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Antibiotic Prescription Practices of Medical Residents For the Treatment of STIs: A Qualitative Study



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Introduction

- According to the CDC, chlamydia and gonorrhea are the most reported bacterial STIs in the United States and their rates are increasing.
- The CDC guidelines were updated in December 2020 to suggest a single IM dose of 500mg of ceftriaxone for treatment of gonorrhea, and if chlamydial infection is not excluded, a dual therapy combined with 100mg doxycycline 2x/day for 7 days.
- Inappropriate antibiotic use has contributed to growing resistance. It is important for health care providers to follow evidence-based treatment guidelines to prevent further AMR and ensure the best possible outcomes for patients. But are providers away of these new guidelines and have they accepted them into their practice?
- This exploratory study aims to determine how providers with different levels of background and experience will treat gonorrhea and chlamydia infections.

Methods

- Obtained IRB approval
- Used residency directors to recruit Family Medicine and Internal Medicine residents affiliated with UC Davis.
- 10-15 minute zoom interviews conducted between May 2021-August 2021 consisting of 8 background questions followed by 3 clinical scenarios.
- Audio recording of responses to ensure transcription accuracy.

Results

Participant Demographics		
Total Participants	Sex (F/M)	Specialty (IM/FM)
5	3 Female	2 Internal Medicine
	2 Male	3 Family Medicine

Theme 1:
When asked about what sources of information they rely on vs what sources of information they view with skepticism:

“Nonmedical sources can be helpful to start understanding ... Random places like Googling or Wikipedia, I don’t go there for treatment information.”

“I use UpToDate extensively, and then I will sometimes find meta-analyses of individual problems. Usually, I don’t have time for that and it’s just UpToDate.”

“Sometimes I will do a google search and see what comes up for ease and efficiency, but I tend to look at those with more skepticism.”

Theme 2:
When presented with clinical case vignettes and asked what their next steps in management would be:

“Given that it looks pretty positive for at least something, I would treat him empirically until results come back ... I believe for gonorrhea and chlamydia it is IM ceftriaxone but I would probably want to double check.”

“I would go ahead and provide treatment ... I would probably do ceftriaxone and give doxycycline for a few days. “

“Because I am a resident and I do not see this all the time, I would look up the best treatment course. A lot of times I will do ceftriaxone in the office + azithromycin to co-treat.”

Summary

- All residents in the study relied heavily on UpToDate to inform their clinical judgement for treatment. Most did not know the current CDC recommendations from memory.
- Participants were more skeptical using non-medical resources such as Google, WebMD, or Healthline. None mentioned the CDC STD Tx Quick Guide and none mentioned asking clinical pharmacists.
- Participants in this study were unlikely to regularly look up current guidelines on their own for STI treatment.
- Only some participants were able to recognize that they should treat empirically. None mentioned a need to treat the partner.
- Residents in earlier years of training were more likely to rely on the instruction of their superiors for updates on treatment guidelines than more senior residents.

Further Study

- Future research may expand on the common themes discovered in this exploratory study with a larger and more diverse sample size to inform improved training on antibiotic prescription practices among residents and other entry level clinicians.
- Information gathered may be used to create standardized resources and promote applications such as those maintained by the CDC that residents may refer to so microbial infections may be treated more effectively and safely.