

Analysis of Amoxicillin-Clavulanate Prescribing in Pediatric Primary Care

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Introduction: Healthcare providers constantly look for ways to reduce medication errors. Antibiotics are common medications associated with dosing errors, especially in pediatrics due to needs for weight, dosage calculation, and choice of dosage form and concentration if applicable. With amoxicillin/ clavulanate (Augmentin), prescribers must consider measurability for liquid dosage forms and desired ratio based on indication. A common dosing error found with antibiotics is underdosing which can lead to resistance and disease progression. This study aims to assess prescribing patterns for amoxicillin/ clavulanate in patients in the pediatric primary care setting: assessing indications for use, ratio selected, dose, and duration of use.

Methods: A retrospective chart review was conducted on amoxicillin/ clavulanate prescribing patterns conducted from January 2024 through March 2024. Patients aged 0 through 17 years receiving care at Riley Pediatric Primary Care Center underwent analysis. Specific data collected: patient demographics (age, sex, weight), amoxicillin/ clavulanate prescription information (indication, dosage form, amoxicillin:clavulanate ratio, dose, route, frequency, duration), and type of prescriber (resident, non-resident).

Results: The most common problem was a lack of documented infectious indication which prevented further analysis of the prescription elements (64.1%). The most frequent prescription error was inappropriate duration, both too long (7.7%) and too short (5.1%). Other aspects of the prescription were correct the majority of the time, and most prescription doses were measurable.

Discussion: These findings underscore the importance of each part of a prescription when verifying appropriateness; this is especially important for community pharmacists to verify prescriptions without access to electronic health records. Education will be provided to prescribers on the importance of indication, required aspects of a prescription, pediatric pearls, and common indications for amoxicillin/ clavulanate with dose and duration.

Conclusion: Further research is needed to identify ways to reduce medication errors as well as ways to educate providers on these issues.