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Review Article

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Improving Antibiotic Prescribing in Bangladesh Comparing with the United Kingdom: A Systematic Review

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Abstract

Antimicrobial resistance (AMR) has emerged as a significant global public health threat, jeopardizing the effectiveness of antibiotics and complicating the treatment of infectious diseases. The World Health Organization (WHO) has identified AMR as a critical issue, attributing its rise to factors such as overprescribing, self-medication, and inadequate antimicrobial stewardship (AMS) practices. In low- and middle-income countries (LMICs) like Bangladesh, the challenge is exacerbated by limited healthcare infrastructure, a high prevalence of informal healthcare providers, and a lack of awareness regarding the responsible use of antibiotics.In contrast, high-income countries such as the United Kingdom have implemented structured AMS frameworks aimed at promoting rational antibiotic prescribing and reducing unnecessary use. Initiatives like the TARGET Antibiotic Checklist have been effective in improving physician practices and enhancing patient education, leading to better health outcomes and a reduction in AMR. This systematic review seeks to compare AMS practices and antibiotic prescribing patterns in Bangladesh and the UK, highlighting the disparities in awareness, knowledge, and implementation of AMS strategies. By examining the current state of antibiotic use in both countries, the review aims to identify key challenges and propose actionable recommendations to improve AMS efforts, particularly in LMICs where the burden of AMR is most acute.

Keywords: *Antibiotic stewardship, antimicrobial resistance, antibiotic prescribing patterns, self-medication, Bangladesh, United Kingdom.*

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Introduction:

Antibiotic resistance (ABR) is a pressing global health challenge that threatens the efficacy of antimicrobial treatments and poses significant risks to patient safety and public health. The World Health Organization (WHO) has declared antibiotic resistance as one of humanity's top ten global public health threats, urging countries to take immediate action to combat this crisis (World Health Organization, 2021). The misuse and overuse of antibiotics are key drivers of ABR, leading to the emergence of resistant bacterial strains that complicate treatment options and increase morbidity and mortality rates[1]. In Bangladesh, the situation is particularly alarming. A study highlighted that antibiotic consumption in the country is significantly higher than the global average, with self-medication and over-the-counter sales contributing to this trend[2]. The lack of stringent regulations governing the sale of antibiotics, coupled with inadequate public awareness about the dangers of misuse, exacerbates the problem[3]. Furthermore, healthcare providers often prescribe antibiotics without proper diagnosis, driven by patient expectations and a lack of diagnostic facilities[4]. This inappropriate prescribing not only contributes to the rise of antibiotic-resistant pathogens but also leads to increased healthcare costs and prolonged illness[5]. In contrast, the United Kingdom (UK) has made substantial progress in managing antibiotic prescribing through the implementation of robust antibiotic stewardship programs. These programs are designed to promote the appropriate use of antibiotics, reduce unnecessary prescriptions, and ultimately curb the development of resistance[6]. The UK government has established guidelines and public awareness campaigns aimed at both healthcare providers and the general public, emphasizing the importance of responsible antibiotic use[7]. As a result, studies have shown a decline in antibiotic prescriptions and a corresponding reduction in resistance rates for certain pathogens in the UK[8]. Despite the differences in antibiotic prescribing practices between Bangladesh and the UK, there is a growing recognition of the need for a global response to antibiotic resistance. The One Health approach, which considers the interconnectedness of human, animal, and environmental health, has been advocated as a comprehensive strategy to address the

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issue[8]. This approach emphasizes the importance of collaborative efforts among various sectors to ensure the responsible use of antibiotics across all domains. The objective of this systematic review is to compare antibiotic prescribing practices in Bangladesh and the UK, focusing on the prevalence of inappropriate prescribing and the effectiveness of interventions aimed at improving these practices. By synthesizing the existing literature, this review aims to identify key factors contributing to antibiotic misuse in Bangladesh and highlight successful strategies employed in the UK that could be adapted to the Bangladeshi context. The findings of this review will provide valuable insights for policymakers, healthcare providers, and public health advocates in Bangladesh as they seek to combat the growing threat of antibiotic resistance.

Methods:

Study Design: This systematic review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure a comprehensive and transparent approach to the review process[9]. The review aims to synthesize original research articles that examine antibiotic prescribing practices and interventions in Bangladesh and the United Kingdom.

Inclusion Criteria: Studies were included in the review if they met the following criteria:

• Original Research: The study must present original research findings, including quantitative data on antibiotic prescribing practices or interventions.

• Geographical Focus: The study must focus on antibiotic prescribing practices in either Bangladesh or the UK.

• Language: Articles must be published in English.

• Relevant Outcomes: The study must report on outcomes related to antibiotic prescribing, such as prevalence rates, prescribing patterns, or the effectiveness of interventions aimed at improving antibiotic use.

Exclusion Criteria: Studies were excluded from the review if they:

• Were qualitative studies, reviews, or opinion pieces without original data.

• Focused on veterinary antibiotics or animal health.

• Did not provide specific data on antibiotic prescribing practices or interventions.

• We're not peer-reviewed or published in predatory journals.

Search Strategy: A systematic literature search was conducted across multiple electronic databases, including PubMed, Scopus, Web of Science, and Google Scholar. The search was performed in July 2024, using a combination of keywords and Medical Subject Headings (MeSH) terms. The following search strategy was employed: (Table I)

Table I: Search Strategy

Aspect	Bangladesh	United Kingdom
Keywords	"Antibiotic prescribing Bangladesh" "Antibiotic resistance Bangladesh" "Antimicrobial stewardship Bangladesh" "Self-medication antibiotics Bangladesh"	"Antibiotic prescribing UK" "Antibiotic resistance UK" "Antimicrobial stewardship UK" "Antibiotic guidelines UK"
Search String	("Antibiotic prescribing" OR "Antibiotic resistance" OR "Antimicrobial stewardship") AND "Bangladesh"	("Antibiotic prescribing" OR " Antibiotic resistance" OR " Antimicrobial stewardship" OR " Antibiotic guidelines") AND "UK"
Filters Applied	- Original research articles - Published in English - No year restrictions - Focused on human subjects - Reported quantitative data related to antibiotic prescribing practices or interventions	- Original research articles - Published in English - No year restrictions - Focused on human subjects - Reported quantitative data related to antibiotic prescribing practices or interventions

Study Selection:

The study selection process followed the PRISMA guidelines and involved four key phases: identification, screening, eligibility, and inclusion. Initially, a comprehensive search was conducted across databases such as Google Scholar, PubMed, and EMBASE using predefined search queries combining keywords like "antibiotic prescribing," "antibiotic resistance," and "antimicrobial stewardship" with "Bangladesh." A total of 1,700 studies were identified, of which 50 duplicates were removed. The remaining 1,650 studies underwent title and abstract screening, during which 1,200 were excluded for not meeting the inclusion criteria. This left 450 studies for full-text review. After assessing these full-text articles for eligibility based on relevance, methodology, and inclusion criteria, 40 studies were excluded for lack of quantitative data or focus on non-human subjects. Finally, 10 studies were included in the systematic review to evaluate antibiotic prescribing practices and interventions in Bangladesh and the UK. The methodology employed in this analysis is presented below (Table II, Figure 1) .

Table II: Search Methodology

Google Scholar	25 July 2024	((antibiotic prescribing [All Fields] OR antibiotic resistance [All Fields] OR antimicrobial stewardship [All Fields]) AND Bangladesh [All Fields] AND English[lang])	1,200
PUBMED	25 July 2024	(antibiotic prescribing [MeSH Terms] OR antibiotic resistance [MeSH Terms] OR antimicrobial stewardship [MeSH Terms]) AND Bangladesh [MeSH Terms] AND English[lang])	350
EMBASE	25 July 2024	(antibiotic prescribing OR antibiotic resistance OR antimicrobial stewardship) AND Bangladesh AND [english]/lim	150

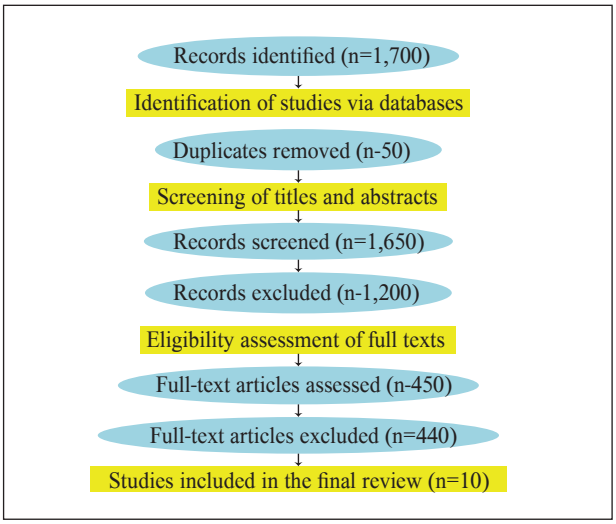

Fig 1: PRISMA Flowchart of the studies selected for the current study

Data Extraction and Quality Assessment:

Data from the included studies were systematically extracted using a standardized data extraction form to ensure consistency and comprehensiveness. Key information collected for each study included the author(s) and publication year, study design, population characteristics such as sample size and demographics, the study setting (e.g., hospital or community), findings related to antibiotic prescribing practices, any interventions implemented, and the outcomes measured. To evaluate the methodological quality of the studies, the Joanna Briggs Institute (JBI) critical appraisal tools were employed. These tools provided a structured approach to assess various research designs and ensured a rigorous evaluation of each study's reliability and validity. Studies were assessed on criteria such as the clarity of objectives, appropriateness of the study design, justification of sample size, and robustness of data analysis methods. This process ensured that only high-quality studies were included in the systematic review, enhancing the credibility and reliability of the findings. **Data Synthesis:** A narrative synthesis approach was employed to summarize and compare the findings of the included studies. The synthesis focused on identifying common themes, trends, and variations in antibiotic prescribing practices between Bangladesh and the UK. Where applicable, quantitative data were summarized using descriptive statistics, and key interventions were highlighted to illustrate effective strategies for improving antibiotic prescribing.

Results:

Table I presents the baseline characteristics of various studies included in the systematic review, focusing on antibiotic prescribing patterns, antimicrobial stewardship (AMS) practices, and associated outcomes in Bangladesh and the United Kingdom. It summarizes key findings and outcomes related to physician awareness of antimicrobial stewardship programs (ASPs), common antibiotic prescribing practices, and the impact of public health initiatives such as education campaigns and feedback mechanisms. The studies from Bangladesh highlight significant gaps in knowledge and practices related to AMS, as well as a high prevalence of self-medication. In contrast, studies from the UK show more structured AMS frameworks and demonstrate positive outcomes from interventions like audit-feedback loops and educational campaigns. Key findings include the widespread use of broad-spectrum antibiotics in both countries, variations in prescribing practices based on health settings, and the effect of interventions in reducing unnecessary antibiotic prescriptions and promoting appropriate AMS practices.

Table III : Baseline characteristics of the included studies

Study	Study design	Sample size	Key Findings	Outcomes
Humayun Kabir et. al, Bangladesh (2023)	Cross-sectional Survey	1102	37% of respondents used antibiotics without a prescription. Significant associations with age, knowledge, and attitudes.	Identified gaps in awareness and high prevalence of self-medication, contributing to antibiotic resistance.
S.A. Sumon et.al Bangladesh (2023)	Cross-sectional Survey	559	40.6% of physicians were aware of ASPs, with higher awareness in public hospitals (43.8%) compared to private hospitals (27.1%). No hospitals had ASP initiatives in place. 55.1% of physicians were open to receiving feedback from ASPs regarding their antibiotic choices. Only 30.9% waited for microbiological test results before prescribing antibiotics.	There is a significant gap in knowledge and practices regarding ASPs and rational antibiotic prescribing among physicians in Bangladesh. Context-specific ASP activities, improved guidelines, and better laboratory facilities are essential to combat AMR.

Study	Study design	Sample Size	key Findings	Outcomes
			Physicians aware of ASPs were 33% less likely to wait for lab results before prescribing. 42.5% of physicians considered patients' affordability when prescribing antibiotics.	
Sejal Parekh et.al UK (2023)	Structured observational study	69,861	62,544 (30%) were for respiratory tract infections (RTIs), 43,093 (21%) for urinary tract infections (UTIs), 30,764 (15%) for dental infections.	The discussions facilitated by the antibiotic checklist also led to an additional 16,625 influenza vaccinations being administered, demonstrating a positive side effect of the initiative in promoting overall public health. The TARGET Antibiotic Checklist represents an effective intervention within the framework of AMS, promoting better communication, patient education, and ultimately contributing to the reduction of AMR.
Alice P. McCloskey et. al., UK (2023)	Retrospective observational study	62,949,272 antibiotic prescriptions from 6,370 General Practices	In the UK, a substantial proportion of antibiotics are prescribed for urinary (22.7%) and respiratory (46%) symptoms.	This study contributes valuable insights into antibiotic prescribing trends in primary care in England, reinforcing the importance of AMS in addressing AMR.
Afroza Sultana et. al. Bangladesh (2023)	Cross-sectional study	320	**Medicine OPD:** Most commonly prescribed antibiotic: Cephalosporin (51.4% of cases) Other commonly prescribed antibiotics: Azithromycin (24.3%) and others (21.6%). **Surgery OPD:** Most commonly used antibiotics: Flucloxacillin (82.5%) and Cephalosporin (30.0%). **Gynaecology & Obstetrics OPD:** Most commonly prescribed antibiotics: Quinolones (46.0%) and other groups of antibiotics (54.0%).	The study concluded that the most commonly used antibiotics across the different OPDs of the hospital were Cephalosporin, Azithromycin, and Flucloxacillin. These findings highlight the prevalent prescribing patterns and provide insights into antibiotic usage in a tertiary care setting.

Study	Study design	Sample Size	key Findings	Outcomes
Rhys Owens et.al., UK (2024)	Retrospective observational study	647	A total of 647 patients were discharged, and 184 patients were reviewed. Out of 1658 antibiotic DOTs, 403 (24%) were classified as excess DOTs. The excess DOTs were categorized based on their timing: 27.8% were due to issues at the initiation of therapy (time point A). 45.7% occurred during the antibiotic review before 72 hours (time point B). 26.6% were attributed to prolonged antibiotic courses (time point C).	The study found that 24% of antibiotic DOTs were unnecessary. The authors identified that the pre-72 hours antibiotic review presented the greatest opportunity to safely reduce antibiotic use, suggesting it as a potential target for future interventions in line with the UK's antimicrobial resistance (AMR) strategy.
Abdullah Masud et.al., Bangladesh (2024)	Cross-sectional study	365	**Antibiotic Dispensing:** Of the observed dispensing events, 25.9% were antibiotics. 56.6% of customers purchased antibiotics without a prescription, primarily for non-severe conditions such as: Upper respiratory tract infections (37.4%) Fever (31.7%) Uncomplicated skin infections (20%) Gastrointestinal infections (11.2%) Urinary tract infections (10.1%) **Types of Antibiotics Purchased:** Commonly purchased antibiotics included: Macrolides (21.8%) Third-generation cephalosporins (20.8%) Second-generation cephalosporins (16.9%) **WHO-AWeRe Classifications:** 73.5% of antibiotics fell into the "Watch" category. 23.1% were in the "Access" category.	The study highlights the widespread sale of broad-spectrum antibiotics without prescriptions in Bangladesh. It emphasizes the need for tailored interventions that consider the health-seeking behaviors prevalent in informal healthcare settings in LMICs. Challenges to enforcing prescription-only rules include easy access to antibiotics through community pharmacies and potential conflicts of interest. Effective interventions should involve user-centric approaches, co-designed research with stakeholders, and prioritization of mass awareness and monitoring of over-the-counter antibiotic sales.

Study	Study design	Sample Size	key Findings	Outcomes
			8.8% were not recommended beta-lactamase inhibitors. **Prescription Behavior:** The likelihood of presenting a prescription while purchasing antibiotics was 27% lower for individuals aged 6–59 compared to those aged ≤5 or ≥60. Conditions like lower respiratory tract infections and enteric fever had higher prescription rates, with adjusted prevalence ratios of 1.78 and 1.87, respectively. Other demographic factors (sex, urban-rural location, income, education, number of health symptoms) did not significantly influence prescription likelihood after adjusting for confounders.	
Rabeya Sultana et.al., Bangladesh (2023)	Mixed-method research study.	583	25.7% of respondents visited an MBBS doctor, 8.1% visited a BDS dentist, and 66.2% consulted traditional healers or pharmacies. Men were found to take more antibiotics for treatment than women, with a significant difference ($p < 0.02$). **Prescribing Practices:** New graduate doctors and traditional healers were noted to prescribe antibiotics for longer durations. The duration of antibiotic prescriptions varied significantly by the type of physician ($p < 0.02$). **Common antibiotics prescribed included:** Upper respiratory tract infections (26%) Cold and fever (21%) Diarrhea (12%) STDs (9%) Hypertension (8%) Urinary tract infections (7.5%) Diabetes (5%) Lower respiratory infections (4%) Types of antibiotics used included: Cephalosporins (31.4%) Macrolides (27.6%) Quinolones (17.8%) Metronidazole (13%) Penicillin (10.1%)	The study found that the majority of respondents had poor knowledge of antimicrobial resistance and were unaware of the negative consequences of antibiotic overuse. The findings indicate a pressing need for community-based awareness programs to educate the public about antimicrobial resistance and the risks associated with the overuse of antibiotics.

Study	Study design	Sample Size	key Findings	Outcomes
			Knowledge of AMR: Approximately 65.8% of caregivers lacked knowledge about antimicrobial resistance and the negative effects of antibiotic overuse.	
G Carney et. al., UK (2024)	Cluster randomized control trial.	5073	A total of 21,307 cases of uncomplicated lower UTI were identified among the three trial arms during the study period. The combination of receiving both the AF and ES increased the relative probability of prescribing nitrofurantoin as the first-line treatment for uncomplicated lower UTIs by 28% (Odds Ratio [OR] 1.28; 95% Confidence Interval [CI] 1.07 to 1.52), compared to the control arm. This increase translates to an additional 8.7 cases of uncomplicated UTI being treated with nitrofurantoin per 100 family physicians during the 6-month study period.	The study concluded that providing audit and feedback prescribing data along with educational materials can significantly improve the prescribing practices of primary care physicians regarding antibiotics for uncomplicated lower UTIs.
Rasha Abdelsalam Elshenawy, Uk (2024)	Cross-sectional design	7,982	**Public Health Impact:** 46% (64 participants) strongly agreed that antimicrobial resistance (AMR) profoundly affects public health and clinical decisions. 39% (55 participants) strongly agreed that efforts against AMR within the trust have long-term societal effects. 52% (74 participants) agreed that AMS implementation leads to improved patient outcomes. 42% (59 participants) agreed that AMS promotes judicious antibiotic use. 21% (30 participants) strongly disagreed that delayed antibiotic prescribing effectively contributes to AMS. **Perceptions During COVID-19:** Communication: 39% agreed that communication with microbiologists and the AMS team significantly enhanced informed decisions about antibiotic use.	The results highlight the importance of clear communication, updated guidelines, and educational interventions in improving antibiotic prescribing practices and combating

Study	Study design	Sample Size	key Findings	Outcomes
			Guidelines and Practices: 38% agreed that broad-spectrum antibiotics are more effective against resistant pathogens. 31% disagreed that changing clinical conditions influenced antibiotic prescribing. 35% agreed on the adaptability and efficiency of updated antibiotic guidelines during the pandemic. 21.8% prioritized clinical judgment over guidelines. **Antibiotic Stewardship Implementation:** Post-Culture Review: 59.2% agreed on the need to review IV antibiotic use after receiving culture results. Technology in Meetings: 46.5% agreed on the importance of using technology platforms (e.g., Zoom, Teams) for multidisciplinary meetings. Overuse of Antimicrobials: 43.7% agreed that the overuse/misuse of antimicrobials during the pandemic could significantly influence AMR. Guideline Compliance: 54.9% remained neutral regarding compliance with local antimicrobial guidelines. Positive Impact of AMS Strategies: Multidisciplinary Team Meetings: 86.6% believed these meetings were beneficial. Regular Antimicrobial Surveillance: 83.8% found this effective. AMS Ward Rounds: 79.6% indicated effectiveness. Other Strategies: Over 70% found prospective audit and feedback, antibiotic review, and intravenous-to-oral antibiotic switch effective. 65.5% considered AMS education and training impactful, though nearly one-third felt it had no influence.	AMR, especially during crisis situations like the COVID-19 pandemic. The study underscores the necessity for tailored educational strategies to address the specific needs and contexts of various healthcare professionals.

Table IV provides a comparative analysis of AMS practices between Bangladesh and the United Kingdom, highlighting key aspects such as study designs, awareness of AMS, prescribing trends, self-medication, patient education, challenges, and recommendations. The analysis indicates that while Bangladesh faces significant challenges in AMS implementation, such as poor infrastructure, lack of formal AMS programs, and widespread self-medication, the UK has a more structured AMS framework integrated into national health strategies. The UK also benefits from widespread public education and professional engagement through initiatives like the TARGET Antibiotic Checklist, which has demonstrated effectiveness in reducing unnecessary antibiotic use and improving patient outcomes. The table emphasizes the need for tailored interventions in Bangladesh, including the establishment of AMS programs and greater public awareness campaigns.

Table IV: Comparative Analysis of Antimicrobial Stewardship (AMS) Practices in Bangladesh and the United Kingdom

Aspect	Bangladesh	United Kingdom
Study Designs	Cross-sectional surveys dominate (e.g., 50% of studies). Focus on knowledge, attitudes, and practices.	More diverse designs, including retrospective observational studies and randomized controlled trials (10%).
Awareness of AMS	Limited awareness among physicians (40.6%), no hospitals implementing structured AMS programs.	High awareness; AMS integrated into national health strategies (e.g., TARGET Antibiotic Checklist).
Prescribing Trends	High use of broad-spectrum antibiotics: cephalosporins (51.4%), macrolides (21.8%), quinolones (17.8%).	Targeted prescribing: nitrofurantoin (first-line for UTIs) and improved compliance with AMS guidelines.
Self-Medication	56.6% of customers purchased antibiotics without prescriptions, primarily for mild conditions (URTIs, fever).	AMS education reduced unnecessary prescription; discussions via TARGET Checklist increased public engagement.
Patient Education	Limited focus on public awareness; high reliance on informal healthcare providers (66.2% consulted traditional healers).	Structured programs like TARGET Antibiotic Checklist provided 69,861 patient nformation leaflets and improved AMS.
Challenges	Poor infrastructure, lack of diagnostics, and informal practices in dispensing antibiotics.	Resistance to guideline updates during crises like COVID-19; need for continued multidisciplinary engagement.
Key Outcomes	Identified critical gaps in AMS implementation; highlighted the need for community-based awareness campaigns and ASPs.	Demonstrated reductions in unnecessary DOTs and improved first-line prescribing practices (e.g., for UTIs).
Recommendations	Establish ASPs in hospitals, improve lab facilities, focus on public awareness and physician training.	Enhance feedback mechanisms and strengthen multidisciplinary team involvement in AMS programs.

Discussion:

The findings from this systematic review highlight significant disparities in antibiotic prescribing patterns and antimicrobial stewardship (AMS) practices between Bangladesh and the United Kingdom. The results underscore critical gaps in physician awareness, public education, and the implementation of structured AMS programs, particularly in Bangladesh, which may contribute to the rising rates of antimicrobial resistance (AMR).

Awareness and Knowledge Gaps: In Bangladesh, the studies revealed a concerning lack of awareness regarding AMS among physicians, with only 40.6% acknowledging the existence of antimicrobial stewardship programs. This is consistent with previous research indicating that low awareness and knowledge of AMS significantly contribute to irrational antibiotic-prescribing practices (Khan et al., 2020).[10] The high prevalence of self-medication (37% to 56.6%) further exacerbates the issue, as patients frequently access antibiotics without professional guidance. This behavior is particularly alarming given that self-medication is associated with increased AMR due to inappropriate usage[11]. Conversely, the UK demonstrates a more integrated approach to AMS, with established frameworks and high awareness levels among healthcare professionals. The TARGET Antibiotic Checklist exemplifies a successful intervention that has enhanced communication between healthcare providers and patients, leading to improved prescribing practices[12]. The contrast in awareness and implementation of AMS initiatives between the two countries highlights the urgent need for targeted educational campaigns in Bangladesh to raise awareness and promote rational antibiotic use.

Prescribing Trends and Self-Medication:

The prescribing patterns observed in Bangladesh, characterized by a high reliance on broad-spectrum antibiotics such as cephalosporins and macrolides, raise concerns about the potential for increased AMR. Studies have shown that the overuse of broad-spectrum antibiotics is a significant driver of resistance[13]. The findings from the UK, which indicate a more judicious use of antibiotics particularly the preference for nitrofurantoin as a first-line treatment for urinary tract infections demonstrate the positive impact of structured AMS interventions[14]. The high rates of self-medication in Bangladesh, especially for non-severe conditions like upper respiratory tract infections, highlight the need for stricter regulations on antibiotic sales and greater public awareness about the risks associated with self-medication[15]. The WHO

emphasizes that community education is crucial in combating AMR and promoting responsible antibiotic use[16].

Challenges and Recommendations:

The challenges faced by Bangladesh in implementing effective AMS programs are multifaceted, including poor healthcare infrastructure, a lack of diagnostic facilities, and the prevalence of informal healthcare providers. These barriers hinder the establishment of formal AMS initiatives and contribute to the ongoing cycle of inappropriate antibiotic use[17,18]. In contrast, the UK benefits from a more robust healthcare system that supports the integration of AMS into routine clinical practice.To address these challenges, Bangladesh must establish formal AMS programs within healthcare facilities, improve laboratory capacity for accurate diagnostics, and develop comprehensive public awareness campaigns aimed at educating the population about the dangers of antibiotic misuse[19]. Tailored interventions that consider local health-seeking behaviors and cultural practices are essential for promoting rational antibiotic use[20].

Conclusion:

In conclusion, the disparities in AMS practices between Bangladesh and the UK underscore the urgent need for comprehensive strategies to combat AMR. While the UK has made significant strides in implementing effective AMS frameworks, Bangladesh faces considerable challenges that require immediate attention. By prioritizing education, establishing formal AMS programs, and addressing the factors contributing to self-medication, Bangladesh can work towards reducing the burden of AMR and promoting the responsible use of antibiotics.

Conflict of Interest: None.

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