AMMI Canada Antibiotic Guidelines Methods Summary

- **This guideline** comprises a series of recommendations on empiric antibiotic treatment for some of the most common clinical infections in Canada.

- A **pan-Canadian panel** — comprising infectious disease physicians, medical microbiologists, pharmacists, family physicians, public health and preventive medicine specialists, paediatricians, and methodologists — defined the scope of the guideline. The panel prioritized **syndromes** according to their incidence and overall contribution to antibiotic use in Canada.

- For each syndrome, research methodologists and medical librarians searched for **systematic reviews and meta-analyses** of randomized trials that compared the health effects of antibiotics, no antibiotics, delayed antibiotics, or different durations or doses of antibiotic therapy. Methodologists worked independently and in duplicate to screen search records for eligible reviews, collect data, and evaluate the **quality of evidence** using the GRADE (Grading of Recommendations Assessment, Development and Evaluation) approach.

- Because reviews seldom reported information on **antibiotic resistance**, the panel supplemented evidence on health benefits and harms with principles related to antimicrobial stewardship, including prioritizing non-antibiotic alternatives, narrow spectrum antibiotics, and treatment for the shortest effective duration.

- To formulate recommendations, the panel also considered evidence on **resource use**, **patient values and preferences**, **acceptability**, and **feasibility**. Publicly available Canadian formularies informed estimates of the costs of antibiotics. For patient values and preferences, the panel referenced published systematic reviews and primary studies. Insights from panel members informed considerations of acceptability and feasibility.

- For each syndrome, the panel met as many times as necessary to reach consensus on recommendations, including whether to prescribe antibiotics, the first and second choice antibiotics, and dose and duration of antibiotic therapy. Panelists with financial conflicts of interest were recused from participating in discussions related to syndromes for which they had conflicts. The panel rated the strength of recommendations as either strong — when there was a clear imbalance between benefits and harms supported by high or moderate certainty evidence — or, otherwise, conditional.

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- The panel additionally considered recommendations from other published guidelines, particularly the World Health Organization (WHO) AWaRe guideline, through the **GRADE 'Adolopment' approach**. For syndromes for which recommendations from the WHO AWaRe guideline were consistent with evidence on health benefits and harms and aligned with Canadian contextual factors — such as antibiotic availability or resistance patterns — the panel adopted the recommendations. Otherwise, the panel adapted recommendations or developed new ones.