

Addressing the mismanagement of *Helicobacter pylori* in Pakistan: A call for coordinated action

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Helicobacter pylori (*H. pylori*) infection remains a major public health concern in Pakistan, where prevalence rates range from 50% to 80%¹, which is significantly higher than the global average, which has declined due to better hygiene, implementation of advanced diagnostic techniques, and precision therapy. This persistently high burden reflects systemic issues including poor sanitation, overcrowding, and limited access to healthcare. Despite the well-established links between *H. pylori* and conditions such as gastritis and peptic ulcer disease, diagnosis and treatment in Pakistan remain inconsistent and often misguided. Many patients receive empirical antibiotics without susceptibility testing, a practice that directly contradicts international “test-and-treat” guidelines.² One unexplored aspect of this mismanagement is the “gastroenterologist’s persistence” in relying on personal experience rather than susceptibility-guided therapy. In addition to therapeutic misjudgements, diagnostic limitations also play a significant role. The continued reliance on serological testing is problematic as it cannot distinguish active from past infection. Antibodies can persist for months even after successful treatment, making serology unreliable for guiding therapy. While urea breath tests (UBT) and endoscopy remain unavailable in most regions, stool antigen tests should be preferred as they reliably detect active infection, are cost-effective, and are suitable for monitoring treatment success. However, stool testing has a major limitation as it cannot detect antibiotic resistance. This is increasingly critical given rising antimicrobial resistance, a challenge further exacerbated by the absence of national surveillance data on *H. pylori* resistance patterns.

Clinicians in Pakistan currently rely on outdated empirical regimens in the absence of local resistance data, increasing the risk of treatment failure. Available studies already indicate high resistance rates to clarithromycin,

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metronidazole, and levofloxacin, and emerging reports of amoxicillin resistance are especially alarming.³ Molecular diagnostics such as PCR-based assays could offer a dual advantage by confirming infection and identifying resistance mutations to guide targeted therapy.⁴ Yet, these tools remain largely inaccessible. Compounding the issue are patient-related barriers, including low health literacy, poor adherence to multi-drug regimens, and unrestricted antibiotic access.

Pakistan lags behind regional counterparts, which have implemented national treatment guidelines and resistance monitoring frameworks. Learning from countries such as China, where systematic interventions have reduced prevalence from 58% to less than 30% over two decades⁵, Pakistan must act urgently. Key priorities include phasing out serology, scaling up access to reliable diagnostics, establishing resistance surveillance, and creating local, evidence-based treatment protocols. Medium-term actions should address public education and antibiotic stewardship, while long-term goals must focus on integrating *H. pylori* screening into primary healthcare and improving sanitation infrastructure. Without immediate and coordinated intervention, Pakistan risks an escalating cycle of resistance, reinfection, and rising healthcare costs. A resistance-informed, patient-centered national strategy is essential to reverse this trajectory.

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