Rural Older Adult Memory Study: A feasibility study to improve dementia diagnosis in rural primary care (ROAM)

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Rationale for Project

- Local, national, & international studies have found high rates of under-diagnosis of dementia in primary care
- 10 - 16% of persons 75 or older have dementia
- Clinicians face many challenges in delivering care to older patients: time and financial constraints
- Some causes of cognitive impairment are reversible
- Families often report that they wish they had known sooner that their relative had dementia
- Although current medications have limited effect, preparing the patient and family for care needs, addressing safety concerns, and decision-making about future care are best addressed early in course of disease

Under-recognition of dementia

- Callahan CM, Hendrie HC, Tierney WM. (1995) Documentation and evaluation of cognitive impairment in elderly primary care patients. Ann Int Med, 122, 422-429.
  - Of moderate/severely cognitively impaired subjects, 25% had dementia diagnosis recorded in chart
- Wind A, Van Staveren G, Jonker C & Van Ijk JTM (1994) The validity of the judgment of general practitioners on dementia. Intl Jl of Ger Psych, 9, 543-549.
  - 42% of demented subjects were judged normal by their GP
- Ross G, et al. (1997) Frequency and characteristics of silent dementia among elderly Japanese-American men. JAMA, 277, 800-805/
  - Of subjects identified by family to have definite problem with thinking or memory, 53% had not received medical evaluation for dementia
- Glasser M (1993) Alzheimer's disease and dementing disorders: Practices and experiences of rural physicians. American Jl Alzheimer's Care and Related Disorders and Research, 8(4), 28-35
  - » 32% of rural physicians reported using any mental status testing

Project Aims

1) Test a clinical practice model to improve dementia diagnosis in rural primary care practices for patients 75 or older

2) Gather pilot data for planned intervention study

Based on *ACOVE*
“Assessing Care of Vulnerable Elders”

Developed at UCLA and Rand in consultation with expert advisory committees

Multi-component practice-change model--

- ✓ Efficient condition-specific clinical data
- ✓ Medical records prompts
- ✓ Patient education materials
- ✓ Physician decision support

Reuben DB, Roth C, Kamberg C, Wenger NS. Restructuring primary care practices to manage geriatric syndromes: The ACOVE-2 intervention. JAGS 2003; 51:1787-93.

ROAM Study Participants

Clinicians

Dunes Family Health Clinic, Reedsport

Robert Law, MD, Janet Patin, MD, Ron Vail, MD

Health Associates of Peace Harbor, Florence

Ronald Shearer, MD, Michael Hodulik, MD

David M. Bice, MD, Newport

David Bice, MD

Bayshore Family Medicine, Pacific City

Craig Brown, MD, Albert Thompson, MD

Rinehart Clinic, Wheeler

Harry Rinehart, MD, Breeanna Van Cott, PA-C, John Prata, PA-C, Cris Rettler, PA-C

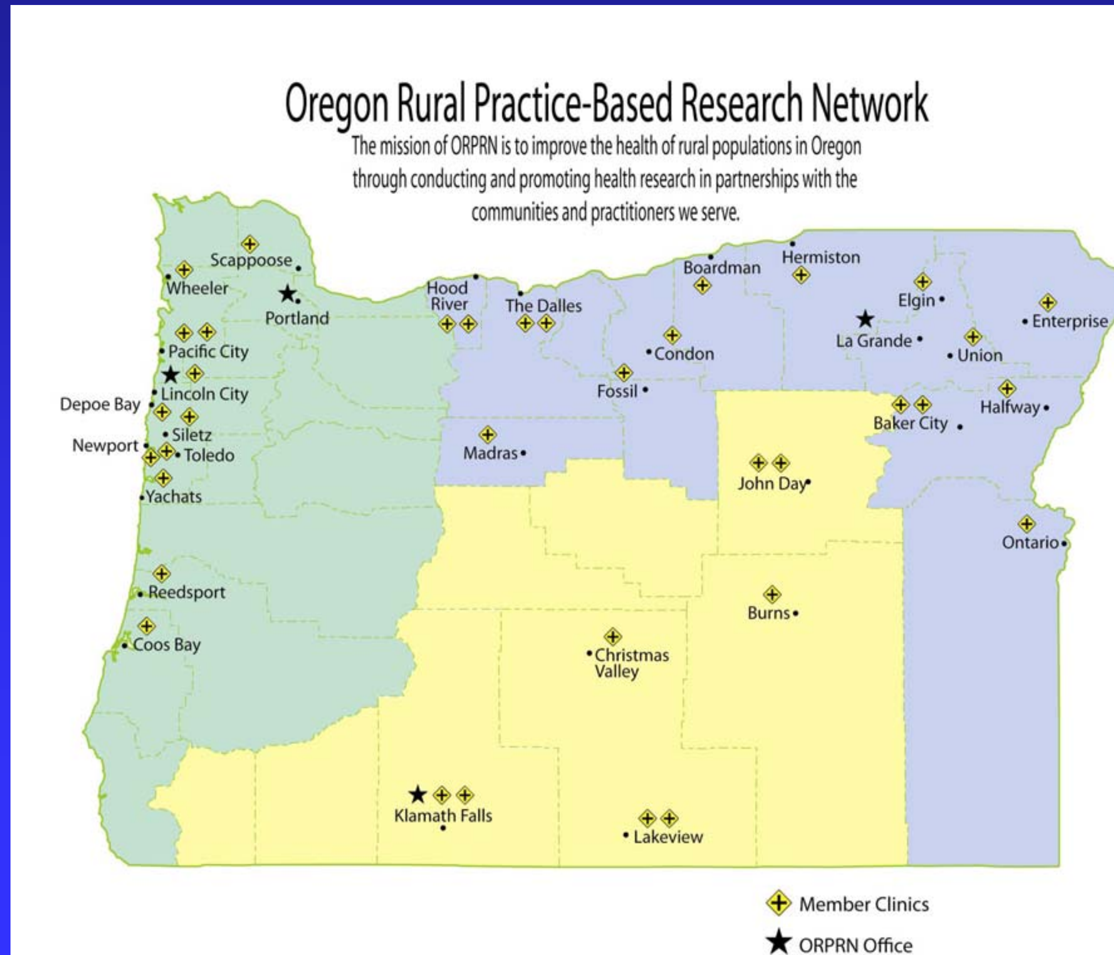
Pacific Family Medicine, Astoria

Katherine Merrill, MD, Angela Nairn, MD

OHSU Family Health Center, Scappoose

Erika Lemke, PA-C, Jessica Lyon, FNP, Michael Yetter, PA-C, Johanna Warren, MD, Kar-yee Wu, MD, Kirsten Roberts, FNP, Bruin Rugge, MD

Collaboration of OHSU Layton Aging & Alzheimer's Disease Center and the Oregon Rural Practice-based Research Network



Study Sample

- Nineteen community clinicians and 18 medical assistants in 7 clinics
- Patients aged 75 or older seen in clinic by study clinicians during 3-month intervention period
- For pre-intervention chart reviews, patients aged 75 or older seen in clinics during 2 – 4 week period in fall, 2006

ROAM clinical process

- Medical Assistants screen patients aged 75 or older
- For patients who screen positive, ROAM MEMORY EVALUATION FORM is placed on chart
- Physician schedules dementia workup
- Physician carries out clinical evaluation, makes diagnosis
- Follow-up as needed

ROAM PATIENT SCREEN

Qu1 Patient excluded from Screening? Too ill, prior dementia diagnosis, taking dementia medications, or refuses

Qu2-5 Medical Assistant administers screening questions

- Patient noted change in memory?
- Family member/companion noted change in memory?
- Three word recall: Recall of 0 or 1 word = pos screen
- Screener has concerns related to memory or confusion

Clinician Notes (For positive screen)

Patient scheduled for dementia workup?

If not scheduled for a dementia workup, why?

(Patient refused or other reason)

AT END OF SCREEN,
PUT TOP COPY IN ROAM BOX
AND BOTTOM COPY IN PATIENT CHART

Focus of analysis

How did ROAM work? (# patients screened, positive screens, and diagnosed)

How did clinicians and clinic staff respond to ROAM?

Was ROAM protocol acceptable to patients?

Did ROAM increase--

- Clinician confidence in diagnosing and managing dementia?
- Incident diagnoses of dementia?
- Referrals for community resources?

Develop ideas for improved care management

Data collection

- Pre-intervention: chart review, clinician survey/focus group interviews
- Intervention data:
  - Brief post-assessment survey of patients screened
  - Clinic process data: # patients screened, positive screens, diagnosed, follow-up
- Post intervention: clinician survey/focus group interviews

Patient Sample

Patients (75+) seen by study clinicians		508
• Too ill to be screened	4	
• Previously diagnosed (or on dem meds)	45	
Patients eligible to be screened		459
Patients refused screening (5%)	23*	
Patients screened for possible dementia		436

*Twenty-three patients refused word recall test; 20 refused to respond to question about their memory

Results of Screening

- Patients screened (N=436)
  - Patient reported memory concerns 173/436 40%
  - Family reported memory concerns 75/155 48%
  - Delayed Word Recall (missed 2 or 3 wds) 37/433 8%
  - Screener reported concerns 39/436 9%

Patients meeting 1+ criteria for positive screen: 204/46.8%

Memory Evaluations

- Of 204 patients who screened positive,
  - 84 were scheduled for memory evaluation
  - 51 patients refused memory evaluation
  - 69 were not scheduled for other reasons, generally clinician determined memory deficits were minor

Patient survey results
(N=328; 72% response rate)

How did patients feel about the screening?

Response	%
No concerns	49%
I was pleased	41%
"No concerns" and "I was pleased"	8%
A little uncomfortable	2%
A lot uncomfortable	0

Is it a good idea to assess memory? 91% yes

Patient refusals

• Patients who refused screen	23
• Patients who refused memory evaluation (of positive screens)	51
	74

74/459 = 16% refusal rate

Results of memory evaluations: Patient diagnoses (N=66)

Diagnosis	N
Normal cognitive status (no dx)	45
Dementia	4
Mild cognitive impairment (MCI)	16
Uncertain (more work up)	1

Diagnosis of dementia: Comparison of pre-intervention and intervention data (preliminary results)

Pre-intervention: 340 medical charts reviewed

– Patients with dementia symptoms:	14
– Patients with dementia evaluation:	4
– Patients diagnosed with dementia or mild cognitive impairment	3

Intervention: 436 patients screened

- Patients screened positive:	211
- Patients with dementia evaluation	66
- Patients diagnosed with dementia or mild cognitive impairment	21

How did clinicians and clinic staff respond to ROAM?

Overall, a very positive response:

"There was no challenge at all (in doing protocol) and it just seemed pretty seamless. The only thing we had trouble doing was remembering to do it at the beginning." (clinician)

"…little effect on practice flow.." (clinician)

"Once you got it down, it was pretty easy." (medical assistant)

Benefits of ROAM

" ..just having it all in one packet, I think, was one of the nice things about this study, and then the resource packet,… having all that in one place. I think that when we met in Newport initially, you had mentioned one of the medical students in Astoria had put together a nice little packet and so when I had a third-year resident student, gee, did I have a project for her…"

"It made me more aware of patients with problems. Came away thinking screening was important."

Anything that surprised you?

- "I was surprised that I really thought it was going to be more of a burden on the screening, … [but the impact] "was pretty mild."
- Needed to schedule 30 – 40 minutes visit for dementia evaluation
- "Most of the people that had dementia had been previously diagnosed"

Another surprise

"One benefit I saw came from patient feedback… I got a lot of positive feedback in terms of us doing the screening. They were happy that we were concerned about their memory, and so I never got any negative feedback for being screened."

(clinician)

Clinician confidence in diagnosis

Pre and post-test of clinician confidence in dementia assessment/diagnosis (n=16)

(8-item Dementia Confidence Scale)

- Significant improvement in differentiating delirium and dementia (paired t-test, $p=.029$)
- Significant improvement in differentiating depression and dementia (paired t-test, $p=.001$)

Preliminary Results: Clinician practices & confidence

- Intervention implemented smoothly in practices
- Intervention increased clinicians' reported knowledge of and confidence in diagnosing dementia
- Patients generally positive about memory screening though 16% refused screening or evaluation
- Clinicians praised dementia evaluation and community resource materials, however:
  - Most will not carry out routine screening for dementia
  - There was minimal use of community resources
  - Clinics expressed interest in continuing to use ROAM forms

Implications

- Time constraints make clinical care for older patients challenging
- Linking community resources with clinical care is key to effective dementia care
- Medical assistants can assist with patient assessments