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Improving Recognition of Delirium in Elderly Patients Hospitalized for Hip Fracture

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BACKGROUND

Delirium:

- ❖ Neurocognitive disorder frequently affecting hospitalized older adults¹
- ❖ Prolongs hospitalization¹, increased iatrogenic events¹, doubles 6-month mortality², cognitive impairment may last 12 months or longer³
- ❖ Patients 70 years and above hospitalized for hip fracture at high risk for delirium⁴
- ❖ Up to 60% of hospitalized hip fracture patients develop delirium⁵

Screening:

- ❖ Delirium screening and recognition remains low⁶
- ❖ Up to 60% of cases unrecognized or undiagnosed⁷
- ❖ Screening increases recognition up to 5x⁶
- ❖ Surgical patients 3x less likely to be screened and 20x less likely to have their delirium recognized⁶
- ❖ Real-time identification of delirium provides opportunities for intervention and improved patient outcomes

Opportunities:

- ❖ The Confusion Assessment Method (CAM) is a validated screening tool easily applied at the bedside⁸
- ❖ A validated retrospective chart review instrument can identify delirium in previously unscreened and undiagnosed patients⁹

PROJECT SETTING

- ❖ 177 patients aged 70 years and above for hip fracture in FY2019
- ❖ No universal way of measuring or tracking delirium outside of its ICUs

PURPOSE AND AIMS

Aim 1

Determine the rate of delirium in elderly patients admitted for femur fracture on an inpatient orthopedic unit.

Aim 2

Improve recognition of delirium by staff nurses in elderly patients hospitalized for hip fracture through implementation of a validated screening tool at an academic medical center.

METHODS

AIM 1

- ❖ Retrospective chart review of patients aged 70 years and older hospitalized for hip fracture between 09/01/2019 and 12/01/2019

- ❖ Delirium identified using validated chart review tool
- ❖ Rate calculated
- ❖ Index rate compared to the literature

AIM 2

- ❖ Education module developed and disseminated to nurses on orthopedic unit of the facility addressing:

- ❖ Symptoms of delirium
- ❖ Risk factors for delirium
- ❖ Introduction and use of CAM

- ❖ Pre/post Likert-style survey administered to assess presentation effectiveness addressing:

- ❖ Ability to recognize delirium
- ❖ Recognize risk factors for delirium

- ❖ 30-day trial period using the CAM for delirium screening

- ❖ Hip fracture patients 70 and above

- ❖ Chart review for CAM use during 30-day trial period determined:

- ❖ Rate of delirium using the same validated instrument
- ❖ Frequency of CAM use
- ❖ Nursing's accuracy with CAM use

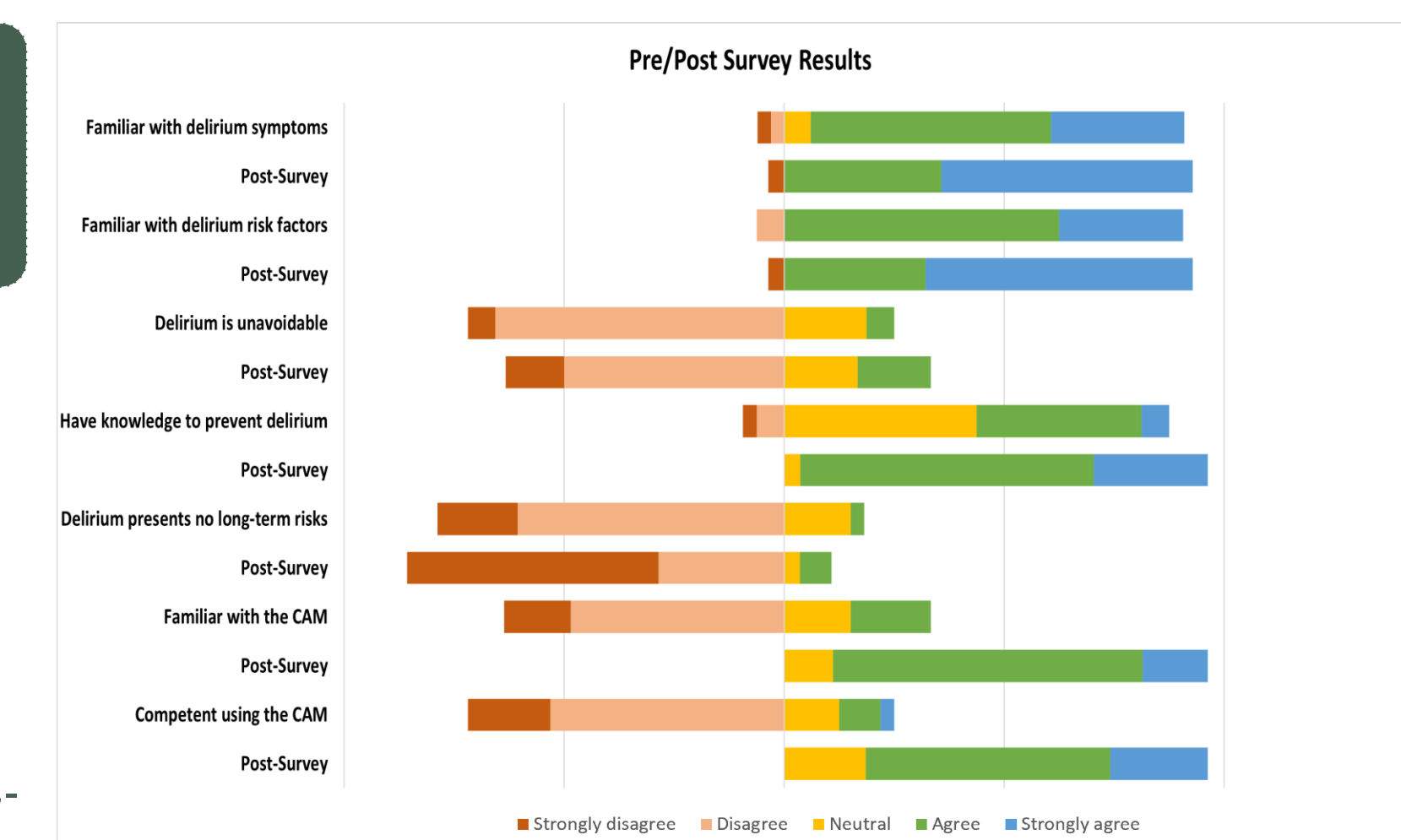
- ❖ Post-trial survey of nursing assessed:
- ❖ Barriers to CAM use
- ❖ Ease of CAM use

RESULTS – Aim 2

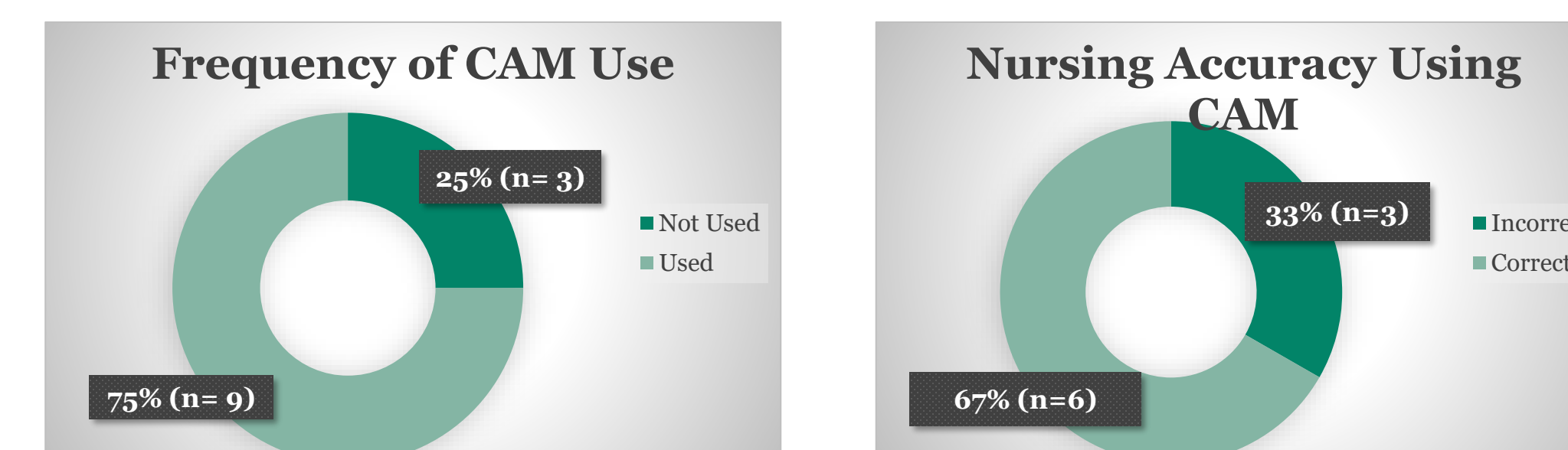
EDUCATION ASSESSMENT

Education & Surveys:
Assigned to 43 nurses

- ❖ 65.1% (n=28) completed education
- ❖ 74.4% (n=32) completed pre-survey
- ❖ 65.1% (n=28) completed post-survey



CAM TRIAL RESULTS

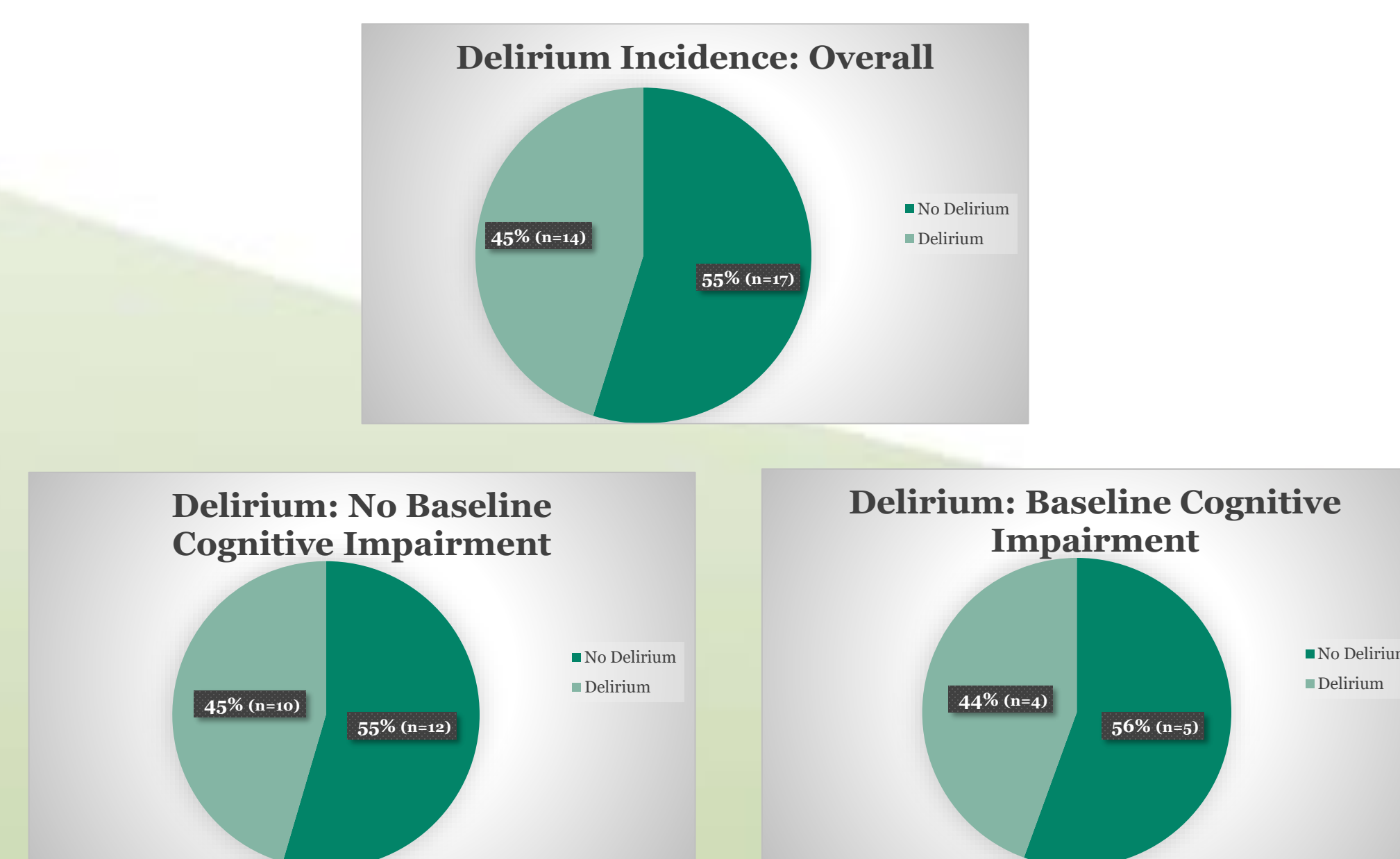


POST INTERVENTION SURVEY RESULTS

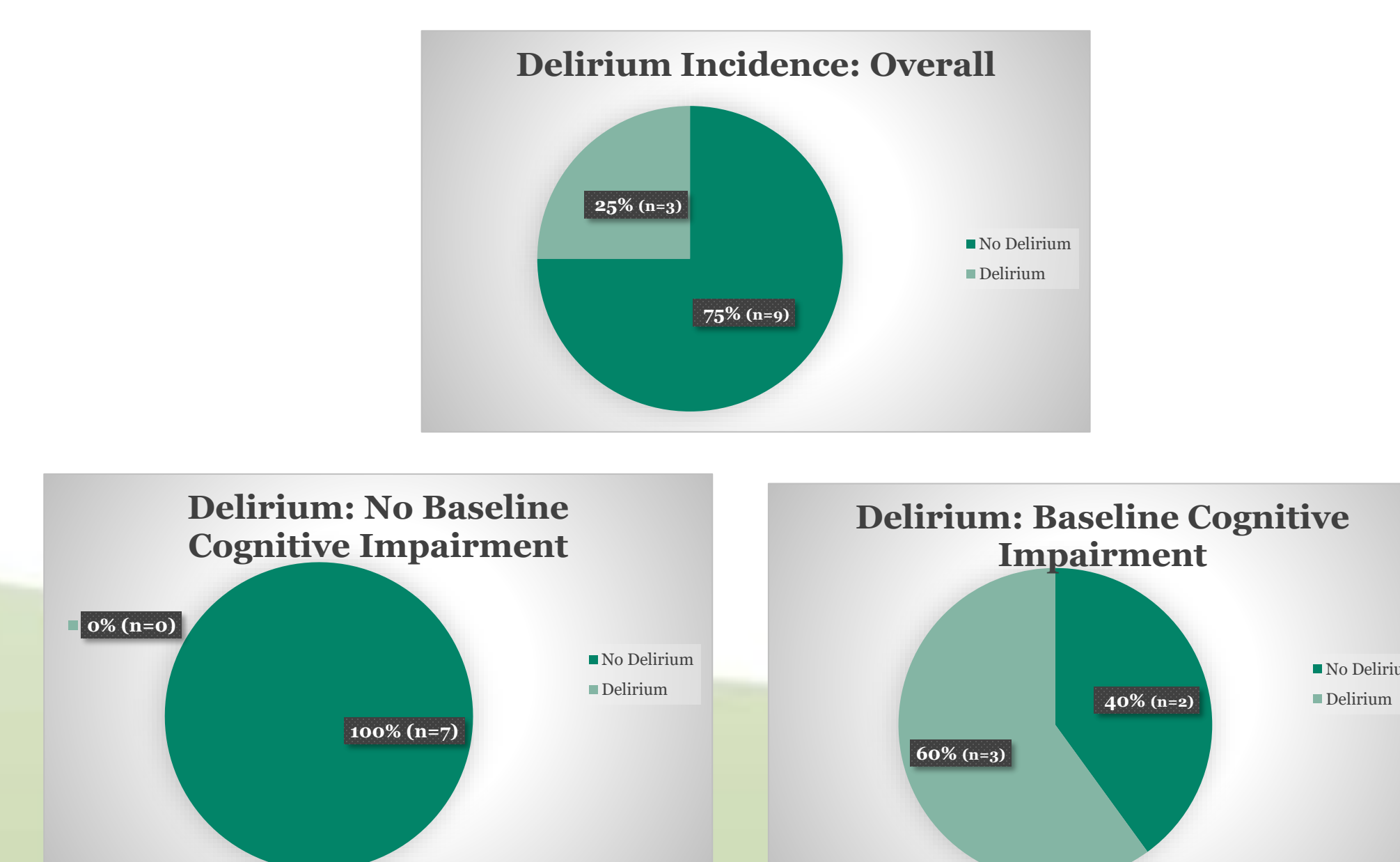
- ❖ Barriers to using CAM:
 - ❖ Time constraints
 - ❖ Poor EHR usability
 - ❖ Not knowing patient's baseline cognitive status

RESULTS – Aim 1

PRE-INTERVENTION CHART REVIEW



POST INTERVENTION CHART REVIEW



DISCUSSION

- ❖ Pre-intervention delirium rate in this population of 45% is comparable to data available in the literature
 - ❖ Studies have demonstrated variability in this rate ranging from approximately 25-60%¹
- ❖ Pre-intervention delirium rate for older hip fracture patients with baseline cognitive impairment of 44% was also in line with the literature
 - ❖ Studies have shown that dementia increases the risk of delirium to one in two²
- ❖ Delirium rate decreased to 25% post-education
 - ❖ 100% of post-intervention delirium cases were in those with baseline cognitive impairment
 - ❖ Suggests education successful at reducing incidence of delirium
- ❖ Education successfully improved self-ratings in all areas assessed

LIMITATIONS

- ❖ Short trial period
- ❖ Limited patient sample size during trial period
- ❖ Limited number post-intervention survey respondents
- ❖ Cyberattack
- ❖ COVID-19 pandemic

CONCLUSIONS

- ❖ Delirium education is effective in reducing delirium
- ❖ Sustainability
 - ❖ Presentation materials are uploaded within facility's online educational platform
 - ❖ Easily assigned to new users across units
- ❖ Next Steps
 - ❖ Working with IT to make flowsheet more user friendly
- ❖ Cost Effective
 - ❖ \$3.87-\$6.43 to train each nurse*
 - ❖ Delirium adds \$20,237 to a hospitalization¹⁰

*Amount for each RN to complete 6-minute training video based on facility's current RN wage scale of \$28.99-\$48.22 per hour

For additional information and references please contact:
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