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Physical Activity and Fall Prevention in Older Adults, an Educational Intervention

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GERIATRIC PHYSICAL ACTIVITY AND FALL PREVENTION

UVM HEALTH NETWORK, CVPH, FAMILY MEDICINE CENTER, PLATTSBURGH, NY

CALEB KNIGHT, LCOM 2020

PRECEPTOR: DR. YAMILEE JACQUES

FAMILY MEDICINE ROTATION, MAY 2018

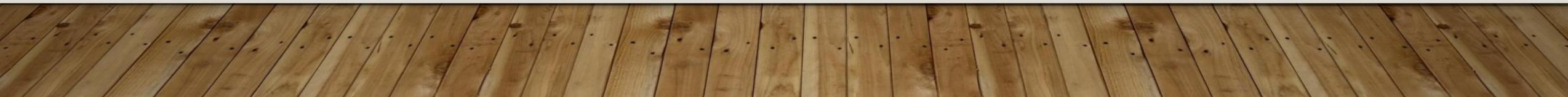
THE “PROBLEM,” BY THE NUMBERS

- Unintentional injuries are the 5th leading cause of death in older adults, and falls are responsible for 2/3 of the deaths resulting from unintentional injuries. (8)
- The proportion of older adults (fastest growing demographic in the US) that require assistance in activities of daily living (ADLs), will rise from 22% in 2010 to 35% in 2030. (4)
- Loss of physical independence, most often due to a fall, is associated with lower quality of life (QOL), increased cost, and often leads to irreversible disability in ADLs. (1)
- One in three older adults will have a fall each year (3), and full recovery of ADLs after being admitted to a hospital for any cause is unlikely. (2)
- Over 50% of older adults require long-term care services due to physical limitations with ADLs. (7)
- 14.2% of Plattsburgh residents are older adults. (8) NY= 18% by 2030. (6)

THE PROBLEM, CTD. (SLIDE 2B)

- Falls are associated with increased morbidity, mortality, hospitalizations and premature nursing home admissions. They are a major reason for approximately 40% of nursing home admissions.
- Within an average community, fall rates in those over 65 are 35-40% annually.
- Within the hospital, fall rates are around 1.5 falls/bed annually, with 10-25% of institutional falls resulting in fracture, laceration, or the need for hospital care.
- Physical activity has been shown to increase the length of independence through many aspects including decreasing fall risk, maintaining physical function, and improving cognitive performance.

(9)



THE COST, NATIONALLY AND LOCALLY

- In the United States, older adults accounted for over 35% of the hospital stays in 2012, with the highest average cost per stay at ~\$13,000 (all other age groups ~\$10,400). (10)
- Older adult falls now account for nearly \$50 billion annually. (4)
- In 2010 an estimated \$306 billion was spent on long-term care facilities, a figure that will continue to rise at the current rates of increasing dependence (10)

COMMUNITY PERSPECTIVE

- Despite the ample resources and excellent programs in Clinton County relative to the rest of the state, barriers exist that hinder older adults from being more physically active.
- “Weather, motivation, having people to exercise with, confidence, and fear of falling” can all deter older adults from being more active. –Marisa Pers, Clinton County Office for the Aging
- Karin Blackburn, a community member and the Center Director at NAHEC, Inc. suspects a loss of independence is what older adults fear most., and agrees that lacking confidence is a barrier.
- The Senior Citizens Counsel of Clinton County incorporates a variety of physical activity programs from yoga and dance to pickleball and water aerobics. “These participants are the ones we see living into their nineties, and still maintaining their independence, still driving,” says Ms. Pers.



INTERVENTION AND METHODOLOGY

- Oral presentation with accompanying slide show reviewing the literature supporting the benefits of physical activity for fall risk prevention was provided for Meadowbrook Healthcare facility residents, all of whom were older adults.
- Intervention was educational in nature, providing data to support and encourage Meadowbrook residents in their daily activities.
- Meadowbrook Healthcare provides physical therapy and rehabilitative services, as well as group fitness activities, however, a scientific perspective from a visitor provided external motivation and answers to questions.



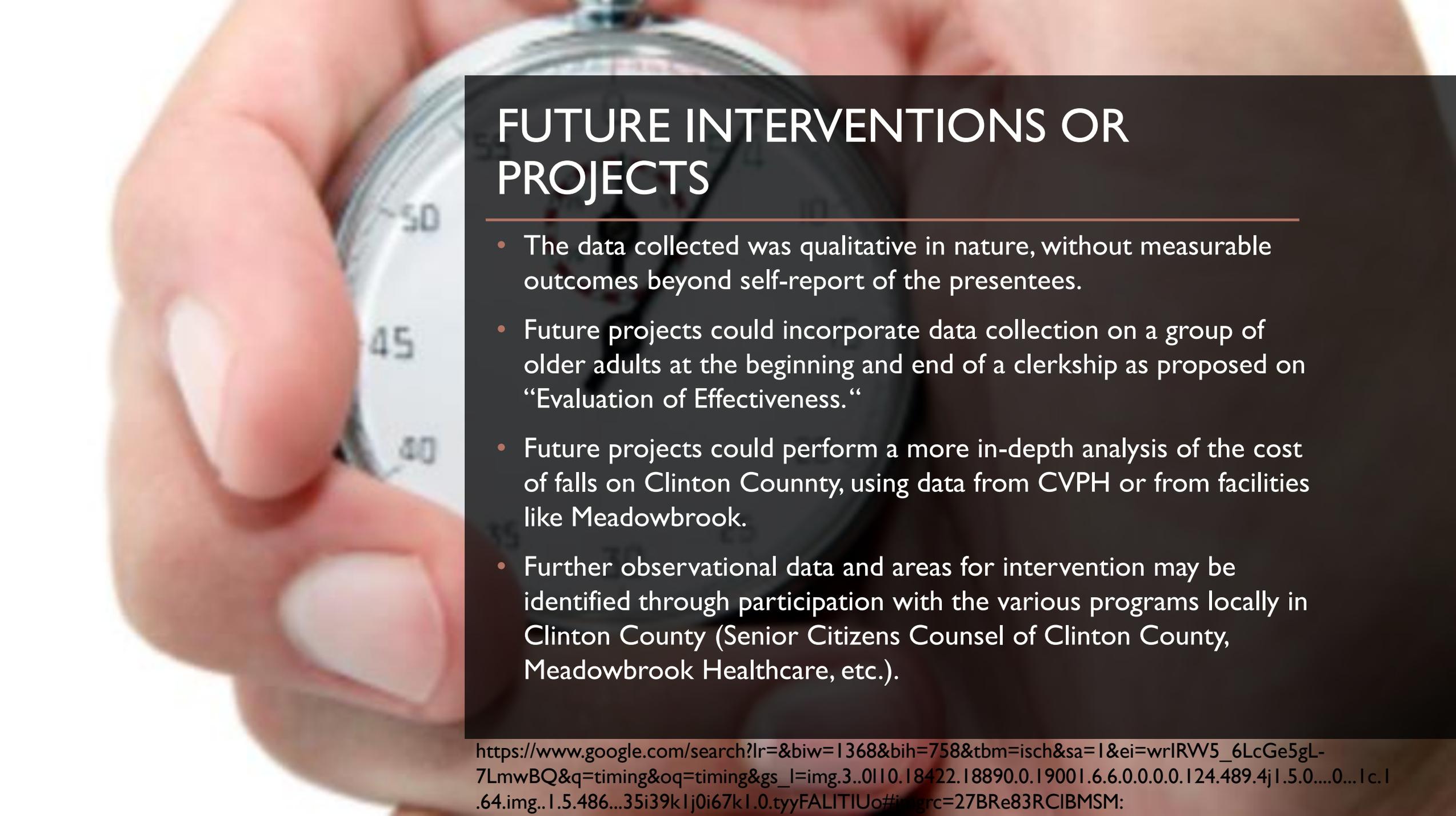
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EVALUATION OF EFFECTIVENESS

- Data collection may be performed on a similar group of older adults at Meadowbrook Healthcare before and after an intervention.
 - Physical parameters like get-up-and-go time, 30s arm curl, 30s chair rise, or 6min walk could be tested before and after a physical activity intervention for older adults during the course of the Family Medicine clerkship.
 - Self-reported confidence levels could be assessed using questionnaires, at the beginning and end of the family medicine clerkship, before and after an educational presentation.
 - Knowledge levels of a group of older adults regarding physical activities, or the benefits of physical activity, could be assessed utilizing a survey to quantify effectiveness of an educational session.

RESULTS/RESPONSE

- The majority of the older adults available for the presentation for the presentation were engaged, and were provided an opportunity for questions afterwards.
- When asked what they might do for physical activity in the future, all respondents spoke to the importance of participation in the Meadowbrook exercise classes.
- When asked what barriers might be met in the future, several residents spoke of the fear of physical activity, and others spoke of lacking motivation at times.
- When asked how they might overcome these barriers, respondents noted peer support, focusing on goals for the future (relocation from the nursing facility, and making family events), and recalibrating goals for the present (instead of being discouraged by their loss of function from their youth).



FUTURE INTERVENTIONS OR PROJECTS

- The data collected was qualitative in nature, without measurable outcomes beyond self-report of the presentees.
- Future projects could incorporate data collection on a group of older adults at the beginning and end of a clerkship as proposed on “Evaluation of Effectiveness.”
- Future projects could perform a more in-depth analysis of the cost of falls on Clinton County, using data from CVPH or from facilities like Meadowbrook.
- Further observational data and areas for intervention may be identified through participation with the various programs locally in Clinton County (Senior Citizens Counsel of Clinton County, Meadowbrook Healthcare, etc.).

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INTERVIEW CONSENT

- Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project. The interviewee affirms that he/she has consented to this interview. Yes **X** / No If not consenting as above: please add the interviewee names here for the department of Family Medicine information only.
Name: Marisa Pers, Karin Blackburn