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# Creating certainty in the world of uncertainty: A systematic review and meta-ethnography to understand doctors views and experiences of antibiotic prescribing in acute hospitals

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**Introduction:** The rapid emergence of antimicrobial resistance (AMR) poses a major threat to public health and patient safety due to associated morbidity, mortality and healthcare-associated infections. With the lack of new antibiotics currently in development, promoting optimal antibiotic use is the only option available to slow the spread of resistance. The aim of the review was to identify, examine and synthesise qualitative studies that explored doctors' perceived barriers and facilitators to appropriate antibiotic use in acute hospitals.

**Methods:** The review was registered on the PROSPERO database. The meta-ethnographic seven-stages approach was applied to provide higher level of analysis and generate conceptually rich insights. Using the SPIDER tool, 20 electronic databases, including grey literature, were systematically searched for studies published between 2007 and 2017. Critical appraisal was conducted by 2 independent reviewers using the CASP tool. EMERGE methodological standards<sup>7</sup> were used to guide reporting of the results.

**Results:** Out of 12,254 identified papers, 13 were included in the final synthesis. The seven-steps process of analysis identified five overarching themes: (1) Mastering the art of antibiotic prescribing; (2) Behind the lens of misguided logic; (3) Social navigation of medical culture (4); The dual nature of uncertainty, and (5) Balancing multiple tensions.

**Discussion:** This is the first meta-ethnography on doctor's experiences of antibiotic prescribing in acute hospitals. Findings

demonstrate that social navigation of medical prescribing is an emotionally-fuelled endeavour often performed within the culture of guesswork. The identified themes suggest that 'appropriate' prescribing is a complex, context-dependant, fluid and intangible process that may often appear at odds with the evidence and therapeutic guidelines. This process is influenced by multiple factors and tensions, including uncertainty, interpersonal relationships, scarce healthcare resources and the fear of: patient deteriorating, losing professional credibility and increased AMR. The findings provide a conceptual framework that could provide the basis for future antibiotic management interventions.

## Biography

Gosha Wojcik is a doctoral student at Edinburgh Napier University and her main research interest is the growing problem of antibiotic misuse leading to the emergence of antimicrobial-resistant pathogens. Her PhD is focused on the development of a theory-based behaviour change intervention to promote optimal antibiotic use in acute hospitals – the IMPACT study. Prior to commencing her PhD, in close collaboration with the Health Protection Scotland (HPS) and ICU clinicians, she developed and led a prospective pilot study that compared two surveillance algorithms for ventilator-associated pneumonia. With a grant from HPS, she then helped design a study titled 'CDC vs HELICS' comparing new Centre for Disease Control (CDC) and the Hospitals in Europe Link for Infection Control through Surveillance (HELICS) systems in the two Lothian general ICUs, the findings of which have been published in the journal of Intensive Care Medicine.

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