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**Assessment of Need for Non-Emergency Medical Transportation for
Underserved, Vulnerable Aging Residents of Iosco County Michigan
Preliminary Findings**

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Partnerships with:

The Region 9 Area Agency on Aging, fiduciary

Central Michigan University College of Medicine, IRB review
and faculty partnerships

This project represents innovation for essential research with personnel and leadership drawing from pool of talent in the retirement community.

Many communities have such a pool of expertise and experience that can be tapped to address critical issues of health care and public health.

The Rural Health Group is a grass roots effort, drawing on talent and experience that is resident in the community, seeking only the opportunity to serve.

**The Perspective of the Aging Services
Community in Rural Michigan**

**The Iosco County Commission on Aging
Hale, Michigan**

Quantifying an Unmet Need

- NEMT phone calls from clients are our #1 requested service need at the Iosco County Commission on Aging.
- There is no affordable referral source in Iosco County.
- Many of these calls are from non-Home Delivered Meal Clients and even non-seniors. The Iosco County Commission on Aging has no means of meeting this expressed need.
- These issues are prevalent and consistent throughout Northeast Michigan.
- My personal Experience with aging parents

Rural Health Group and Region 9 Area Agency on Aging Partnership with Iosco County Commission on Aging

- Purpose is to accumulate data on NEMT needs
- Region 9 Area Agency on Aging is acting as fiduciary and direct contact with Michigan Health Endowment Fund
- Iosco County Commission on Aging has provided access to participating clients and office space for field work.

A question to establish
context:
What is the first thing all
patients
encounter when arriving at any
medical care facility?

History of the project and acknowledgement of macro issues:

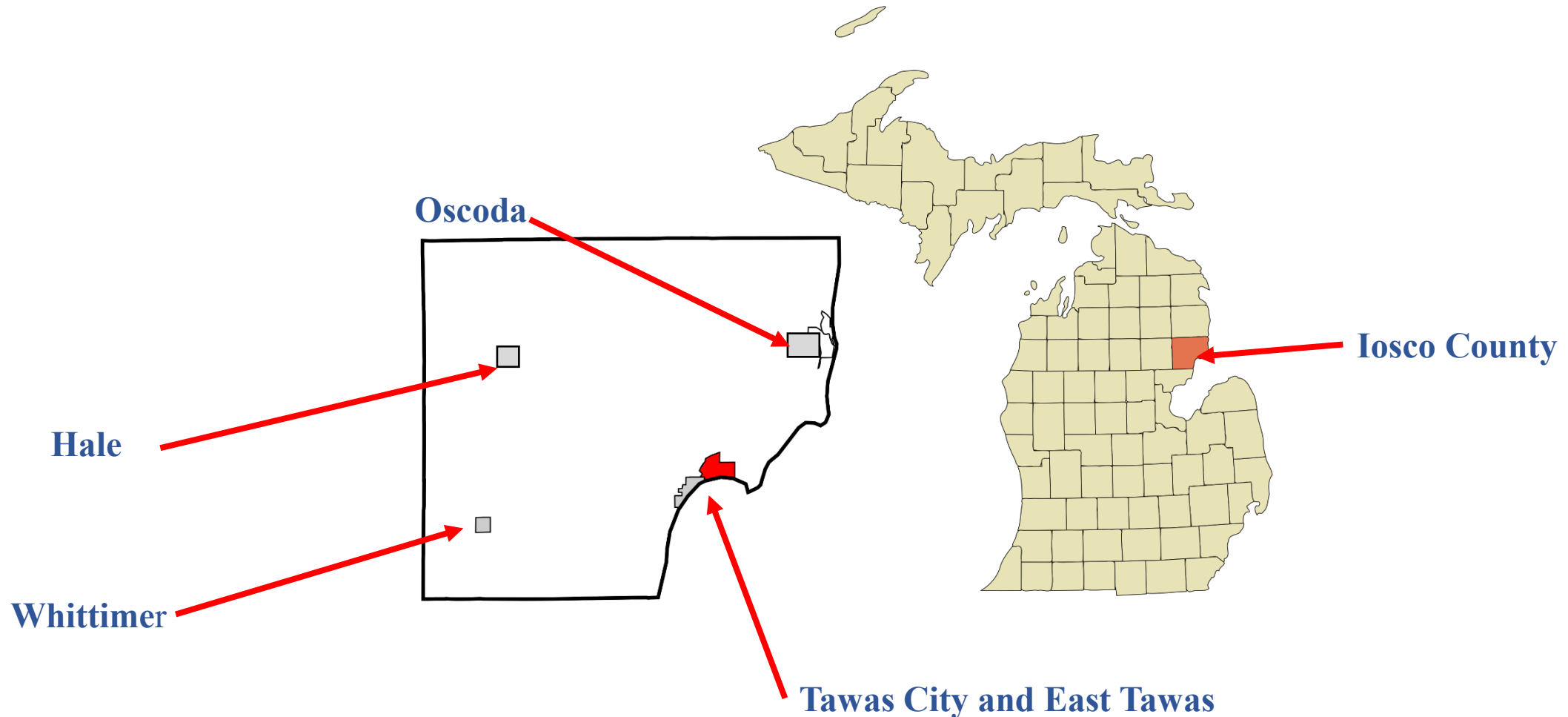
Providers face “no shows“, non-adherence & non-compliance with medical appointments.

Patients experience interrupted or discontinued care. We know from insights from the Friends Together cancer NGO in Alpena, inputs from local providers, and concerns from major providing systems such as Trinity Health. Very little research examines the consequences of unmet NEMT on patients.

Patients and families **and** providers all suffer from insufficient NEMT and transportation should be part of current public health thinking on Social Determinants of Health.

**We believe that these issues have significant
relevance for this conference's theme of
"Ripple Effects".**

Iosco County – typical modest-income, rural and small town, aging with pockets of serious poverty and low density, and relative isolation. There are socioeconomic and housing distinctions separating incorporated from unincorporated townships. Nearly 30% of the county is within National Forest jurisdiction. Total population 25,473 (2020 Census), With **65 and older at 30.7%**



The 1974 Older Americans Act was driven by the revelations of hunger in America's elderly.

Home-delivered meal recipients from the Iosco County Commission on Aging represent a federally-defined vulnerable population based on need for meal assistance but **not on economic status or clinical presentation.**

We believe that this sample will be highly generalizable. Consider how many rural and small town counties in Michigan have similar demographic and cultural characteristics and how many similar places there are in rural America?

Framework of research design (generalizability and limitations)

IRB (Human Subjects Review) authorization

Internal consistency issues – common terms and presentation of questions

Sample size considerations – need for the ability to stratify statistical analyses by demographics, housing, locations, medical status demand larger than “minimal necessary” sample size. **Current target is 100-110 from a total population of home-delivered meal recipients of 223 (Sample fraction of over 50%);** providing a highly representative sample that is sufficient to pursue multi-variable stratified analyses.

Interviewer training and interviewing with witnesses & instrument development: Modules 1-3 general information and medical needs, Module 4 focuses on consequences of interrupted or discontinued care.

Sources of interviewers include community volunteers and both paid and volunteer “meals on wheels” volunteers have been engaged as interviewers.

Ongoing data entry permits preliminary analyses and implications of participant recruitment methods.

Participant recruitment has included letters, cold-calls, home visits and have yielded different levels of recruitment success.

Compensation to participating respondents.

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FINDINGS AFTER 60% OF FIELD WORK

Total Respondents	64	
Respondents Reporting [NEMT]		
Unmet Need	18	28%
Respondents Reporting [NEMT]		
No Unmet Need	46	72%

SAMPLE DEMOGRAPHICS

• Characteristic	Unmet Need	No Unmet Need
• Average Age Years	71	79
• Male Gender	50%	46%
• Living Alone	50%	56%
• Cannot Live Independently	22%	11%

Are there Visible Accommodations for Americans with Disability Conformance for Access

Yes	
No	
Are there Entry Stairs or Steps?	
Yes	
No	
If yes,	
5 +	1
3-4	1
1-2	
Is the entrance to the home ramped?	
Yes	
No	
If ramped, is there a railing?	Yes
	No
Is there a Sidewalk?	
Yes	
No	

EXTERNAL HOUSING ASSISTANCE DEVICES QUESTIONNAIRE

EXTERNAL HOUSING ASSISTANCE DEVICES

• Characteristic	Unmet Need	No Unmet Need
• ADA Compliant	33%	17%
• Ramped	39%	17%
• Railing	50%	21%

HOUSING QUESTIONS

Housing	Single family home		
		Frame	
		Brick/stone	
		1 floor	
		2 or more floors	
	Multiple Residence		
		Apartment building	
		Duplex, or multi-unit	
	Mobile Home	Single-wide	
		Double-wide	
		Located on individual residence property	
		Located within cluster or mobile home community	

HOUSING

• Characteristic	Unmet Need	No Unmet Need
• Frame (One Story)	44%	61%
• In Town	50%	52%
• Greater Than 1 Mile	28%	24%
• Apartment	11%	9%
• Mobile Home	17%	13%

DO YOU OWN A CELL PHONE?

Yes, and I use it.

Yes, but I do not use it.

No

Do you use the Internet?

Yes, Once in a while

Yes, Weekly

Yes, Daily

Yes, Multiple times a day

No

What is your level of comfort with the Internet?

Very comfortable

I use it but have little confidence.

Not comfortable, but by necessity

Do you have access to broadband at home?

Yes

No too costly

No No service

I don't know how

I do not want Internet services in my home.

Do you ever use others Internet service?

Yes, Friend or Relative

Yes, at the library.

No

PERSONAL TECHNOLOGY QUESTIONS

PERSONAL TECHNOLOGY

• Characteristic	Unmet Need	No Unmet Need
• Cell Phone	89%	60%
• Have Internet	39%	13%
• Like Internet	59%	38%
• Broad Band	88%	61%
• Use Other	0%	7%

Grocery shopping				
	Usually	Sometimes	Rarely	Never
I drive myself				
Friend,				
Neighbor,				
Relative,				
Hired driver				
Service agency driver/vehicle				
Public Transportation (any kind)				
Uber or Taxi service				

How do you travel for routine needs?

TRAVEL FOR GROCERIES

• Characteristic	Unmet Need	No Unmet Need
• Never Drive Myself	56%	46%
• Never Friend Drives	89%	93%
• Never Relative Drives	56%	65%

TRAVEL FOR MEDICAL

• Characteristic	Unmet Need	No Unmet Need
• Never Drive Myself	56%	48%
• Never Friend Drives	40%	0%
• Never Relative Drives	56%	61%

INSURANCE

• Characteristic	Unmet Need	No Unmet Need
• Medicaid	28%	15%
• Medicare	100%	100%
• VA	20%	13%
• Dual Eligible	0%	11%

MEDICAL ISSUES SURVEYED QUESTIONNAIRE

Illness	Check only if applies	Seldom	Often	Ongoing	Start Date	Travel Miles 1 way
Depression, Melancholy						
Heart Failure						
Chronic Kidney Disease						
Dialysis						
Diabetes Type 1						
Diabetes Type 2						
Coronary Heart Disease						
Congestive Heart Failure						
Other Heart Failure						
Arthritis Hips						
Arthritis Knees						
Arthritis Hands						
Arthritis All Over						
High Cholesterol						
High Blood Pressure						
Cancer type/stage TEXT						
COPD						
Memory Loss						
Alzheimer's Disease						
Poor Dental Health						
Lack of Dentures						
Vision Distance						
Vision Reading						
Hearing Loss						
Parkinson's Disease						
Other						

MEDICAL ISSUES SURVEYED

- Depression
 - Heart Failure
 - Kidney Disease
 - Diabetes
 - Coronary Artery Disease
 - Arthritis
 - High Cholesterol
- High Blood Pressure
 - Cancer
 - COPD
 - Memory Loss
 - Dental Health
 - Vision
 - Hearing

MEDICAL ISSUES REPORTED

Differences in Characteristics Larger than 10%

• Characteristic	Unmet Need	No Unmet Need
• About the Same Health	47%	39%
• Heart Failure	12%	24%
• Hearing Loss	29%	39%
• Arthritis General	61%	43%
• High Blood Pressure	64%	49%

DROPPED OUT OF CARE

- Seven people (11%) dropped out of care
- “Yes Only Recently” was Respondent **One, Four and Seven**
- “Yes for 1 or 2 years” was Respondent **Two, Five and Six**
- “Yes for more than 2 years” was Respondent **Three**

DESCRIPTION OF RESPONDENT ONE WHO DROPPED OUT OF CARE

- Believes Health is Worse Than Average
- **Medical Conditions**
 - Arthritis
 - Cholesterol
 - Cancer
 - COPD

DESCRIPTION OF RESPONDENT TWO WHO DROPPED OUT OF CARE

- Believes Health is Worse Than Average
- **Medical Conditions**
 - Depression
 - Cholesterol
 - COPD
 - Arthritis
 - High Blood Pressure

DESCRIPTION OF RESPONDENT THREE WHO DROPPED OUT OF CARE

- Believes Health is Better Than Average
- **Medical Conditions**
 - Heart Failure Congestive Heart Failure
 - Arthritis High Blood Pressure
 - Asthma

DESCRIPTION OF RESPONDENT FOUR WHO DROPPED OUT OF CARE

- Believes Health is Worse Than Average
- **Medical Conditions**
 - Depression Heart Failure Congestive Heart Failure
 - Arthritis Asthma Diabetes
 - Cholesterol COPD Parkinson's
 - High Blood Pressure

DESCRIPTION OF RESPONDENT FIVE WHO DROPPED OUT OF CARE

- Believes Health is about the same as Average

- **Medical Conditions**

 - Depression

 - Parkinson's

 - Arthritis

DESCRIPTION OF RESPONDENT SIX WHO DROPPED OUT OF CARE

- Believes Health is worse than Average
- **Medical Conditions**
 - Chronic Kidney Disease Diabetes Arthritis
 - High Blood Pressure COPD

DESCRIPTION OF RESPONDENT SEVEN WHO DROPPED OUT OF CARE

- Believes Health is worse than Average
- **Medical Conditions**
 - Arthritis
 - Blood Pressure
 - Cholesterol High

CONCLUSIONS ON REFLECTION

- These Seven cases show how **serious** this issue is.
 - Dropping out of care for:
 - High Blood Pressure leads to heart disease
 - Cancer leads to metastasis
 - COPD leads to suffocation
 - Diabetes leads to kidney disease, etc.

THANK YOU

- Volunteers
- Respondents