

**Brief name of the working group:** INFECTION.

**Full name of the working group:** NOSOCOMIAL INFECTION AND ANTIBIOTIC TREATMENT IN PATIENTS WITH EXTRACORPOREAL LIFE SUPPORT.

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**BACKGROUND I. Why is this topic important.**

- Nosocomial infection is a frequently reported adverse effect in patients with ECLS, and one of the main causes of death in patients receiving either respiratory or circulatory extracorporeal support (Bizzaro MJ et al. *Pediatr Crit Care Med* 2011 - Schmidt M, et al. *Clin Infect Dis* 2012).
- Evidence-based interventions on nosocomial infections have a direct positive impact in outcomes (Pronovost P et al. *NEJM* 2006.).
- There is a need for standardized definitions with specific diagnosing criteria for nosocomial infections. Evidence-based protocols for prophylaxis and empiric treatment of these complications are lacking (Abrams et al. *ICM* 2020).
- Significant pharmacokinetic alterations have been reported in patients receiving ECLS. This hinders notably the adequate treatment of these complications. (Shekar et al. *AJRCCM* 2022).
- Very recent studies have evidenced an important role of intestinal microbiota dysbiosis in the clinical evolution of the critically ill patients. Patients with ECLS are at high risk of suffering these alterations but no published research has been done to date on this important and innovative field. (Wei R et al. *Am J Transl Res.* 2021).
- Currently, no scientific society is directly covering enough the clinical scenario of a critically ill patient with ECLS suffering a nosocomial infection. The same is true for antibiotic treatment in patients with ECLS.

**BACKGROUND II. Why a working group on this topic.**

- ECLS is a broad concept and ELSO-EuroELSO are the referent societies on this topic. Infection is a small specific clinical area within ECLS, though also a very wide concept. Creating a working group would facilitate research collaboration, would help to unify different clinical experiences, would be the perfect instrument to organize scientific events...and all these been done with bridges with other Societies/institutions also involved in some fashion with the concept of infection of the critically ill patient.

## **GENERAL OBJECTIVE OF THE GROUP**

Be the referent scientific group in the field of nosocomial infection and antibiotic treatment in the critically ill patient needing ECLS.

## **SPECIFIC OBJECTIVES OF THE GROUP**

1. Coordinate investigation projects about nosocomial infection and antibiotic treatment in the critically ill patient with ECLS.
2. Endorse and give publicity to solid scientific projects on the topic.
3. Generate guidelines on prevention, diagnosis, prophylaxis, and empiric treatment of nosocomial infection in the critically ill patient with ECLS.
4. Create and maintain collaboration with other Scientific Societies and other entities related with the topic.
5. Organize courses/sessions/lectures, webinars, podcasts & journal clubs on the topic.

## METHODS I. Working group structure, members and general activities

<b>WG COORDINATOR EUROELSO STEERING COMMITTEE MEMBER</b>	Coordinates and follows up all the group activities. Links with EuroELSO Steering Committee Sets frequency, content, and format (virtual vs presential) of WG meetings. Representative of EuroELSO with other related Societies/entities, together with EuroELSO President. Evaluates activity of WG members in the last WG meeting of the year. Organizes WG activities during EuroELSO Congress, in coordination with Scientific Committee WG members. Evaluates candidates to be included in the group. Proposes investigations, courses, webinars.
<b>EUROELSO SCIENTIFIC COMMITTEE MEMBER (adults)</b>	Links with EuroELSO scientific Committee Organizes WG activities during EuroELSO Congress, in coordination with Scientific Committee WG members. Evaluates activity of WG members in the last WG meeting of the year. Proposes investigations, courses, webinars. Evaluates candidates to be included in the group. Evaluates proposals of activities from WG members. Coordinates with EuroELSO Secretariat/PCO the organization of activities. Evaluates WG participation in the annual congress.
<b>EUROELSO SCIENTIFIC or STEERING COMMITTEE MEMBER (peds)</b>	Links with EuroELSO scientific/steering Committee Organizes WG activities during EuroELSO Congress, in coordination with Scientific Committee WG members. Evaluates activity of WG members in the last WG meeting of the year. Proposes investigations, courses, webinars. Evaluates candidates to be included in the group. Evaluates proposals of activities from WG members. Coordinates with EuroELSO Secretariat/PCO the organization of activities. Evaluates WG participation in the annual congress.
<b>WORKING GROUP MEMBERS*</b>	Participates in WG meetings (at least in one/year). Participates actively in WG activities (Congress, courses, webinars, investigations). This participation is mandatory to be part of the group. Proposes investigations, courses, webinars and other scientific activities. There would not be a maximum of WG members. Receives an annual certificate of being part of the group.

\*To become a working group member, it is mandatory to:

- be individual ELSO member.
- participates actively in the group.

## METHODS II. Working methodology and continuous evaluation

- The WG will meet either virtually or in person, with a minimum frequency of once a year. The WG coordinator would decide whether to increase the frequency of meetings, with a maximum of 4 /year. The WG coordinator will decide the format (virtual/in person).
- In the first WG meeting of the year, specific year goals will be set.
- During a year the WG must had accomplished:
  - Participation in the annual EuroELSO Congress.
  - One webinar/podcast/journal club.
  - Guidelines should be updated in accordance with evidence.
  - At least one research project must be active.
- Each project (research/webinar/course/meeting) should be well defined and the goals to be achieved during the year should be specified.
- In the last WG meeting of the year, the specific year goals will be evaluated.
- In this last WG of the year, each WG member should present a dossier with the work done during the year.
- In the last Steering Committee meeting of the year, the coordinator of the group will specify the work being done by the group during the year. It should be approved by  $\frac{3}{4}$  positive votes of the SC members to continue WG tasks.