

## Development of a Checklist for Sequential Oral Antimicrobial Therapy (SOAT) in a Large Municipal Hospital in Rio de Janeiro

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### Introduction

Rational antimicrobial use is a primary goal in hospital units, pharmacists play an essential role. While intravenous antimicrobial therapy (IV) is the choice for severe infections, in mild to moderate infections, oral therapy often yields comparable serum levels and clinical outcomes. Sequential Oral Antimicrobial Therapy (SOAT) involves the appropriate transition from IV to oral antibiotics, offering benefits such as avoiding the need for venous access, shorter hospital stays, reduced costs, and improved patient comfort. Recognizing these advantages, a pharmaceutical intervention program for SOAT was developed, including a checklist of criteria to assess patient eligibility for SOAT.

### Material and Methods

This study aimed to gather data and create a necessary checklist for implementing a SOAT program in a large municipal hospital in Rio de Janeiro. To develop the checklist, it was necessary to determine the inclusion and exclusion criteria for patient eligibility for the transition of antimicrobial therapy. For this, it was necessary to collect scientific data from the literature on different eligibility criteria used in other studies with a focus on Sequential Oral Antimicrobial Therapy. Priority was given to studies conducted in Brazil and Latin America. After the data was obtained, the inclusion of criteria in the checklist took into account the highest level of safety and the particularities of the hospital unit.

### Results and Discussion

A checklist was developed with a questionnaire comprising twelve criteria to assess patient eligibility for SOAT. Eligibility criteria for SOAT include a stable clinical condition, absence of fever and hypothermia in the last 24 hours, oxygen saturation of 95% or higher, no tachypnea, white blood cell count between 4,000 and 12,000 per microliter, ability to eat orally, absence of vomiting, diarrhea, and steatorrhea in the last 24 hours, no mechanical swallowing disorders, no serious complications during hospitalization, prior IV antibiotic therapy for at least 48 hours, and absence of severe infectious conditions. In addition, concerning the patient, the checklist includes fields for the entry of personal information (name, age, medical record number, among other data), the ongoing IV antibiotic therapy (dosage, duration of treatment), the reason for the prescription of antibiotic therapy (prophylaxis, empirical use, or guided use), the antibiogram and microbiological culture results, vital signs, and leukocyte count. As for healthcare professionals, the checklist includes fields for the signature and stamp of the individual responsible for data collection, an evaluation of the patient's eligibility for therapy transition, the recommended oral antibiotic therapy, including dosage and treatment duration, field of accepts or declines of the recommendation to the prescribing professional, and the signature and stamp of the pharmacist responsible for checklist evaluation. Data collection from the patient can be carried out by a healthcare

professional with a background in pharmacy, medicine, or nursing. However, the evaluation of eligibility and the recommendation of antibiotic therapy are exclusive to the pharmacist.

## **Conclusion**

The future implementation of this strategy has the potential to reduce costs, shorten average hospital stays, decrease the risk of healthcare-associated infections, and enhance patient comfort.

## **Acknowledgments**

I would like to express for the support COREMU, UFF, Secretária Municipal do Rio de Janeiro, Hospital Municipal Miguel Couto, my advisor Geraldo Renato de Paula, my preceptor Maely Peçanha Fávero-Retto.

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