

XII Meeting. State of the Art in

# HEART FAILURE

CLINICAL PRACTICE AND ORGANIZATIONAL MODELS

Venue: Hotel Meliá María Pita, A Coruña

A Coruña 26-27 September 2025



#ACORUÑAHF2025



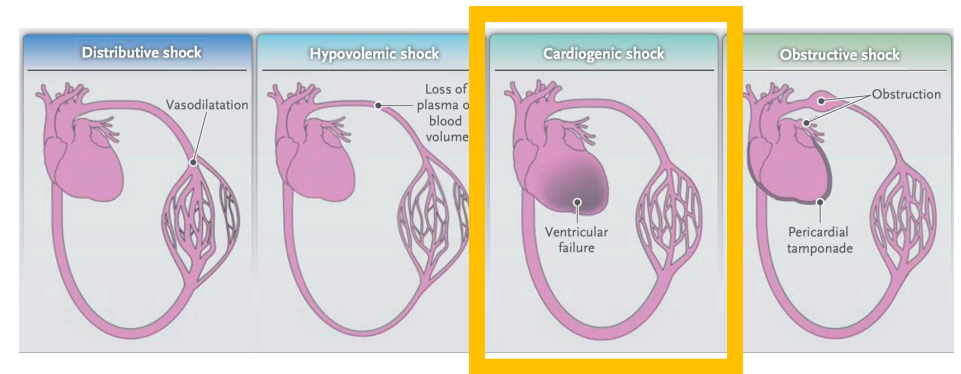
## Cardiogenic Shock: Time, technology and networking Hub and Spoke Model in Galicia

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# Cardiogenic Shock



- **Most severe** clinical manifestation of HF
- It is a syndrome caused by **primary cardiac dysfunction** that results in **inadequate cardiac output** and, consequently, tissue hypoperfusion and hypoxia, which can lead to **multiple organ dysfunction and death**.
- Different causes/phenotypes:
  - **CS-AMI** (most common aetiology)
  - **CS-HF** (increasing)
  - **CS-Post-cardiotomy, secondary CS** (arrhythmias, valves, pericardium)
- **Mortality 50%**

Vincent JL, NEJM 2013; 369: 1726-34

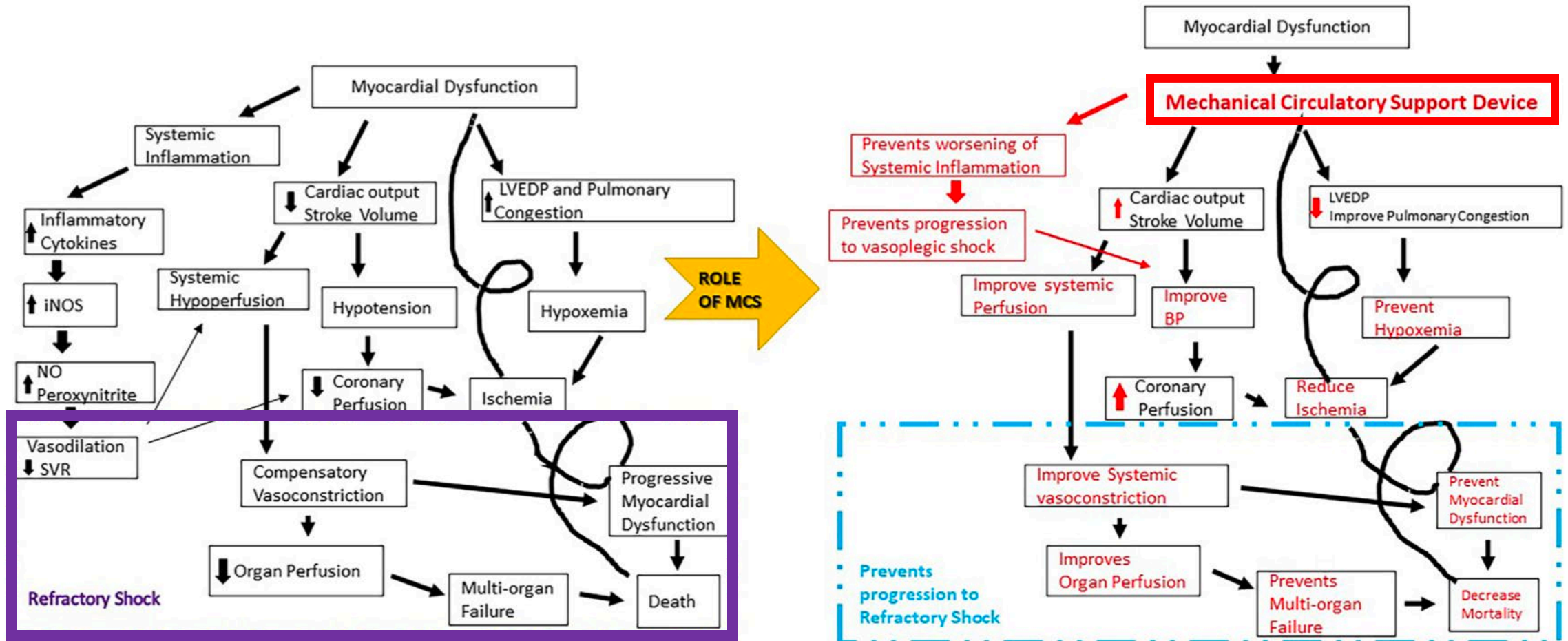


# Cardiogenic Shock Stages

<b>HYPOTENSION</b>	<i>SBP</i> <i>MAP</i>
<b>HYPOPERFUSION</b>	<i>Lactate</i> <i>ALT</i> <i>pH</i>
<b>TREATMENT INTENSITY:</b> Vasoactive Drugs Inotropic Drugs Acute Mechanical Circulatory Support Devices Intra-Aortic Balloon Pump Impella (2.5, CP, 5.0, 5.5, or RP) TandemHeart (LV or RV Support) VA-ECMO	

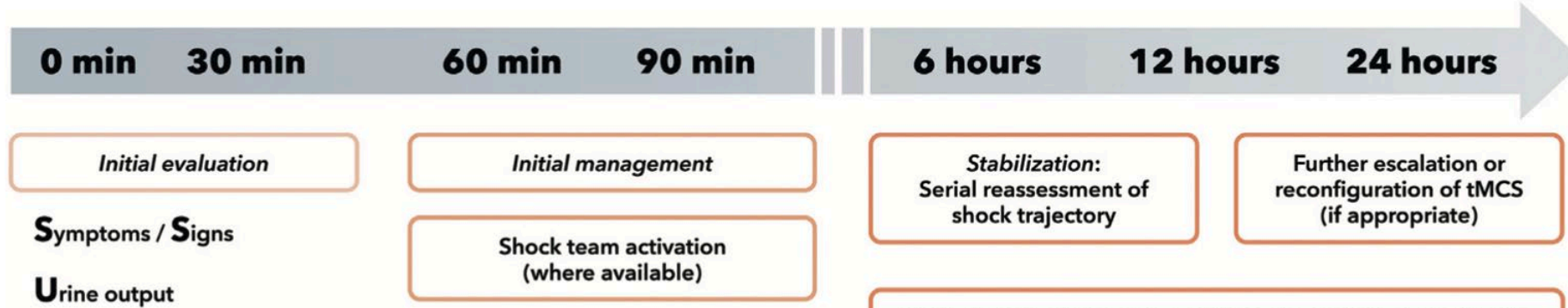
Kapur NK, et al JACC 2022;80:185-198

# Role of MCS in improving pathophysiology of cardiogenic shock

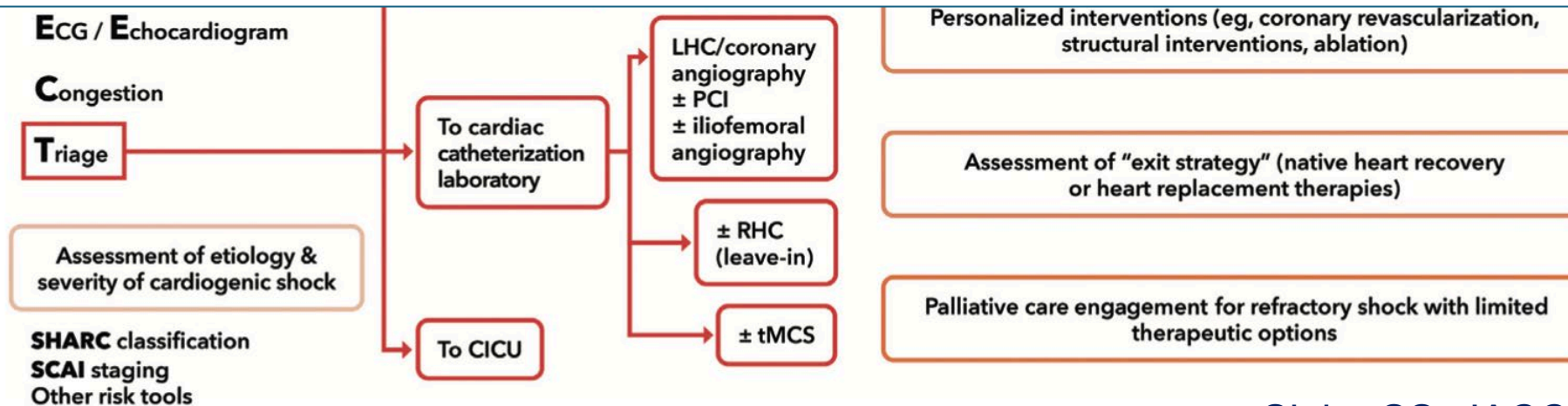


Pahuja M, Curr Cardiol Rep 2023; 25: 213-27

# 24-h roadmap in the evaluation & management of CS SUSPECT CS

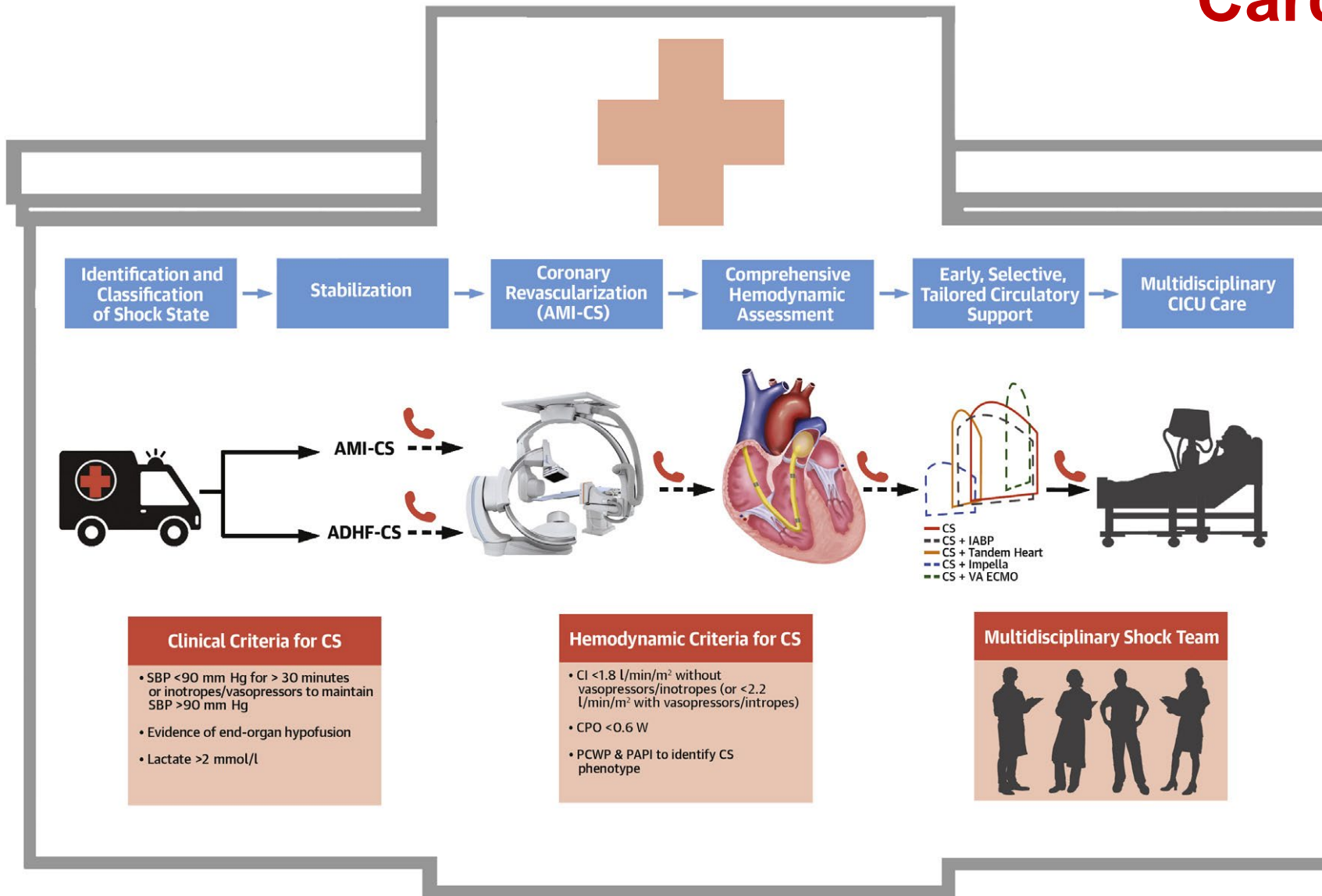


## The Golden Hour: Recognize / Rescue



Sinha SS, JACC 2025 online

# Cardiogenic Shock



Time

Technology

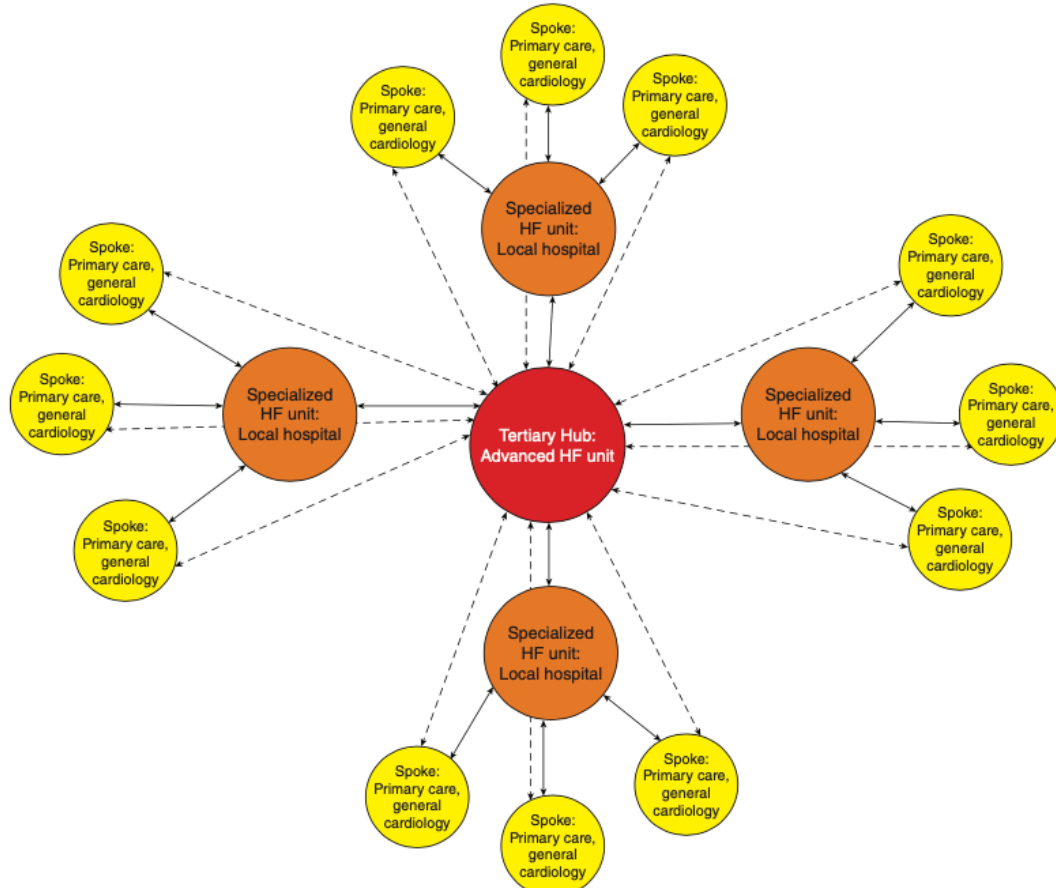
Networking

Kapur NK, et al JACC 2022;80:185-198

- Spoke: Community HF units**
- Primary care provider
  - General cardiologist
  - Day-to-day management of HF patient
  - Education
  - Patient triage and timely access to care

- Specialized HF unit**
- Intermediate HF care
  - Multidisciplinary team
  - HF knowledge and expertise
  - Patient education programmes
  - Training of referring physicians/primary care
  - Access to cardiac diagnostics
  - Pharmacologic assessment, optimization and titration of evidence-based therapies
  - Evaluation/implantation of device therapies (e.g. ICD, CRT)
  - Interventional cardiology
  - Cardiac surgery
  - Short-term mechanical circulatory support
  - Risk factor assessment
  - Specialist consultation
  - Access to clinical trials

- Tertiary Hub: Advanced HF unit**
- Community and specialized services, plus:
  - Access to highly specialized care providers
  - Advanced diagnostics and interventions (e.g. mechanical circulatory support, transplant)
  - Provide mentorship to community hub



European Journal of Heart Failure (2018)  
doi:10.1002/ejhf.1236

## HFA POSITION STATEMENT

# Advanced heart failure: a position statement of the Heart Failure Association of the European Society of Cardiology

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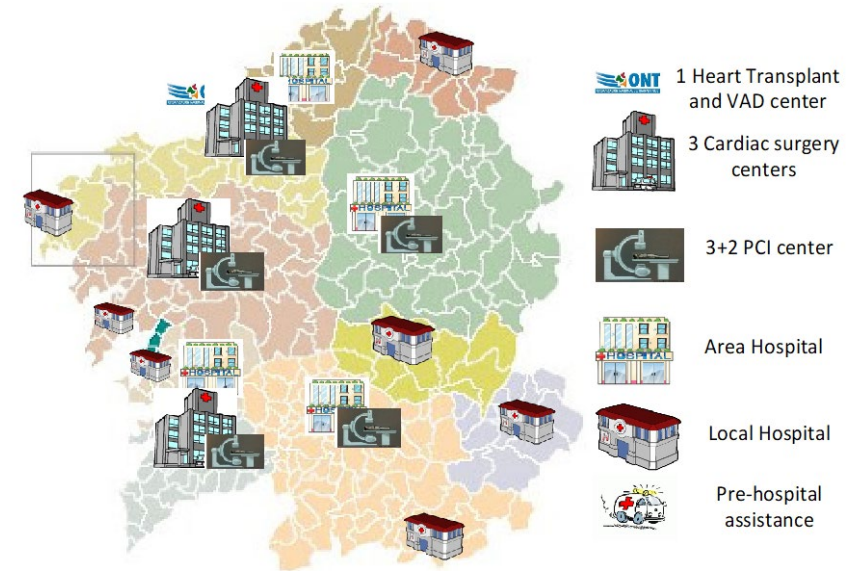
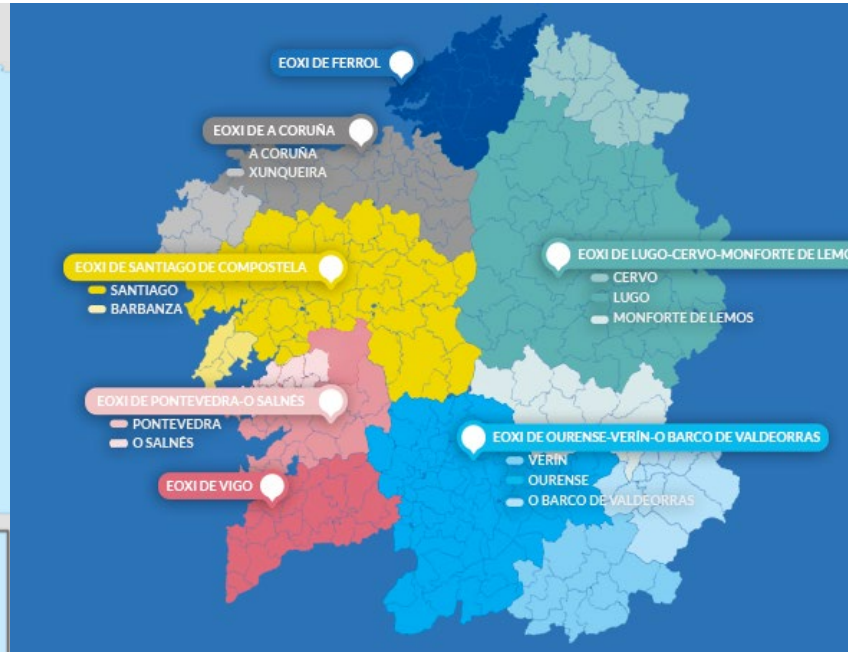
# Hub & Spoke Model of Care

Crespo-Leiro MG et al. Eur J Heart Fail 2018, 20:1505-1535

# Hub and Spoke Model of Care in Galicia



# Hub and Spoke Model of Care in Galicia



2,7 mil population  
7 health care areas

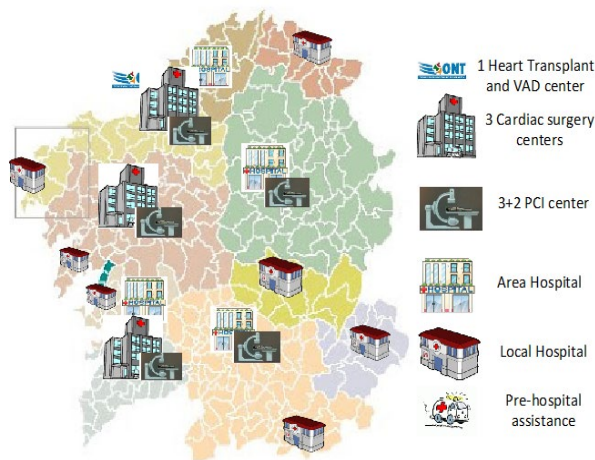
- 15 hospitals
- 3 cardiac surgery centers
  - 3 + 2 PCI centers
  - 1 advanced HF (HT & VAD)

**SERGAS: Servicio Galego de Saude**



# CS Centers / CS Teams SC (ISHLT)

**Tier 1**  
**Tier 2**  
**Tier 3**  
**Tier 4**



**Table 1A** Tiers of Shock Centers and Shock Team Composition.

	Tier 4	Tier 3	Tier 2	Tier 1
Description	Non-PCI capable	24/7 Cath Lab Can do tMCS (IABP, Impella)	Tier 3 + CT surgery VA-ECMO Dedicated CCU	Tier 2+: LVAD/HT
CS goals	Identify CS Pharmacologic support and transfer	Identify and Stabilize CS +/- PCI +/- Initiate tMCS Identify refractory CS and transfer	Identify, Stabilize, and Manage CS PCI Initiate, Manage, and Escalate tMCS Bridge to Recovery Identify Refractory CS and Transfer	Identify, Stabilize, and Manage CS PCI Initiate, Manage, and Escalate tMCS Bridge to Recovery LVAD, OHT
Shock Team Needed	No	Yes (if patients will stay after tMCS implantation) +/- Consultation with Tier 2/1 Team	Yes	Yes
Shock Team Members		IC Intensivist	IC Intensivist HF CTS	IC Intensivist HF CTS
Notes	Needs relationships w/higher tier centers	Wide variation Needs relationships w/Tier 2		

Kanwar J, Heart Lung Transplant 2024

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*The strength of a chain is measured by its weakest link.*

**Success is teamwork.**