

## Special Abstract

### INSPIRED Multicenter data summary of Pediatric respiratory and cardiac ECMO from India

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INSPIRED (Indian network of Specialist Pediatric intensivists for research Education and data) Participating institutions (in alphabetical order)	7. Kokilaben Ambani Hospital, Mumbai Preetha Joshi, Vinay Joshi, Rao
1. Apollo childrens hospital, Chennai Indira Jayakumar, Rajeshwari, Suchitra ranjit	8. Medanta medicity, Gurgaon, Maninder S Dhaliwal, Rajeshkumar Sharma
2. BLK Superspeciality hospital, Delhi Praveen Khilnani, Rachna Sharma, Ajay Kaul, Naresh Lal	9. Narayana Hrudalya hospital, Bengaluru Abhijit Bagde, Anilkumar Sapare, Binoy Chattuparambil, Muralidhar Krishna
3. Fortis memorial research institute, Gurgaon Vikas Taneja, Krishan chugh	10. PD Hinduja hospital, Mumbai Soonu Udani, Rekha Solomon
4. Indra prastha Apollo hospital, Delhi Nameet jerath, Anita Bakshi	11. Ridhivinayak hospital, Mumbai Pranay Oza, Venkat Goyal.
5. Jaypee hospital, Noida, Vishal Singh, Rajesh Sharma	12. Sir Ganga ram hospital, Delhi Anil Sachdev, Dhiren Gupta, Raja Joshi
6. Krishna Institute of Medical sciences Hyderabad, Nanda Kishore, Suneel Pooboni	13. SPS Hospital, Ludhiana Mehak Bansal, Vikas Bansal

#### Introduction :

The use of ECMO in the recent times has been increasing in India significantly. According to one source, there are more than 54 centres doing ECMO with more than 600 cases per year. Despite that information, reporting of ECMO data is grossly inadequate. ECMO Society of India has been making efforts to collect the data and conduct training programs on regular basis. With the initiation of Pediatric critical care wing of Indian Academy of Pediatrics, a new initiative called INSPIRED has been much helpful in collecting data from all those doing Pediatric and neonatal ECMO in India.

**Aim :** To collect data from ECMO centers offering ECMO services to children in India for past 7 years.

**Methods :** A standard data sheet was sent to all ECMO program directors and was filled by all participating centres for patients receiving ECMO therapy from Jan 2011-Jan2017 for children under 16 years of age. Data sheet requested following information:

#### Correspondence:

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Demographic data, PRISM III score, indication of ECMO, respiratory or cardiac, type of ECMO (VV: Venovenous or VA: Venoarterial), diagnosis, duration of ventilation, duration of ECMO, survival from ECMO, survival to discharge, complications if any. Preliminary data received till Jan 31 2017 is collated and presented in this abstract.

**Results :** Total of 86 cases of ECMO were reported. 52 children underwent respiratory ECMO from 9 institutions with a 40% survival. Total of 34 children underwent cardiac ECMO from 8 centers with 73.5% survival. From ECLS 2016 registry information 121 adults patients reported by a single center (Ridhi Vinayak hospital, Mumbai) from India with facility for ECMO transport, which provided ECMO therapy to adult patients at hospitals all over India with overall 40.4% survival rate.

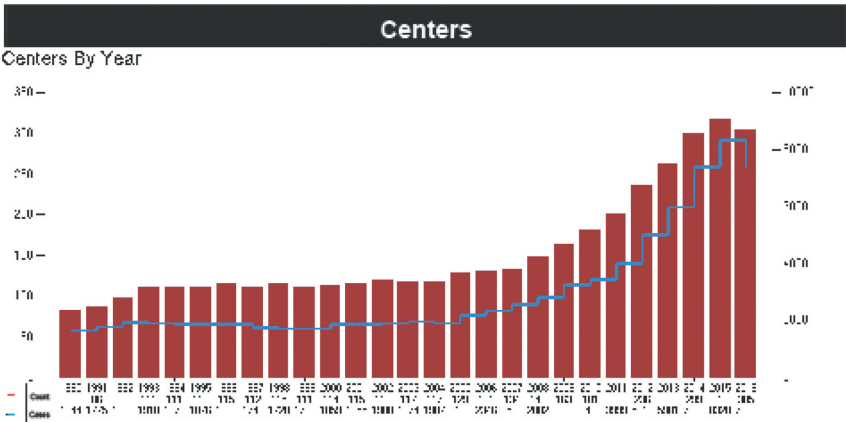
**Discussion :** Numbers of pediatric ECMO are less than that of adults (86 vs 111). However overall mortality seems to be lower than that of adults. Pediatric cardiac ECMO survival of 73.5% appears to be better compared to overall ELSO data. Pediatric respiratory ECMO survival (40%) seems to be less than overall survival of 55% by ELSO registry figures 2017.

**ECLS Registry Report**  
International Summary  
January, 2017



Extracorporeal Life Support Organization  
2800 Plymouth Road  
Building 300, Room 303  
Ann Arbor, MI 48109

Overall Outcomes					
	Total Runs	Survived ECLS		Survived to DC or Transfer	
<b>Neonatal</b>					
Pulmonary	29,942	25,205	84%	21,948	73%
Cardiac	7,169	4,643	64%	2,938	40%
ECPR	1,532	1,028	67%	627	40%
<b>Pediatric</b>					
Pulmonary	8,070	5,424	67%	4,632	57%
Cardiac	9,362	6,404	68%	4,758	50%
ECPR	3,399	1,958	57%	1,414	41%
<b>Adult</b>					
Pulmonary	12,346	8,242	66%	7,157	57%
Cardiac	10,982	6,251	56%	4,466	40%
ECPR	3,485	1,382	39%	993	28%
<b>Total</b>	<b>86,287</b>	<b>60,537</b>	<b>70%</b>	<b>48,933</b>	<b>56%</b>



Our expectations in near future include streamlining training programs, Integration, Simulation, reporting and sharing information and dealing with tropical problems. Thorough understanding and practice of ECMO will help in bringing the costs of the equipment down with innovations and developing support to

work together.

**Conflict of Interest:** None

**Source of Funding:** None

Table 1: Pediatric Respiratory ECMO

Institution	Total no (52)	Survivors (21) (40.4%)
Apollo childrens,Chennai	11	8
Apollo Indraprastha,Delhi	1	0
BLK Superspeciality,Delhi	3	1
KIMS Hyderabad	11	1
KB Ambani hospital ,Mumbai	5	1
Ridhi vinayak and Hinduja hospital, Mumbai	9	5
Fortis MRI,Gurgaon	1	0
SGRH, Delhi	10	5
Medanta,Medicity ,Gurgaon	1	0

Table 2: Pediatric cardiac ECMO

Institution	Total no (34)	Survivors (25) (73.5%)
Apollo childrens,Chennai	1	1
JayPeehospital,Noida	2	1
BLK Superspeciality,Delhi	1	1
KIMS Hyderabad	3	1
KB Ambani hospital ,Mumbai	21	16
Narayan hrudalaya,Bengaluru	1	1
SPS hospital, Ludhiana	1	1
Medanta,Medicity ,Gurgaon	4	3

Table 3: ECMO adult data

<b>Institution</b>	<b>Total no (121)</b>	<b>Survivors (49) (40.4%)</b>
Ridhi vinayak Hospital ,Mumbai		
Respiratory	96	39
Cardiac	20	09
E CPR	05	01

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