

Community Health and Mobility Partnership (CHAMP):

*COLLABORATION, OUTCOMES, AND
EXPANSION*

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Collaboration

History of CHAMP

- Idea originated with faculty at UNC – Chapel Hill
- Developed academic and community partners; obtained funding.
- First CHAMP location began in McDowell County in 2009



Early CHAMP partners

Academic

- University of North Carolina at Chapel Hill
- Western Carolina University
- Caldwell Community College & Technical Institute
- McDowell Technical Community College
- Appalachian State University
- South College - Asheville

Community

- McDowell County government
- McDowell Senior Center
- McDowell County EMS
- McDowell Hospital
- McDowell Dept of Social Services
- Rutherford-Polk-McDowell District Health Dept

Recognizing that falls among older adults was a serious problem in this county, and that health care students could help provide needed services while at the same time receiving valuable training, members of academic institutions and community organizations came together in 2009 to form CHAMP.

Mission Statement

CHAMP's mission is to prevent falls in community-dwelling older adults and people with disabilities, with a focus on rural and underserved communities.



CHAMP Model



Why interprofessional, community-based education?

- Trend toward health care delivery in community-based settings (Williams-Barnard et al, 2004)
- Effective for teaching health promotion and prevention concepts (Kataoka-Yahiro et al, 1996)
- Competition for a limited number of clinical sites



- Trend toward health care delivery in community-based settings
 - which in turn is driven by escalating health care costs and socioeconomic disparities
- Health promotion and prevention concepts can be taught more effectively in the community
 - This type of education facilitates development of health care providers who are responsive to community needs
- Competition for a limited number of clinical sites – so may need to provide integrated learning experiences that can supplement traditional clinical placements

Interprofessional education

- Prepares health care students to function effectively as members of interprofessional teams (Bridges et al, 2011)
- Leads to optimal quality of care and client outcomes (Medves et al, 2008; Furze et al, 2008; Bridges et al, 2011)



<http://www.aippen.net/what-is-ipe-lpl-ipp>

So how does CHAMP work?

- Screening events held at community sites that are easily accessible to older adults
- Providers & participants scheduled in advance



So how does CHAMP work? (cont.)

- Assessment: Intake Forms
 - Activities-specific Balance Confidence Scale
 - Geriatric Depression Scale
 - Rapid Assessment of Physical Activity
 - Cognitive Screening (Mini-Mental State Exam)

Show of hands who is familiar with/has administered each one. Have a person who is familiar with the assessment share a little bit about each assessment.

So how does CHAMP work? (cont.)

- Assessment: Nursing/
EMS

- Medical history
- Blood pressure assessment
- Medication review
- Vision screening

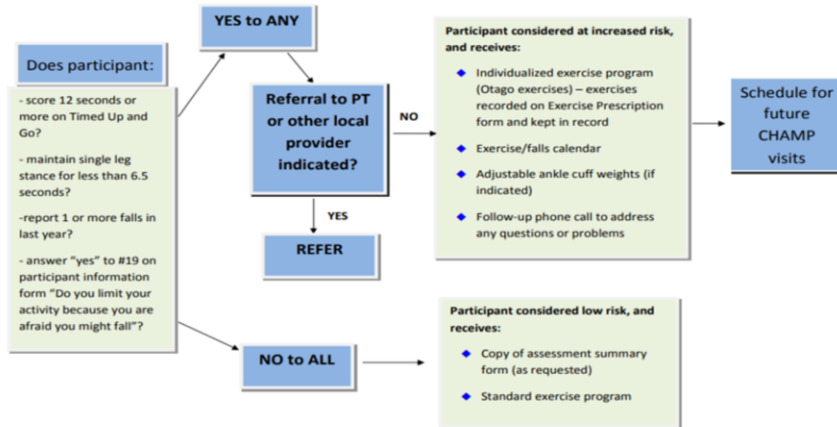


So how does CHAMP work? (cont.)

- Assessment: PT/PTA students, faculty, and clinicians
 - Grip Strength Testing
 - 30 Second Chair Stands
 - Four Stage Balance Test
 - Timed Up and Go



CHAMP Algorithm for Risk Identification and Recommendations



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Based on test results, providers determine whether participant is at increased risk for falls. Participants at increased risk for falls: Given individualized home program (Otago) exercises and scheduled for follow-up through CHAMP. May be referred to local health care professionals, or other community programs if needed. Matter of Balance for low ABC score, Healthy IDEAS for depression.

So how does CHAMP work? (cont.)

- Otago Intervention:
 - Balance and strengthening exercises
 - Resulted in 35% reduction in falls and fall related injuries
 - Was most effective for those ≥ 80 years old and those with history of falls
 - Improved strength & balance

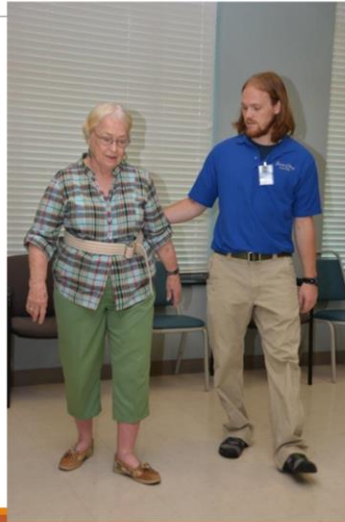
(Robertson et al, 2002; Sherrington et al, 2008)



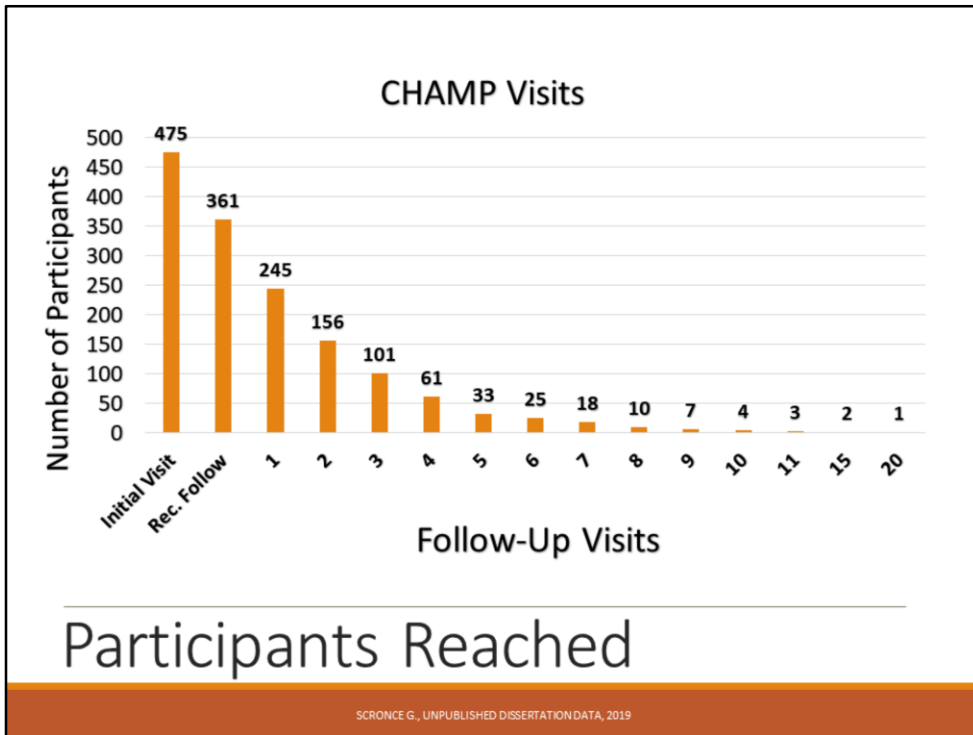
Example exercise illustration from Otago manual

So how does CHAMP work? (cont.)

- At follow-up visits,
 - Review health status
 - Repeat ABC Scale and physical performance testing
 - Review home exercises and modify as appropriate



Outcomes



The following information is based on Caldwell and McDowell sites from 2009-2017

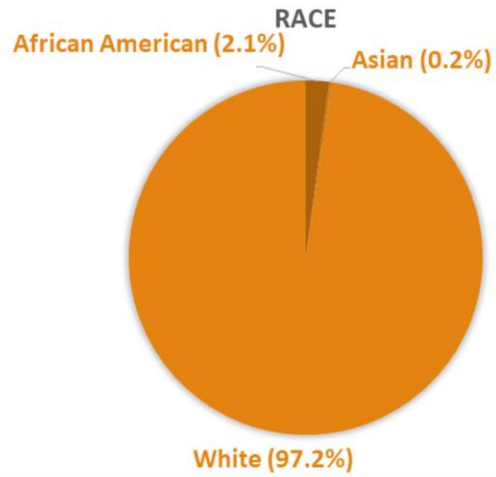
Participant Demographics (n=475)

Age	74.4 ± 9.1 years
Gender	78.3% Women
	21.7% Men
Ethnicity	0.5% Hispanic or Latino
BMI	28.8 ± 6.2 kg/m ²
Falls	1.3 ± 2.8 falls in past year
Fear of Falling	42.3% limit activity

SCRONCE G., UNPUBLISHED DISSERTATION DATA, 2019

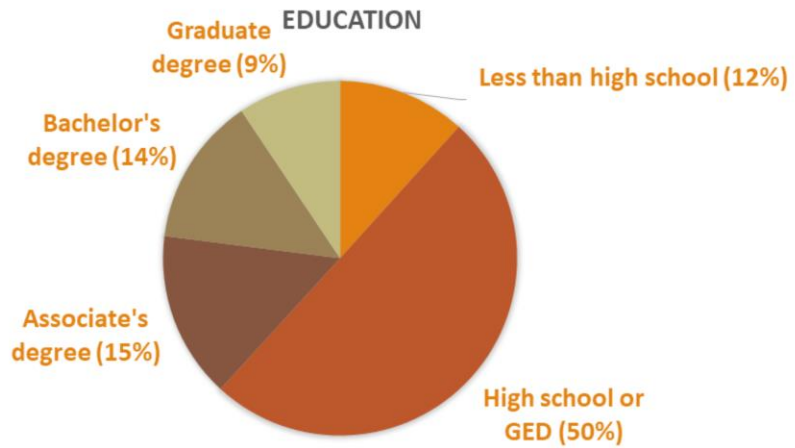
The demographic information is based on Caldwell and McDowell sites from 2009-2017

Participant Demographics (cont.)



SCRONCE G., UNPUBLISHED DISSERTATION DATA, 2019

Participant Demographics (cont.)



SCRONCE G., UNPUBLISHED DISSERTATION DATA, 2019

Participant Demographics (cont.)

Comorbidities:

70.1% arthritis

60.2% hypertension

25.5% osteoporosis

25.5% cardiovascular disease

24.0% diabetes

18.5% history of cancer

SCRONCE G., UNPUBLISHED DISSERTATION DATA, 2019

Participant Demographics (cont.)

Device (used for TUG)

84.0% none

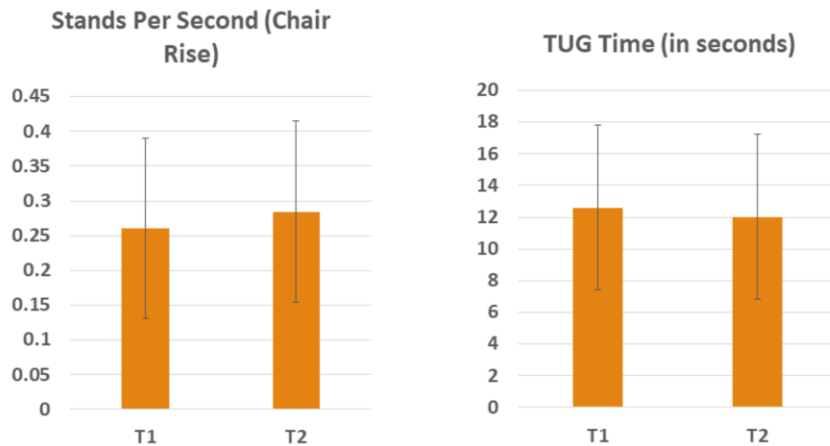
9.3% straight cane

4.9% walker

1.3% quad cane

SCRONCE G., UNPUBLISHED DISSERTATION DATA, 2019

Participant Performance Outcomes (cont.)



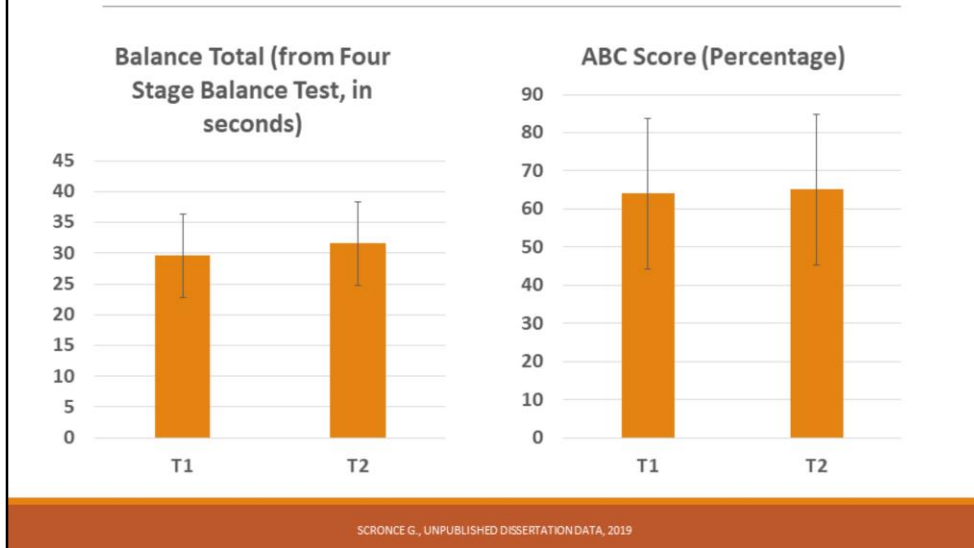
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T1=initial evaluation, T2=after 2 follow-up visits. Explain meaning of each outcome measure.

Stands Per Second: T1 mean → 0.26 ± 0.13 stands/s, T2 mean → 0.28 ± 0.14 stands/s. SIGNIFICANT ($t=-2.769$, Sig.=0.006)

TUG Time: T1 mean → 12.59 ± 5.30 s, T2 mean → 12.03 ± 5.07 s.

Participant Performance Outcomes (cont.)

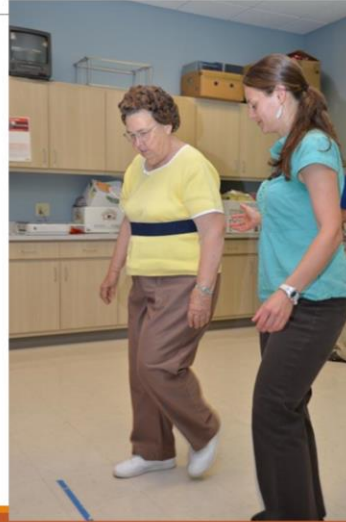


Balance Total: T1 mean → 29.59±6.54, T2 mean → 31.58±7.13. SIGNIFICANT (t=-3.879, sig.=0.000)

ABC: T1 mean → 64.00±19.61, T2 mean → 65.13±19.86. ABC score may have increased at T2 because many older adults learn that they are at risk for falls through the program, and therefore become less confident in their balance during the first few months.

Bottom Line

- Able to detect increased risk of falls for 361 participants
- Evidence shows improvement in multiple falls risk indicators after only 2 follow-up visits.



Educational Outcomes

- Student Participation:
 - Approximately 150 students participated in first 2.5 years
 - At the McDowell County Location, 96 students participated from 2017-2018.

CHAMP can help educational programs meet goals (e.g. geriatric competencies for entry-level PT education)

Student Survey Results

- Survey (adapted from Shinnamon et al, 1999) sent out to current and former PT and PTA students

	SD	D	N	A	SA	
Use of course material in health & wellness	0.0%	3.1%	0.0%	21.9%	75.0%	4.9
↑ understanding of course material	0.0%	0.0%	3.1%	40.6%	56.3%	4.5

32 responses received: N = 15 (54%) for PT students; N = 17 (23%) for PTA students

Student Survey Results (cont.)

	SD	D	N	A	SA	
↑ awareness of other professional roles	0.0%	0.0%	21.9%	34.4%	43.8%	4.2
↑ awareness of needs of rural areas	0.0%	3.2%	9.7%	41.9%	45.2%	4.3
Helped me clarify choice of career/ specialization	0.0%	3.2%	32.3%	32.3%	32.3%	3.9
Plan to integrate community service into future plans	0.0%	0.0%	0.0%	43.8%	56.3%	4.6

Positive outcomes for students.

Participant Survey Results

QUESTION/ ITEM	RESPONSE (%)				
1. How would you rate the CHAMP program overall?	Poor 0.0	Fair 0.0	Good 5.4	Very Good 35.1	Excellent 59.5
2. How satisfied are you with your experience as a participant in the CHAMP program?	Not at all satisfied 0.0	A little satisfied 0.0	Somewhat satisfied 5.4	Mostly satisfied 21.6	Completely satisfied 73.0
3. How well did the health care providers at CHAMP work together to assess and make recommendations for you?	Not well at all 0.0	Not so well 0.0	Somewhat well 2.7	Very well 35.1	Extremely well 62.2
4. How do you feel about having health care students (physical therapy and nursing students) involved with CHAMP?	Strongly negative 0.0	Negative 0.0	Neutral 0.0	Positive 37.8	Strongly Positive 62.2
5. Please rate your level of agreement with the following statement: "I have benefitted physically (for example, with better strength, balance, walking, or overall health) from my participation in CHAMP".	Strongly disagree 0.0	Disagree 0.0	Neutral 2.7	Agree 43.2	Strongly Agree 54.1

Paper and pencil survey given out to older adults who had or were currently participating in CHAMP. Survey distributed at 3 regular CHAMP event locations (2 senior centers and one subsidized housing community for seniors). N = 37.

Participant Survey Quotes:

What were the BEST things about your CHAMP experience?

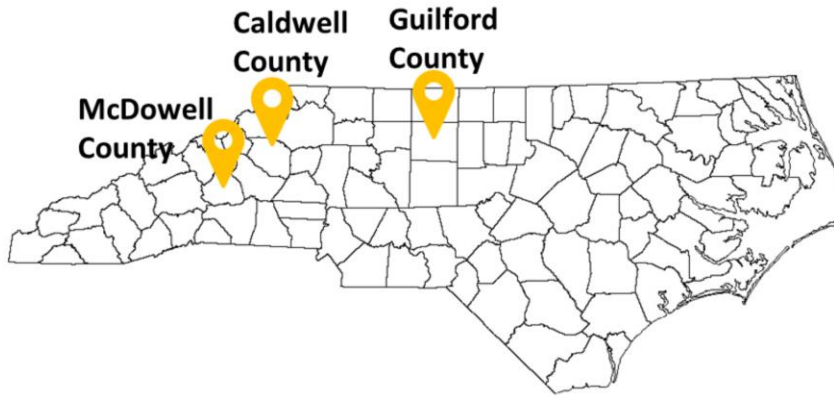
“I was losing muscle strength in my legs and sometimes I fell very easy. I have regained my walking ability and by watching my step, I’m not falling now.”

“They were very positive & pleasant. I felt better after being with them, and [it] made me want to continue my exercise.”

From Participant Survey.

Expansion

Current CHAMP Sites



Key Ingredients for Expansion



Elderly population
with need in area



Accessible Location:
Senior Center,
Retirement Center,
etc.



Professional Partnerships:
healthcare facilities,
professional volunteers



Academic Partnerships:
student volunteers

Practical Needs of Each New Site

- Equipment: BP cuffs, hand dynamometers, gait belts, stop watches (can be provided by UNC)
- Forms: easily accessible for printing through CHAMP website
- Volunteer Staff:
 - Site leader – coordinates scheduling, obtains supplies, oversees operations
 - Intake Forms/Nursing Assessment (2 or more volunteers)
 - Physical Assessment and Otago Prescription (2 or more volunteers, one must be a licensed physical therapist, others can be student PT/PTA volunteers)

CHAMP events take place monthly, so volunteers would come 1 day/month at the maximum.

Resources for Expansion

- CHAMP Manual
- Website: access to manual, all CHAMP forms, other falls prevention resources
- Consultation from UNC

Resources for Expansion (cont.)

- Training:
 - Online Otago training through North Carolina AHEConnect Learning Management system
 - Can provide on-site training
 - Training checklist with competencies provided in manual

Recent and Planned Additions

- **Pennybyrn, Guilford County (Fall 2018)**
 - Partners: Pennybyrn Retirement Center, Guilford Technical Community College
- **Buncombe County (Fall 2019)**
 - Potential partners: UNC Asheville, Western Carolina University, South College, Asheville-Buncombe Technical Community College, Mission Health network, Council on Aging

Interested?

Visit ncchamp.org for
more information or to
volunteer!

Acknowledgements



THE BAXTER INTERNATIONAL
FOUNDATION

The Baxter International
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McDowell County Government



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

UNC Center for Aging and
Health

Thorp Faculty Engaged Scholars
(UNC)



NC AHEC

All CHAMP Partners

QUESTIONS?

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