



Preventing Fracture(d) Care

Lessons Learned from the Implementation of a
Bone Health Care Telehealth PACT

Our Team

Kimberly McCoy ^{4,5}

Karla L. Miller ^{1,2,3}

Christopher Richards ^{4,5}

Xiomara Santana ^{4,5}

Aaron T. Seaman ^{4,5,6}

Samantha L. Solimeo ^{4,5,6,7}

Melissa J. A. Steffen ^{4,5,7}

Jennifer Van Tiem ^{4,5}

Shylo Wardyn ^{4,5}



¹VA Office Of Rural Health, Veterans Rural Health Resource Center- Salt Lake City

²University Of Utah School Of Medicine, Division Of Rheumatology

³VA Salt Lake City Health Care System

⁴VA Office Of Rural Health, Veterans Rural Health Resource Center-Iowa City

⁵VA HSR&D Center For Access And Delivery Research & Evaluation, Iowa City VA Health Care System

⁶University Of Iowa Carver College Of Medicine, Department Of Internal Medicine

⁷VA Office Of Patient Care Services, Primary Care Analytics Team- Iowa City, Iowa City VA Health Care System



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Overview

Samantha L Solimeo, PhD, MPH

Today's Presentation

The case for a specialty care PACT to deliver bone health care

The Rural Bone Health Team (BHT) Model and implementation lessons learned

Lessons learned from the experiences of primary care providers co-managing care with the Rural Bone Health Team

Lessons learned about sustainment barriers

Next Steps

Knowledge Check

In a recent study of male Veterans with history of hip fracture, roughly what percent received either a DXA or osteoporosis medication in the year after their fracture?*

0- 10%

10-20%

20-30%

40-50%

50-60%

* Solimeo SL, Adler B, McCoy K, Reisinger HS, Vaughan-Sarrazin M. Factors Associated With Osteoporosis Care of Men Hospitalized for Hip Fracture: A Retrospective Cohort Study, *Journal of Bone and Mineral Research Plus*. 2019 September;3(9):e10198. PMID:31667454. doi: 10.1002/jbm4.10198.

The case for a specialty care PACT to deliver bone health care

Many Veterans rely on medications known to affect bone remodeling and increase fracture risk

Veterans with risk of fracture are infrequently evaluated or treated for osteoporosis

PACTs can manage risk assessment and treatment, however there are barriers.

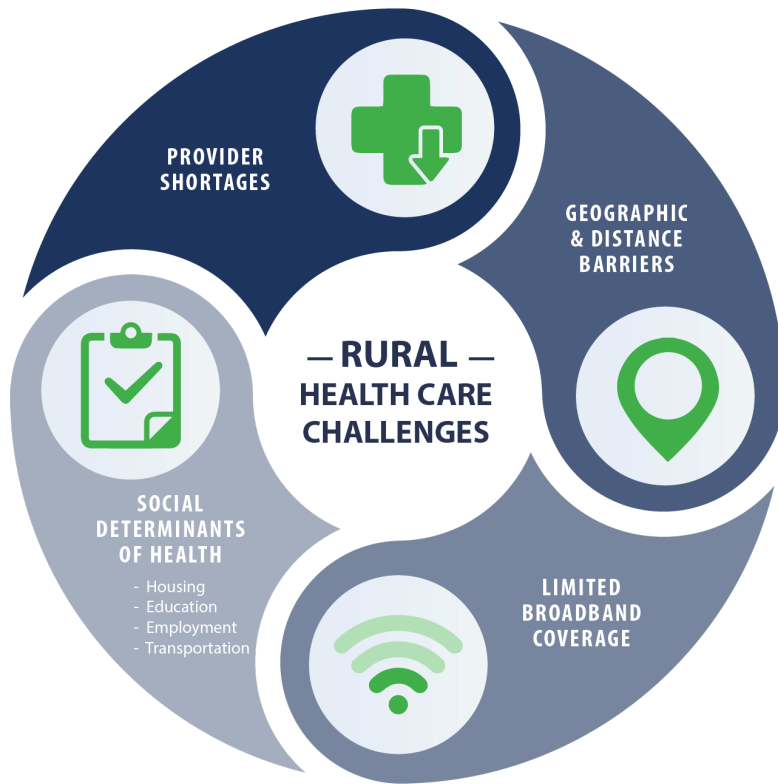
A centralized team with specialized expertise can co-manage bone health care with PACTs, reducing PCP workload while providing high quality care directly to Veterans



Rural Bone Health Team Model and Implementation Lessons Learned

Karla L Miller, MD

What happens when reduced access and primary care are barriers to DXA?

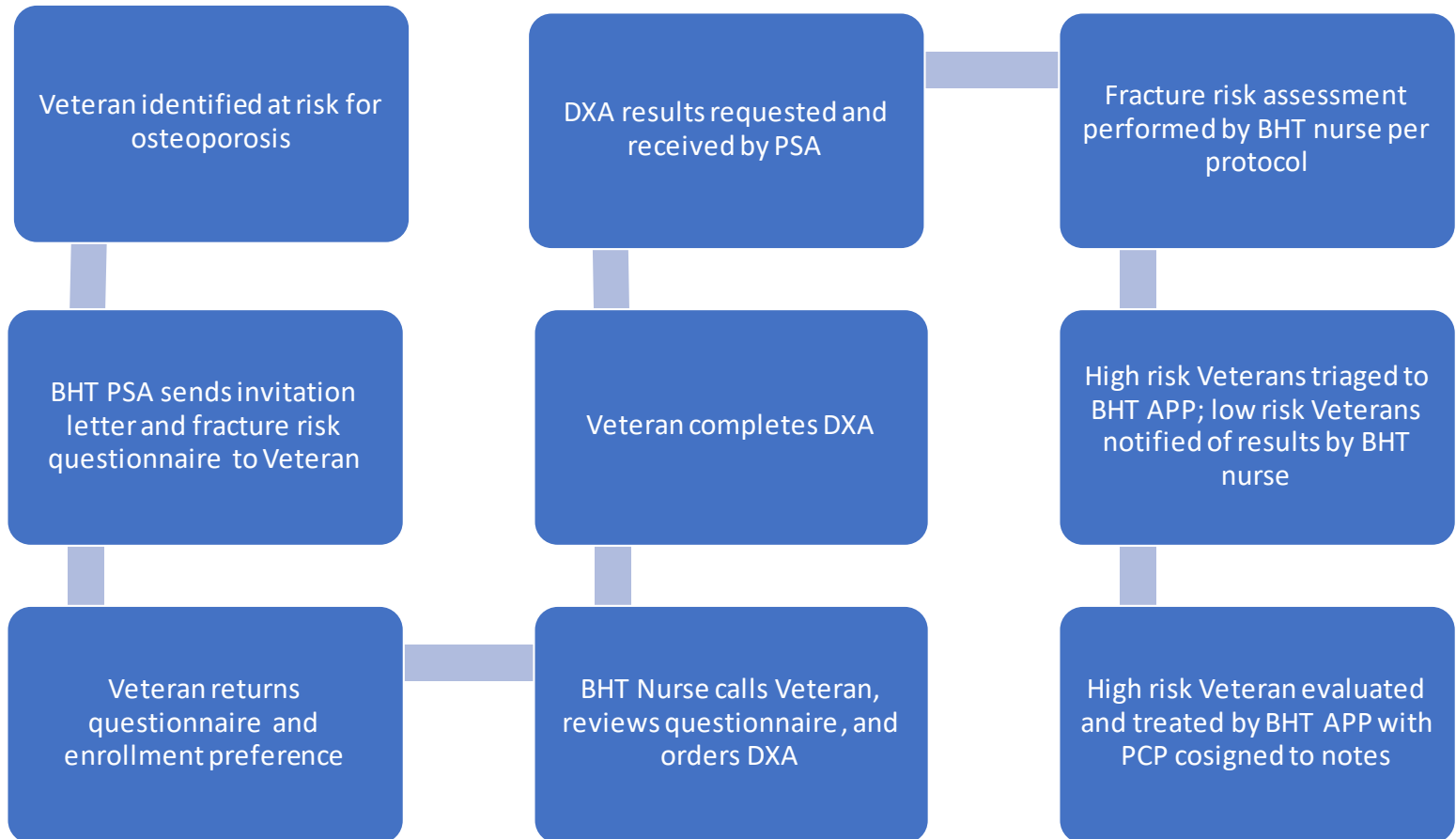


Risk Identification

We identified risk factors for which screening guidelines or validated tools exist:

- Age-related risk (women ≥ 65 ; men ≥ 80)
- Osteoporosis Self-Assessment Tool score of ≤ 1 (calculated as $[\text{Weight (kg)} - \text{Age (years)}] \times 0.2$)
- Chronic therapy with glucocorticoids, androgen deprivation, or aromatase inhibitors

Bone Health Team Clinical Workflow



Methods (Quantitative)

Data were collected over a 15-month period (5/1/2017 to 9/30/2018).

EHR note templates with structured data labels supplied patient care delivery outcomes

Primary outcome: Number of rural Veterans evaluated with DXA

Secondary outcome: Number of rural Veterans eligible for prescription therapy, who initiated prescription therapy.

World Health Organization diagnostic classifications or clinical diagnosis by adult low trauma hip or vertebral fracture used for DXA diagnoses.

Descriptive analyses were conducted for the quantitative outcomes

Methods (Qualitative)

Promoting Action on Research Implementation in Health Services (PARIHS) Framework

- *Context, Evidence, and Facilitation*

Framework chosen for:

- Simplicity
- Fit in describing this facilitated implementation

Data collected through three site visits at two locations:

- In-person interviews
- Observations of clinical workflow
- New site onboarding

Concepts refined across the three PARIHS domains for consensus.

Bone Health Team Enrollment Table

Results

	Overall		Women		Men	
	N	%	N	%	N	%
	4500	100.0	292	6.49	4208	93.51
Engagement with Screening						
Declined	531	11.80	60	20.55	471	11.19
No Response	2888	64.18	165	56.51	2723	64.71
Completed DXA	1081	24.02	67	22.95	1014	24.10
Diagnosis ^a						
Normal Bone Density	399	36.54	14	20.90	385	37.56
Osteopenia Low Risk	324	29.67	39	58.21	285	27.80
Osteopenia High Risk	203	18.59	3	4.48	200	19.51
Osteoporosis by DXA	132	12.09	11	16.42	121	11.80
Osteoporosis by Clinical Fracture History	34	3.11	0	0.00	34	3.32
Medication Indication	338	31.27	14	20.90	324	31.95
Initiated or Maintained Medication	306	90.53	12	85.71	294	90.74
Refused Medication	32	9.47	2	14.29	30	9.26

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Implementation Factors: Barriers

Results

Context*	Evidence*	Facilitation*
Geographic Service Area	Implementation Complexity	
Population Characteristics		

**PARIHS Elements of Successful Implementation*

Implementation Factors: Facilitators

Results

Context*	Evidence*	Facilitation*
Clinical Stakeholder	Data Infrastructure	Formal and Informal Facilitators
Resource Availability	Evidence Base for Care	Responsiveness
	Stakeholder Buy-In	Team-Led Initiative

**PARIHS Elements of Successful Implementation*

Conclusions

Limitations

- Did not measure impact of screening or treatment on fracture rates
- Did not analyze factors influencing rates of enrollment, treatment, or adherence
- Model may not be transferrable or feasible outside of VHA

Strengths

- One of few studies examining feasibility of an osteoporosis prevention program
- Study design allowed us to examine:
 - Feasibility system for providing virtual population bone health
 - Implementation process for delivering these services to rural U.S. Veterans



Lessons Learned from the Experiences of Primary Care Providers Co-Managing Care with the Rural Bone Health Team

Melissa J A Steffen, MPH

Overview

Study aim: To understand experience of PCPs that co-manage patients with the Rural BHT

Conducted semi-structured telephone interviews with PCPs

Transcribed interviews verbatim

Analysis completed by two team members

PCP Characteristics

	Sample	Total
Primary Care Providers	9	80
Patients Comanaged with Bone Health Team	178	1256
Patients Indicated for Osteoporosis Medication	65	413
Patients Initiated Osteoporosis Medications	59	349
Patients Not Indicated for Osteoporosis Medications	113	843

Results

BHT model acceptability

PCP perspectives on co-management

Experience of BHT's minimalist approach

Unintended consequences of BHT's minimalist approach

BHT Model Acceptability

PCPs responded positively to the BHT

“Individual visits could be so busy... having someone else doing the panel management around [osteoporosis] and then arranging follow-up and treatments... we have more time to work on some of the other issues that are really important to us and to the patients.” (PCP 5)

Or reported needing more exposure to make an assessment

“I don’t think I’ve seen enough to really see a pattern of what they’re doing.” (PCP 9)

PCP Perspectives on Co-Management

Patients were receptive to the BHT and satisfied with their care

“They [patients] pretty much understand what it is and why they’re doing it and what it’s about, and they usually don’t have any questions.” (PCP 7)

Patient care could be improved through “coordinated, consistent messages” from PCPs and the BHT to patients.

Experience of BHT's Minimalist Approach

PCPs find BHT's communication methods to be appropriate for their work and not burdensome.

"[BHT] usually almost never do cosign me, which is fine. ...if there's not anything actionable for me specifically to do, then I'd rather them not cosign me because I have enough things to try to weed through." (PCP 1)

"It's convenient. When I see it, I'm already somewhere where it's easy to be into the patient's chart... I can fairly easily shift and think about that patient and that feels like it works well." (PCP 5)

Unintended Consequences of BHT's Minimalist Approach

The BHT and their care provision may be overlooked.

“We don't hear quite often enough from the Rural Bone Health, I think, sometimes forget they're out there.” (PCP 3)

Missed opportunities for provider education

“If [BHT] felt that the patient had risk factors, which were not being addressed based on review of my notes, I would definitely appreciate some feedback on that.” (PCP 2)

Conclusions

The BHT model of care is feasible and acceptable to PCPs.

Although PCPs generally appreciated the minimalist approach of the BHT, increased visibility of the BHT and involvement of PCPs was desired.

Implications

Highlights the need to involve stakeholders in the implementation process of an intervention.

Importance of balancing stakeholder involvement to optimize an intervention's effectiveness.



Lessons Learned about Sustainment Barriers

Aaron T Seaman, PhD

The Study

Sustainability and the Role of Context

Study Objective: To characterize the range of bone health care delivery initiatives within the VA and identify contextual factors affecting their implementation and sustainability

Methods

Semi-structured interviews with VA clinical stakeholders involved in osteoporosis care

Recruitment

Interview Domains

Participants' osteoporosis initiative, including what they were, how they worked, and what were the barriers and facilitators of their implementation and sustainment

Osteoporosis care delivery within the VA, including participants' recommendations for osteoporosis care delivery

Data Analysis

Participants

20 Clinical Stakeholders

Endocrinology (8)

Pharmacy (5)

Primary Care (4)

Rheumatology (2)

Orthopedic Surgery (1)

Initiatives

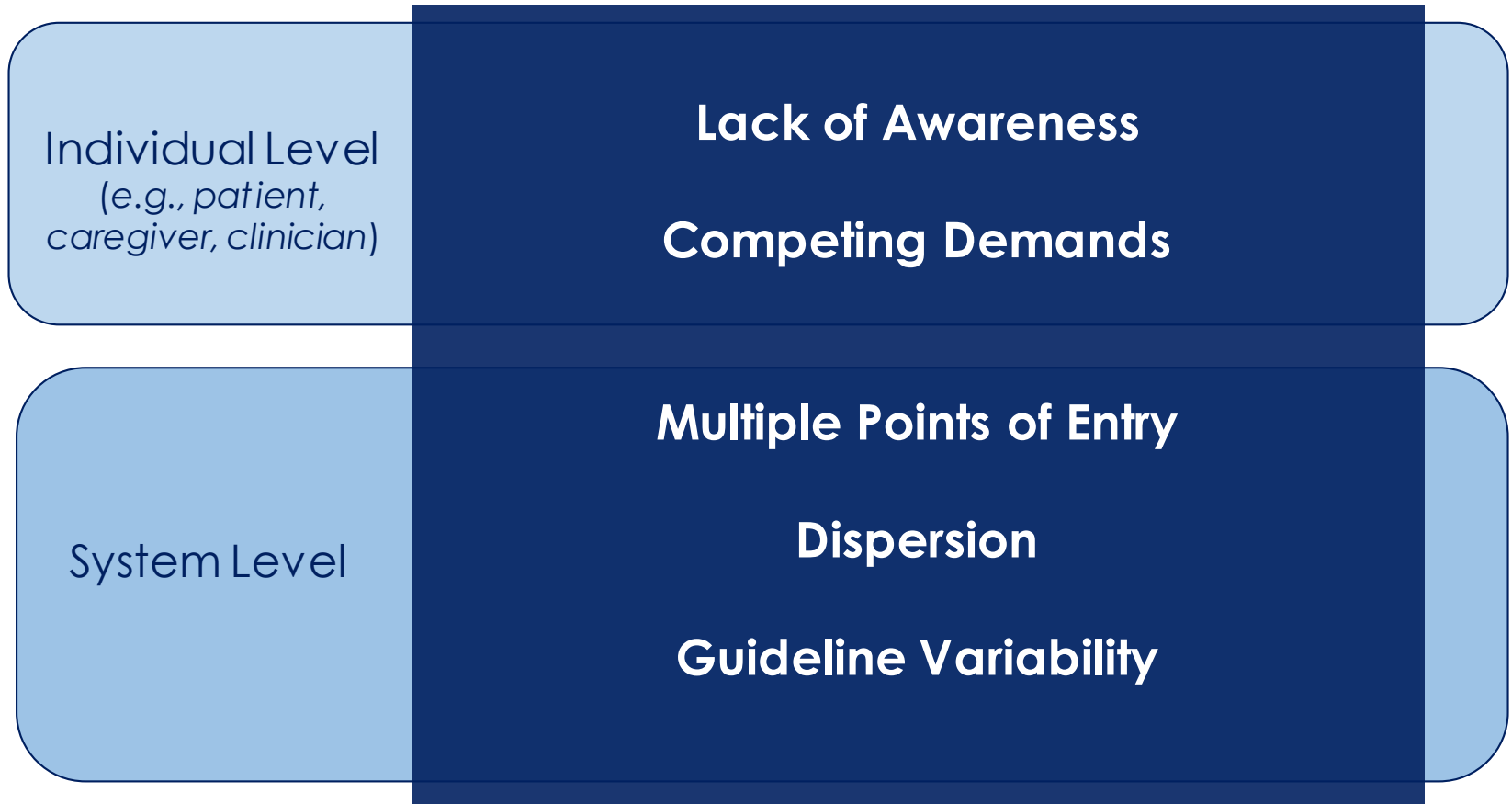
Short- and long-term Interventions

Comprehensive Programs

Clinics

Care Delivery Challenges

Results



Initiatives

Results



Sustainability Challenges

Results



Pulling It All Together

Results

Bone Health

Context

Individual Level
(e.g., patient,
caregiver,
clinician)

System Level

Care Delivery
Challenges

Lack of Awareness

Competing Demands

Multiple Points of Entry

Dispersion

Guideline Variability

Initiatives

Identification

Education

Communication

Coordination

Sustainability
Challenges

Turnover

Champion(s)

Prioritization

Cross-cutting

Invisibility

Conclusions

Contextual factors persist because they're connected

Interventions aimed at addressing one factor are less successful

System-level change has to occur alongside individual-level

Prioritization, reducing invisibility, is key



Next Steps

Thank you!
Questions?

Contact information:
aaron.seaman@va.gov
aaron-seaman@uiowa.edu