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Promoting Antibiotic Stewardship

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Antibiotic Stewardship

- Up to 50% of antibiotics are unnecessarily prescribed. [1]
- Many patients in the outpatient setting come in for common respiratory infections, and some of these patients ask about or explicitly ask for antibiotics for their symptoms.
- In most cases, those antibiotics are unwarranted, and providers will spend time counseling patients against the use of antibiotics as it would contribute to antimicrobial resistance, perhaps cause side effects to the patient from the resultant elimination of natural gut flora, and propagate healthcare associated infections (HAI).
- The time spent counseling adds up, which could cause delay in seeing other patients at their scheduled times.
- Educating patients about antibiotic use outside of the exam room and beyond can help minimize confusion and questions, which streamlines patient care.

How costly is it?

- Antibiotic use itself is difficult to quantify, however overuse can lead to healthcare associated infections (HAI).
- Across the nation, up to $45 Billion may be spent on HAI each year. [2]
- Vermont's state implemented HAI Plan seeks to cut down the rate of HAI through programs such as the MDRO (multi drug resistant organism) Collaborative which promote antibiotic stewardship.[2]
  - Vermont has significantly reduced specific types of HAI (central line associated, MRSA, and C. diff) compared to the nation. [3]
  - However, Vermont has significantly higher rates of UTI and surgical infection compared to the nation.[3]
- Aside from monetary cost, HAI imparts a cost on a patient's health, causing hospitalization, longer stays, and physical/emotional stress.

Community Perspective

- **Physician at TCHC**: *"I think it would be a great idea if patients can read something on their own so they have a better understanding of antibiotic use. Perhaps 20-30% of patients coming in for common colds request antibiotics. If we don't prescribe, they'll likely go elsewhere. With some basic understanding, we can even reassure them of what they know, and that can move things along."*
- **Physician at TCHC**: *"I used to see a lot of patients asking for antibiotics in the past. Today it's not as much as back then, but it's still something we deal with. When I'm on call, I usually do get 2 or 3 patients asking for antibiotics. I end up telling each of them the same thing, and that actually can get tiring."*

Intervention and Methods

- **Intervention**: Introduce a form of patient education that will grab the reader's attention, self serve its purpose, and ensure the patient leaves having learned something.
- **Methods**:
  - Create a visual aid that is striking so as to grab the reader's attention
  - Provide easy to understand facts as bullet points in succession for fast and simple reading
    - Make it easy to know when antibiotics are warranted → YES, MAYBE, NO
  - Place visuals in areas where patients will see them (waiting rooms, exam rooms, bathroom walls)
  - Make sure providers and other staff promote the visual aid and encourage patients to share the information to people they know

Response

- Physicians and staff at TCHC very positively responded to the idea of having such a visual aid present throughout the clinic, as they really believe patients will want to read it and will learn from it as well.
- It is difficult to gauge patient response at this stage. Over time, providers will get a feel for the number of patients reading the visual and how they are reacting to it.
- Providers will encourage patients to inform people they know who may be having a common cold like illness.

Effectiveness and Limitations

- Effectiveness of the visual will primarily be determined by the providers qualitatively.
  - They will note their own change in time spent counseling on antibiotic use.
  - They will note the change in a number of antibiotic prescriptions being sent to pharmacies. (This can be done quantitatively as well, if the data is available.)

- Limitations
  - The results will likely be qualitative since running data and statistics for gauging patient response and decrease in antibiotic use may not be plausible.

Future Recommendations

- Creating more visuals and multiple copies of them to be handed out to patients may further augment its effectiveness.
- If plausible, determining a quantitative change in the number of prescriptions and time spent counseling since putting up the visual aid can provide some evidence as to whether it plays a significant role in stewardship.

References

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