

A Survey of Antimicrobial Use in Children at the National Referral Hospital, Solomon Islands

Dr Betty Taotao-Wini

MMED II

Introduction

- Resistance to antimicrobials is a serious threat worldwide
- Data from developing countries is limited where burden of infectious diseases is high
- Rational use of antimicrobials is essential

Introduction

- Studies demonstrates that programs aimed at promoting rational antimicrobial use (AU)
 - Improve antibiotic prescription and management
 - Improve patient outcomes
 - Reduced costs

Schentag 1993, Carling 2003, LaRocco 2003, Ansari 2003, Ruttimann 2004

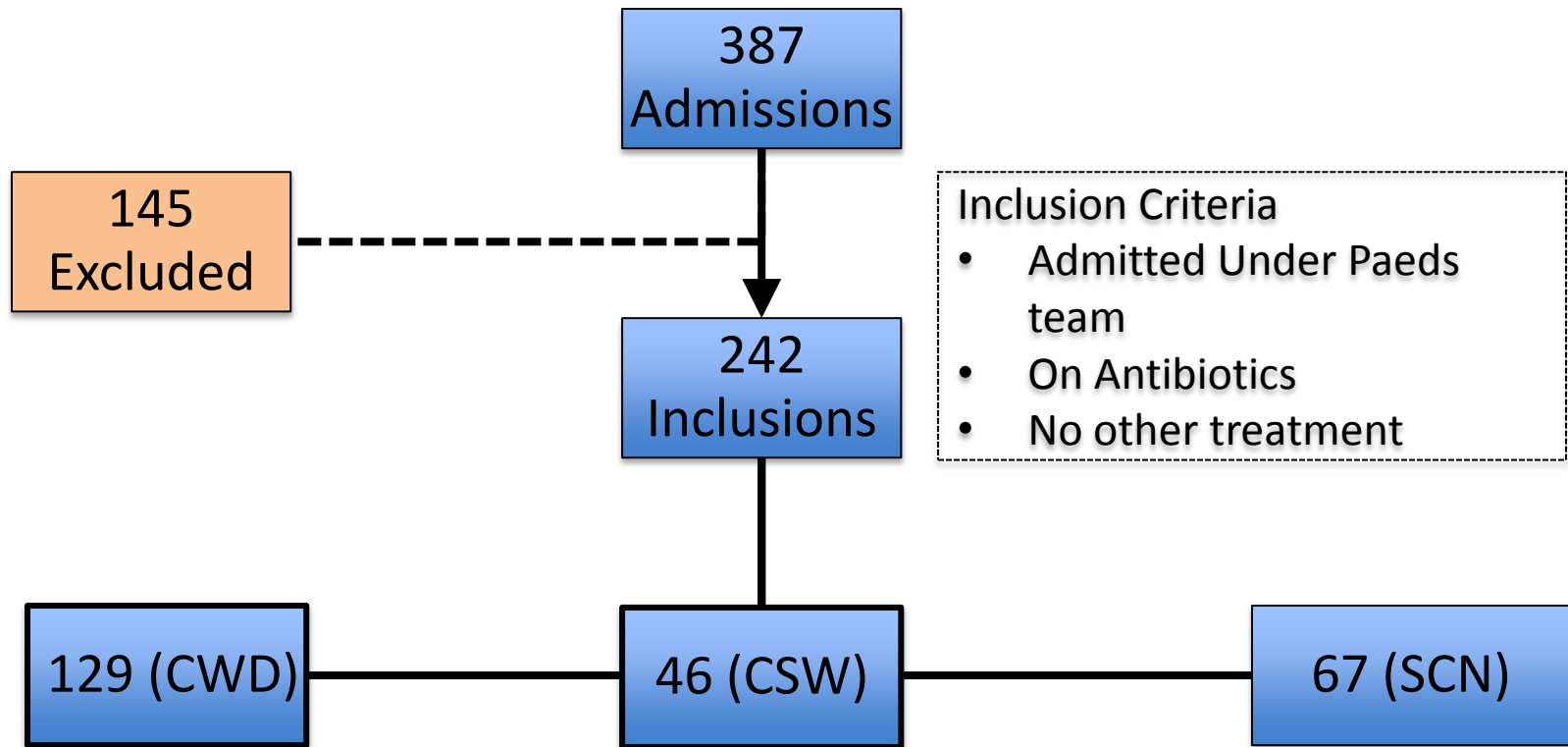
Aim

- To assess the prevalence of antimicrobial use (AU)
- To determine the appropriateness of AU

Methodology

- The survey on AU was conducted
 - November 2013 to Jan 2014
 - Preapproval policy for 3rd generation cephalosporin effective at time of this audit

Methods



Methods

- Medical records were reviewed to collect
 - Rationale for AU
 - Infection sites
 - Infection onset location

Description of Cases Surveyed

	Neonates	Infants	1 - 4	5 - 12	Totals
Gender					
Females	37	25	27	14	103
Males	39	45	42	13	139
Total	76	70	69	27	242

Antibiotics Prescribed by Ward

Medication	Wards			
	SCN	CWD	CSW	Total
Amoxicillin	0	3	1	4
Ampicillin	52	56	20	128
Chloramphenicol	5	36	10	52
Ceftriaxone	0	4	0	4
Cloxacillin	5	19	13	37
Erythromycin	0	1	0	1
Flucloxacillin	0	1	0	1
Metronidazole	0	1	0	1
Benzathine penicillin	0	1	0	1
Benzyl penicillin	0	1	0	1
				330

Frequency of prescribing antibiotics

Number of Abx Prescribed per patient	Frequency	(%)
1	87	37%
2	103	43%
3	32	13%
4	13	5%
>4	3	1%
Total	238	

Overview of Prescribing Practices

Measure	Frequency	Percentage
Number of Patients Surveyed	387	
Number of Patients (%) prescribed antimicrobials	242	62.5
Number of Patients (%) prescribed single antimicrobials	87	37
Number of Prescriptions (%) for parenteral antimicrobials	217	89.7
Number of Prescriptions (%) with indications recorded in notes	131	54.1

Discussion

- High prevalence of antimicrobial use among our hospital inpatients (62.5)%
- Study participants
 - 190 (80%) one or more antimicrobial drug (AD)
 - 48 (19%) more than two AD
- Commonly prescribed antimicrobials
 - Ampicillin
 - Chloramphenicol
 - Cloxacillin

Discussion

- Underestimation of use of oral antimicrobial
- Infrequent use of 3rd generation cephalosporin

Conclusion

- My study found that
 - Prevalence of antimicrobial use is high (62.5%) which is in keeping with a similar study at three major centres
 - PMGH
 - APH
 - LHC

Joshua 2013

Limitation

- Lack standardization of diagnosis
- Data entry
- Missing data

Acknowledgements

- Dr Nasi
- Dr Subhi
- Team at the PMGH
- Prof Duke
- Dr Ripa
- Lyndes, Lynnold & Lysandra