NHS
Lancashire and South Cumbria
Integrated Care Board

MLCSU Clinical

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Prescribing Tip For Information

Antimicrobial susceptibility reports: Changes in sensitivity interpretation

Antimicrobial susceptibility testing is a commonly used method for evaluating resistance to antibiotics and determining the treatment plan for patients. The sensitivity test results of the bacterial isolates are based on standardised laboratory investigations. The standards are provided by the European Committee on Antibacterial Susceptibility Testing (EUCAST). EUCAST continually review the accuracy of the lab test results. Until now, the microbiology laboratory has reported an antimicrobial to be either: *Sensitive* "*S*" or *Resistant* "*R*" however recent reviews have resulted in changes to the lab interpretation of the test results.

New EUCAST Antimicrobial Interpretation Definitions

"S" – Susceptible, standard dosing regimen: A microorganism is categorised as "susceptible" when there is a high likelihood of therapeutic success using a standard dosing regimen of the antibiotic.
"I" - Susceptible, increased exposure: A microorganism is categorised as "susceptible, increased exposure" when the antimicrobial dose or frequency must be **increased** * to achieve therapeutic success.
"R" - Resistant: A microorganism is categorised as "resistant" when there is a high likelihood of therapeutic failure even when there is increased exposure/dose.

The increased dose should be only used for patients with normal renal and liver function. If a patient has renal and /or liver impairment, the highest available dose for the patient's organ function should be applied. (Check for appropriate doses in BNF, SPC, renal drug handbook or discuss with your pharmacist)

Microbiology LTHTr Guidance: How does it affect your antibiotic prescription?

- For antibiotics reported as "S", prescribe the standard dosing regime and those reported as "R", do not use.
- **For antibiotics reported as "I": Susceptible, increased exposure, refer to the following doses (for patients with normal renal & liver function).**

ANTIBIOTIC	ROUTE OF ADMINISTRATION	PATIENT AGE	RECOMMENDED DOSE IF ANTIBIOTIC SENSITIVITY REPORTED AS "I" for patient with normal renal and liver functions
Amoxicillin	Oral	Neonate 7 days to 28 days	30mg/kg (max 125mg) TDS
		Child 1 month – 4 years	30mg/kg TDS
		Child 5 – 11 years	30mg/kg (max 1g) TDS
		Child 12 years – Adult	1g TDS
Co-amoxiclav (ONLY for *Haemophilus influenzae*)	Oral	Child 2 – 23 months	0.3mL/kg BD of 400/57 oral suspension
		Child 2 – 6 years (13 – 21kg)	5mL BD of 400/57 oral suspension
		Child 7 – 12 years (22 – 40kg)	10mL BD of 400/57 oral suspension
		Child 12 years – 17 years (41kg and above)	10mL TDS of 400/57 oral suspension
		Adults	Co-amoxiclav 625mg TDS combined with Amoxicillin 500 mg TDS
Ciprofloxacin	Oral	Neonate	15mg/kg BD
		Child	20mg/kg (max 750mg) BD
		Adult	750mg BD
Levofloxacin	Oral	Adults	500 mg BD
Doxycycline	Oral	Adults	Loading dose 200 mg STAT followed by 100 mg BD, or 200 mg OD

For the LTHTr microbiology guidance see: Explanation of the changes in sensitivity interpretation for GPs