Antibiotic Stewardship & Electronic Prescribing
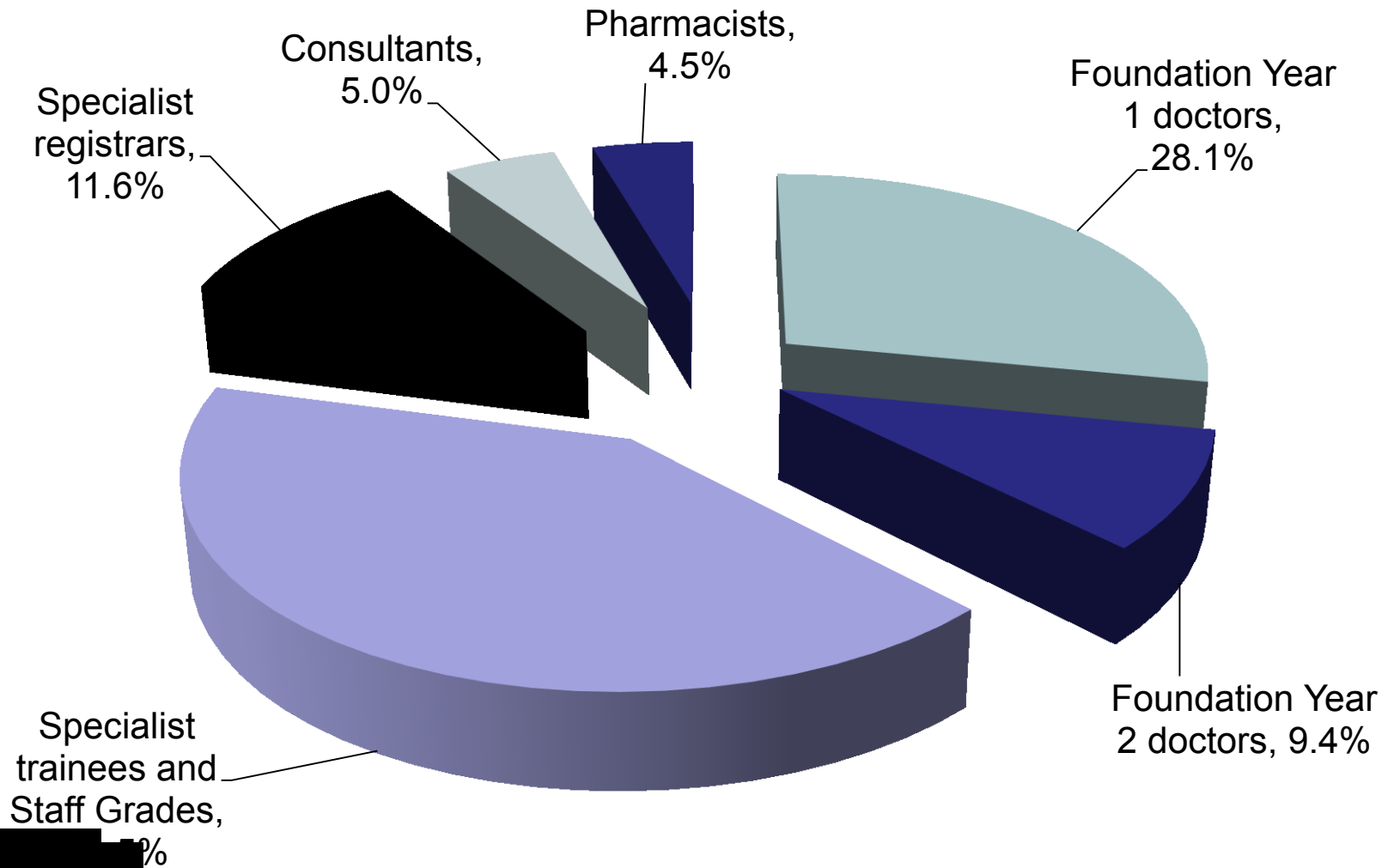
On behalf of the EP team

Dr Chris Green

Director of Pharmacy

October 2014

Who is prescribing?

Pie chart showing prescribing distribution:

- Foundation Year 1 doctors, 28.1%
- Foundation Year 2 doctors, 9.4%
- Specialist trainees and Staff Grades, [partially obscured]%
- Specialist registrars, 11.6%
- Consultants, 5.0%
- Pharmacists, 4.5%

NUR.COCH (D/LIVE.MIS/96/COCH) - EP LOCUM ACCESS

Enter/Edit Inpatient Medication Order

Patient	EDITESTPATIENT,SIX	Acct #	IP0030084/12	Loc	IMT	U #	CC01015121
User Name	EP LOCUM ACCESS	Ag/Sx	46/M	Wd	IMT	Reg	27/03/12
Consultant	DENISE TEST CONSULTANT	Status	ADM IN	Bed	6	DIS	

Ord Type REG   Regular (SCH) Medication

Med PIPTAZ4.5

(Med,Dose,Route,Frequency,Schedule,Par,PRN Reason,Total Doses)

PIPERACILLIN WITH TAZOBACTAM 4.5 G INJECTION

Packaging VIAL

Clinical Indication   RESPHAP   RESP: hosp. acquired pneumonia

Dose   4.5   (G   )

Edit Drug Rx Queries

Do NOT delay antibiotic prescription for:

    Severe sepsis / Septic shock   Bacterial Meningitis
    Neutropenic sepsis   Community Aquired Pneumonia
    Necrotising fasciitis   Confirmed or suspected C. difficile

Antibiotic prescriptions for other indications MUST be verified with ST3 (Registrar)
or above for all in-patients.

Verified Use with: _____   Please specify: _____

Extra Information: _____

Pending E

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Verified Use with: REGISTRAR   Please specify: DR K JONES

Extra Information:

Pending E

Clinical indication

- Optional / mandatory

- Free type / coded

  - CAP / .

- Choice of set up

  - Indication / organ system

  - Audit

Clinical Indication Lookup

Select [   ]

	Mnemonic	Name
1	RESPASPN	RESP: aspiration pneumonia
2	RESPBRONC	RESP: bronchiectasis
3	RESPCAP1-2	RESP:CURB 1-2 comm acq pneum
4	RESPCAP3-5	RESP:CURB 3-5 comm acq pneum
5	RESPHAP	RESP: hosp. acquired pneumonia
6	RESPIECOPD	RESP: infective exacerb. COPD
7	RESPLRTI	RESP: LRTI
8	RESPLUNG	RESP: lung abscess
9	RESPOTHE	RESP:OTHER state in Dose Instr
10	RESPPCPP	RESP: PROPHYLAXIS PCP
11	RESPPCPT	RESP: TREATMENT PCP
12	RESPPROPH	RESP: PROPHYLAXIS longterm
13	RESPTB	RESP: tuberculosis

Cultures

Yes/No Confirmation

You have selected SEPSIS as the Clinical Indication. Have BLOOD CULTURES been taken BEFORE initiating treatment?

Yes   No

Order sets

- CURB scores
- Doxycycline for LRTI
  - stat loading dose / five day course
- IV to oral switches
  - Clarithromycin
  - Piperacillin & tazobactam

Default course lengths

- An opportunity - and a dilemma
- Lots of options, lots of discussion
- Oral meds – 5 days
- IV meds – 72 hours, then 48
- Hard / soft stop options
  - "The computer stopped it"

Message

This medication has a DEFAULT STOP DATE please check it is appropriate

Ok

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(Med,Dose,Route,Frequency,Schedule,Par,PRN Reason,Total Doses)

PIPERACILLIN WITH TAZOBACTAM 4.5 G INJECTION

Packaging VIAL

Clinical Indication RESPHAP   RESP: hosp. acquired pneumonia

Dose   4.5   (G   )

Route   IV   INTRAVENOUS   Taper

Freq   TDS (08,14,22)   Daily @ 0800,1400,2200

Schedule SCH   PRN Rsn   Chrg on Admin?

Start Date 17/04/12   Start Time 1800   Total Doses 15

Stop Date   22/04/12   Stop Time

Edit Dose Instructions?   Query ✓ E

                                                           NF Qry   V
                                                           Pending E

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Ord Type `REG`   Regular (SCH) Medication

Med `PIPTAZ4.5`

(Med,Dose,Route,Frequency,Schedule,Par,PRN Reason,Total Doses)

PIPERACILLIN WITH TAZOBACTAM 4.5 G INJECTION

Packaging `VIAL`

Clinical Indication `RESPHAP`   RESP: hosp. acquired pneumonia

Dose `4.5`   (`G`)

Route `IV`   INTRAVENOUS   Taper `  `

Freq `TDS (08,14,22)`   Daily @ 0800,1400,2200

Schedule `SCH`   PRN Rsn `                ` Chrg on Admin? `  `

Start Date `17/04/12`   Start Time `1815`   Total Doses `    `

Stop Date `        `   Stop Time `    `

Edit Dose Instructions?   `Y`   Query `✓ E`

FOR REVIEW AFTER 5 DAYS ON 23/04/12

NF Qry `  V`

Pending `  E`

Big data

- Compared to paper
- Coding of drugs and indications
- PP audits
  - Full data set
- Huge amounts of data
  - Maybe too much ….and noise
- DDDs / DOTs
- Real time data

Data management.	
Extraction	• Drug / Dose / Frequency / Route • Order type – when required, once-only, regular • Indication • Start date / time & Stop date / time • Consultant / Speciality • Ward / Unit • Prescriber and grade
Cleansing & sorting	• Prescriptions never administered to the patient • Removal of paediatric patients • Stat doses
Calculation	• Frequency of prescription • Drug choices per indication • Number of doses given
Reporting	• Course length • Prescribing patterns • IV course lengths • DDDs / DOTs • Patients using antibiotics that require TDM • Formulary compliance (manual validation)

Prescribing support

Formulary support

Rule Processing

Formulary choice for oral candidiasis: FLUCONAZOLE 50mg daily

-AVOID fluconazole in PREGNANCY, PORPHYRIA & DYSPHAGIA

-Fluconazole interacts with critical medications including:
 WARFARIN, CICLOSPORIN, ANTIEPILEPTICS see BNF for full list

-NYSTATIN can be used in these circumstances

Conclusions

- Many opportunities
- Dilemmas
- Decision support
- Data and research
- Real time and retrospective
- Alignment of coding / nomenclature

Thank you for listening

Any Questions?

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@drchrisgreen