VARIABILITY OF LENGTH OF THERAPY FOR POSSIBLE EARLY ONSET SEPSIS(EOS) & LATE ONSET SEPSIS (LOS) IDENTIFYING OPPORTUNITIES FOR ANTIBIOTIC STEWARDSHIP IN THE NEONATAL INTENSIVE CARE UNIT(NICU)

I. Kopsidas¹, E. Bouza², T. Gouvas³, A. Kaffe⁴, K. Karachristou⁵, E. Kourkouni¹, G. Mavrogeorgos⁶, E. Roilides⁷, T. Siahianidou⁸, V. Soubasi⁷, N. Spyridis⁹, E. Stratiki¹⁰, M. Theodoraki¹¹, P. Triantafyllidou¹², A. Tsintoni¹³, G.C. Tsopela¹, M. Tzaki¹⁴, T.E. Zaoutis¹.

¹Center for Clinical Epidemiology and Outcomes Research, CLEO, Athens, Greece.²General Children's Hospital of Athens "Agia Sofia", B NICU, Athens, Greece.³University Hospital of Ioannina, NICU, Ioannina, Greece.⁴University of Thessaly, School of Medicine, Department of Neonatology-NICU, Larissa, Greece.⁵General Children's Hospital of Athens "Agia Sofia", A NICU, Athens, Greece.⁶General Children's Hospital of Athens "P. & A. Kyriakou", NICU, Athens, Greece.⁷Aristotle University of Thessaloniki, 2nd Department of Neonatology- Papageorgiou Hospital, Thessaloniki, Greece.⁸National and Kapodistrian University of Athens, NICU of the First Department of Paediatrics, Athens, Greece.⁹National and Kapodistrian University of Athens, Pediatric Infectious Diseases Unit- 2nd Department of Pediatrics, Athens, Greece.¹⁰General District Hospital Athens "Alexandra", NICU, Athens, Greece.¹¹General Hospital of Nikaia and Piraeus "Aghios Panteleimon", NICU, Athens, Greece.¹²National and Kapodistrian University of Athens, NICU- 3rd Department of Paediatrics- University General Hospital "Attikon", Athens, Greece.¹³University General Hospital of Patras, NICU, Rio, Greece.¹⁴General - Maternity District Hospital «Helena Venizelou», NICU, Athens, Greece.

ESP18-0756

BACKGROUND

Antibiotic resistance is a global public health threat and is associated with increased morbidity, mortality and healthcare costs. Antimicrobial stewardship is considered a core action in reducing antimicrobial resistance and is being advocated by all major health organizations globally. We sought to describe prescribing patterns in neonates treated for possible EOS and LOS and negative cultures

METHODS

15 public NICUs participated (Sep 2016 - June 2017) and captured demographic, clinical, laboratory and antibiotic use data. The first 15 antibiotic initiations for unique patients were recorded each month. Cases with negative cultures were selected.

- Length of therapy (LOT) was calculated for each unit and described by median and IQR.
- Antibiotic consumption was measured for the first 7 days of each episode of EOS or LOS. Possible EOS was defined as one occurring within the first 2 days of life.

RESULTS

1330 cases of possible EOS were recorded with a median LOT of 7 days (IQR:5-7.5). Median LOT, at the unit with the lowest value, was 3 days(IQR:2-4) while at the one with the highest 11 (IQR:9-15)

260 cases of possible LOS were identified with a median LOT of 7 days (IQR:5-7.5). Median LOT, at the unit with the lowest value, was 4 days (IQR2-5) while at the one with the highest 10 (IQR6-13).

Median antibiotic consumption was:

Glycopeptides	EOS: 2.7% (range:0-12.6%)	LOS: 21.7% (range:8.8%-34.8%)
Meropenem	EOS: 0.4% (range:0-4.8%)	LOS: 8.6% (range:0-16.8%)
Cefotaxime	EOS: 1.2% (range:0%-12.5%)	LOS: 2.2% (range:0-26.8%)

CONCLUSIONS

Benchmarking data on the variability of antibiotic use for common neonatal and pediatric indications is critical in identifying targets for antibiotic stewardship. We identified significant variability in the duration of therapy for EOS and LOS in the NICU. We are currently utilizing these data to design an intervention to improve antibiotic use in the NICUs nationally.