
21 countries: optional
Percentage of CR programmes mainly provided by public funding

10 countries: 0-25%
5 countries: 25-50%
1 country: 50-75%
26 countries: 75-100%
National accreditation program for licensing CR programs

15 countries
National CR electronic database registry

8 countries
Standardization and quality improvement of secondary prevention through cardiac rehabilitation programmes in Europe: the avenue towards an EAPC/ESC Accreditation Program.

A position statement of Cardiac Rehabilitation Section of the European Association of Preventive Cardiology (EAPC)

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To be published at the EJPC
EAPC Preventive Cardiology Centre Accreditation

Recognising and monitoring the quality of cardiovascular preventive care in ESC member and ESC affiliated cardiac societies.

Topic(s): Rehabilitation and Sports Cardiology; Risk Factors and Prevention;

Who can apply?

- Centre/department/outpatient clinic, (public or privately run) providing cardiovascular risk prevention in an ESC member or ESC Affiliate country.
- Must be in operation for a minimum of two years.
- Must have at least one current staff member who is an EAPC Silver or Gold Member.
- Applications shall be submitted online.
- Documents, letters, and applications must be submitted in English.
# Accredited centres by EAPC

We are pleased to share the list of centres already accredited:

<table>
<thead>
<tr>
<th>Centre</th>
<th>Country</th>
<th>Cardiovascular risk management and prevention</th>
<th>Secondary prevention and cardiac rehabilitation</th>
<th>Sports cardiology</th>
<th>Valid until</th>
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<td>European Prevention Center (EPC)</td>
<td>Germany</td>
<td>X</td>
<td></td>
<td></td>
<td>August 2022</td>
</tr>
<tr>
<td>University Medical Center Utrecht</td>
<td>The Netherlands</td>
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<td>X</td>
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<tr>
<td>CRY Centre for Sports Cardiology</td>
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<tr>
<td>Cardiology Clinical Academic Group</td>
<td>St George’s, University of London</td>
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<tr>
<td>Preventive sports medicine and sports cardiology Centre, Munich</td>
<td>Germany</td>
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<td>X</td>
<td>April 2022</td>
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<tr>
<td>Jessa Ziekenhuis Hospital, Hasselt</td>
<td>Belgium</td>
<td></td>
<td></td>
<td>X</td>
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<tr>
<td>Department of Cardiology Interdisciplinary Centre for Sports &amp; Exercise Medicine Inselspital, University Hospital Bern</td>
<td>Switzerland</td>
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<td>April 2022</td>
</tr>
</tbody>
</table>
LET’S GO FOR THE BEST CR IN EUROPE

I Am Always Satisfied with the Best

Winston Churchill