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# How do doctors decide when to prescribe antibiotics in upper respiratory tract infections?

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**Purpose**: To examine the predictive features which doctors use when prescribing antibiotics in upper respiratory tract infections (URTIs).

**Method**: This is a cross sectional, prospective study done in a teaching university primary care centre in Kuala Lumpur from June to August 2000. Twelve primary care practitioners participated in the study. Each practitioner was asked to record clinical data and prescriptions given to twenty consecutive patients with URTIs using a structured questionnaire for each patient.

**Results**: 203 completed questionnaires were analysed. The antibiotic prescription rate was 19.2% (range:0-80%). Using Multinomial Logistic Regression, significant predictive features associated with antibiotic prescriptions at a level of p <0.05 were enlarged tonsil, temperature> 38 degree C, cervical adenopathy and duration of first symptom. Coloured phlegm, co-morbidity, ages were not significant factors in determining antibiotic prescribing. When doctors' presumed aetiology of the URTIs were compared with McIsaac's predictive features for URTIs (fever, absence of cough, cervical adenopathy, enlarged tonsils and tonsillar exudates), it was shown that when the number of positive features increased, the aetiology was determined to be bacterial and was consistent with antibiotic prescribing. The antibiotics commonly prescribed in decreasing order were amoxycillin (38.5%), erythromycin (30.8%), ceporex (12.5%), penicillin V (12.5%), ampicillin (2.6%) and cloxacillin (2.6%).

**Conclusion**: The antibiotic prescribing behaviour in these doctors was to large extent evidence based.