

NAME: Dr. Trisha Sharma

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TITLE:

“Assessment of Parental Knowledge and Attitudes Towards Antibiotic Use in Pediatric Care: Implications for Antimicrobial Stewardship.”

INTRODUCTION

A vital component of contemporary medicine, antibiotics have transformed the way infectious diseases are treated and drastically decreased global morbidity and mortality rates. But the development of antibiotic resistance jeopardizes public health worldwide and calls into question the efficacy of these life-saving medications. In paediatric care, where infections are common and antibiotics are frequently prescribed, the prudent use of these medications is imperative to mitigate the spread of resistance.

Parental awareness and attitudes about antibiotic use in paediatric care are critical in deciding the appropriateness of antibiotic prescriptions for their children. When it comes to their child's medical care, parents are frequently the main decision-makers. They have an impact on whether antibiotics are requested, approved, or denied. Therefore, putting into practice effective antimicrobial stewardship techniques in paediatric settings requires an understanding of parental perspectives on antibiotic use.

The purpose of this study is to examine parental attitudes and understanding regarding the use of antibiotics in paediatric treatment, as well as any implications for antimicrobial stewardship. This study aims to shed light on the difficulties of antibiotic prescribing patterns in paediatric healthcare by looking at things like parental awareness of antibiotics, views of the need for antibiotics, worries about side effects, and implications on decision-making processes.

In addition, this study will evaluate how parental views on antibiotic use are affected by educational interventions and interpersonal strategies. Healthcare professionals can support the preservation of antibiotic efficacy and improve antimicrobial stewardship efforts by discovering efficient ways to involve and empower parents in making decisions about their children's antibiotic treatment.

Here, Antimicrobial stewardship refers to a coordinated effort within healthcare settings to optimize the use of antimicrobial agents, including antibiotics, antivirals, antifungals, and antiparasitics, with the overarching goals of improving patient outcomes, reducing the emergence of antimicrobial resistance, and minimizing adverse effects associated with antimicrobial therapy.

The paper aims to provide information for the formulation of focused interventions and policies that support cautious antibiotic prescribing practices and combat the growing threat of antibiotic resistance. subsequently providing a thorough analysis of parental perspectives on antibiotic use in paediatric care. Future generations' access to antibiotics can be protected by promoting cooperation amongst parents, legislators, and healthcare professionals.

RESEARCH QUESTION

In what ways do parental understanding and beliefs concerning antibiotic utilization in pediatric healthcare shape prescribing behaviors for children? Additionally, how can insights derived from parental perspectives inform the development and implementation of robust antimicrobial stewardship strategies tailored to pediatric healthcare settings?

OBJECTIVES

1. Evaluate parental knowledge levels regarding appropriate antibiotic use in pediatric care, including understanding of indications, dosing, and potential risks.
2. Investigate parental attitudes and beliefs towards antibiotic prescribing for children, exploring factors such as perceived necessity, concerns about side effects, and influences on decision-making.
3. Identify challenges and barriers faced by parents in adhering to antimicrobial stewardship principles in pediatric healthcare.

MATERIALS AND METHODS:

Study Design: A longitudinal cross sectional study needs to be employed to investigate the implications for Assessing of Parental Knowledge and Attitudes Towards Antibiotic Use in Pediatric Care: Implications for Antimicrobial Stewardship.

Setting: The study will be conducted at a Thanisandra branch of Cloudnine Hospitals, Bangalore, a newly opened branch located in the suburbs of Bangalore, The unit started functioning on 10th of April 2024.

Study Population: The study population will comprise children in the age range of one to twelve years receiving pediatric care services at Cloudnine Hospitals.

- **Inclusion criteria:**

- 1 Parents or legal guardians of pediatric patients aged 0-12 years.
2. Parents or legal guardians who have sought medical care for their child in a pediatric between April to June 2024.
3. Willingness to participate in interviews or surveys for qualitative data collection.
4. Access to necessary technology (e.g., internet, phone) for participation in surveys or interviews.

- **Exclusion criteria:**

1. Parents or legal guardians who are unable to provide consent for participation.
2. Parents or legal guardians with children who have chronic medical conditions requiring long-term antibiotic therapy.
3. Inability or refusal to participate in interviews or surveys
4. Individuals with cognitive impairments or mental health conditions that may hinder their ability to participate effectively in the study.

- **Study Tools:**

1. Electronic Health Records – Usage of Lifetrenz and adm site
2. Structured Interviews and Surveys
3. Case Report Forms

Duration of Study: 3 months (1st of April 2024 – 30th June 2024)

Sample Size: 50-150 cases

Sampling Technique: The sampling technique will involve a convenience sampling method.

Data Collection Procedure: The data collection procedure for the study will be systematic and comprehensive to ensure the collection of high-quality data for the longitudinal cross sectional study.

OPERATIONAL DEFINITION:

Parental Knowledge: Parents' understanding of when and how antibiotics should be used for paediatric illnesses, including awareness of antibiotic resistance and alternatives.

Parental Attitudes: Parents' beliefs and preferences regarding antibiotic prescriptions for their children, including expectations, concerns, and trust in healthcare providers.

Antimicrobial Stewardship: Strategies to promote appropriate antibiotic use while minimizing resistance, encompassing education, guidelines adherence, and patient engagement.

Paediatric Care: Healthcare for children, spanning prevention, diagnosis, and treatment, delivered by specialized providers like paediatricians.

DATA ANALYSIS PLAN:

1. Quantitative and Qualitative data analysis
2. Integration of the above data and sub group analysis
3. Sensitivity analysis

ETHICAL CONSIDERATIONS:

1. Informed consent
2. Confidentiality and Privacy
3. Voluntary participation and right to withdraw
4. Respect for autonomy and dignity

IMPLICATIONS OF RESEARCH

Research on parental knowledge and attitudes towards antibiotic use in pediatric care is crucial for advancing antimicrobial stewardship efforts. Longitudinal studies can track changes over time, informing the effectiveness of interventions. Intervention studies assessing educational strategies' impact on improving

antibiotic stewardship behaviors among parents are essential. Understanding healthcare providers' perspectives can guide effective communication strategies. Investigating cultural and socioeconomic influences is key for developing tailored interventions. Utilizing health information technology for real-time feedback may enhance stewardship efforts. Community-based interventions, behavioral economics approaches, and multidisciplinary collaboration are also essential for addressing antibiotic resistance.