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Introduction

- Relatively little is known about how clinicians make therapeutic decisions.¹
- Recent work has explored how physicians use antimicrobial therapeutic reasoning (ATR) to choose medications.²
- Understanding pharmacists' ATR could:
 - Inform pharmacy education
 - Improve antimicrobial stewardship (AS)
 - Support robust interprofessional collaboration

Study Aim

Our study explored ATR among infectious disease (ID) and non-ID clinical pharmacists.

Methods

- We adapted a think-aloud protocol for semi-structured interviews aimed at exploring participants' therapeutic reasoning processes.²
- 11 pharmacists (5 ID pharmacists and 6 non-ID clinical pharmacists) participated.
- Participants responded to clinical vignettes and questions about their general ATR processes.
- Interviews were audio recorded, transcribed, and analyzed using the codebook developed by Abdoler and colleagues² as an initial framework.
- Two investigators (EA and KG) added and adapted codes through an iterative, collaborative process.
- A third investigator (CM) arbitrated unresolved code application discrepancies and definitions.

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Figure 1: ATR Framework

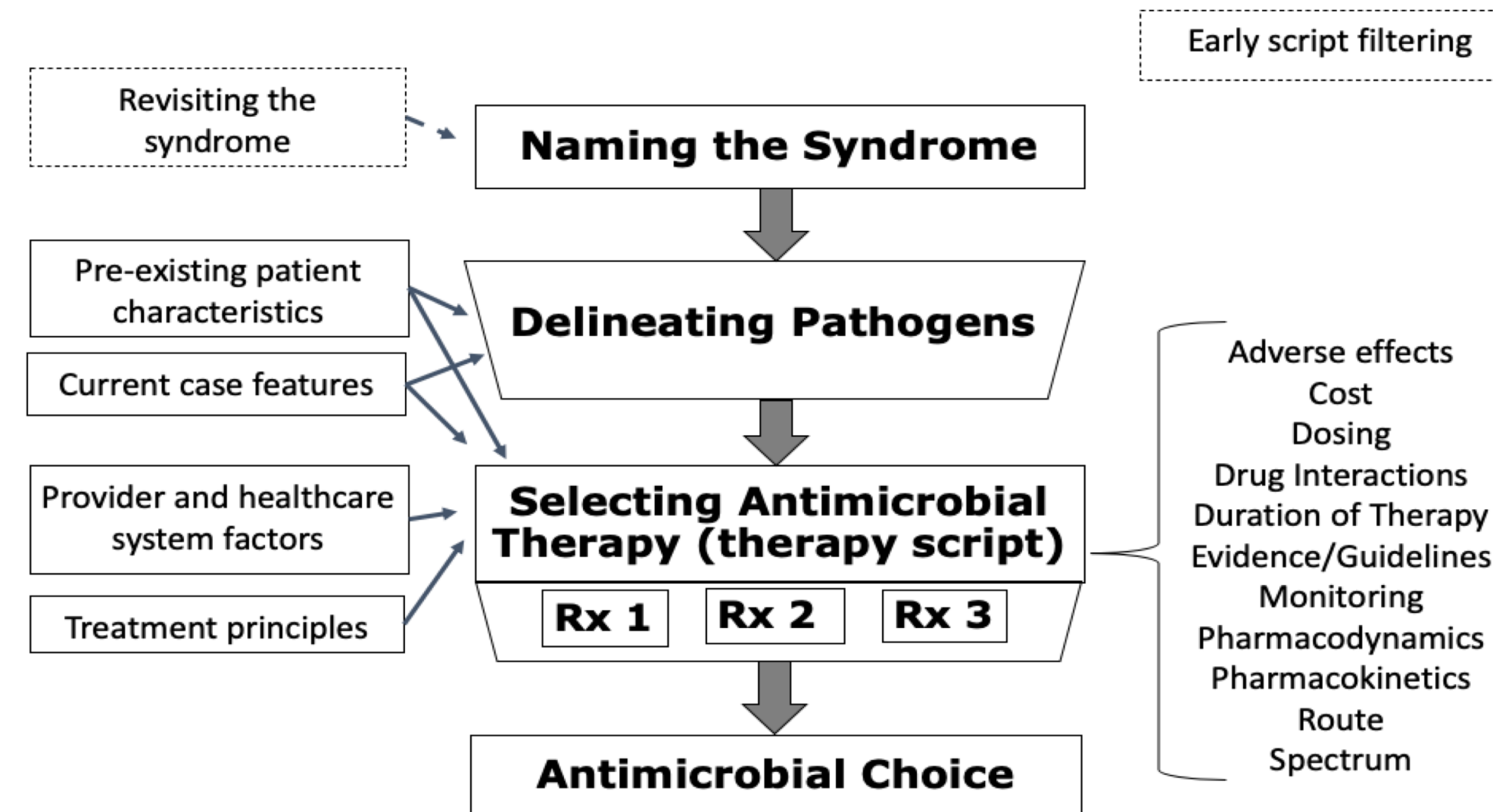


Table 1: Factors Involved in Pharmacists' ATR Process

Categories	Factors					
Patient Characteristics	Age	Allergies	Exposures	Medical History	Medications	Social Factors
				<u>Sub-factors:</u> Can take oral meds, weight* , comorbidities, past infections	<u>Sub-factors:</u> Prior exposure to antibiotics, current meds	<u>Sub-factors:</u> Ability to adhere** , financial factors
Current Case Features	Differentiating features	Microbiologic data	Illness severity	Illness trajectory		
Provider and Health System Factors	Antibiogram	Clinical experience	Team dynamics*	Institution-specific practices		
Treatment Principles	Pathogen-based treatment	Parsimony	Narrow Coverage	Evidence-based/guideline-supported decisions**		

*New factors compared to those previously identified in the ATR process in physicians

**Factors with expanded definitions compared to those identified by physicians

Factors previously identified by physicians but not pharmacists: Pill burden, Likelihood of follow-up, Patient preferences, Supporting trainee choices

Results

- Pharmacists generally engaged in the same ATR steps described by physicians, with two additions (Figure 1):
 - “Revisiting the syndrome” in light of clinical data
 - Engaging in “Early script filtering” to narrow options during ATR
- Pharmacists also identified some new factors that impact ATR (Table 1)

Summary

- We identified a framework for pharmacist ATR.
- Factors mentioned by pharmacists are similar to those previously identified by physicians.²
- Differences in physician and pharmacist ATR may be due to pharmacist's role in medication review.

Next Steps

- This framework could be applied towards:
 - Teaching students and residents
 - Identifying errors/bias within the ATR process
 - Communication across professions

Acknowledgements

This work was funded by the Divine Family Endowed Chair in Clinical Pharmacy Grant.

References

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2. Abdoler, EA, O'Brien, BC, Schwartz, BS. Following the Script: An Exploratory Study of the Therapeutic Reasoning Underlying Physicians' Choice of Antimicrobial Therapy. Acad Med. 2020;95:1238-47.