



KNOWLEDGE, ATTITUDES, AND PRACTICES TO ANTIBIOTIC PRESCRIBING AMONGST DOCTORS FOR UNCOMPLICATED URINARY TRACT INFECTIONS IN NON-PREGNANT, PRE-MENOPAUSAL WOMEN

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Introduction

- Uncomplicated urinary tract infection (UTI) is among the most prevalent bacterial illnesses and is the 2nd leading indicator for antibiotic prescription.
- In Trinidad and Tobago (T&T) there are insufficient and underdeveloped antimicrobial resistance (AMR) data on uncomplicated UTIs in premenopausal, non-pregnant women
- Clinicians therefore face difficulty in prescribing appropriate antibiotics for UTIs
- The scarcity of evidence supporting local antibiotic policy advancement leads to potential antibiotic misuse and the appearance of multidrug-resistant (MDR) uropathogenic bacteria strains.

Objectives

1. To ascertain physicians' knowledge about antibiotic treatment for uncomplicated UTIs in Trinidad and Tobago.
2. To ascertain physicians' attitude towards antibiotic treatment for uncomplicated UTIs in Trinidad and Tobago.
3. To determine if the practices of physicians align with the NICE guidelines for treatment recommendations of uncomplicated UTIs.
4. To determine if physicians act as dispensers of antibiotics.

Methodology

- Cross sectional study
- Target group - registered medical practitioners in clinical practice locally, who treat uncomplicated UTI in non-pregnant, pre-menopausal women aged 18-45.
- Data collection was obtained via virtual questionnaire (Google Forms) which was protected with encryption and password as well as signed privacy agreements to minimize confidentiality breach.
- This research was conducted in public and private health centres/facilities/clinics from Jan 2022 – August 2022.

Expected Outcome

This study findings should help to identify areas for intervention to improve antibiotic prescribing practices which would ultimately lead to a decrease in antimicrobial resistance.

Results

Response Rate= 63.3% (81/128)

Good Knowledge – 78%

Positive Attitude - 99%

Positive Practice – 95%

Towards antibiotic prescribing for uncomplicated urinary tract infections in non-pregnant, pre-menopausal women

Knowledge:

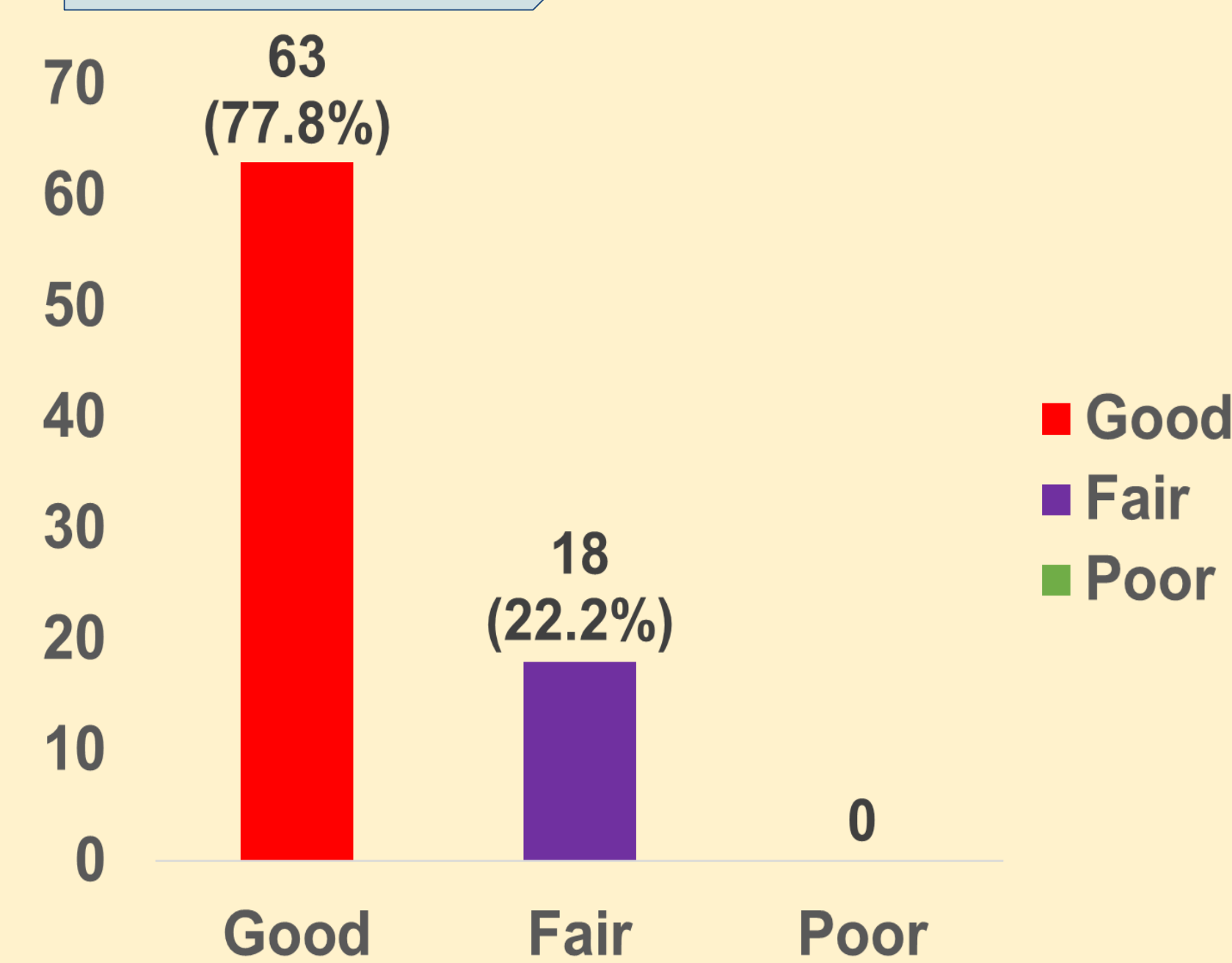


Figure 1. Bar chart Showing Physicians Level of Knowledge Towards Current Antibiotic Treatment Recommendations For Uncomplicated UTIs in Non-pregnant, Pre-menopausal Women

Attitude:

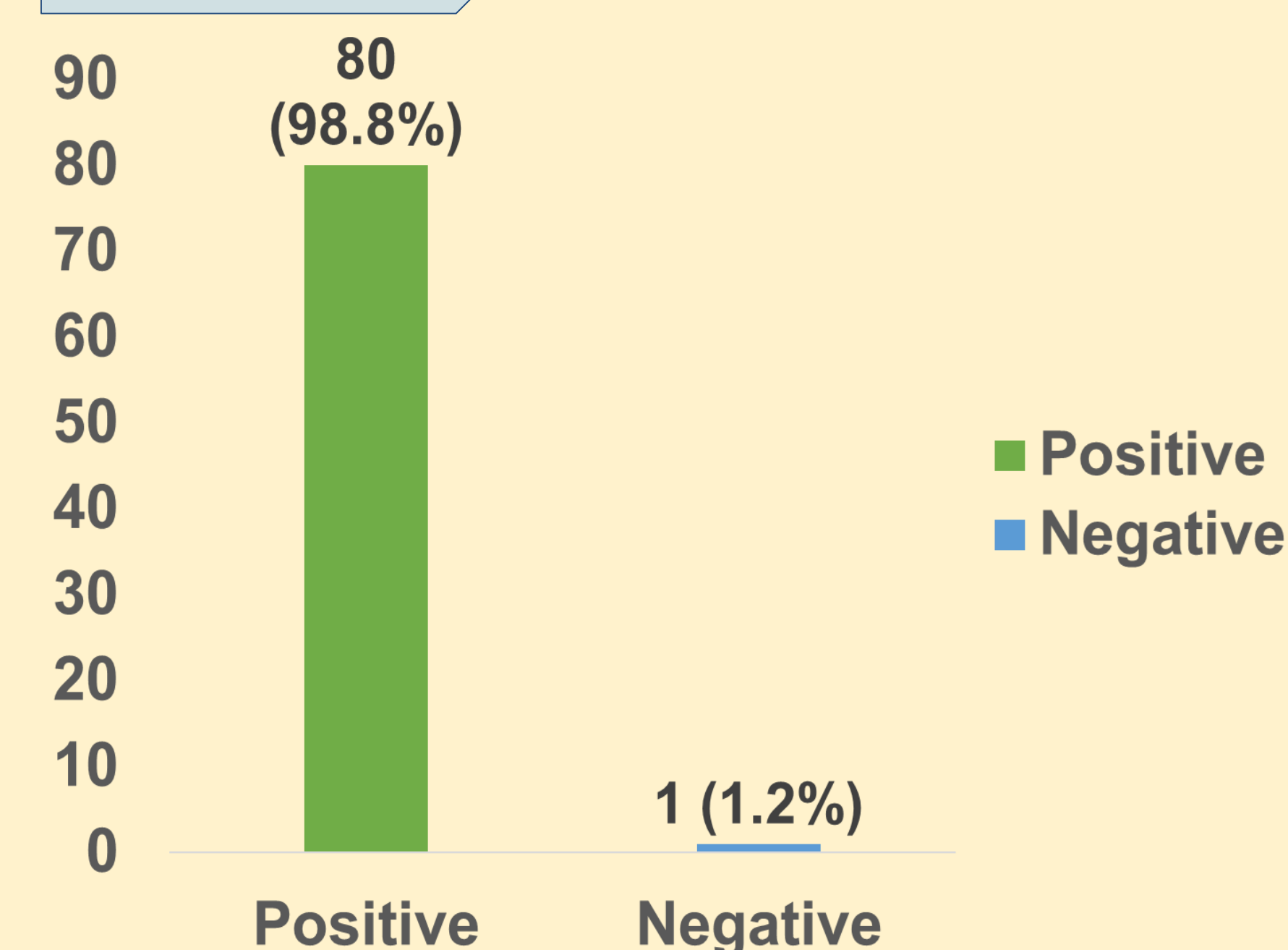


Figure 2. Bar chart Showing Physicians Level of Attitudes Towards Current Antibiotic Treatment Recommendations For Uncomplicated UTIs in Non-pregnant, Pre-menopausal Women

Practice:

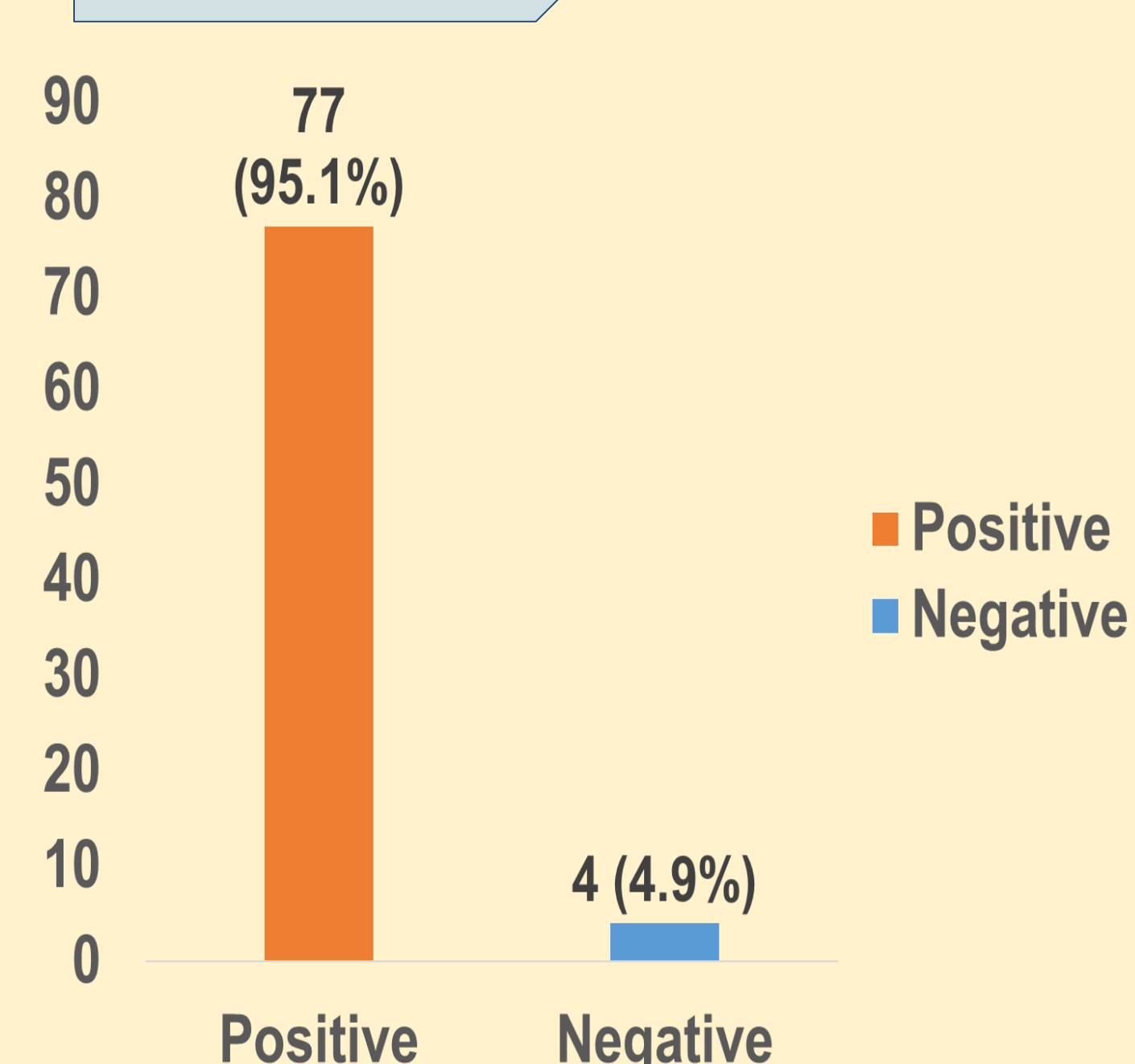


Figure 3. Bar chart Showing Physicians Practices Towards Current Antibiotic Treatment Recommendations For Uncomplicated UTIs in Non-pregnant, Pre-menopausal Women

- Physicians used a variety of antibiotics including second generation cephalosporins and fluoroquinolones with Ciprofloxacin (n=23; 28.4%) and Cefuroxime (n=19; 23.5%) being the most prescribed antibiotics for treatment of Uncomplicated UTIs
- The most predominant guideline used to prescribe antibiotics was NICE (n=30; 37.0%)
- 19.8% physicians indicated using no guidelines for treatment of uncomplicated UTIs

Physicians Act as Dispensers of Antibiotics

81.5% physicians dispense antibiotics and antibiotic samples to patients with Uncomplicated UTIs

63% dispense antibiotics samples to patients because they cannot afford it otherwise

74.2% dispense antibiotics for reasons other than Uncomplicated UTIs

Discussion

The study response rate was 63.3% and General Practitioners comprised the majority of respondents. This study yielded useful information about physicians' antibiotic prescribing habits for the treatment of uncomplicated UTIs in non-pregnant women.

Although 78% of responders reported good knowledge (1), and 95.1% physicians reported positive practice, knowledge was not significantly associated with attitude and practice (p=0.060 and p= 0.891 respectively). In addition, attitude was not significantly associated with practice (p=0.819).

One-fifth of participants indicated that they did not use a guideline which can lead to the misuse of antibiotics and hence, AMR, as was found in a previous study (2).

The majority (96.2%) of responders were aware that antibiotic resistance is an important issue however, physicians dispensed antibiotics to patients who cannot afford it and for reasons other than uncomplicated UTIs. There was a significant association between profession category and physicians empirically prescribing antibiotics due to delayed results.

Conclusion and Next Steps

Knowledge, attitude and practices among physicians were found to be good. There appears to be some mismatch between knowledge and attitude and practice. There is a role for refresher training on AMR and diagnosis and management of uncomplicated UTIs. These interventions will be a positive step in the global effort against antimicrobial resistance.

References

1. Chaw PS, Höpner J, Mikolajczyk R. The knowledge, attitude and practice of health practitioners towards antibiotic prescribing and resistance in developing countries—A systematic review. *J Clin Pharm Ther.* 2018;43(5):606–13.
2. Pinto Pereira LM, Phillips M, Ramlal H, Teemul K, Prabhakar P. Third generation cephalosporin use in a tertiary hospital in Port of Spain, Trinidad: need for an antibiotic policy. *BMC Infect Dis.* 2004 Dec 15;4:59.