

Reducing Inappropriate ER Utilization with an ALF COVID-19 Preparedness Toolkit

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PROBLEM STATEMENT

- Nurse practitioner students assisted a Florida county health department in conducting infection prevention and control (IPC) visits at local assisted living facilities (ALFs) to stem the tide of COVID-19 infections in June-July 2020.
- 27% (n= 19) of participating ALFs (n= 71) had no plan in place to manage residents testing positive for SARS-CoV-2.
 - 73% (n= 52) of participating ALFs (n= 71) had an appropriate plan to manage residents with suspected or confirmed cases.
 - Many ALFs reported plans to send residents to the ER regardless of severity of illness.
 - In July 2020, the county health department reported a surge in ALF resident ER transfers with nearly 25% not requiring ER level care

PROJECT PURPOSE

To improve the preparedness of ALFs to manage asymptomatic and stable residents testing positive for SARS-CoV-2 to prevent overwhelming local ERs.

Aim: Decrease the rate of inappropriate ER transfers by 20% from a select county ALF within one month following implementation of a COVID-19 preparedness planning toolkit.

PICOT Question: Does the implementation of a coronavirus preparedness planning toolkit reduce the rate of inappropriate ER utilization in ALFs choosing to participate compared to usual practice?

MODEL/NURSING THEORY

This quality improvement (QI) project follows the *Model for Improvement* approach through use of a PDSA cycle. Florence Nightingale's *Environmental Theory* further informed this project whereby environmental conditions impact a person's health as occurs during a pandemic.

METHODS

Participants:

- Residents living within an ALF with the highest inappropriate ER transfer rate.

Setting:

- A large 150-bed community ALF.

Instruments/Tools:

- This project did not require a specific instrument or tool.

Intervention/Data Collection

Retrospective review of data regarding June-July IPC visits completed by nurse practitioner students to gain understanding of factors that may have influenced the rate of infection necessitating transfers.

Create and implementation of an evidence-based *COVID-19 Preparedness Planning Toolkit* including:

- Key elements for building a comprehensive preparedness plan including measures to prevent, prepare, and respond to COVID-19.
- CDC education and guidance for families, residents, and staff regarding COVID-19 transmission and prevention.
- Process algorithm aligning with local emergency service recommendations to link residents with suspected or confirmed cases to appropriate care.

De-identified data was collected from the emergency status system and health department.

RESULTS

Figure 1

Average of Confirmed ALF Resident COVID-19 Cases

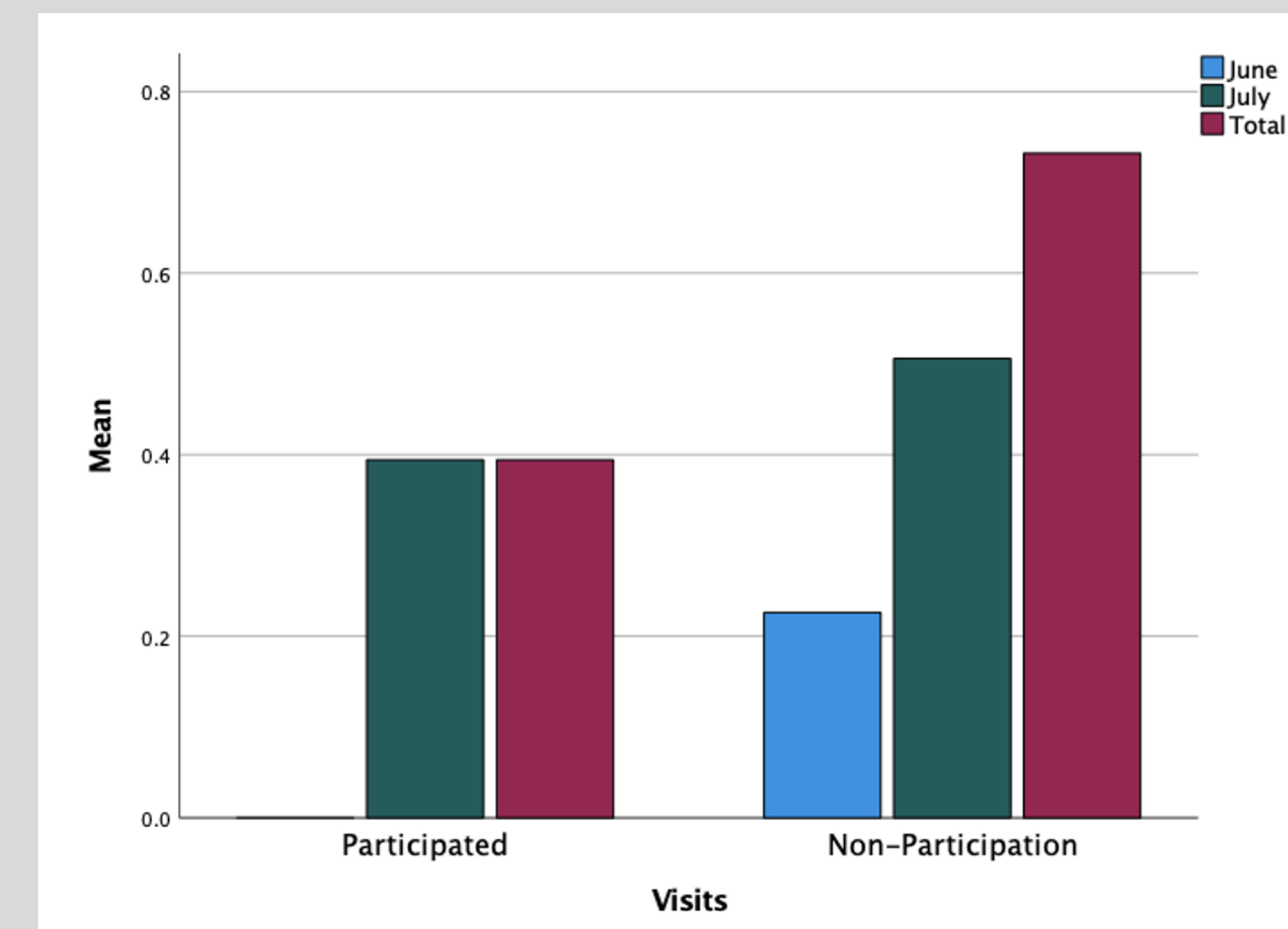


Table 1

Frequency of ALF Confirmed COVID-19 Case Characteristics

ALF Groups	No.	Confirmed Resident Cases		
		June	July	Total
Participated	71	0	28	28
Non-Participating	168	38	88	126
Total ALFs	239	38	113	151

Table 2

T- test Summary of Confirmed Cases Between ALF Groups

	ALF Groups						Mean Diff.	Standard Error Diff.	95% CI for Mean Difference
	Participating			Non-Participating					
Confirmed COVID-19 Cases	n	M	SD	n	M	SD			
	71	.39	1.35	168	.73	2.47	-.338*	.249	-.828, .152

(*p= 0.18)

DISCUSSION

- The project was not able to be fully implemented due to manpower challenges experienced during the pandemic including competing interest with the introduction of state mandated responsibility for testing within the facility.
- The retrospective review of IPC visit data does not support NP student visits as a factor influencing the frequency of cases necessitating transfers. Results were not statistically significant for confirmed cases between the two groups ($p = > 0.05$).
- Despite results not being statistically significant, any reduction in COVID-19 cases is clinically significant.

LIMITATIONS

- Inability to track daily ALF resident census data or frequency of suspected cases (not testing positive).
- Non-participation of ALFs for full project.

IMPLICATIONS: ADVANCE PRACTICE NURSING

Advanced practice nursing students can assist local health departments to meet community needs during times of national emergency. QI efforts during a pandemic are challenging due to rapidly evolving situations yet needed. In such cases, success may require measurement by clinical and not statistical significance. Doctoral level nursing leadership skills are in high demand during such times.

SUSTAINABILITY

A *COVID-19 Preparedness Planning Toolkit* was provided to the local health department for ALFs to adopt as part of their emergency management plan.

REFERENCES



SCAN ME

Future projects are needed to determine if implementation of a COVID-19 Preparedness Planning Toolkit can reduce inappropriate ER utilization by ALFs.