

Fall Prevention Interventions in Rural Communities: Findings from a National Dissemination

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Self-Management
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Falls in America

- Every 19 minutes, an older adult dies from a fall. Every 11 seconds, an older adult is treated in an emergency room for a fall-related injury
- 1 in 4 adults age 65+ fall each year
- Those who fall are 2 to 3 times more likely to fall again
- 1 in 5 falls cause a serious injury (fracture, head trauma)
 - Result in morbidity, reduced mobility, loss of independence, premature mortality
- Costs associated with fall-related treatment exceeds \$31B



Risk and Prevention

- Falls are common, predictable, and largely preventable
- Growing action to support intervention
 - Administration for Community Living (ACL)
 - Centers for Disease Control and Prevention (CDC)
 - Patient-Centered Outcomes Research Institute (PCORI)
- Over 15% of older adults live in rural communities
 - Increased fall-related risk and ramifications based on
 - Physical environment and lifestyle
 - Geographic and technological isolation
 - Sparse and dispersed healthcare resources
- Less is known about the rural reach of evidence-based fall prevention programs



Study Purposes

1. Briefly describe the national dissemination of 8 evidence-based fall prevention programs funded by the Administration for Community Living (ACL)
2. Identify participant reach in rural areas
3. Describe opportunities to enhance and support program delivery to maximize reach and benefit

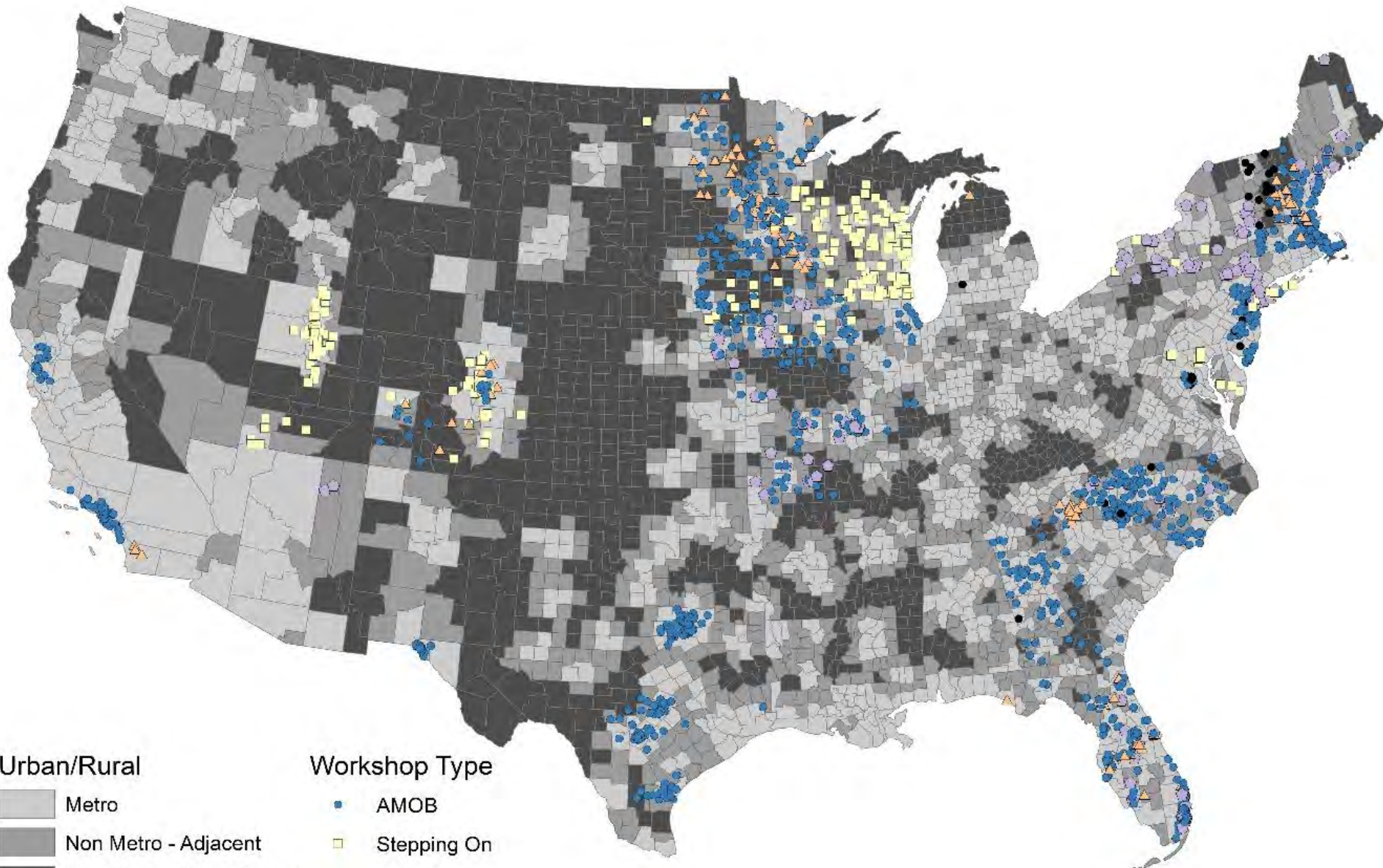
A National Initiative

- Nationwide delivery of evidence-based programs (EBP) as part of the *Prevention and Public Health Fund* (PPHF)
- Data collected from grantees between 2014 and 2017
 - 39 grantees spanning 22 states
- Eight EBP supported:
 - A Matter of Balance (AMOB); Stepping On (SO); Tai Ji Quan: Moving for Better Balance (TJQMBB); Tai Chi for Arthritis (TCA); FallScape; Stay Active and Independent for Life (SAIL); Stay Safe, Stay Active; and Otago Exercise Program (OEP)
- EBP delivered in a variety of community settings through the aging services network and public health system




Data & Measures

- Administrative records and baseline questionnaire
- Geospatial and descriptive analyses of 3,755 workshops
 - 45,812 participants, 22 states
- Measures
 - Rurality (based on Rural-Urban Continuum Codes [RUCC])
 - Metro (RUCC = 1-3)
 - Non-Metro Adjacent (RUCC = 4, 6, 8)
 - Non-Metro Non-Adjacent (RUCC = 5, 7, 9)
 - Neighborhood characteristics of workshops
 - ZIP Code Tabulation Area (ZCTA)
 - Delivery site type (e.g., senior centers)
 - Sociodemographics





Urban/Rural

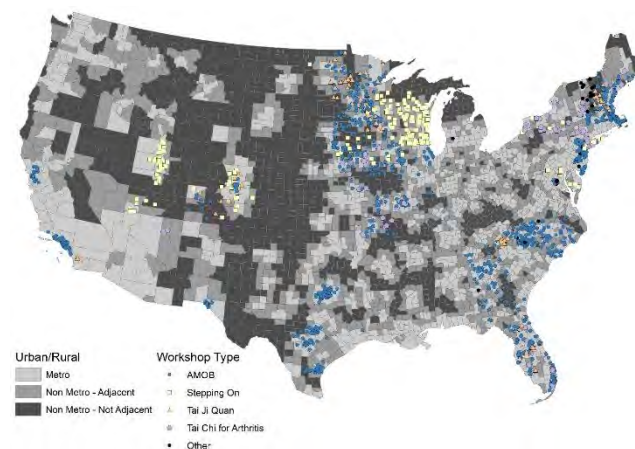
-  Metro
-  Non Metro - Adjacent
-  Non Metro - Not Adjacent

Workshop Type

-  AMOB
-  Stepping On
-  Tai Ji Quan
-  Tai Chi for Arthritis
-  Other

Geospatial Dissemination

- Of the 3,221 U.S. counties, one or more workshops were delivered in 551 unique counties (17.1%)
- Of the 3,755 workshops delivered (45,812 participants)
 - 80% metro
 - 13% non-metro adjacent
 - 7% non-metro non-adjacent
- Programs most frequently delivered
 - 67% AMOB
 - 14% SO
 - 11% TJQ
 - 5% Tai Chi for Arthritis



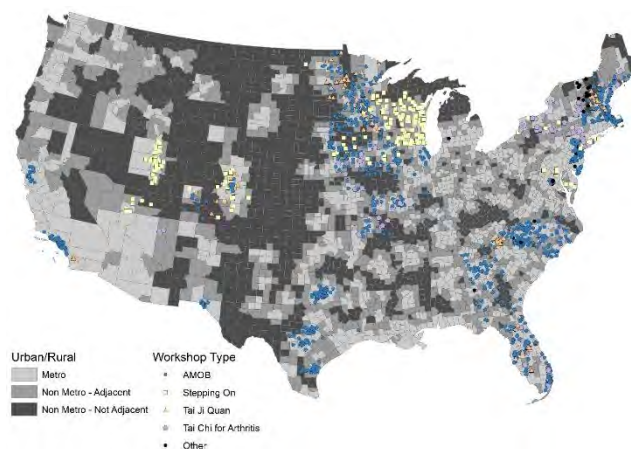
Fall Prevention Program Workshop Types by Rurality

Program Type	PARTICIPANTS	WORKSHOPS [COUNTIES]			Total
	Total	Metro	Non - Metro: Adjacent	Non - Metro: Not Adjacent	
A Matter of Balance	30,132	2,057 [204]	289 [91]	159 [50]	2,505 [345]
Stepping On	6,388	388 [49]	96 [35]	40 [15]	524 [99]
Tai Ji Quan	5,332	295 [17]	65 [12]	50 [10]	410 [39]
Tai Chi for Arthritis	3,184	157 [30]	30 [11]	15 [6]	202 [47]
FallScape	262	3 [2]	3 [3]	7 [5]	13 [10]
SAIL	242	14 [3]	0 [0]	0 [0]	14 [3]
Stay Safe, Stay Active	144	1 [0]	2 [1]	0 [0]	3 [1]
Otago Exercise Program	128	83 [6]	1 [1]	0 [0]	84 [7]
TOTAL	45,812	2,998 [311]	486 [154]	271 [86]	3,755 [551]

[0] = no unique county served with this program

Geospatial Dissemination

- Of the 3,755 workshops delivered
 - 26% Senior Center
 - 20% Residential Facility
 - 13% Healthcare Organization
 - 9% Faith-Based Organization
- Of the 45,812 participants
 - Average age 76 years
 - 81% female
 - 7% African American; 6% Hispanic
 - 56% High school education or less
 - Average household income \$55,861



Delivery Site Types by Rurality

Delivery Site Type	PARTICIPANTS	WORKSHOPS [COUNTIES]			Total
	Total	Metro	Non - Metro: Adjacent	Non - Metro: Not Adjacent	
Senior Center	11989	739 [94]	129 [49]	68 [27]	936 [170]
Residential Facility	8933	582 [46]	98 [23]	51 [15]	731 [84]
Healthcare Organization	6087	507 [41]	72 [17]	50 [13]	629 [71]
Faith-Based Organization	3874	229 [23]	50 [18]	19 [8]	298 [49]
Recreational Organization	3111	206 [24]	13 [5]	9 [2]	228 [31]
Community Center	2885	168 [16]	37 [8]	19 [3]	224 [27]
Other	2809	176 [27]	30 [14]	22 [8]	228 [49]
Multi-Purpose / Social Service Organization	1527	106 [9]	9 [5]	7 [3]	122 [17]
Library	1372	89 [6]	7 [1]	7 [0]	103 [7]
Area Agency on Aging	1065	69 [13]	13 [7]	10 [5]	92 [25]
Municipal Government	607	40 [1]	9 [2]	1 [0]	50 [3]
County Health Department	564	31 [7]	13 [2]	1 [0]	45 [9]
Educational Institution	524	30 [2]	3 [1]	5 [1]	38 [4]
Tribal Center	176	2 [0]	3 [2]	2 [1]	7 [3]
State Unit on Aging	171	14 [2]	0 [0]	0 [0]	14 [2]
Workplace	102	8 [0]	0 [0]	0 [0]	8 [0]
State Health Department	16	2 [0]	0 [0]	0 [0]	2 [0]
TOTAL	45,812	2,998 [311]	486 [154]	271 [86]	3,755 [551]

[0] = no unique county served by this delivery site type

Participant, Delivery Site Location, and Workshop Characteristics by Rurality

	Total	Metro	Non - Metro: Adjacent	Non - Metro: Not Adjacent
PARTICIPANT CHARACTERISTICS				
Age	76.01 (±9.45)	75.87 (±9.41)	76.42 (±9.47)	76.81 (±9.78)
Proportion of Female Participants	80.5%	80.3%	82.4%	79.9%
Proportion of White Participants	73.4%	71.1%	83.7%	82.0%
Proportion of African American Participants	6.9%	7.8%	3.9%	1.5%
Proportion of Hispanic Participants	5.9%	6.8%	2.0%	2.6%
Proportion with Less Than High School	11.1%	11.0%	11.6%	10.4%
Proportion with High School/GED/Vocational	44.9%	43.0%	53.5%	49.4%
Proportion with College Degree or Higher	44.1%	46.0%	34.8%	40.2%
Proportion with Arthritis	42.0%	41.2%	45.7%	44.7%
Proportion with Heart Disease	19.7%	19.1%	22.1%	22.6%
Proportion with Diabetes	16.0%	15.8%	17.0%	16.5%
Proportion with Depression or Anxiety	10.6%	10.6%	11.2%	9.9%
DELIVERY SITE LOCATION CHARACTERISTICS*				
Median Household Income*	\$55,861.66 (±21,668.27)	\$58,346.23 (±22,932.93)	\$45,313.00 (±9,922.84)	\$45,857.62 (±10,303.06)
Percent Living Over Poverty Line*	14.06 (±9.52)	14.01 (±10.06)	14.42 (±7.04)	13.96 (±6.32)
Percent White*	79.26 (±19.44)	76.84 (±19.34)	89.11 (±17.38)	89.87 (±14.11)
Percent African American*	9.88 (±15.31)	11.25 (±15.96)	4.88 (±11.46)	2.73 (±7.83)
Percent Hispanic*	12.99 (±18.00)	14.79 (±18.83)	4.61 (±8.30)	7.04 (±15.18)
Percent Less than High School Education*	12.97 (±9.18)	12.94 (±9.64)	13.31 (±7.15)	12.66 (±6.43)
WORKSHOP CHARACTERISTICS				
Number of Participants Enrolled in Workshops	14.71 (±7.87)	14.69 (±6.99)	15.64 (±12.62)	13.12 (5.43±)
Proportion of Sessions Attended	70.64 (±29.73)	70.81 (±29.49)	70.19 (±30.39)	69.41 (±31.45)

*Indicates statistic from the ZCTA of the delivery site location

Conclusion

- Fall prevention programs have capacity to serve large numbers of diverse older adults through an established and growing network of delivery sites
- Coordinated community-wide efforts are needed to reduce falls
 - Changing clinical care practices
 - Offering community-based programs
 - Introducing and enforcing policy
- Efforts are needed to expand delivery to serve more rural and disadvantaged communities
 - Improve access (overcoming barriers of time, space, and resources)
 - Use multi-pronged strategies (integrating technology)
 - Leverage multiple programs and services (bundling)
 - Translate (diversify those served: content, setting, modalities)

THANK YOU!

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