Reducing the Re-emergence of COVID-19 in the Assisted Living Facilities

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PROBLEM STATEMENT

USF Doctoral Nurse Practitioner students assisted a Florida county department of health (DOH) in conducting infection prevention and control (IPC) visits to local assisted living facilities (ALF).

- Despite efforts, the positivity rate of COVID-19 amongst residents in ALF is 10% in August and increase to 20% in September.
- ALF's show a compliance deficit in donning and doffing PPE, hand hygiene, and basic knowledge of COVID-19 transmission.

PROJECT PURPOSE

The overall purpose of this project is to mitigate the spread of COVID-19 and re-infections amongst the ALF residents.

Aim: Overarching aim of this project is to reduce the re-emergence of COVID-19 to be less than 5%.

PICOT Question: Does the implementation of an Infection Prevention and Control (IPC) intervention reduce the re-emergence positivity rate of SARS-coV-2 virus infection amongst assistant living facility residence compared to usual practice?

MODEL/NURSING THEORY

This quality improvement (QI) project follows the *Improvement* approach through use of a PDSA cycle. Florence Nightingale's *Environmental Theory* emphasized how the environment can effect a persons health, especially during a pandemic, and the importance of changing the environment to improve patient's outcomes.

METHODS

Participants

- Residence living within an ALF with high rates of COVID-19 positivity rates

Setting

- 120-bed community ALF.

Instruments/Tools

- This project did not require a tool

Intervention and Data Collection

Retrospective review of data during August-October 2020 during the IPC visits to gain an understanding of the factors promoting increase positivity rate amongst ALF residents.

Create and implement an evidence based IPC event day protocol to include:

- Center for Disease Control and Prevention (CDC) education and guidelines for preventing and mitigating COVID-19 in the ALF.
- Development of hands on activities to promote proper hand washing, donning and doffing PPE, and COVID-19 Jeopardy.
- Identification and selection of an IPC champion within the ALF to promote sustainability.
- De-identified data collected from the local DOH.

RESULTS

Figure 1

Average of Confirmed ALF Resident COVID-19 Cases

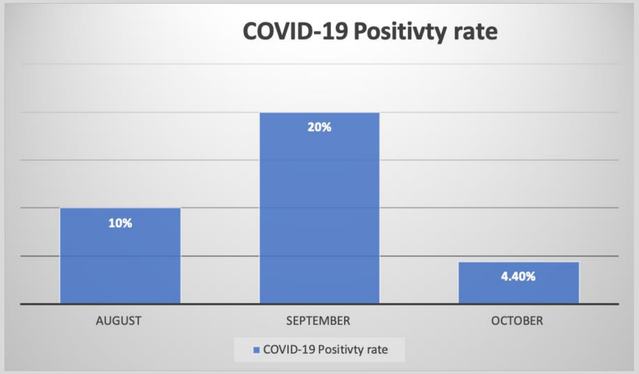

Table 1

Confirmed COVID-19 Case

	Confirmed Resident Cases		
Months	Covid-19 cases	Resident census	Percent positive rate (%)
August	9	91	9.89 (10%)
September	18	91	19.7 (20%)
October	4	91	4.39 (4.4%)

Table 2

Test For One Proportion Summary for positivity rate in ALF

	ALF					
	Observed proportion %	Sample size	Null Hypothesis %	Z stat	Significant Level	95% CI for Mean Difference
COVID-19 Positivity Rate	4.4%	91	20	3.69	P= 0.0002	1.26% to 11.02%

DISCUSSION

- The DNP project was not fully implemented due to COVID-19 restrictions within the ALF facilities and State mandates.
- The retrospective review of the IPC visits does not support NP student visits as an influence on the positivity rate of COVID-19 amongst ALF residence.
- Despite the inability to implement the project, any reduction in the positivity rate of COVID-19 amongst residence is significant.

Limitation

- Unpredictability of a pandemic and the frequently changing environment.
- Inability to track ALF census

IMPLICATIONS FOR ADVANCE PRACTICE NURSING

The advance nurse practitioner student can partner with a local DOH to tackle local/national healthcare issues, such as the COVID-19 pandemic. QI projects may not go as planned due to rapidly changing situations and unforeseen obstacles. However, doctoral nursing students leadership skills and ability to promote change is needed more than ever. It is the responsibility of the APRN to endorse health promotion and prevention.

SUSTAINABILITY

A *COVID-19 Event Day Intervention* was provided to the local DOH for ALFs to adopt as part of their annual review and new hire training.

REFERENCE

Future Projects are required to determine if the implementation of a COVID-19 IPC event can reduce the re-emergence of COVID-19 in the ALF

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