

Improvement Science (Wednesday 4 July, 15.30 – 16.45)

Balancing the risks to individual and society: A systematic review and synthesis of qualitative research on antibiotic prescribing behaviour in hospitals

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Background

Over-prescribing of antibiotics is a significant problem globally, and contributes to the growing threat of widespread antimicrobial resistance (AMR). Risk perceptions play a critical role in medicines over-use, with doctors commonly practicing defensive medicine in the face of uncertainty. We conducted a systematic review of qualitative research on antibiotic prescribing decisions in hospitals worldwide, including literature from high and LMICs, to identify the role of risk perceptions in antibiotic over-use in hospitals.

Methods

A systematic search of qualitative research on antibiotic prescribing for adult hospital patients published between 2007 and 2017 was conducted. Drawing on the Health Belief Model, a framework synthesis was conducted to assess risk perceptions associated with AMR, and perceived benefits and barriers associated with the optimisation of antibiotic prescribing as a means of addressing this risk.

Results

The risk of AMR is generally perceived to be serious, but the abstract and long-term nature of its consequences leads physicians to doubt personal susceptibility. While prescribers believe in the benefits of optimising antibiotic prescribing, the direct link between overprescribing and antimicrobial resistance is often questioned, and prescribers' can consider behaviour change futile in the fight against a problem as complex as AMR. The salience of individual patient risks of inadequate treatment is a key barrier to more conservative prescribing. Physicians perceive antibiotics to be highly effective and low risk; prescribing broad-spectrum antibiotics in particular involve low cognitive demand and enables physicians to respond to patient expectations. Literature from LMIC settings indicates that antibiotics prescribing is occurring in a context of heightened uncertainty and risk, due to poor microbiology and infection control services.

Implications

When tackling antimicrobial resistance, the tensions between immediate individual risks and long term collective risks need to be taken into account. Efforts to reduce

diagnostic uncertainty, and to change risk perceptions, will be critical in shifting practice.