

Development of a novel educational tool to promote antimicrobial stewardship on a university campus



George Ni, PharmD Candidate 2020, Carina Acosta, PharmD Candidate 2021, Yuman Lee, PharmD, BCIDP, Nicole Bradley, PharmD, BCPS, BCIDP
St. John's University College of Pharmacy and Health Sciences, Queens, NY



Introduction

- Antibiotic resistance persists as an urgent and growing threat to public health.¹
- St. John's University Queens Campus offers programs in business, education, health sciences, liberal arts and sciences, and professional studies.
 - 21,346 full and part-time students are currently enrolled.
 - St. John's student population is ethnically diverse, which is reflective of its location in Queens, NY.
- A previous survey conducted at St. John's University revealed a knowledge deficit and inappropriate perception on proper antibiotic use among college students.²
 - Areas identified, which require further education, included appropriate indications of antibiotics, expectations of antibiotic prescriptions from doctors, and adherence to antibiotics once prescribed.
 - A need was seen to introduce antimicrobial stewardship concepts on a level which college students could grasp.

Objective

- The objective of this study is to develop a novel peer educational tool to promote antimicrobial stewardship among college students.

Methods

A taskforce of two infectious diseases faculty members & two pharmacy students was formed. IRB approval was granted.

The taskforce coined the acronym "BUG OFF: Better Use (of antibiotics) Guards Ourselves, Friends, and Family".

The taskforce developed an educational tool and protocol for its use.

After a training session on the educational goals and protocol, P-4 APPE students served as peer educators.

Peer educators completed an anonymous survey to evaluate their experience.

Results

- An origami fortune teller was created as the tool to facilitate peer-to-peer education.
 - The fortune teller was implemented at a university wellness fair, which was held outdoors with various tables focused around student health, such as blood pressure screenings and fitness center activities.
- Five targeted key points of antimicrobial stewardship were identified and situational learning mini-cases were developed around them.
- Following the conclusion of the event, peer-educators were surveyed about their experiences with the tool and protocol, regarding ease of use and standards of implementation.

Key Points

- Antibiotics only work against bacterial infections.
- Differentiate viral vs. bacterial infection symptomatology.
- Educate on proper use of antibiotics.
- Utilize non-pharmacologic measures to combat infection.
- Antibiotic resistance is a consequence of inappropriate antibiotic use.

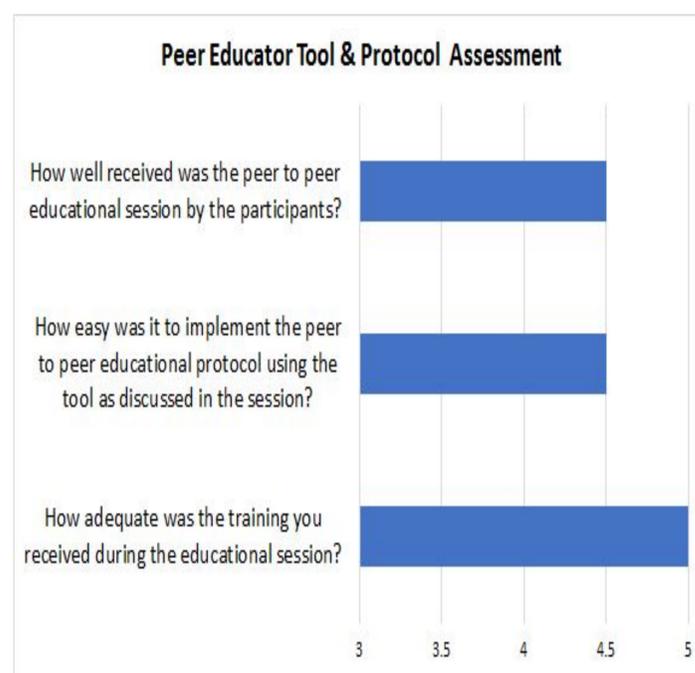
Fortune Teller Cases

John sits down for lunch. What is the first thing he should do before he digs in?

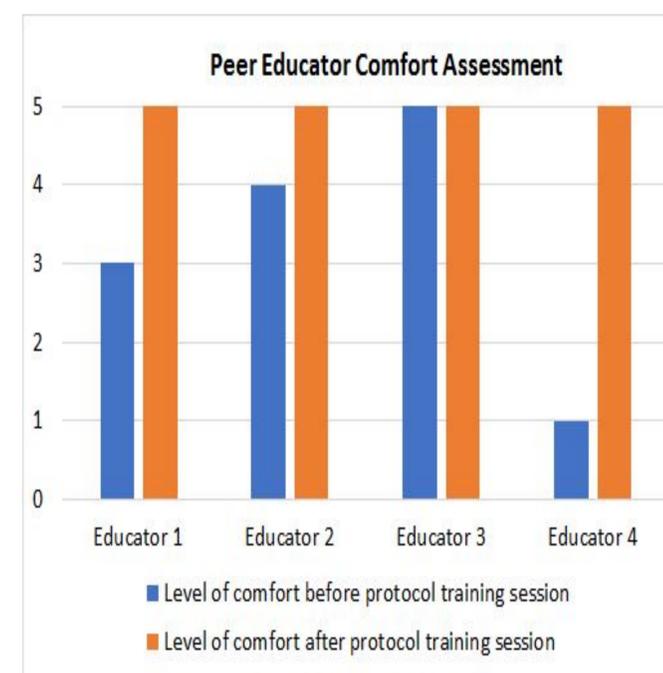
Alex has a runny nose and cough. His mucus is green. Is this a sign of a bacterial infection?

Cathy has been prescribed a 10-day course of antibiotics. On day 6, she starts feeling better. Is it okay for her to stop her regimen?

Jennifer has been diagnosed with the flu. Should she be given antibiotics to help with her symptoms?



5 – Very good
4 – Good
3 – Acceptable
2 – Poor
1 – Very poor



5 – Very comfortable
4 – Comfortable
3 – Neutral
2 – Uncomfortable
1 – Very uncomfortable

Discussion

- The tool was designed to facilitate the promotion of antimicrobial stewardship around a peer-to-peer dynamic.
- The focused mini-patient cases allowed our students to be engaged, while the peer-to-peer aspect lead participants through a guided discussion.
- Peer educators found that the protocol was easy to implement and that the training received was very adequate. Educators felt very comfortable after the protocol training session.
- A strength of the study was that the peer educators were able to educate 143 students during the 3 hour wellness fair.
 - The protocol allows for the simultaneous education of 2-5 students at a time.
- A limitation of the study was the small number (n=4) of peer educators who participated and were surveyed. Additionally, only one peer education event was held using this tool at a single college campus.

Conclusion

- The origami fortune teller as an educational tool allowed the complex concepts of antibiotic stewardship to be more digestible for our target demographic.
- The origami fortune teller's visual, interactive, and nostalgic characteristics resonated with participants. Participants actively learned from peer educators by discussing multiple patient-care situations.
- This novel educational tool may be implemented for future peer education events on antibiotic stewardship, such as the promotion of immunizations, or reimagined for use in other domains of pharmacy.
 - Expanding peer educator training sessions can further promote antibiotic stewardship by recruiting more students to teach others.

Author Disclosures

- All authors have nothing to disclose.
- Corresponding student author: George Ni, PharmD Candidate c/o 2020 (george.ni14@stjohns.edu)
- Corresponding faculty author: Yumi Lee, PharmD, BCIDP (leey2@stjohns.edu)

References

- [1] CDC. About Antimicrobial Resistance. Last updated September 10 2018. Accessed November 11 2019. <https://www.cdc.gov/drugresistance/about.html>
- [2] Dhanani L, Farzadeh S, Lee Y. Knowledge and attitude of antibiotic use amongst college students. AACP. 2018. <https://www.aacp.org/sites/default/files/posters/2018/pdf/dhanani.pdf>