# The Culture of Safety and Leadership Style in Long Term Care Facilities

Said Abusalem, PhD, RN

Timothy Crawford, PhD, MPH

Barbara Polivka, PhD, RN

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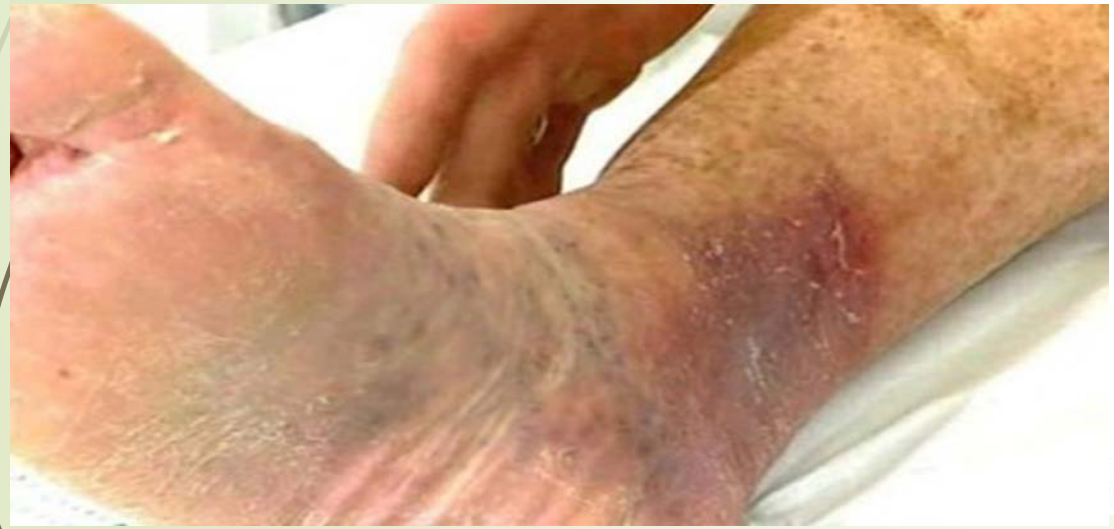
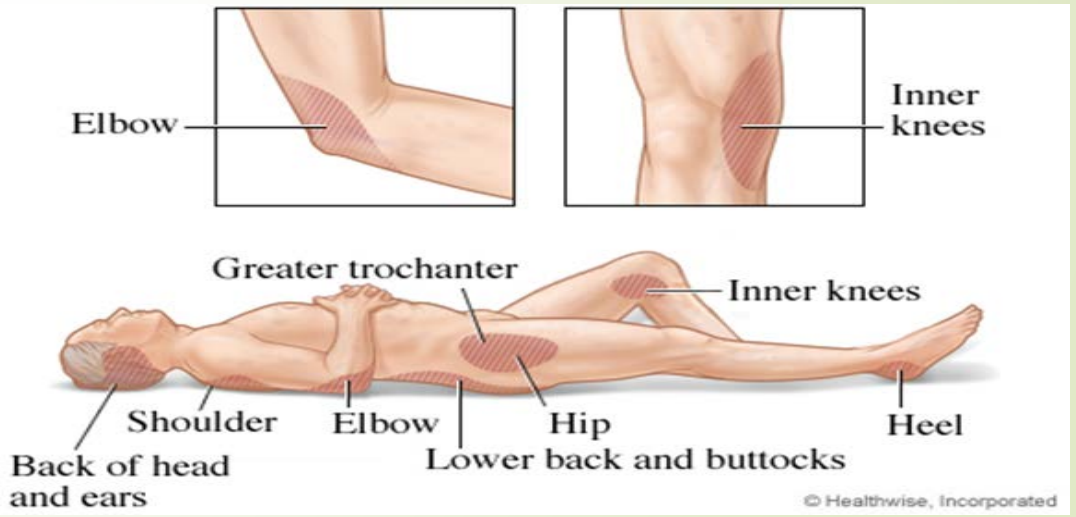
# Culture of Safety

- Building a person-centered culture of safety is a core element in improving resident safety and care quality in LTCFs.
- An effective culture of safety affects residents' care experiences as well as healthcare workers' motivation, commitment, productivity, and effectiveness.
- Teamwork, appropriate staffing rate and mix, non-punitive responses to mistakes, and effective communication and leadership are all part of an effective culture of safety.
- Creating healthy environments that contribute to promoting optimal resident and staff outcomes requires organizational systems that emphasize building healthy cultures of safety.

# Culture of Safety- Continued

- In contrast, toxic workplace cultures have serious consequences for resident outcomes and staff well-being. High levels of sick leave, poor staff retention, and psychological ill health of employees are prevalent in toxic workplace environments.





# Adverse Events in LTCF

- Over 1.63 million Americans reside in 18,000 LTCFs.
- Several studies have reported higher rates of adverse events in LTCFs.
- Adverse events in LTCFs are mainly falls and pressure ulcers. The prevalence of pressure ulcers in LTCFs ranges from 6% to 25%, depending on factors such as staff mix, organizational commitment, and enforcing evidence-based guidelines.
- LTCF residents fall at an annual rate of 1.7 per bed, with 10% to 25% sustaining serious injuries eventually leading to death. The relationship between adverse events and a culture of safety in LTCFs has not yet been adequately explored.

# Adverse Events in LTCF-Continued

- Lower adverse events and lower mortality rates have been attributed to an appropriate RN ratio in healthcare organizations.
- Although researchers have recommended improved communication among LTCF staff as a method of reducing adverse events, limited research is available in this area.
- It is crucial in the current changing health care environment to identify organizational factors that affect adverse events and residents' safety culture in LTCFs.

# Leadership in LTCF

- Current evidence suggests relationships between positive leadership styles and higher patient satisfaction and lower patient mortality, medication errors, restraint use and hospital-acquired infections.
- In a systematic Literature review Cummings et al. (2010) found that 24 studies reported that leadership styles focused on people and relationships (transformational, resonant, supportive, and consideration) were associated with higher nurse job satisfaction.
- There is lack of knowledge of positive leadership in processes enhancing person-centered culture of care in nursing homes.

# Study Purpose

- Assess culture of safety, leadership style and its relationships with organizational factors in LTCFs and selected adverse events as falls and UTIs.

# Study Aims

- 1. Identify organizational factors associated with: (a)culture of safety, (b) leadership style scores, and (c) selected adverse events.
- 2. Evaluate the relationships of culture of safety, leadership style with: (a) staff turnover rates, (b) staffing levels, and (c) communication performance.

# Study Design and Setting

- This study used both a cross-sectional survey design and secondary analysis of existing data.
- Using standardized reliable and valid instruments, healthcare staff, including nursing supervisors and administrators, RNs, licensed practical nurses (LPNs), and nursing assistants (NAs) in participating LTCFs were surveyed.
- Administrators of a stratified random sample, 5 out of the 70 eligible LTCFs contacted agreed to participate and provided permission for their facility to participate.
- Secondary analysis of existing data from the Nursing Home Compare Website was conducted.
  - **Nursing Home Compare** website has information about the quality of care, adverse events, and staffing ratios provided by Medicare or Medicaid for certified **nursing homes** throughout the nation.

# Sample

- Limiting the sample to only Medicaid-certified LTCFs ensured a homogenous sample with similar organizational characteristics and requirements.
- A sample of LTCFs was recruited and enrolled (N = 5).
- Inclusion criteria for survey participants were English speaking and current resident care employees such as nursing supervisors, RNs, LPNs, NAs, SWs, PTs, and OTs.

# Procedure

- Trained research staff visited the facility during a scheduled staff meeting to explain the study and request participation.
- The survey packet, including a preamble letter describing the study, the survey, and an envelope were distributed to all resident care employees on every shift.
- Refreshments were provided to staff to improve the response rate.
- Reminder flyers were posted in areas such as staff break rooms and locker rooms for one month following the staff meeting.
- Data were collected anonymously, participants were provided with an envelope to return their completed survey in a study mail box.

# Measures

- **Resident safety culture.** The Nursing Home Survey on person-centered culture of safety was developed by AHRQ (2008). Reported Cronbach's alphas ranged from .63 to .84. The NHSPSC has 42 items that measure 12 composites:

| | |
|---|---|
| Teamwork -4 items | Handoffs- 4 items |
| Staffing- 4 items | Feedback & Communication About Incidents- 4 items |
| Compliance With Procedures-3 items | Communication Openness- 3 items |
| Training & Skills- 3 items | Overall Perceptions of Resident Safety – 3 items |
| Nonpunitive Response to Mistakes- 4 items | Management Support for Resident Safety – 3 items |
| Supervisor Expectations & Actions Promoting Resident Safety- 3 items | Organizational Learning- 4 items |

# MLQ Leadership Scales

| Scale | Items |
|---|---|
| Idealized Influence | 1, 8, 15 |
| Inspirational Motivation | 2, 9, 16 |
| Intellectual Stimulation | 3, 10, 17 |
| Individualized Consideration | 4, 11, 18 |
| Contingent Reward | 5, 12, 19 |
| Management-by-exception | 6, 13, 20 |
| Laissez-faire Leadership | 7, 14, 21 |
| Score Range: High = 9-12, Moderate = 5-8, Low = 0-4 | |

# Findings

- The 211 respondents were: licensed nurses (27%), nursing assistants (35%), administrators/managers (8%), administrative support (3%), and rehabilitation staff (13%).
- Ninety-eight participants (46%) worked overtime.
- The majority of participants were neutral (neither agreed nor disagreed) with regard to statements concerning compliance with procedures, adequate staffing levels, and non-punitive responses to errors.

# Findings- Continued

- Highest mean scores were feedback and communication about incidents with a mean of 4.35 (SD = 0.71), mean supervisor expectations and actions promoting resident safety 4.03 (SD = 0.89), and mean score of overall perceptions of resident safety 4.24 (SD = 0.68). (A score of 4 = agree and 5 = strongly agree).
- A Spearman's rank-order correlation was run to determine the relationship between rate of falls and handoffs reports. There was a negative correlation between handoffs report and rate of falls $r_s = -0.247$, $p<0.0001$, and there was a negative relationship between handoffs and rate of UTIs $r_s = -0.143$, $p<0.05$.

# Findings- Continued

- Risk for falls increased as the number of residents per facility increased [Rate Ratio (RR) = 1.02 (95% Confidence Interval (CI) = 1.01 -1.02)] and as the number of LPN hours per resident increased [RR = 37.7 (18.5 – 76.5)].
- As the number of licensed RN plus LPN staff hours per resident per day increased, rate of falls decreased 79% [RR = 0.21 (95% CI = 0.13 – 0.34)].
- As the culture of safety scores increased, the risk of fall decreased 26% [RR = 0.74 (95% CI = 0.67 -0.82)], UTIs decreased 20% [RR = 0.80 (95% CI = 0.75 - 0.86)], and short-stay ulcers decreased 7% [RR = 0.93 (95% CI = 0.90 – 0.97)].

# Generalizing Estimating Equations (Poisson Distribution) to Predict Rate of Care Error Rates

| | Falls | Urinary Tract Infections | Short-Stay Ulcers |
|---|---|---|---|
| | RR (95% CI) | RR (95% CI) | RR (95% CI) |
| Number of Residents | 1.02 (1.01 – 1.02) | 1.01 (1.01 – 1.01) | 0.98 (0.98 – 0.98) |
| Number of Licensed Nurse Staff Hours per Resident Day | 0.21 (0.13 – 0.34) | 0.21(0.15 – 0.31) | --- |
| RN Hours Per Resident Day | --- | --- | 0.12 (0.09 – 0.15) |
| Physical therapy staff hours | --- | --- | 0.24 (0.18 – 0.34) |
| LPN/LVN Hours per Resident Day | 37.7 (18.5 – 76.5) | 61.5 (36.6 – 102.4) | --- |
| Culture Safety Score | 0.74 (0.67 – 0.82) | 0.80 (0.75 – 0.86) | 0.93 (0.90 – 0.97) |

RR = Rate Ratio
CI = Confidence Interval
Note: Variables with a no information were not included in the respective models.

# MLQ Scales and SubScales (N = 252)

| | n | Cronbach's α | M (SD) | Median (IQR) |
|---|---|---|---|---|
| Idealized Influence (Attributed) – 4 items | 218 | 0.89 | 2.69 (1.09) | 3.00 (2.00, 3.50) |
| Idealized Influence (Behavior) – 4 items | 216 | 0.83 | 2.62 (0.98) | 2.75 (2.00, 3.25) |
| Inspirational Motivation – 4 items | 216 | 0.89 | 2.70 (1.03) | 3.00 (2.00, 3.50) |
| Intellectual Stimulation – 4 items | 216 | 0.84 | 2.55 (1.01) | 2.75 (2.00, 3.25) |
| Individualized Consideration – 4 items | 216 | 0.80 | 2.42 (1.07) | 2.50 (2.00, 3.12) |
| Contingent Reward – 4 items | 216 | 0.88 | 2.58 (1.08) | 2.75 (2.00, 3.50) |
| Management-by-Exception (Active) – 4 items | 217 | 0.67 | 2.38 (0.91) | 2.50 (1.75, 3.00) |
| Management-by-Exception (Passive) – 4 items | 217 | 0.72 | 1.22 (0.99) | 1.00 (0.25, 2.00) |
| Laissez-faire Leadership – 4 items | 216 | 0.80 | 1.04 (1.03) | 0.75 (0, 2.00) |
| Extra Effort – 3 items | 221 | 0.84 | 2.52 (1.15) | 2.67 (2.00, 3.33) |
| Effectiveness – 4 items | 221 | 0.93 | 2.66 (1.16) | 3.00 (2.00, 3.75) |
| Satisfaction – 2 items | 223 | 0.90 | 2.74 (1.20) | 3.00 (2.00, 4.00) |

IQR = Interquartile Range – 25% and 75%

M = Mean

SD = Standard Deviation

# Conclusions

- The findings suggest that there is a need to build a strong culture of safety to improve LTCF employee retention and foster PCCS attributes.
- With the shortage of RNs in LTCFs and new reimbursement regulations, many LTCFs are hiring LPNs to have full staffing and save money. LPNs may lack essential leadership knowledge to decrease the rate of pressure ulcers.
- One option is to develop a Person-Centered Comprehensive Unit-based Safety Program (CUSP) for LTCFs similar to the AHRQ