

SUPPLEMENTARY TABLE. Categories of Grading of Recommendations Assessment, Development and Evaluation for strength of recommendation¹

Category	Definition
Strong	High confidence in the balance between desirable and undesirable consequences
	For: When desirable consequences outweigh undesirable consequences
	Against: When undesirable consequences outweigh desirable consequences
Weak	Less confidence in the balance between desirable and undesirable consequences
• Conditional	Depends on patient values and preferences, resources available, or the setting in which the intervention will be implemented
• Discretionary	At the discretion of the patient and clinician
• Qualified	Involves issues that could lead to different decisions

APPENDIX. *Helicobacter pylori* in pregnancy and children

***Helicobacter pylori* in pregnancy**

Meta-analyses from 2019 to 2021 showed that *H pylori* infection during pregnancy was associated with higher rates of preeclampsia, fetal growth restriction, gestational diabetes mellitus, hyperemesis gravidarum, spontaneous abortion, and iron deficiency anaemia, compared with the rates observed in *H pylori*-negative pregnancies; thus, the authors of those studies proposed implementing *H pylori* screening and treatment during pregnancy.³⁻⁶ The results of prior meta-analyses and two prospective cohort studies supported a link between adverse events and *H pylori* infection during pregnancy, but the authors of those studies cited the need for future high-quality research.⁷⁻¹⁰ Considering the mixed results, this panel did not propose a statement regarding *H pylori* screening or testing in this specific population.

***Helicobacter pylori* in children**

Statement 14: For all patients who undergo endoscopy, the initial diagnosis of *H pylori* can be made by the following methods: rapid urease test, histology with or without specific staining, and culture.

For children, initial diagnosis by upper gastrointestinal endoscopy with biopsy for rapid urease test, histology, or culture is recommended. In accordance with the European Society for Paediatric

Gastroenterology Hepatology and Nutrition/North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN/NASPGHAN) guidelines,¹¹ when peptic ulcer disease has been diagnosed by endoscopy, the consensus panel recommends collecting gastric tissue for culture, histology, and the rapid urease test.

Statement 15: The choice of *H pylori* eradication therapy should be based on *H pylori* microbial resistance patterns and antibiotic stewardship in Hong Kong, as well as the efficacy of gastric acid suppression. The regimen should be simple to use and well-tolerated, with good compliance and high efficacy (>85%).

Antibiotic susceptibility analyses revealed high rates of resistance to metronidazole and clarithromycin among children in China and Japan, which may affect antibiotic selection in younger age groups.¹²⁻¹⁴

Statement 16: In the first-line setting for *H pylori* eradication, possible therapies include (a) triple therapy with a proton pump inhibitor (PPI), clarithromycin, and amoxicillin for 14 days; and (b) bismuth quadruple therapy with a PPI, tetracycline, metronidazole, and a bismuth salt for 10 to 14 days.

If the antimicrobial susceptibility profile of the *H pylori* strain is known, a PPI-based triple therapy regimen with amoxicillin and clarithromycin

TABLE. Dosing regimen in children

Drug	Body weight range	Morning dose, mg	Evening dose, mg
Proton pump inhibitor	15-24 kg	20	20
	25-34 kg	30	30
	>34 kg	40	40
Amoxicillin	15-24 kg	500 (High dose: 750)	500 (High dose: 750)
	25-34 kg	750 (High dose: 1000)	750 (High dose: 1000)
	>34 kg	1000 (High dose: 1500)	1000 (High dose: 1500)
Clarithromycin	15-24 kg	250	250
	25-34 kg	500	250
	>34 kg	500	500
Metronidazole	15-24 kg	250	250
	25-34 kg	500	250
	>34 kg	500	500
Bismuth subsalicylate	Age <10 years	262 qid	
	Age ≥10 years	524 qid	

Abbreviation: qid = 4 times daily

(preferred; metronidazole to be used if there is drug resistance) is also recommended for children.^{11,15} If resistance to clarithromycin or metronidazole is high, or the antimicrobial susceptibility profile is unknown, an alternative approach comprises the addition of high-dose amoxicillin to the PPI–metronidazole regimen, or the use of bismuth-based therapy (see paediatric dosing in the Table).¹¹ Currently, no data are available regarding *H pylori* antibiotic resistance among children in Hong Kong. In the past decade, reports from China and Belgium have shown that bismuth-based quadruple therapy is efficacious and safe as first-line treatment in children.^{16–18} However, very young children are unable to chew bismuth. Additionally, levofloxacin and doxycycline may be included in regimens for adolescents because these agents are approved for older children in many regions.

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