Program Evaluation of MOVIN® in a Rural Hospital Setting

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Agenda

- Background, significance, and MOVIN®
- Overview of an outcome-based program evaluation
- Mobility program implementation strategies and recommendations
- Summary

Background and Significance

Mobility's Importance

- Historically treats
  - "Affections of the mind" (Stout, 1887, p. 89)
  - Chronic rheumatism (Fuller, 1860)
- Decreased risk of numerous disease processes (CDC, 2022)

The Problem

- Mobility orders most frequently omitted (Cimen & Aslan, 2021)
- Older adults at high risk for functional decline after discharge (Naseri et al., 2020)
- Many not physically prepared for community ambulation at discharge (Snowdon et al., 2021)

Mobilizing Older adults Via a system-based Intervention (MOVIN®)

Psychomotor Skills

- Staff education
- PT orders & ambulation expectations

Resources

- EMR recording
- Orders & Goals sheet
- **Ambulation aide**

Communication

- Regular meetings with MOVIN® & staff
- Informational sheet

Equipment

- Measuring wheel
- Various ambulatory equipment

Unit Culture

- Unit-level launch team
- Unit goals

(MOVIN®, 2023)

The Research

Purpose

Organizational concern for readiness for patient discharge

MOVIN®

"In hospitalized adult patients in a Midwestern rural critical access acute care setting, how effective and efficient is MOVIN®?"

- independence with ambulation
- Discharges to lower levels of care

worsened discharge disposition, and decreased independence (Caba et al., 2022)

Literature Review: Themes

Mobility Program

Hospital Length of Stay

- 4 report statically significant ↓ in LOS (Falkenstein et al., 2020; Dewitt et al., 2019; Schaller et al., 2016; Wahab et al., 2016)
- 2 report ↑ LOS w/o statical significance (Fraser et al., 2015; Hamilton et al., 2019)

ICU Length of Stay

- 4 articles report ↓ LOS with statistical significance (Falkenstein et al., 2020; Fraser et al., 2015; Schaller et al., 2016; Thiolliere et al., 2022; Wahab et al., 2016)
- 1 reports ↓ LOS w/o statistical significance (Fraser et al., 2019)

Discharge Disposition

- 3 articles report statically significant ↑ in # of pts discharging home (Fraser et al., 2015; Schaller et al., 2016; Thiolliere et al., 2022; Workman et al., 2020)
- 1 reports ↑ but w/o statical significance (Thiolliere et al., 2022)

Theoretical Framework: Nursing Need Theory

Virginia Hendersen & Gladys Nite (1978) in *Principles and Practice of Nursing*

14 components of basic nursing care

Focus: movement and proper body mechanics

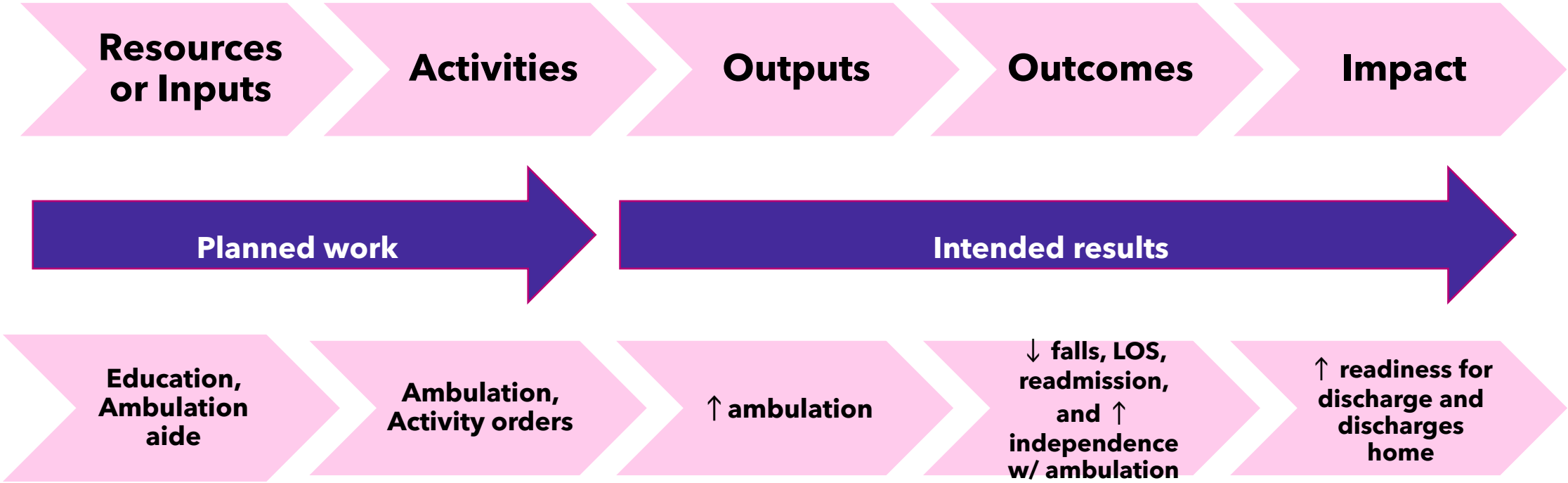
Theory Goal:

Regain lost independence in one, some, or all of the 14 components

(Hendersen & Nite, 1978)

(Dzubak, 2021)

Theoretical Framework: Logic Model



(W. K. Kellogg Foundation, 2004)

Methodology: Design & Sample

Design & Variables

- Outcomes-based program evaluation
- Compared summer prior to MOVIN®'s implementation to summer after
  - June – Aug 2022 & June – Aug 2023
- Demographics:
  - Age, gender, admitting status, and diagnosis
- Variables:
  - Length of stay, readmission rates, fall rates, ambulation distance, assistance required with ambulation, discharge level of care

Sample, Sampling, & Recruitment

- Convenience sample
- Exclusion criteria:
  - Under 18 years, chair or bedbound, expired or expected
- Historical census average 70/month
- Expected attrition
  - Leaving AMA
  - Unexpected expiration
  - Documentation errors/omissions
- No power analysis nor consent

Note. AMA = against medical advice

Methodology: Data Collection

Collection Methods

- Manual retrospective data collection from EMR

(StAdobeStock, n.d.)

Data Analysis

- Length of stay & ambulation distance
  - Numerical collection
  - *M*, SD, & non-paired 2-tailed *t*-testing
- Fall & readmission rates
  - Yes or no collection
  - Compared by percentages
- Assistance required with ambulation & discharge level of care
  - Coded
  - Compared by percentages

Results: D

Table 1

Table 3

Demographics: 2022 A

Demographics: Admis

	Number (%)
Observation	
Medical Inpatient	
Swing Bed	

Note. Observation = expect

expected to stay more than

midnights in the hospital.

Female	130 (56.28%)
Total	231 (100%)

Note. *M* = mean; SD = standard

Tab

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D

Categorized Admitting Dx	2022	2023
Respiratory	37 (16.52%)	45 (19.48%)
Gastrointestinal	32 (14.29%)	59 (25.54%)
Cardiac	26 (11.61%)	24 (10.39%)
Neurologic	23 (10.27%)	7 (3.03%)
Musculoskeletal	23 (10.27%)	11 (4.76%)
Surgical	23 (10.27%)	15 (6.49%)
Sepsis	17 (7.59%)	14 (6.06%)
Electrolyte Imbalance	15 (6.70%)	10 (4.33%)
Pain	11 (4.91%)	8 (3.46%)
Genitourinary	9 (4.02%)	8 (3.46%)
Weakness/Falls/Vertigo	7 (3.13%%)	12 (5.19%)
Endocrine	7 (2.69%)	5 (2.12%)
Integumentary	6 (2.69%)	9 (3.90%)
Syncope	5 (2.23%)	2 (0.87%)
Gynecologic	2 (0.89%)	0 (0%)
Cancer-related	1 (0.45%)	7 (3.03%)
Other	9 (4.02%)	20 (8.66%)

6 *Note.* Admitting diagnoses do not equal 100% as diagnoses occasionally fit into more than one category.

Results: Variables

Length of Stay & Ambulation Distance

- LOS decreased from an average 3.28 (SD = 3.67) days in 2022 to average 2.62 (SD = 2.18) days in 2023
  - **(*p* = .02)**

Table 5

Distance Ambulated 2022 and 2023

	Total	Mean (SD)	*p*-value
2022	256,221 ft	1,143.84 ft (2,659.1)	.35
2023	328,576 ft	1,422.41 ft (3,597.97)	.35

Note. LOS = Length of stay.

Readmission and Fall Rates

- Readmission rates decreased by .69%
- No change in fall rates
  - No falls

(Freepik, n.d)

Results: Variables

Assistance Required with Ambulation

Table 6

Ambulation Assistance Required Between Admission and D

Table 7

Patients' Change in Ambulation Assistance Requirements: 2022 and 2023

	2022		2023	
	2022 Admit	2022 Discharge	2023 Admit	2023 Discharge
Independent	26 (11.61%)	69 (30.80%)	45 (19.48%)	92 (39.83%)
Standby Assist	92 (41.07%)	92 (41.07%)	90 (39%)	84 (36.36%)
1-Person Assist	65 (29.02%)	56 (25%)	57 (24.68%)	45 (19.48%)
2-Person Assist	32 (14.29%)	6 (2.68%)	24 (10.39%)	8 (3.46%)
Non-ambulatory	9 (4.02%)	1 (0.45%)	13 (5.63%)	0 (0%)
2 levels higher on discharge		0 (0%)		0 (0%)
3 levels higher on discharge		0 (0%)		0 (0%)

epik, n.d.)

Results: Variables

Level of Care Required on Admit versus on Discharge

Table 8

Admission versus Discharge Level of Care: 2022 and 2023

	2022	2023
Home		
Assisted		
Skilled N		
Other Hc		
Left AM		

Table 9

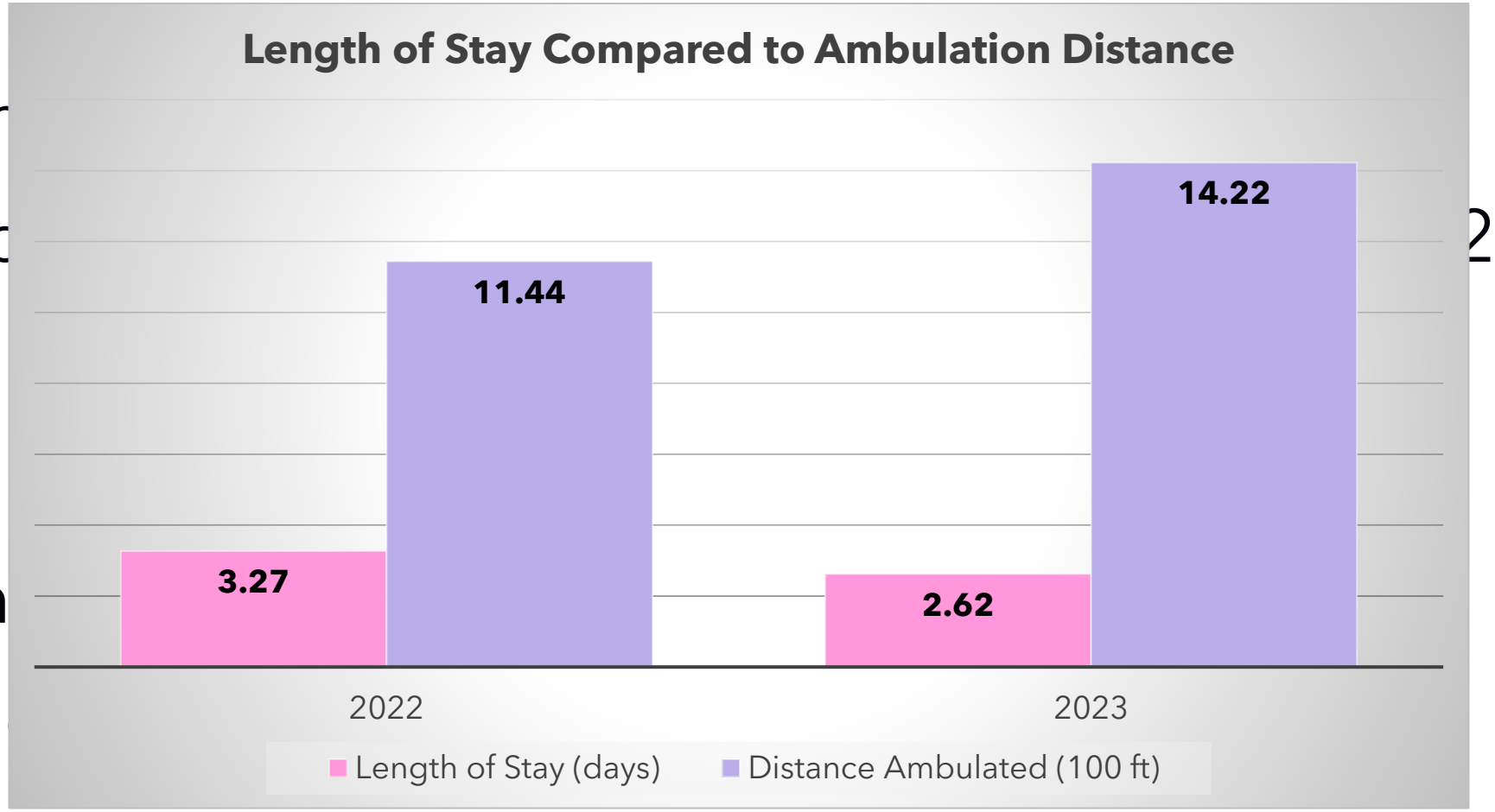
Individuals' Difference Between Admission and Discharge Level of Care: 2022 and 2023

	2022	2023
D/C to same location as admission	40 (17.86%)	41 (17.75%)
D/C to 1 level of care higher	130 (58.04%)	131 (56.71%)
D/C to 2 levels of care higher	64 (28.57%)	71 (30.74%)
D/C to 3 levels of care higher	41 (18.30%)	44 (19.05%)
D/C to 1 level of care lower	0 (0%)	1 (0.43%)
D/C to 2 levels of care lower	0 (0%)	0 (0%)
D/C to 3 levels of care lower	1 (0.45%)	2 (0.87%)

n.d.)

Discussion: Interpretation

- Adr
- Dec
- Min
- No



Note. LOS = length of stay; *M* = mean.

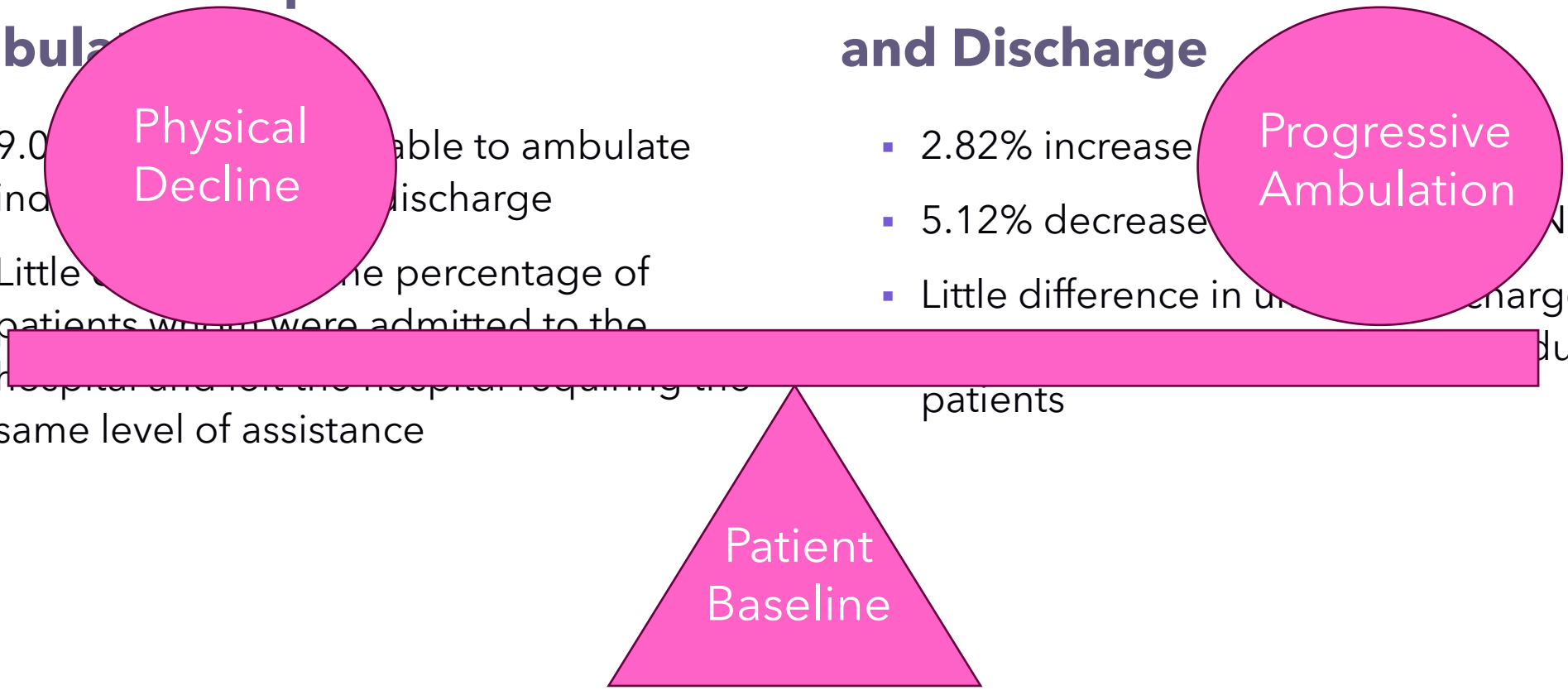
Discussion: Interpretation

Assistance Required with Ambula

- 9.0 able to ambulate ind ischarge
- Little e e percentage of patients wh were admitted to the h and left the hospital requiring the same level of assistance

Level of Care between Admission and Discharge

- 2.82% increase
- 5.12% decrease NF
- Little difference in u charge dual patients



Note. SNF = skilled nursing facility

Discussion

Implications

- Importance of mobility
- Decreased l
- Adding a m
  program/an
  should be considered by
  patient

Limitations

- Single institution = not
- No a ide on
  w
- n

Sustainability

- Cost-effective
  weekend
  age
  n is reusable
- Quality and Patient Safety
  Awa

But what does that mean financially?
In 3 Months:

Hospital spent: $8,400

Community saved: $273,000

Overall decreased in financial healthcare burden: $264,600

The Implementation

Assessment of Unit Specific Needs

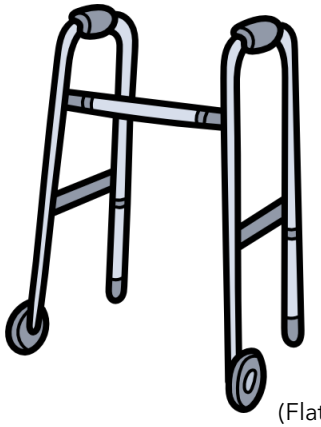
Additional FTE vs Duty Reassignment

- Unit Ambulation Needs
- 1.0 FTE Mobility Aid
- Evaluation of Employee Roles

(iStock, n.d.)

Equipment

- Assistive Devices
- Communication Tools



(Flaticon, n.d.)

Distance Tracking

- Badge Card
- Ambulation Wheel
- EMR Reports
- Visual for Staff and Patients

(iStock, n.d.)

Key Stakeholders

Leadership Team

- Acute Care Director
- Acute Care Coordinator
- WHA Quality Director

Team Members

- Physical Therapy Coordinator
- Inpatient Physical Therapist
- Lead Registered Nurse
- Ambulation Aid
- Tomah Health Quality Director

(Li-Sauerwine, 2019)

(Altmann, 2020))

Process of Implementation

(MOVIN®, 2023)

- Phase One
  - Establish Timeline
  - Collaborate with Physical Therapy for Psychomotor Skills Training
  - Ambulation Aid
  - Communication Tools
  - Ambulation Pathways
  - Educate Unit on MOVIN
  - Plan for Kick-Off
- Phase Two
  - Begin Data Collection
  - Review Purpose of MOVIN with Staff
  - Ambulation Aid Prioritization
  - Set Unit Goals
  - Share Ambulation Activity Data with Staff
  - Continue Psychomotor Training with Staff
  - COMMUNICATION

Culture of Progressive Ambulation

- Communication and Education
- Overcome Struggles
- Normalize Ambulation for Patients
- Celebrate and Acknowledge Staff for Meeting Goals
- Make it Fun

(Carlson, 2017)

Summary and Key Takeaways

Summary

The Research

- Statically significant decrease in LOS
- Clinically significant increase in ambulation distance
- Minimal improvements in readmission rates
- More research needed on relation to fall rates
- More research needed on halting decline/decompensation

The Practical Implementation

- Assessment of unit
- Assemble team
- Phases of implementation
- Culture of ambulation
- Sharing success

Lessons Learned

- Add additional FTE for a CNA to function as ambulation aide
- Form strong interdisciplinary bonds with physical therapy team
- Implement 7 days weekly
- Education available for patients
- Identify barriers to mobility prior to implementation
- Create and promote unit culture of progressive ambulation
- Importance of family/caregiver involvement

Ask the Ambulation Aide

- What does a typical shift look like for you?
- How do you encourage patients who refuse ambulation?

Acknowledgements

(Millard, 2021)

Viterbo University

(UnitedWay, n.d)

Tomah Health

(WHA, 2024)

Wisconsin Hospital Association

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Questions