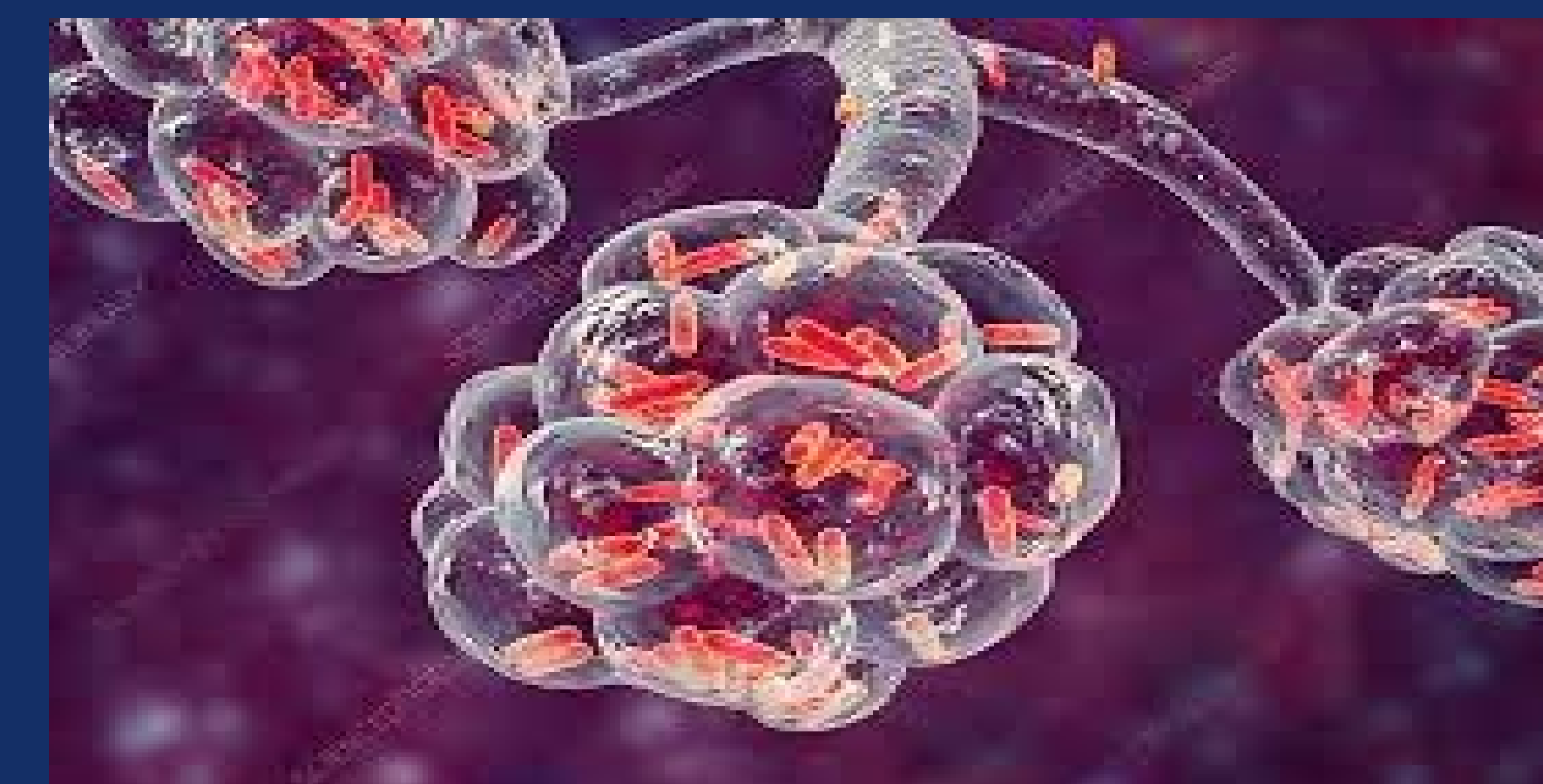


# Implementation of a Modified Sepsis Protocol in a Skilled Nursing Facility: Quality Improvement Project

Asma Ahmed DNP, ANP-C, RN & Vinciya Pandian PHD, MBA, MSN, RN



## Introduction

- Sepsis disproportionately affects skilled nursing facility (SNF) residents as they experience extended hospital stays, ICU admissions & mortality rates<sup>1</sup>
- The cost of sepsis in acute and SNF settings exceeded \$62 billion in 2019<sup>2</sup>
- Timely detection and treatment of sepsis can save lives and cost.<sup>3</sup>

## Purpose and Aims

- This quality improvement project evaluated the impact of a modified sepsis pathway and sepsis bundle on SNF residents
- The aims of the study were to document:
  - Documentation of SIRS criteria
  - Number of times sepsis bundle was initiated
  - Rate of transfer back from SNF to hospital

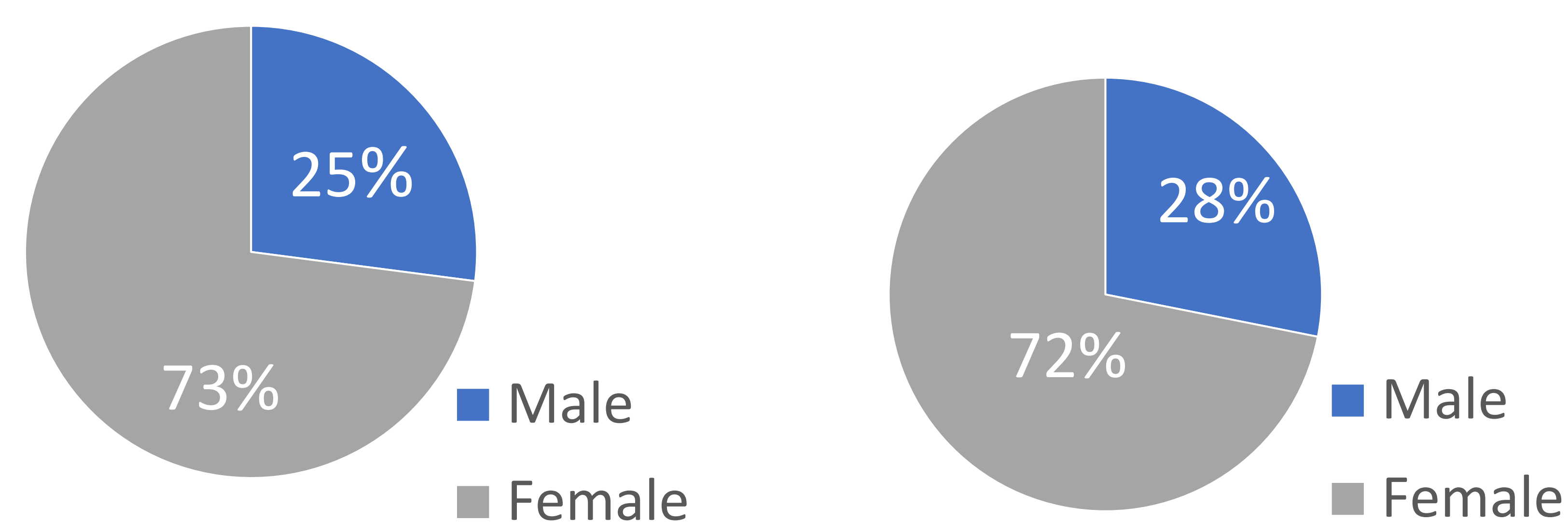
## Methods

- Design and Setting:** Pre/post implementation design at a SNF setting in the western region between June thru December 2020
- Intervention:** Sepsis bundle initiation when triggered by modified sepsis pathway:
- Measures:** Sepsis bundle, Lactic acid & WBC
- Analysis:** Chi-square, Independent t-tests, Wilcoxon signed-rank test & Fishers exact test

## Sample

- A total of 181 patients were included in the study with 85 patients in pre and 96 in post implementation.
- There were no statistically significant differences in co-morbidities, Charleston score or BMI.
- See Figure 1 for sample gender

Pre- Implementation      Post- Implementation



## Results

- Aim 1:** The intervention did not change the documentation rate of SIRS criteria
- Aim 2:** Patients who received lactate, WBC, and blood cultures were successfully treated in the SNF
- Aim 3:** None of the patients who received the sepsis bundle were transferred back to the hospital, whereas patients who did not receive the bundle were transferred back to the hospital
- See Table 1 for results of each of the aims

## Table 1: Results

Aim	Pre, N (%)	Post, N (%)	P
Aim 1: SIRS criteria	21 (25.9)	36 (37.1)	0.11
Aim 2: # sepsis bundles	0 (0.00)	16 (44.4)	< 0.00
Aim 2a: Lactate	0 (0.00)	16 (44.4)	< 0.00
Aim 3a:WBC	0 (0.00)	16 (44.4)	< 0.00
Aim 3a: Blood Cultures	0 (0.00)	16 (44.4)	< 0.00
Aim 3: Transfer back from SNF to hospital	17 (68.0)	16 (44.5)	0.116

## Conclusion

- This quality improvement project demonstrated how a modified sepsis pathway can assist in the initiation of a sepsis bundle, and reduce transfer back to the hospital
- While this project focused on one SNF, it can be replicated to other SNF's
- Ultimately, recognizing sepsis in its earlier stages can lead to early detection and treatment, reducing mortality and lowering cost.

## References

- Ginde, Moss, Shapiro & Schwartz, 2013 , 2. . Buchman et. al., 2020
- Paoli. C. J., Reynolds, M. A., Sinha, M., Gitlin, M., Crouser, E., (2018)