IRC 2021

CONGRESSO NAZIONALE

16•17•18 DICEMBRE

NUOVE LINEE GUIDA 2021: RIANIMAZIONE CARDIOPOLMONARE POST-LOCKDOWN

IRC | Italian Resuscitation Council

Rimini IRC 2021 CONGRESSO NAZIONALE 16•17•18 DICEMBRE POST-LOCKDOWN

RESUSCITATION 2021

Fotografia dell'Italia

Esiti a lungo termine e riabilitazione

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UNIVERSITY OF TRIESTE

EUROPEAN RESUSCITATION COUNCIL GUIDELINES 2021

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European Parliament

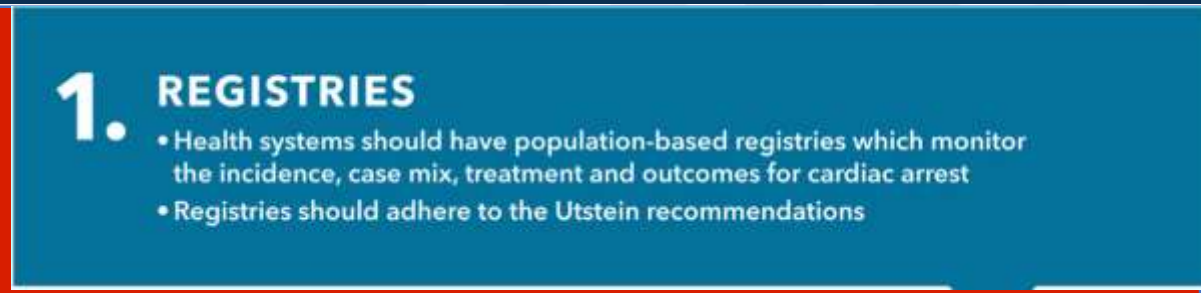
14 June 2012

Declaration of EU parliament

European cardiac arrest awareness week

Registries

- EuReCa 29 countries
- OHCA registries in 70% EU countries
- Incidence 67-170 per 100K inhabitants
- Survival 0-18%



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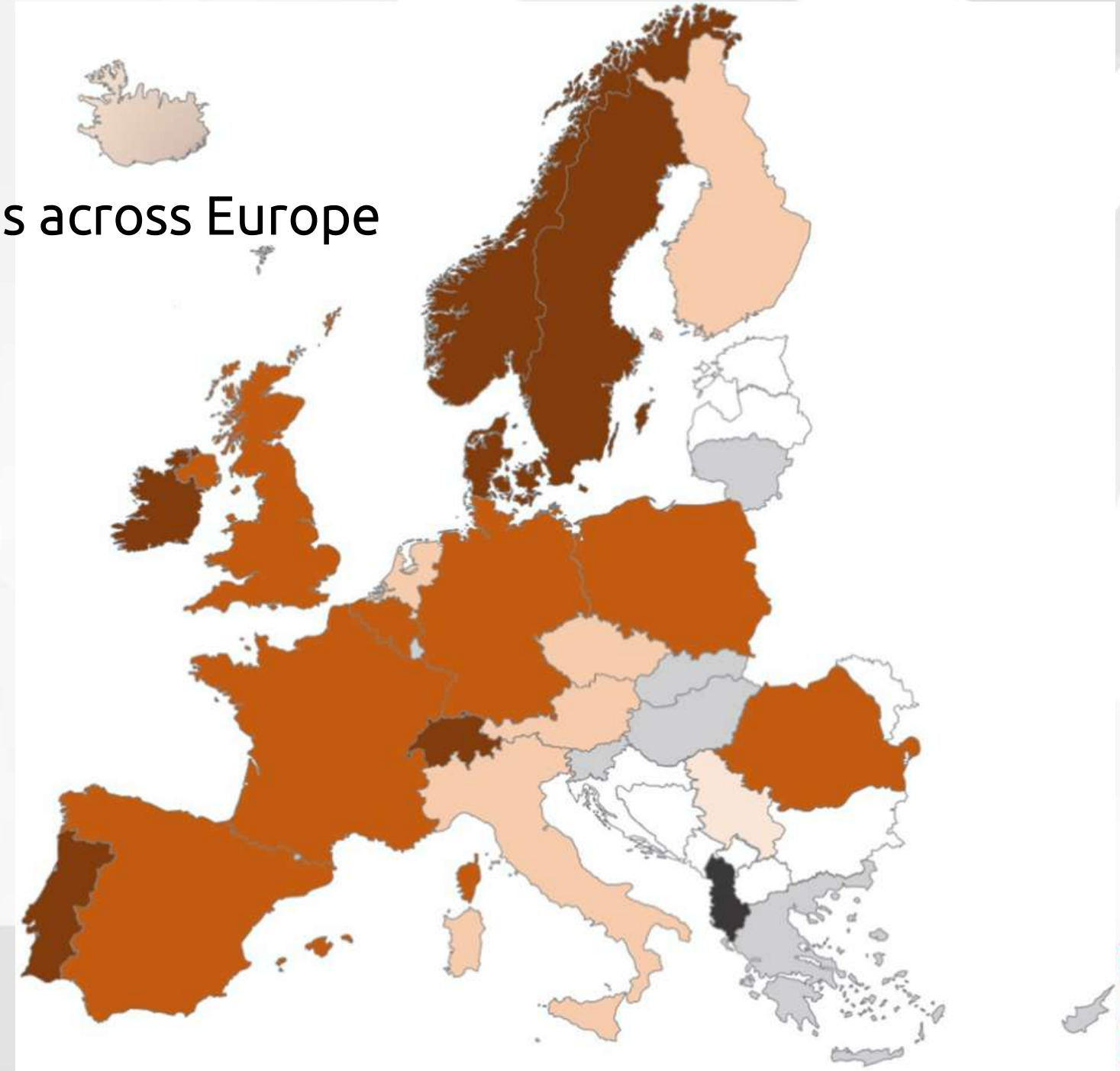
National registries across Europe



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SURVIVAL

8%
EURECA TWO

11.7%
Yan S.
2020;24:61
11.7%

<7%
Pan Asian
registry

12%
AUS-ROC

11%
US

EuReCa One 10.3% (1.1-30.8)
EuReCa TWO 8% (0-18)

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OUTCOME

Factors:
- gender
- initial rhythm
- previous comorbid
- event location
- socioeconomic deprivation
- ethnicity

Availability of specific post resuscitation measures (e.g. PCI, TM, CAC) may contribute to variability in survival

- public health policy
- societal network

Different EMS

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Analysis of survival

Robust collection of Key data elements

Utstein guidelines

- categorization of patients
- utstein comparator group

+ 30% Eureca

+ 40% Eureca TWO

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Long term survival

Utstein-style template

Survival

Neurological status

- Cerebral performance category scale (CPC)
- Modified ranking scale (mRS)

QoL

4. LONG TERM OUTCOMES

- Clinicians should be alert to longer term consequences of cardiac arrest and refer for specialist support where required

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Scale di valutazione

modified Ranking scale

0	Nessun sintomo
1	Nessuna disabilità significativa malgrado i sintomi: è in grado di svolgere tutte le attività e i compiti abituali
2	Disabilità lieve: non riesce più di svolgere tutte le attività precedenti, ma è autonomo/a nel camminare e nelle attività della vita quotidiana
3	Disabilità moderata: richiede qualche aiuto nelle attività della vita quotidiana, ma cammina senza assistenza
4	Disabilità moderatamente grave: non è più in grado di camminare senza aiuto né di badare ai propri bisogni corporali
5	Disabilità grave: costretto/a a letto, incontinente e bisognoso/a di assistenza infermieristica e di attenzione costante
	TOTALE

CPC scale

	Attenzione: valutare la possibilità che il paziente sia anestetizzato, curarizzato o intubato prima di calcolare il grado di *performance* cerebrale (utilizzare "come se"...)
CPC 1	Buone capacità cerebrali: cosciente, sveglio, in grado di lavorare, potrebbe avere qualche lieve deficit neurologico o psicologico.
CPC 2	Incapacità intermedia: cosciente, funzioni cerebrali sufficienti per un'autonomia nel quotidiano. In grado di lavorare in ambiente protetto.
CPC 3	Incapacità grave: cosciente, dipende da altri per le attività quotidiane a causa di deficit neurologici importanti. Si può andare da uno stato ambulatoriale ad una severa demenza o paralisi.
CPC 4	Coma o stato vegetativo. Tutti gli stati di coma senza la presenza dei criteri di morte cerebrale. Incoscienza, se appare sveglio (stato vegetativo) non ha nessuna interazione con l'ambiente circostante; può avere gli occhi aperti spontaneamente ed un ciclo sonno/veglia.
CPC 5	Morte cerebrale: apnea, areflessia, EEG silente, ecc.

Measurement of long-term recovery in cardiac arrest patients

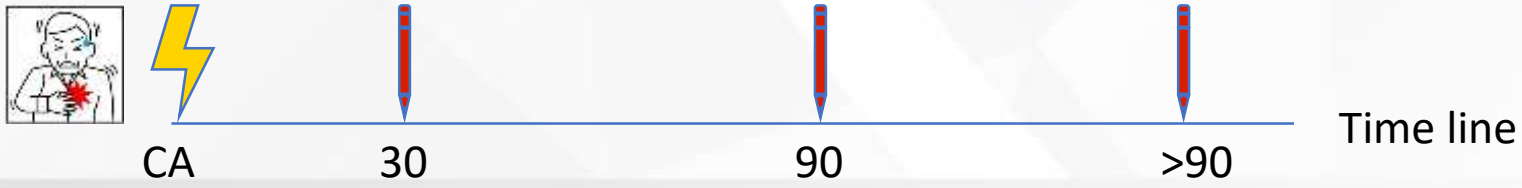
89%

RCT no mention on recovery,
none HRQoL or societal partecipation
Whitehead,Resuscitation 2015

COSCA

survival 30 days or HD
neurological function 30 days or HD (mRS)
HRQoL 90 days
later HUI-3, EQ-5D-5L, SF36

P-COSCA



Neurological outcome

Functional outcome scales

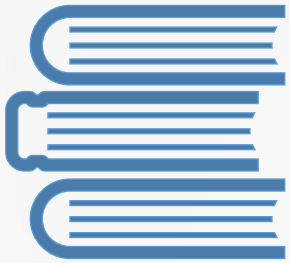
- Cerebral Performance Category scale (CPC)
- modified Rankin Scale (mRS) or the
- Glasgow Outcome Scale/Extended (GOS/GOSE)

Good vs Poor

WLST

YES a poor neurological **outcome <10%** (*Irish National Cardiac Arrest Register, 2018*)

NO more common severe brain injury



Roman-Pognuz E, Elmer J, Guyette FX, Poillucci G, Lucangelo U, Berlot G, Manganotti P, Peratoner A, Pellis T, Taccone F, Callaway C. **Multimodal Long-Term Predictors of Outcome in Out of Hospital Cardiac Arrest Patients Treated with Targeted Temperature Management at 36 °C.** J Clin Med. 2021 Mar;10(6).

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Neurological outcome

HIBI HIBI on survi

Neurocognitive impairment

Early all, 40% at distance

Cognitive domains
episodic/long-term memory
attention/processing speed
executive functions.

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5. POST CARDIAC ARREST REHABILITATION

- There is a need for more research and greater provision of post resuscitation rehabilitation services

Rehabilitation

Planning

Smania N, et al. Factors predicting functional and cognitive recovery following severe traumatic, anoxic, and cerebrovascular brain damage. J Head Trauma Rehabil 2013

After a mean of 78 days, 45% of patients with anoxic brain injury were able to return home.

While anoxic patients had poorer recovery than other groups, they also had worse baseline cognitive impairment and functioning.

van
Lau
s
treat

Estraneo A, Moretta P, Loreto V, et al. Predictors of recovery of responsiveness in prolonged anoxic vegetative state. Neurology 2013;

even patients with improved consciousness remained severely neurological impaired at two years follow-up

Rehabilitation

Nolan JP, Soar J, Cariou A, et al. European resuscitation council and european society of intensive care medicine guidelines for post-resuscitation care 2015: Section 5 of the European Resuscitation Council Guidelines for Resuscitation 2015.

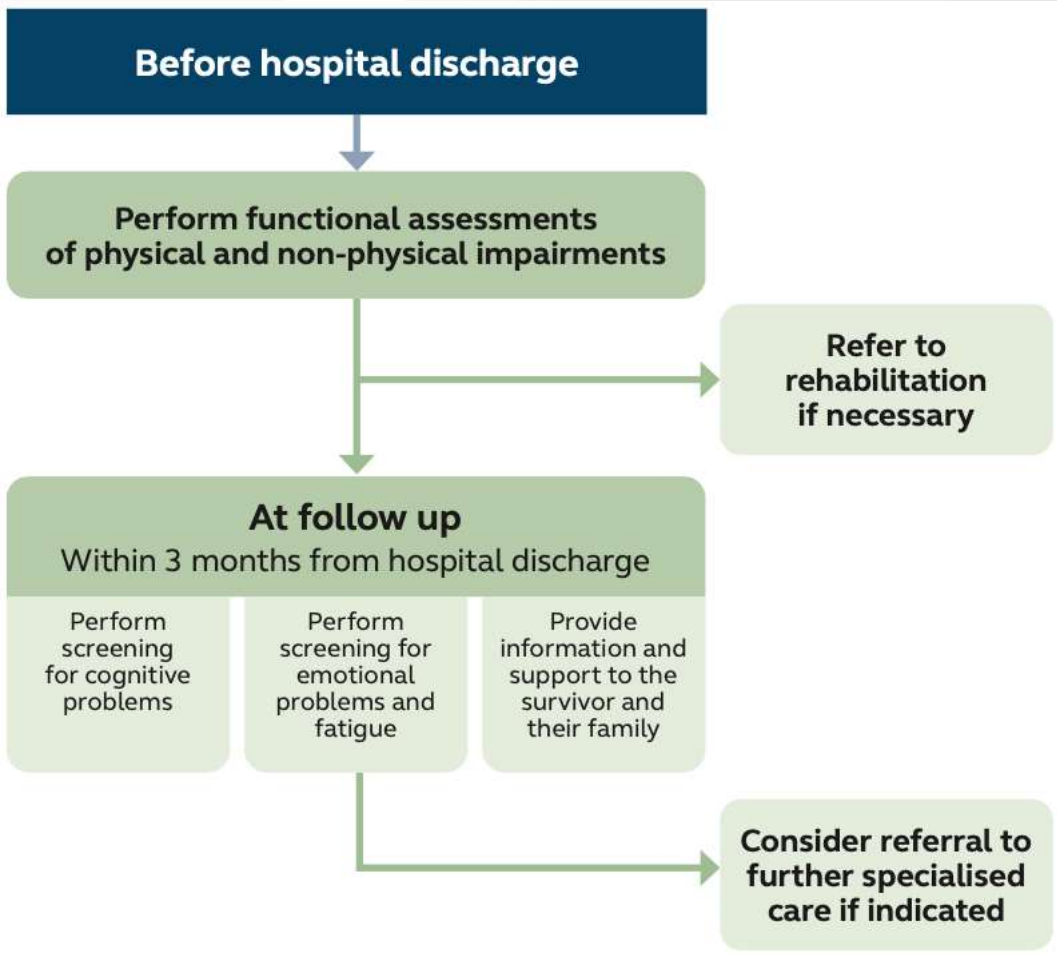
the need for rehabilitation may not be recognised during the acute hospital stay

- No comprehensive evaluation of the types or numbers of rehabilitation across Europe
- Reflect a need for more comprehensive reporting on interventions
- It is also of note that no paediatric rehabilitation studies were identified.

compared with the control group.

Verbunt JA, Heugten CM. Early neurologically focused follow-up after cardiac arrest is cost- effective: A trial-based economic evaluation. Resuscitation 2016;106:306.

Flow chart riabilitazione



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