

# Effect of a 6-Lecture Course Series on Selected Pharmacy and Healthcare Topics on High School Students in Pre-Health Career Track Coursework

Matthew Dunahoo, PharmD Candidate; Jessica Kerr, PharmD

## Background

- Career choice is important for not just money but for long-term happiness and fulfillment.
- Information gathered and choices made during adolescence are important in career choice.
- High school health classes also often do not fully prepare students with real-life health knowledge, such as concerning illness and when to go to the doctor.
- Experts in healthcare may be able to greatly impact high school students in career choice, health-related knowledge, and long-term happiness.

## Objective

- To develop a fully-fleshed out program concerning various healthcare topics aimed at high school students that is easily modifiable, adaptable, and easy-to-implement.

## Methods

- A 6-lecture course series was developed regarding various healthcare topics.
- Topics covered include drug basics, drug kinetics, infectious diseases, high blood pressure, prescription verification, special populations, addiction, and more.
- Supplemental materials were developed as well, including skeleton notes for each lecture, a study packet, assessments of learning, videos, hands-on activities, and discussions.
- The hands-on activities included learning to take blood pressure as well as one day dedicated to “working like a pharmacist.”
- The Edwardsville High School class the program was given to was part of their course for students interested in healthcare professions in university.

## Results

Student Career Choice Before Lecture Series vs. After Lecture Series						
Before/After Course Series	#1 Career Choice		#2 Career Choice		#3 Career Choice	
	Before	After	Before	After	Before	After
Student 1	Physician	NP	Dermatologist	Physician	PT/OT	PT/OT
Student 2	Physician	Physician	PT/OT	NP	NP	PT/OT
Student 3	NP	N/A	Airforce Pararescue	NP	RPh	Physician
Student 4	NP	NP	Physician	Physician	PT/OT	PT/OT
Student 5	NP	NP	Nurse Research Scientist	RPh	Physician	Nurse Research Scientist
Student 6	NP	NP	Forensic Examiner	PT/OT	RPh	RPh
Student 7	PT/OT	PT/OT	Speech Therapist	Speech Therapist	NP	NP
Student 8	Trauma Surgeon	N/A	Physician	N/A	NP	N/A
Student 9	PT/OT	N/A	RPh	N/A	Physician	N/A

- Themes for decision to take the pre-health professionals sequence:
  - Large variety of career opportunities.
  - Helping to alleviate the pain and suffering of others.
  - Challenge their own learning about disease states and how to treat them.
- The majority of students agreed that the program:
  - provided valuable information.
  - Provided insight into topics they would have otherwise not learned about.
  - Made them realize that all healthcare providers are important in their own way and are inter-connected.
- Score on initial quiz vs final quiz increased (3.75 to 4.1 out of a total 5; 75% to 82%).
- 100% of students agreed that the program should be offered again.

## Limitations

- Small class size of only nine students, with only seven students completing both the pre- and post-surveys (due to COVID-19 pandemic, normal class size around 30 students).
- Shorter-than-expected class time (due to COVID-19 pandemic).
- Virtual-only classes, no hands-on activities able to be completed (due to COVID-19 pandemic).
- No other class also surveyed to compare as a non-intervention group.

## Discussion

- Students unanimously enjoyed the program and were more committed to a healthcare career after the program.
- Only small changed in the primary career choices happened (see table in Results sections).
  - This could relate to reinforcement of career choice rather than decision to change due to this program.
- Pharmacy is the only profession that gained trust out of the three surveyed.
- Students gained some knowledge that was retained.

## Future Direction

- The program should be repeated in a larger class with longer class time to allow for the whole expected program.
- If possible, the program should be done in-person to be able to fully complete the hands-on activities, as these were very important in the program schedule.
- A comparator group should be surveyed as well.
- Hopefully, this program can be continued and expanded upon by pharmacy students in the coming years.