Can inter-professional teaching be effective with large class sizes?

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Background

- **Clinical Microbiology is a component of both the Undergraduate Medical & Pharmacy curricula**
  - **Infective Endocarditis is covered separately in both**

Medicine (Year 2/3)
Semester 2 (Jan-Apr)

Foundations in Microbiology

Foundations in Pathology

Cardio-respiratory

Pharmacy (Year 2)
Semester 2 (Jan-Apr)

Immunology

Infection

Sensory & Protective Structures

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Challenges with Inter-professional Teaching

- **Large class sizes and disparity in numbers between student cohorts**
  - When combined student numbers total ~390
  - ~340 medical students *versus* ~ 50 pharmacy students

- **Having an appropriate teaching venue**
  - requires a large flat space or multiple small flat spaces
  - requires block-booking putting pressure on teaching space

- **Coordinating the appropriate multi-disciplinary teaching staff**
  - finding a suitable date for all is difficult

- **Time consuming commitment i.e. preparing material, lengthy teaching sessions**

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Our Teaching Objective

To develop an efficient and effective format for small group inter-professional education (IPE) for large classes that promoted collaboration.

The Learning Outcomes

Choose an appropriate empiric antibiotic regimen for a patient with infective endocarditis (**common competency**)

Calculate appropriate initial doses of antibiotics and complete a drug chart accordingly (**common competency**)

Advise on the monitoring required for safe and effective use of the antibiotics (**common competency**)

Interpret therapeutic drug monitoring (TDM) levels to make appropriate adjustments to the antibiotic doses (**common competency**)

Outline the role of the multi-disciplinary team in the management of a patient with infective endocarditis (**collaborative competency**)

Demonstrate the ability to work in a multidisciplinary team to optimise the care of patients with infective endocarditis (**collaborative competency**)

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The Logistics

- The session took place in the main examinations hall

- There were **four** sessions, lasting 1 hour 30 minutes
  - First session began at 09.00 h with a 30 min break between each

- Staff included: Consultant Clinical Microbiologists, Clinical/Pharmacy Practice Senior Lecturers, Lecturers, Clinical Partners (Antimicrobial Pharmacist) (**Total:** 10)

- Each session had 12-13 groups seated at large round tables
  - 7 : 1 (Medical students: Pharmacy students)
  - Each table had: a workbook, a “clicker” and a flip-chart & marker
  - Students rotated the role of scribe and spokesperson

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The Patient- A 68 year old male

- Admitted from home
- Unwell, hot and sweaty and light headed x 2 weeks
- No past medical history, non smoker, usually very active
- Elective cystoscopy 3 weeks previously in the same hospital
- Lives at homes with his wife. No recent antibiotics.
- Penicillin allergy

On Examination:

- Temperature 38.5^{o}C
- BP 110/20 mmHg
- Heart rate: 90 bpm
- Respiratory rate: 16/min
- Examination: no obvious source of infection

- Chest X ray, plain film of his abdomen and ECG are normal
- As he is clinically stable, but is admitted for observation
- Three sets of blood cultures and an MSU are sent from the ED
- Decision is made not to commence antibiotic therapy right now

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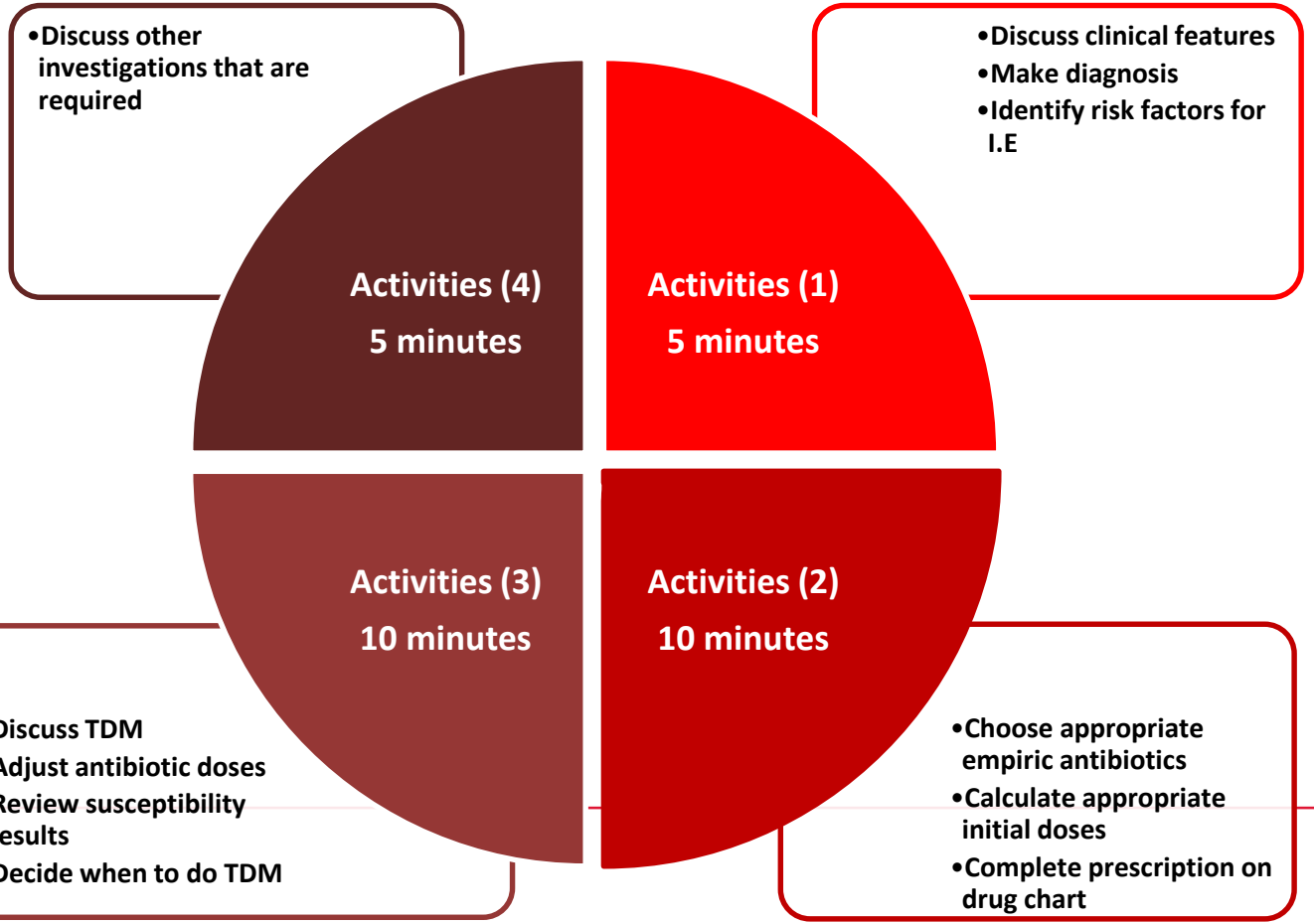
•Discuss other investigations that are required
•Discuss clinical features
•Make diagnosis
•Identify risk factors for I.E
Activities (4)
5 minutes
Activities (1)
5 minutes
Activities (3)
10 minutes
Activities (2)
10 minutes
•Discuss TDM
•Adjust antibiotic doses
•Review susceptibility results
•Decide when to do TDM
•Choose appropriate empiric antibiotics
•Calculate appropriate initial doses
•Complete prescription on drug chart

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The Evaluation

- Students were asked to complete a survey at the end of each session
  - Likert Scale (1 (Strongly disagree) to 5 (Strongly agree))

What did we ask the students?

1. **The learning outcomes of the IPE session were achieved?**
2. **The session was well organised?**
3. **The session had a clear and logical structure?**
4. **The session met my own learning objectives & gave me a good understanding of the case and my role?**
5. **I found the IPE session helpful**

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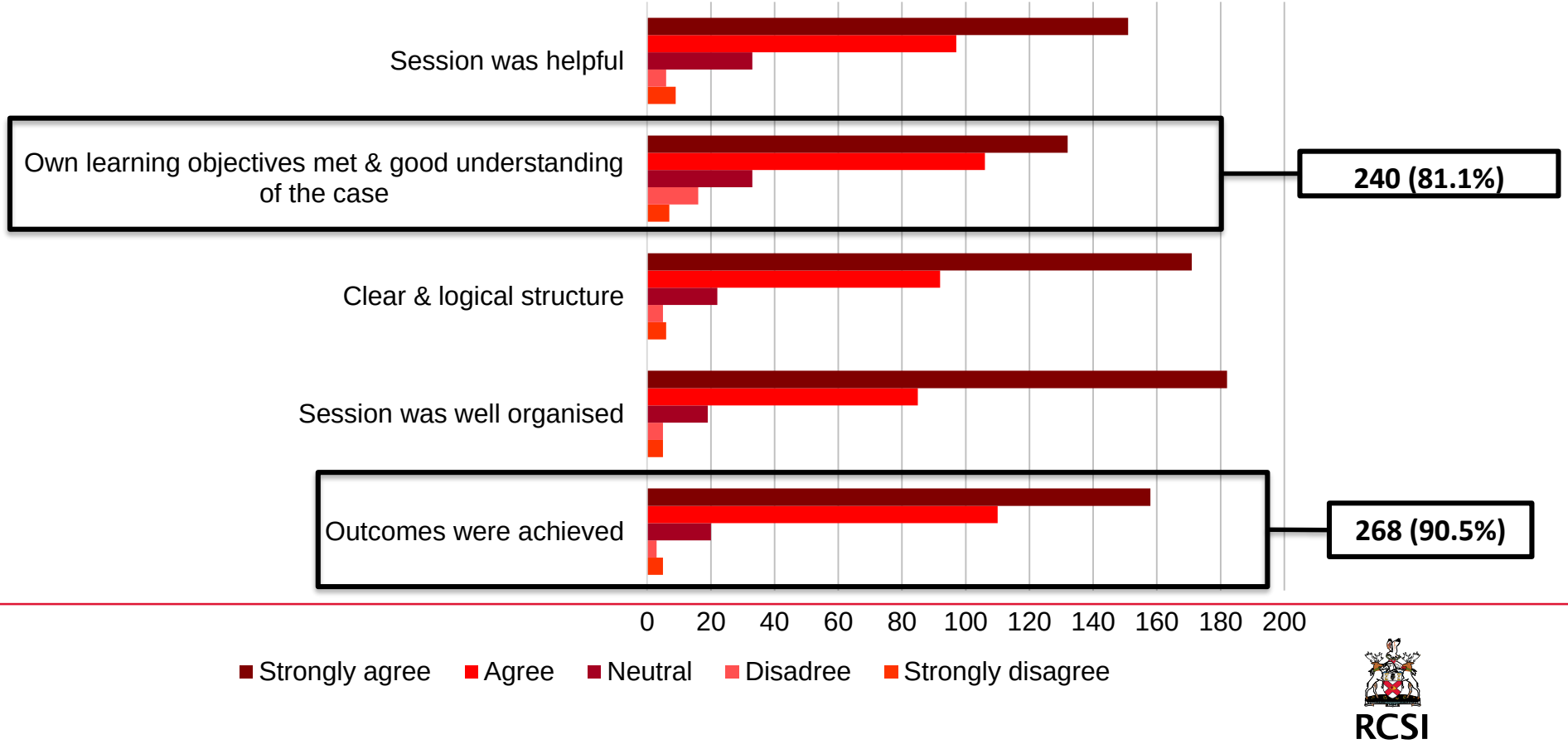
The students thoughts…….



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Some More Feedback

"How inter-connected the healthcare system is"

"I gained an appreciation for pharmacists"

"Importance of team-work and seeing things from other's perspectives"

"How to use guidelines"

"It felt rushed, more time needed overall"

"Put it earlier than the last week of classes"

Staff feedback

- Session was time intensive but was a good teaching experience overall

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What can we take from this IPE session?

1. **This is an effective approach to running IPE teaching sessions to large groups of students**
   - once the appropriate venue is present
   - once the appropriate multidisciplinary expertise is available

2. **Requires an appropriate case**

3. **Requires a detailed lesson plan and adequate planning**
   - but is time intensive

4. **That IPE teaching sessions are important and valuable learning activities**
   -To promote professional self-awareness and an appreciation of other health professions
   -To promote communication and team-work

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Acknowledgements

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