

Patient, Provider and Organizational Interventions for Managing Osteoarthritis (OA) in Veterans

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Poll Question #1

What is your primary role in the VA?

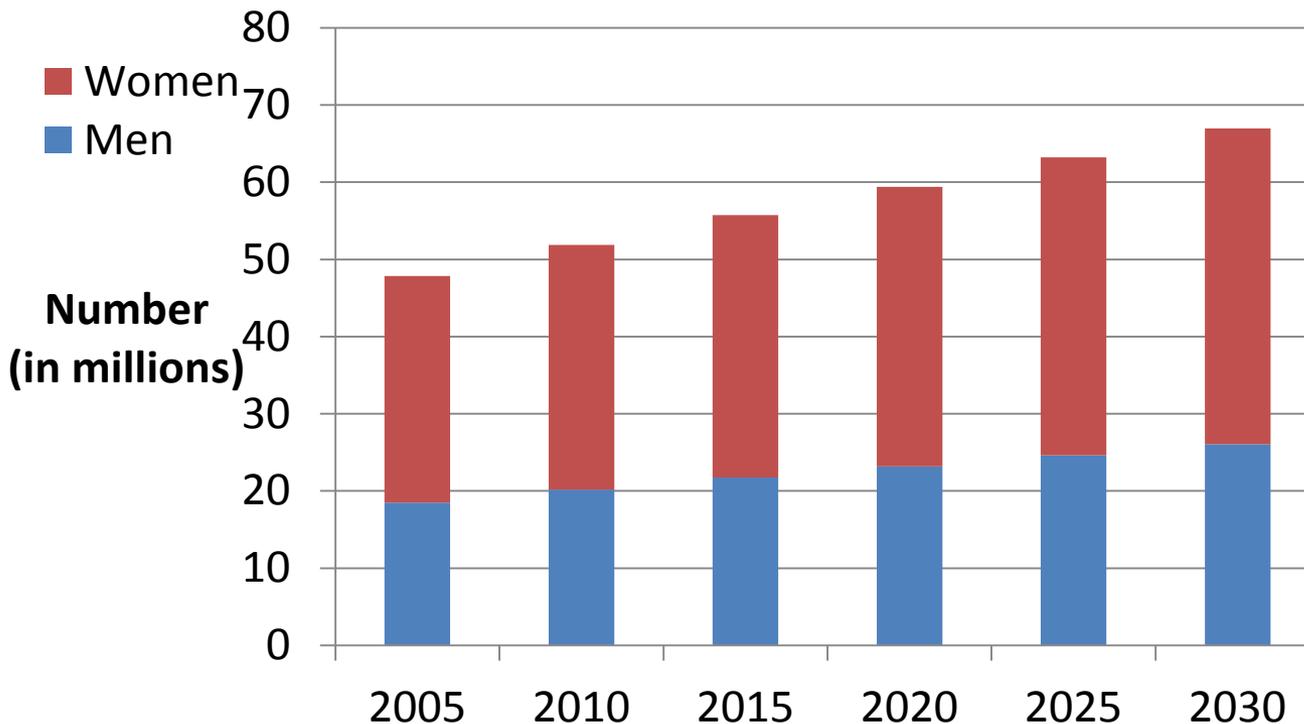
- Student, trainee, fellow
- Clinician
- Researcher
- Manager, Policy-Maker
- Other

Burden of Osteoarthritis

- Highly Prevalent

- Lifetime risk of symptomatic knee OA is 45%
- Lifetime risk of symptomatic hip OA is 25%*

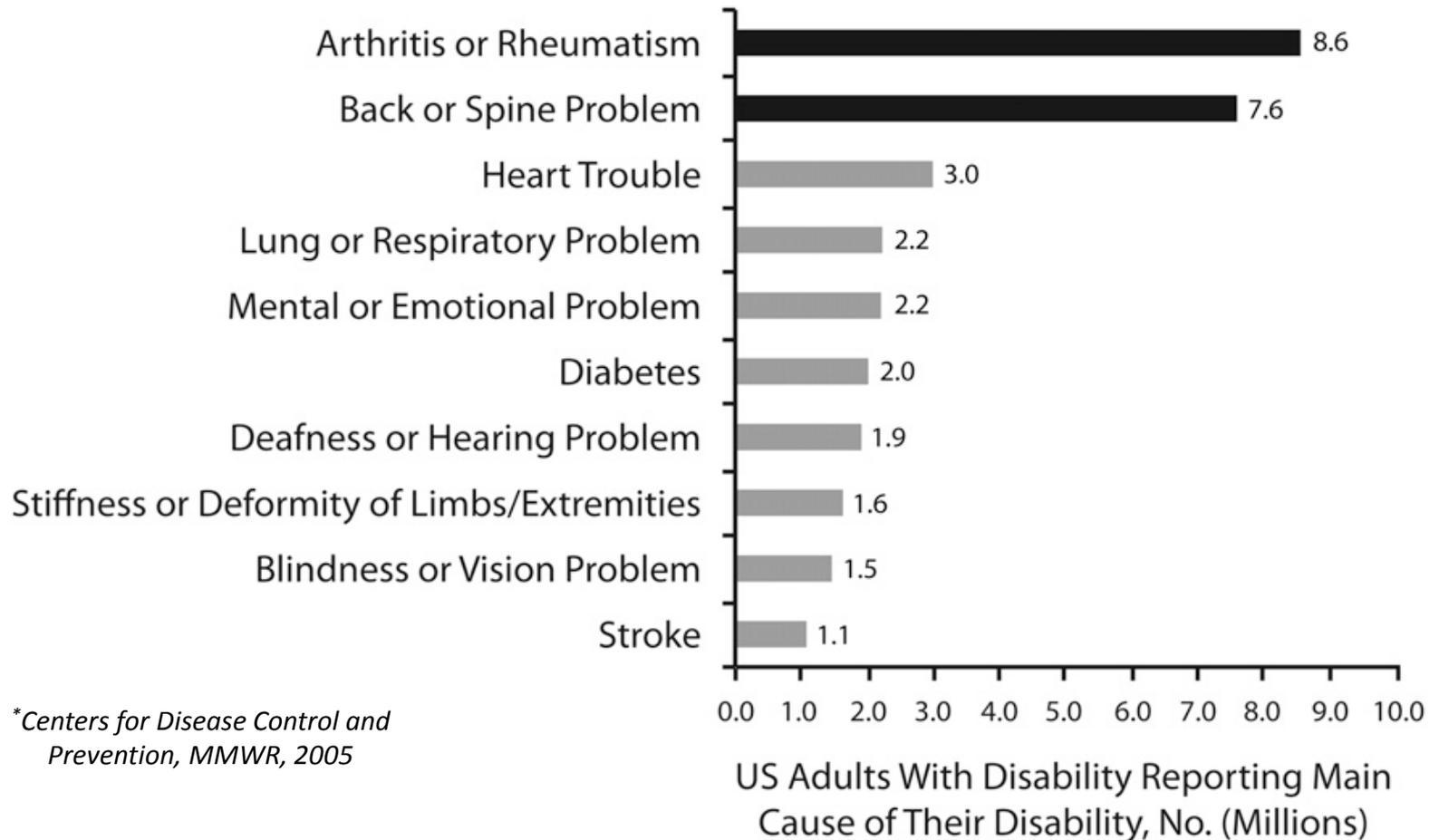
* Johnston County Osteoarthritis Project; Murphy et al., *Arthritis Rheum*, 2008; Murphy et al., *Osteoarthritis Cartilage*, 2010



Projected prevalence of doctor-diagnosed arthritis among US adults (18+)
National Health Interview Survey
Hootman et al., Arthritis Rheum, 2006

Burden of Osteoarthritis

- Highly Disabling



**Centers for Disease Control and Prevention, MMWR, 2005*

Burden of Osteoarthritis in Veterans

- Arthritis is 3rd most prevalent health problem among veterans*
- Prevalence of arthritis is higher in veterans than non-veterans:
 - Data from CDC, arthritis affects[§]:
 - 22% of non-veterans
 - 30% of veteran non-VA users
 - 43% of VA users
- Among veterans with arthritis, activity-limiting joint symptoms are more common among VA users than non-users (63% vs. 42%, $p < 0.001$)[§]

Gaps in Management of OA: Patient Behaviors

- Patients often symptomatic for long duration before seeking care
- Many individuals have limited knowledge about OA, self-management strategies, and treatment options
- Physical Activity: 60-75% of individuals with OA do not meet recommendations
- Weight: majority of individuals with lower extremity OA (~90%) are overweight or obese

Gaps in Management of OA: Health Care Systems

- Detection & diagnosis often late; no systematic screening
 - No good early “markers” for OA, but we know risk factors and early symptoms
- Gaps in recommended care*
 - Overall quality indicator pass rates 22-57%[§]
 - In particular, low use of conservative, non-pharmacological strategies (exercise, weight loss, physical therapy, assistive devices)

Poll Question #2

Describe your familiarity with osteoarthritis treatment guidelines (any set):

- Did not know there were any
- Know they exist but unfamiliar with content
- Somewhat familiar with content
- Very familiar with content

Patient and Provider Interventions for Mana Osteoarthritis in Primary Care (PRIMO)*



- **Objective:** Examine the effectiveness of a comprehensive intervention, involving both patients and providers, for improving OA-related outcomes in a real-world VA clinical setting
- **Study Design**
 - Randomized Controlled Trial:
 - Patient + Provider Intervention vs. Usual Care
 - N=30 primary care providers (randomized)
 - Aimed to enroll 10 each of their patients (5 white, 5 non-white)
 - Some enrolled providers left the VA during study period; range of enrolled patients per provider was 3-12

* VA HSR&D IIR 10-126; Allen et al., *BMC Musculoskeletal Disord*, 2012

Patient and Provider Interventions for Mana Osteoarthritis in Primary Care (PRIMO)



- Participants

- Under care at VAMC in Durham, NC
- Symptomatic hip and / or knee OA (radiographic evidence or clinical criteria)
- BMI \geq 25
- Not meeting DHHS physical activity recommendations

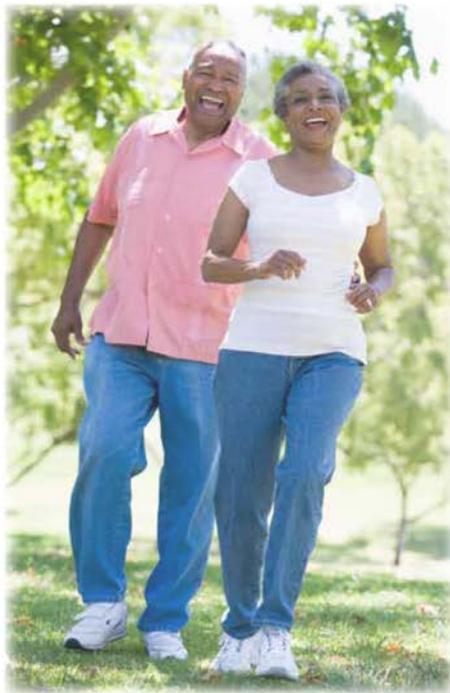
- Measures

- Primary Outcome: Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC): self-reported pain, stiffness, and function
- Short Performance Physical Battery (SPPB): objectively assessed physical function
- Depressive Symptoms (PHQ-8)

PRIMO Interventions



- Patient Intervention
 - 12-months, telephone-based
 - Focus on physical activity, weight management, cognitive behavioral pain management skills
 - Emphasis on goal-setting; motivational interviewing approaches
- Provider Intervention
 - Overall goal – enhance use of guideline-based treatment, with emphasis on non-pharmacological therapies
 - Patient-specific treatment recommendations issued at point of care
 - Based on treatment guidelines and patient clinical status & preferences (baseline assessments)



MY way. Each day.

A Program for People
with Osteoarthritis



What Is Osteoarthritis?

What Is Osteoarthritis? (OA)

- ◆ OA is the most common joint disease.
- ◆ Joints are where two bones meet. Cartilage (KAR-til-uj) covers the ends of the bones and allows the joint to move with ease.
- ◆ In OA, the cartilage wears away. This can cause pain and stiffness.
- ◆ OA most often affects the knees, hips, back, neck, and hands.



What Causes OA?

We don't know all of the causes of OA. Some things that can increase the risk for getting OA are:

- ✓ Being overweight
- ✓ Being older than 55
- ✓ Being female
- ✓ Past joint injuries
- ✓ Having jobs or playing sports that involve a lot of knee bending, kneeling, squatting, or putting other stress on the knees or hips
- ✓ Having knees that bow in ("knock-kneed") or bow out ("bow-legged") when you stand
- ✓ Having one leg that is longer than the other
- ✓ Having family with OA



Stretching Exercises

Quadriceps Stretch

1. Lay on your stomach or side.
2. Bend one knee and pull your heel toward your buttocks until you feel a stretch in the front of the thigh. (If you are lying on your side, bend the top leg.) Repeat with the other leg.
3. You may use your hand, a sheet, or a towel wrapped around your ankle to gently pull your foot.



Side position with towel



Side position without towel



Stomach position using towel



Stomach position without towel

Weight Management

Having a Healthy Weight

Having a healthy weight is very important for controlling osteoarthritis (OA) pain.

- ◆ **A lower body weight puts less strain on joints.**
 - Losing just 1 pound reduces the load on the knee joints by about 4 pounds during walking.
- ◆ Even a small amount of weight loss can give you more energy for your everyday activities and can reduce your pain. **Losing 10 pounds can help many people with OA feel better.**
- ◆ Keeping a healthy weight for the long term requires a commitment to healthy eating.



“When I eat out, I always ask for a to-go box right away. I save half of my meal for the next day. It helps me eat fewer calories and save money!”

– Dorothy

PRIMO Interventions



- Patient Intervention
 - 12-month, telephone-based
 - Focus on physical activity, weight management, cognitive behavioral pain management skills
 - Emphasis on goal-setting
- Provider Intervention
 - Overall goal – enhance use of guideline-based OA treatment, with emphasis on non-pharmacological therapies
 - Patient-specific treatment recommendations issued at point of care (EMR), optimally in conjunction with routine visit
 - Based on published OA treatment guidelines and patient clinical status & preferences (baseline assessments)

PRIMO Interventions



- **Provider Intervention: Recommendation Example**
 - **Refer to physical therapist for evaluation and / or therapeutic exercises**
 - Patient indicates interest in being referred for physical therapy for OA if their provider recommends AND
 - Patient is not doing strengthening exercises ≥ 2 times per week AND
 - Patient indicates being dissatisfied with their ability to perform one more activities on the Satisfaction with Physical Function Scale (walking, lifting / carrying, stair climbing, housework) AND
 - Patient has not seen a physical therapist for their OA in the past year
- **Other Recommendations:**
 - Knee braces
 - Referral for weight management program
 - Referral for physical activity programs
 - Joint injections
 - Topical NSAIDs / capsaicin
 - Adding gastroprotective agent
 - Trying new pain medication
 - Referral to orthopedist (evaluation for surgery)

PRIMO Participant Characteristics



	Mean (SD) or % (N=300)
Mean Age	61 (SD = 9)
Race	
White	50%
Non-White	50%
Male	91%
Mean BMI	34 (SD = 6)
Hip OA	21%
Knee OA	89%
Mean duration of arthritis symptoms	14 years (SD = 11)
Mean WOMAC Score	48 (SD = 18)

PRIMO Baseline Data: Pain Medication Use



Any (Prescription or OTC)	77%
Acetaminophen	19%
NSAIDs	54%
Opioids	29%

- How well are your medications controlling your arthritis pain (0=not at all, 10=very well)?
 - Mean = 5.2, SD = 2.6
- Would you be interested in talking with your health care provider about the possibility of trying a different medication for your arthritis pain?
 - Yes: 78%, Maybe: 14%, No: 8%

PRIMO Baseline Data: Joint Injections



Have you ever had an injection into your hip / knee for your arthritis?

Knee (Any)	55%
Hip (Any)	18%

- Would you be interested in having a knee or hip joint injection if your healthcare provider thought it may be appropriate for you?
 - Yes: 60%, Maybe: 22%, No: 18%

PRIMO Baseline Data: Topical Creams & Knee Braces



- Have you ever used a topical cream to treat your arthritis?
 - Yes: 69%
 - 96% interested in trying a topical cream if recommended by provider

- Have you ever used a knee brace (if knee OA)?
 - Yes: 81%
 - Half of brace use was elastic sleeve only
 - 92% interested in trying brace (or new kind of brace) if recommended by provider

PRIMO Baseline Data: Physical Therapy



- Have you ever seen a physical therapist for your knee / hip arthritis?
 - Knee: 47%
 - Hip: 31%

- If no PT in past year: Would you be interested in seeing a physical therapist for your knee / hip arthritis if your healthcare provider thought it might be appropriate for you?
 - Knee: Yes: 80%, Maybe: 10%, No: 8%
 - Hip: Yes: 68%, Maybe: 16%, No: 15%

PRIMO: Intervention Delivery



- Patient Intervention:
 - Mean calls completed (out of possible 18): 12.0 (SD=4.3)
 - Average call duration: 16.7 minutes
 - Preliminary cost estimate: ~\$300 / patient

- Provider Intervention:
 - Treatment recommendations successfully issued for all but 6 participants within study period
 - 68% were delivered within 2 weeks prior to non-acute clinic visit

PRIMO: Treatment Recommendations & Consults



Treatment Recommendation	% Issued to Provider	% With Consult [†]
Knee Brace	41%	35%
Refer to PT – eval and exercises	49%	20%
Weight Management (MOVE!)	82%	23%
Physical Activity (MOVE!)	77%	23%
[†] Of those receiving recommendation		

PRIMO: Treatment Recommendations & Consults

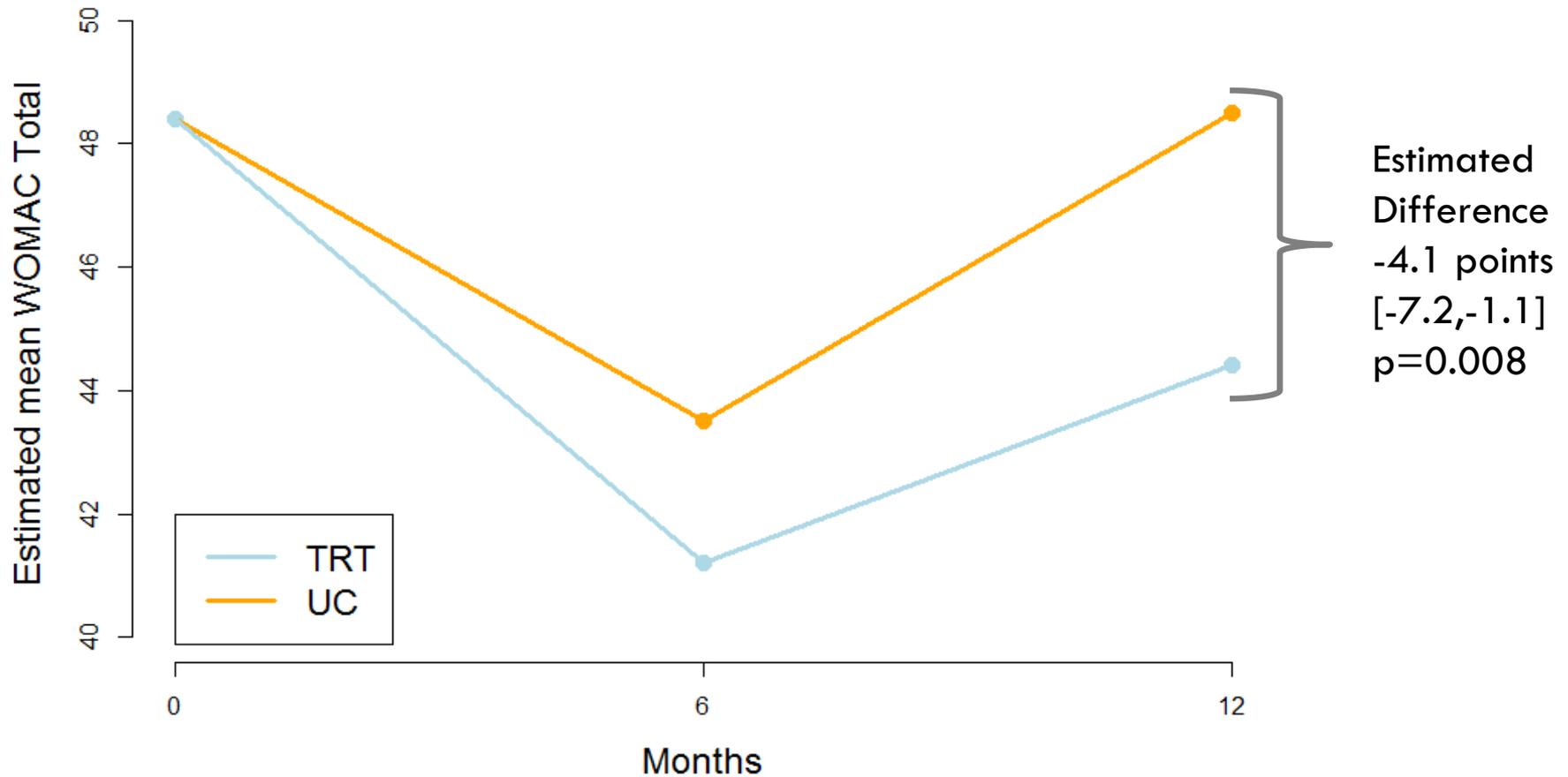


Treatment Recommendation	% Issued to Provider	% With Consult [†]
Joint Injection	22%	15%
Topical NSAID / Capsaicin	50%	N/A
Add gastroprotective / remove from NSAID	11%	N/A
Discuss new / alternative pain medication	83%	N/A
Refer to Ortho – Discuss Joint Replacement	12%	11%

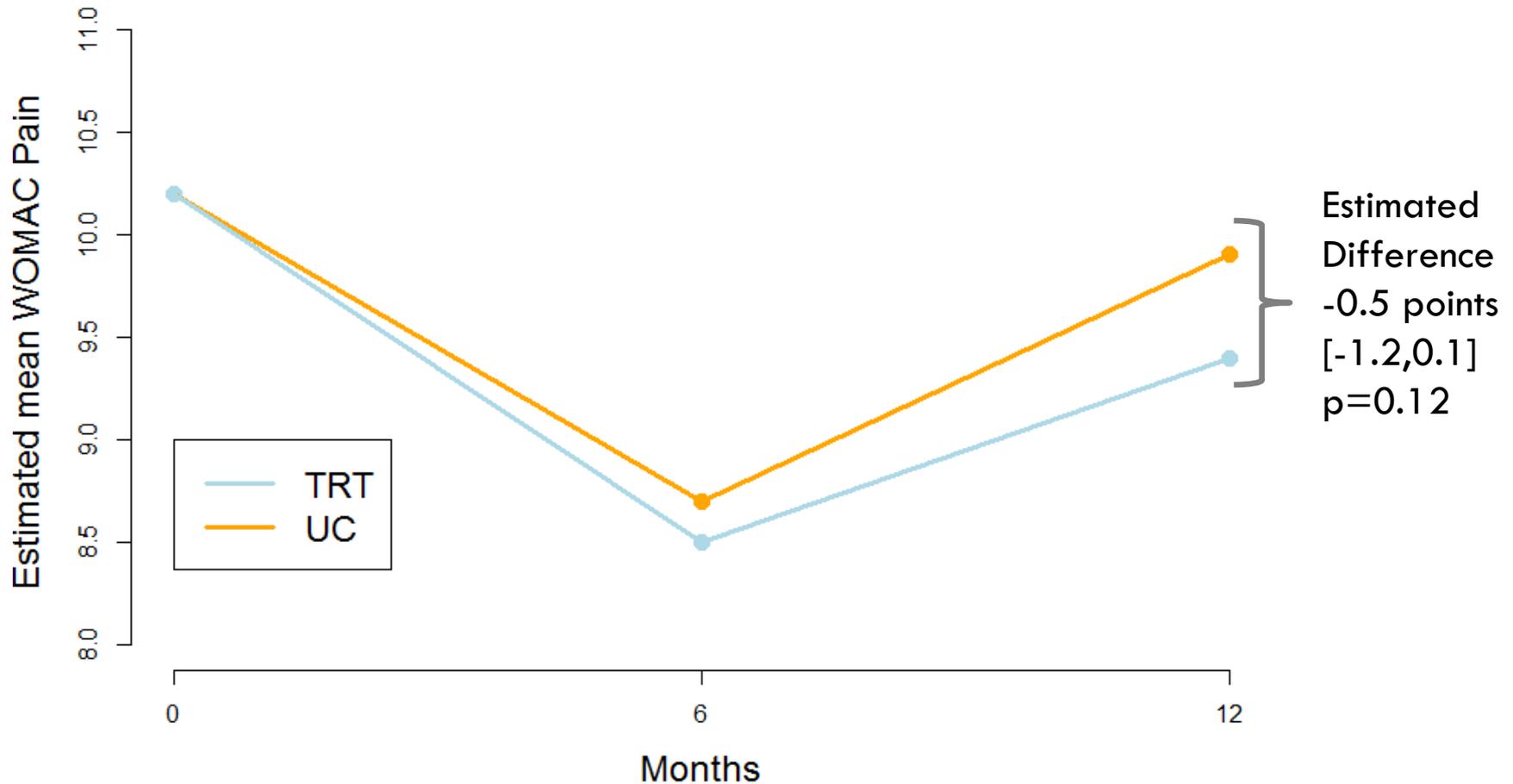
40% were issued ≥ 1 consult

[†] Of those receiving recommendation

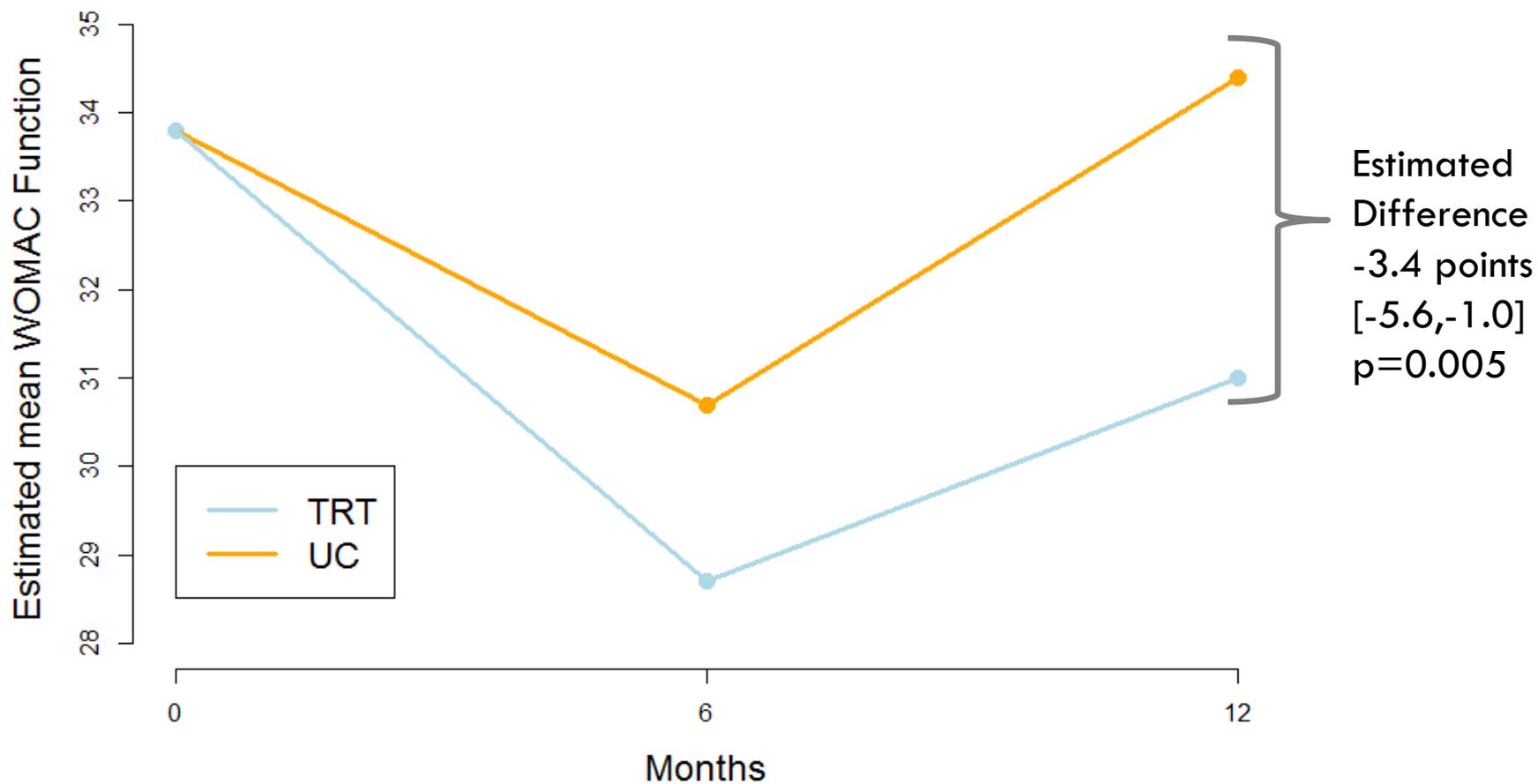
PRIMO Preliminary Results: WOMAC Total Score



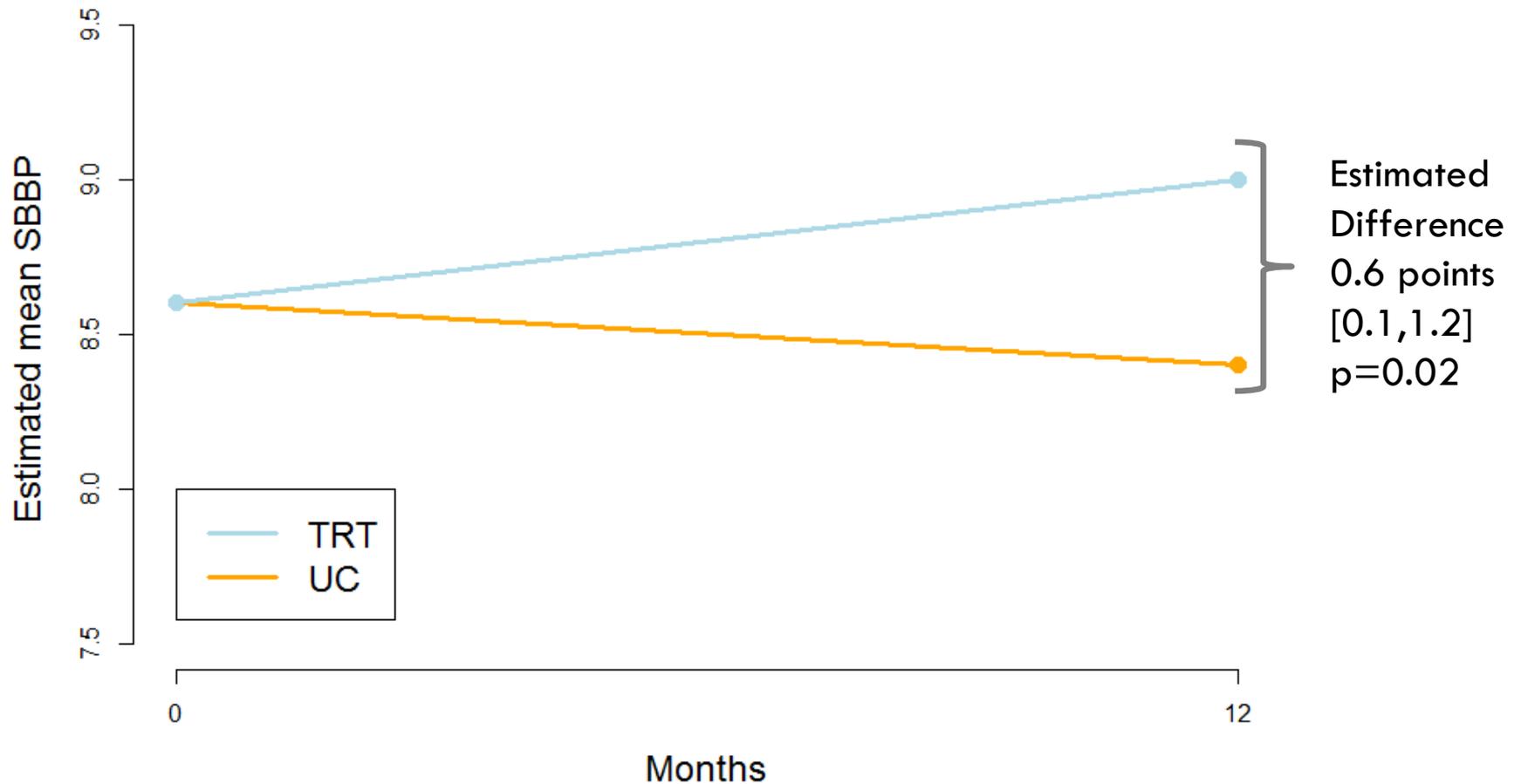
PRIMO Preliminary Results: WOMAC Pain Subscale



PRIMO Preliminary Results: WOMAC Function Subscale



PRIMO Preliminary Results: SPPB Objective Function Tests



Summary & Conclusions

- A combined patient and provider intervention improved key OA outcomes
 - ▣ Relatively inexpensive and could be delivered centrally in the VA

- Remaining questions:
 - ▣ Longer term outcomes?
 - ▣ Relative importance of patient vs. provider intervention?
 - ▣ Simple, automated method to deliver provider-based intervention?
 - ▣ Your suggestions for additional research and implementation?

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