

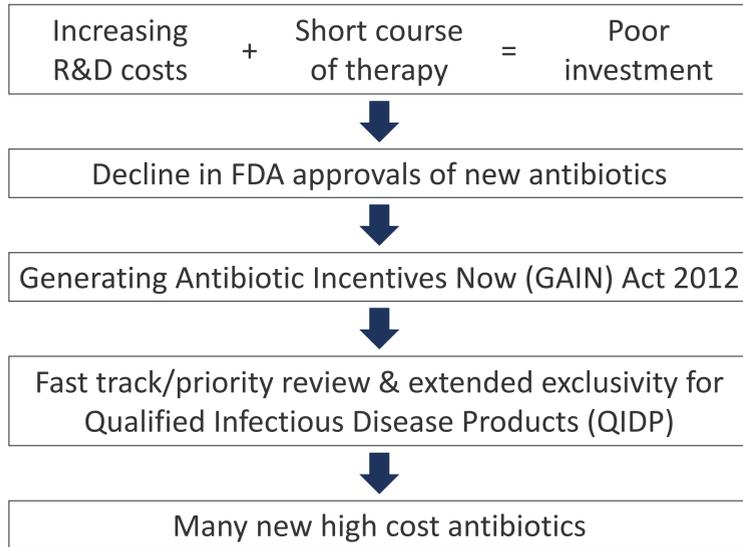
Development of a Pharmacoeconomics Calculator for New Antibiotics



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INTRODUCTION



OBJECTIVE

Enable pharmacy decision-makers to efficiently evaluate new antibiotics utilizing cost & efficacy

METHODS

- Collected information on new antibiotics including:
 - Indications and dosing from package inserts
 - Average treatment duration and off label uses from primary literature
 - Wholesale acquisition cost (WAC) from Red Book
- Created a pharmacoeconomics calculator for new antibiotics using the data collected & the Slicer Tool in Microsoft Excel

RESULTS

Figure 1. The pharmacoeconomics calculator after selecting complicated intraabdominal infections (cIAI) for the indication

Generic Name	Brand Name	Indication	Indication On (X) or Off (OL) Label	Adult Dosing Regimen	Infusion Time	Treatment Duration Range	Average Treatment Duration	WAC Price Per Day	WAC Price Per Average Treatment Duration	Efficacy Rating (for Indication)
Cefiderocol	Fetroja	cIAI	OL	2 g IV Q8H	180 minutes	7 to 14 days	Insufficient data	No WAC yet	No WAC yet	5-A
Ceftazidime/avibactam	Avycaz	cIAI	X	2.5 g IV Q8H	120 minutes	5 to 14 days	8 days	\$1,076.43	\$8,611.42	1-B
Ceftolozane/tazobactam	Zerbaxa	cIAI	X	1.5 g IV Q8H	60 minutes	4 to 14 days	6 days	\$341.82	\$2,050.92	1-B
Imipenem/cilastatin/relebactam	Recarbrio	cIAI	X	1.25 g IV Q6H	30 minutes	4 to 14 days	7 days	No WAC yet	No WAC yet	2-B
Meropenem/vaborbactam	Vabomere	cIAI	OL	4 g IV Q8H	180 minutes	≤14 days	Insufficient data	\$1,069.20	Insufficient data	5-A
Eravacycline	Xerava	cIAI	X	1 mg/kg IV Q12H	60 minutes	4 to 14 days	8 days	\$147.00	\$1,176.00	1-A

Efficacy Rating (for Indication) Key

# Cured in Clinical Studies	% Cured in Clinical Studies
1: ≥200 patients	A: ≥90%
2: 100-199 patients	B: 85-89%
3: 50-99 patients	C: 80-84%
4: 10-49 patients	D: 75-79%
5: 0-9 patients	E: <75%

Figure 2. The pharmacoeconomics calculator results after selecting cIAI for the indication and *Pseudomonas aeruginosa* for the bacterium

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CONCLUSIONS

- The pharmacoeconomics calculator generates quick & customizable comparisons of antibiotics that can then be paired with local antibiograms.
- Pharmacists can efficiently assess key clinical & operational factors of each medication
- The most cost-effective product can easily be identified.
 - Although one product may have a higher WAC, the calculator shows the product with the lowest overall treatment cost.
 - Contract pricing can also be incorporated.
- The addition of off-label indications through clinical trials & post-marketing data provides for more robust decision making.
- Potential uses range from patient specific decisions to system-wide administrative decisions.
- Additionally, the tool could be adapted to other medication classes.

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DISCLOSURES

Authors of this presentation disclose the following relationships with commercial interests related to the subject of this poster:
 Emily Singleton, Andrew Douglas, Kate Claussen, and Jason Braithwaite: Nothing to disclose