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Contrasts and contradictions in antibiotic decision making on medical and surgical ward rounds - a qualitative study

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Background: The impact of culture and team dynamics on antimicrobial stewardship efforts has not been studied. Culture describes the way individuals learn, and shape their behaviours as members of a group. Culture has the power to drive or inhibit change and impact the outcome of interventions. We report a qualitative study investigating the characteristics and culture of the ward round (WR) in medical and surgical specialties and how this impacts on antibiotic decision-making.

Material/methods: An ethnographic observational study of ward rounds by six acute surgical teams and eight acute medical teams at a teaching hospital in London was conducted. Over a period of three months: 1) Fifty-eight WRs (150 hours) were observed, 2) face-to-face key informant follow up interviews were conducted, 3) 30 multidisciplinary meetings on the management of patients and daily practice on wards were observed. The three data collection methods provided rich data for characterising the processes and outcome of WRs and specifically the impact on antimicrobial decision making. The iterative approach to analysis enabled cross-validation and triangulation of the findings.

Results: The surgical WR is highly time pressured because of the need for the team to return to the operating room (**Table 1**). The medical WR is the central focus of the day for the team with more time spent on individual patients. Consequently, there is minimum conversation on the rationale of the antibiotic therapy amongst the surgical team, compared to the medical team where time is spent to discuss antibiotic therapy as a team. Infection management is more rationalized and policy driven in the medical WR, with emphasis on symptom management and de-escalation of therapy. In surgery, the task of antibiotic prescribing is more likely to be delegated to the junior team members with the common remark from the surgeon leading the WR being '*start the patient on antibiotics… is s/he already on them?'*. There is a stark difference in how the teams communicate. Surgical teams, being constantly split, rely heavily on sending messages (including clinical information and clinical actions to be taken for individual patients) via communication apps and taking calls on their smartphones during the WR. The medical team rely mainly on verbal communication and documentation in the medical notes.

Conclusions: There are key contrasts in the function of the WR as well as role definition, decision making processes and delegation of responsibility for antibiotic prescribing between medicine and surgery. To date, most antibiotic prescribing interventions have focused on the medical specialty. This study highlights the urgent need to address antibiotic decision making in the surgical specialty. There is a critical need to interventions which address the prevailing culture and context in which they are to be implemented.

	Acute Medical Ward Round	**Acute Surgical Ward Round**
Setting and inclusion criteria	8 Firms across the acute medical specialty 8am acute post-take ward round	6 Firms across acute gastrointestinal & General surgical specialty 7.30 acute ward round
	All consented participants staff and patients in the daily ward round	
Ward round participants	Consultants; Pharmacist	Surgeons; locums
	trainees; patient and carer; students	
Infection management	Emphasis on diagnosis of infection Symptom management De-escalation of therapy Antibiotic choice discussed	Wound care Drain outputs Prophylaxis Antibiotic choice not discussed
	White cell count, C reactive protein, temperature	
Process of antibiotic decision making	Consultant makes decisions with input from team Policy driven Rationalised	Prophylaxis decision made by surgeon Complicated infection management referred to other specialties Delegation of decision not clarified
Medication review	A central tenet of the ward round	Not a routine part of the ward round
Communication	Streamlined communication via medical notes and verbally Phones rarely used on the ward round	Heavily reliant on technology for communication, e.g. texting, messaging groups The phone constantly used on ward round

Table 1 The key characteristics of the medical and surgical ward rounds