



Physical Activity Practices in Long-Term and Residential Care Communities and the COVID-19 Impact

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Agenda

- Introduction
- Methods
- Results
- Conclusion
- Next Steps

Objective 1 : Describe the impact of facility staffing, resources/ funding, and resident needs within Long-Term and Residential Care Communities.

Objective 2 : Identify how PA practices differ within various Long-Term and Residential Care Communities.

Objective 3 : Differentiate how Covid-19 has impacted Long-Term and Residential Care Communities, as well as PA practices within these facilities.



Acknowledgements

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**Exercise
Science**

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Introduction



Many organizations recognize the importance of regular physical activity (PA) for the quality of care in Long-term and residential-care communities (LT-RCCs)

What PA actually being performed
at various facilities in Central Illinois?



Importance of Physical Activity

- Individuals at any age and any level of fitness can benefit from physical activity (Nelson et al., 2007)
- PA effective in treating various chronic disease (Chao, Foy, & Farmer, 2000)
- Higher levels of regular PA associated with lower mortality rates (DHHS, 1996)



PA Programming in Community-Dwelling Setting

- Assessed the effectiveness of a community-based behavior change and fitness program
 - designed to promote physical activity among sedentary community-dwelling older adults aged 50 years and older
- This study suggests that coupling behavioral change and fitness programs leads to significant changes in physical performance among older adults

(Yan, Wilber, Aguirre, & Trejo, 2009)



PA Guidelines for Americans

- DHHS (2008) released [PA Guidelines for Americans](#)
 - updated in 2018
- At least 150 minutes of moderate-intensity, or 75 minutes of vigorous-intensity, or an equivalent combination; and 2 days per week of total body strength training
 - older adults should also include balance and flexibility



PA Guidelines Compliance

- ½ Americans 18+ meet the US PA guidelines
 - 20.6% in 2011 → 23% in 2019 (CDC, 2022)
- Only 14% aged 65+ reported meeting the PA Guidelines
 - Declines with age (Federal Interagency Forum on Aging-Related Statistics, 2020)
 - Trends are more positive
 - 1998= 6% → 2018= 14%



Long-Term and Residential Care Communities (LT-RCCs)

- 15,600 Long-Term and 28,900 Residential Care Communities in the US (Harris-Kojetin et al., 2019)
- US- 14.0%, IL- 13.9% aged 65 years and over have independent living difficulty (American Community Survey 5-Year)
- Staffing shortages
- Funding issues



Importance of PA in LT-RCCs

- Many organizations recognize the importance of regular PA for quality of care in LT-RCCs (de Souto Barreto et al., 2016)
- PA improves strength and physical function in LT-RCC residents (De Souto Barreto et al., 2015)
- PA promotion and importance is often overlooked
 - especially mobility of residents (Maurer et al., 2019)



COVID-19

- Coronavirus Disease 2019 (Covid-19)
- March 2023: (Johns Hopkins Coronavirus Resource Center)
 - Covid-19 cases= 676,051,663
 - Deaths= 6,877,590
- Decreased PA overall (Aubertin-Leheudre & Rolland, 2020)
- Physical inactivity increases risk for severe COVID-19 (Sallis et al., 2021)



Research Purpose

- The purpose of this research is to evaluate local long-term and residential care facilities regarding physical activity offerings and needs of residents. In addition, the role the Covid-19 pandemic played on activity levels of patients will be assessed.
- The specific aims:
 - Describe facility staffing, resources, and resident needs
 - Examine PA practices at local LT-RCCs
 - Examine the impact of Covid-19 on LT-RCCs and PA practices



Methods



Recruitment of Participants

- Researchers found 228 LT-RCCs from across 26 counties in Central Illinois (*Cass, Champaign, Christian, Clark, Coles, Cumberland, DeWitt, Douglas, Edgar, Ford, Iroquois, Livingston, Logan, Macon, Mason, McLean, Menard, Morgan, Moultrie, Peoria, Piatt, Sangamon, Shelby, Shelby, Tazewell, and Vermilion*)
- 86 administrator emails were identified (37%) and invited to participate in an online survey



Survey

- 27 questions
 - Facility, staffing, and resources within the LT-RCC
 - Impact of PA practices within LT-RCCs, as well as current and desired PA practices for residents
 - Covid-19 Impact and how the pandemic changed PA practices regarding offerings and staffing
- Online, anonymous (Qualtrics)
- Est. 10-15 min completion



Dissemination of Survey

- 86 administrator emails were identified
- 37% invited to participate

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Intro and Consent: You are being invited to participate in a research study titled "Physical Activity Practices in Long-Term and Residential Care Communities and the Covid-19 Impact" being conducted by Angela Doehring, PhD (Assistant Professor) and the Research Team (Students) in the School of Health Sciences at the University of Illinois Springfield.

The goal of this research is to understand the impact that Physical Activity (PA) plays on Long-term and Residential Care Facilities (LT-RCCs). The survey will take approximately 10-15 minutes to complete. This information allows us to better understand best practices and how current LT-RCCs deliver PA for residents.

As an Administrator of a local LT-RCC, you will be asked a series of questions regarding programming, staffing and activities within your facility. In addition, researchers would like to know how the Covid-19 pandemic has impacted your facility. Please be sure to take your time and to the best of your ability, answer honestly and accurately.

We don't believe there are any risks from participating in this research. You might even benefit from being in this study as all invited participants will receive an Executive Summary with the research findings at the conclusion of the study.

Your participation in the research is voluntary, and you may stop at any time. You do not have to answer any question you do not want to answer. There is no penalty for not taking part in this research study. Consent is implied by clicking to begin this survey. It is UIS policy to maintain confidential records of data for at least 3 years after completion of the study.

For research related questions, or questions about your rights as a research participant, please contact Angela Doehring (adoehring@uis.edu). This research has been reviewed by the UIS Human Subjects Review Office. Dr. Lucía Vazquez, Dr. Vazquez can answer any questions about your rights as a volunteer participant in this project. She can be reached at ora@uis.edu or 217-206-0112.

By clicking the "I agree" button below and by completing the following survey, I indicate that:

- I am 18 years of age or older,
- I have read this form,
- I understand my rights as a research participant,
- I understand the nature of the research described above,
- My questions so far have been answered, and
- I am giving informed consent to participate in this research study.

☐ I agree

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LT-RCC Section: This first section revolves around a comprehensive view of the structure, resources, and staffing of Long-term and Residential Care Facilities (LT-RCCs). If your facility offers multiple components, you may take the survey multiple times for each structure of your facility, or just select one aspect to focus on. Please answer to the best of your ability.

1. Please select your current position/role within the LT-RCC.

Director
Assistant Director
Nursing staff
Activity-based staff
CEO
Other (Please specify):
<input type="text"/>

2. How would you define the structure of your facility? Select all that apply.

Independent living residence
Hospital
Memory care facility
Nursing home or skilled nursing facility
A specific unit where subacute or rehabilitation care is provided

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PA Section: This next section will be focused on physical activity related programming, resources, and staffing within Long-term and Residential Care Facilities (LT-RCCs). Please answer to the best of your ability.

9. Is there set, dedicated time for structured and/or leisure resident activities?

Yes
No

10. What types of structured exercise (Therapy/ Exercise Classes/ Personal Exercise Routines) is offered/available to all residents EVERY day? Select all that apply.

Physical Therapy
Occupational Therapy
Recreational therapy
Aerobic exercise class (e.g., chair aerobics, dance aerobics, etc.)
Resistance exercise class (e.g., weights, resistance bands, body weight, etc.)
Stretching exercise class (e.g., Yoga, Pilates, general stretch class, etc.)
Balance training
Cycling
Drop-in water class

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Covid Section: The Covid-19 pandemic has had a tremendous impact on Long-term and Residential Care Facilities (LT-RCCs). In this final section, we will ask about how the pandemic has affected your facility in particular. Please answer to the best of your ability.

21. Does your organization have a shortage of staff and/or personnel? Please specify below where your facility has a shortage/ need for additional staff by selecting yes or no for each position.

	No	Yes
Nursing Staff: registered nurse, licensed practical nurse, unlicensed nurse	<input type="radio"/>	<input type="radio"/>
Clinical Staff: physician, physician assistant, advanced practice nurse	<input type="radio"/>	<input type="radio"/>
Other staff: certified nursing assistant, nurse aide, medication aide, and medication technician	<input type="radio"/>	<input type="radio"/>
Activity Staff: Activity/ Recreation director, activity aides, exercise physiologists, exercise technician	<input type="radio"/>	<input type="radio"/>
Other staff or facility personnel, regardless of clinical responsibility or resident contact not included in the categories above (for example, environmental services; please specify: <input type="text"/>)	<input type="radio"/>	<input type="radio"/>

22. Compared to prior to the Covid-19 pandemic, would you say your facility's overall staffing situation has generally gotten better or worse?

Much worse
Somewhat worse
Somewhat better
Much better



Results



Data Collection

- Survey launched November, 2022
- 80 invited
 - 6 follow-up messages sent
- 21 responses (~26% response rate)
 - 13 fully completed
 - 7 partially completed
 - 1 began, but did not answer any questions
- Avg. duration ~17 min



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LT-RCC Section. This first section revolves around a comprehensive view of the structure, resources, and staffing of Long-term and Residential Care Facilities (LT-RCCs). If your facility offers multiple components, you may take the survey multiple times for each structure of your facility, or just select one aspect to focus on. Please answer to the best of your ability.

1. Please select your current position/ role within the LT-RCC.

Director

Assistant Director

LT- RCC Facility Structure, Resources and Staffing

Section 1



Respondent and Facility Info

- Most respondents were Activity-based staff (38%) or Facility Directors (33%)
- Nearly 45% of facilities were nursing homes or skilled nursing facilities
 - Independent living residence (33%)
- 65% were For-Profit facilities
- 14- 200 bed capacity, with an average of ~62 current residents



Kinds of Dedicated Space for Activity

Large General Community room	19.44%
Pool	1.39%
Outdoor garden	11.11%
Outdoor trails	4.17%
Exercise gym	13.89%
Rehabilitation suite	5.56%
Residents room	19.44%
Facility halls	19.44%



PA Section. This next section will be focused on physical activity related programming, resources, and staffing within Long-term and Residential Care Facilities (LT-RCCs). Please answer to the best of your ability.

9. Is there set, dedicated time for structured and/ or leisure resident activities?

Yes

No

10. What types of structured exercise (Therapy/ Exercise Classes/ Personal Exercise

PA Programming, Resources and Staffing

Section 2



Activity

- 67% have dedicated time for resident activities (n= 14)
- 62% have dedicated activity-related staff to work with residents (n=13)
- About 79 minutes of total daily PA (mode= 60)
- Nearly 43% of residents do not get enough PA



Types of Structured Exercise Performed Daily

	N	%
Physical therapy	4	10.26%
Occupational therapy	4	10.26%
Recreational therapy	3	7.69%
Aerobic exercise class (e.g.- chair aerobics, dance aerobics, etc.)	7	17.95%
Resistance exercise class (e.g.- weights, resistance bands, body weight, etc.)	4	10.26%
Stretching exercise class (e.g.- Yoga, Pilates, general stretch class, etc.)	5	12.82%
Balance training	1	2.56%
Cycling	1	2.56%
Pool/Water Class	0	0.00%
Lap Swimming	0	0.00%
Walking	7	17.95%
Dancing	1	2.56%
Other (Please specify)		

PT/OT available but for only those with orders

Look into getting Yoga back in the building/covid put a stop to it, but I like to offer it again to our residents



Sedentary Behavior

- How long do you estimate that residents who are able to exercise spend sitting on an average day?
 - Mean= 268 min
 - Mode= 120 min
 - *“Too much, a lot is attitude and how do you change that. I offer, encourage, and visit with residents daily. I have outside activities planned, but they have to want to participate.”*



Covid Section. The Covid-19 pandemic has had a tremendous impact on Long-term and Residential Care Facilities (LT-RCCs). In this final section, we will ask about how the pandemic has affected your facility in particular. Please answer to the best of your ability.

21. Does your organization have a shortage of staff and/or personnel? Please specify below where your facility has a shortage/ need for additional staff by selecting yes or no for each position.

	No	Yes
Nursing Staff: registered nurse, licensed practical nurse, vocational nurse	<input type="radio"/>	<input type="radio"/>
Medical Staff: physicians	<input type="radio"/>	<input type="radio"/>

Covid-19 Impact

Section 3



Covid-19 Impact

- Facility's overall staffing situation
 - 75% much worse or somewhat worse
- Time to perform activity-related work
 - 33% much worse or somewhat worse
- Allotment of staff to perform activity-related work
 - 42% much worse or somewhat worse



Increase Residents' Physical Activity

- “More staffing hours to work with residents”
- “Overall I think we try to encourage our residents to participate in activities and I know how important it is for their overall well being, but I can only encourage-not force participation :-)”
- “We need an Activity Bus for outings”



Conclusions



Decreasing Sedentary Behavior

- Residents tend to be sedentary
 - Our findings stated residents spending an average of nearly 4 ½ hours each day of sitting
 - Other research shows avg. 21.9 hr/ day (Lee et al., 2020) and about 65% of their time inert and alone in their rooms (Lorenz et al., 2012)
 - Some residents spent more time in their room than did other residents (Donovan et al., 2014)
- Decrease sedentary bouts and increase social interaction



Increase Funding for PA

- Reallocate funding to increase opportunities for PA for residents
 - space, resources and tools
 - staffing



Staffing

- Post-COVID, Activity-based staffing was said to be sufficient, yet there is a disconnect in the actual PA being performed



Study Limitations

- Small sample size
- Buy-In, Gatekeepers
- Generalizability
 - Regional vs. National



Next Steps



Future Research

- Larger, more generalizable sample
- Qualitative
- Conduct additional research
 - Resident motivation for PA



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Questions

Interested in participating in
future research?

Additional comments or
questions?

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