Design and baseline data from a randomized trial of collaborative care for chronic musculoskeletal pain in primary care

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Background

- Chronic pain is common among veterans
- Chronic pain is usually treated in primary care
- Comorbid depression is common and increases mortality, deficits in function and well-being, poor response to treatment, and costs
- Guidelines exist for treatment of chronic pain, but implementation has been problematic

Barriers to treatment

- Clinician deficits in knowledge and skills
- Clinician uncertainty about pain treatments
- Patient desires for simple approaches, unrealistic expectations, fear-avoidance
- Pain and Depression: problems with recognition and attribution of symptoms
  Lack of time and system support

Addressing barriers: Collaborative care?

- Collaborative interventions include:
  - Clinician education and activation
  - Patient education and activation
  - Outcomes monitoring with clinician feedback
  - Expert decision support—guideline based
  - Information systems changes
- Effective in improving depression (and other chronic illnesses) outcomes
- **Would a primary-care based collaborative approach be effective for chronic pain?**

Study of the Effectiveness of A Collaborative Approach to Pain: (SEACAP)

VA HSRD funded

Investigators:
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Consultants:
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Research Team:
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Intervention Team:
- Ruth Leibowitz PhD
- Melanie Doak MD
- Ron Blehm

Main SEACAP Research Questions

- To what extent does a collaborative intervention improve chronic musculoskeletal pain outcomes?
- To what extent does the intervention improve depression outcomes?
- To what extent does the intervention improve clinician adherence to treatment guidelines?

Study Design and Methods

- Recruit 384 patients and 45 to 50 clinicians
- Randomize to intervention vs. TAU by clinician; patients nested within clinician
- 3, 6 and 12 months follow-up
- Main outcome: Roland Pain Disability score
- Secondary outcomes:
  - Pain severity (CPG)
  - Depression severity (PHQ-9)
  - Measure of adherence to guidelines (PAM)

Recruitment and eligibility

- Recruit using mass mailings and flyers
- Inclusion criteria
  - Musculoskeletal pain diagnosis in chart
  - 12 weeks of more of pain duration
  - Roland Disability (pain) score $\geq$ 6
- Exclusion criteria
  - Fibromyalgia, chronic fatigue, somat. disorder
  - Cognitive deficits, psychosis, terminal illness
  - Drug seeking/disruptive behavior flag

Conceptual components of interventon

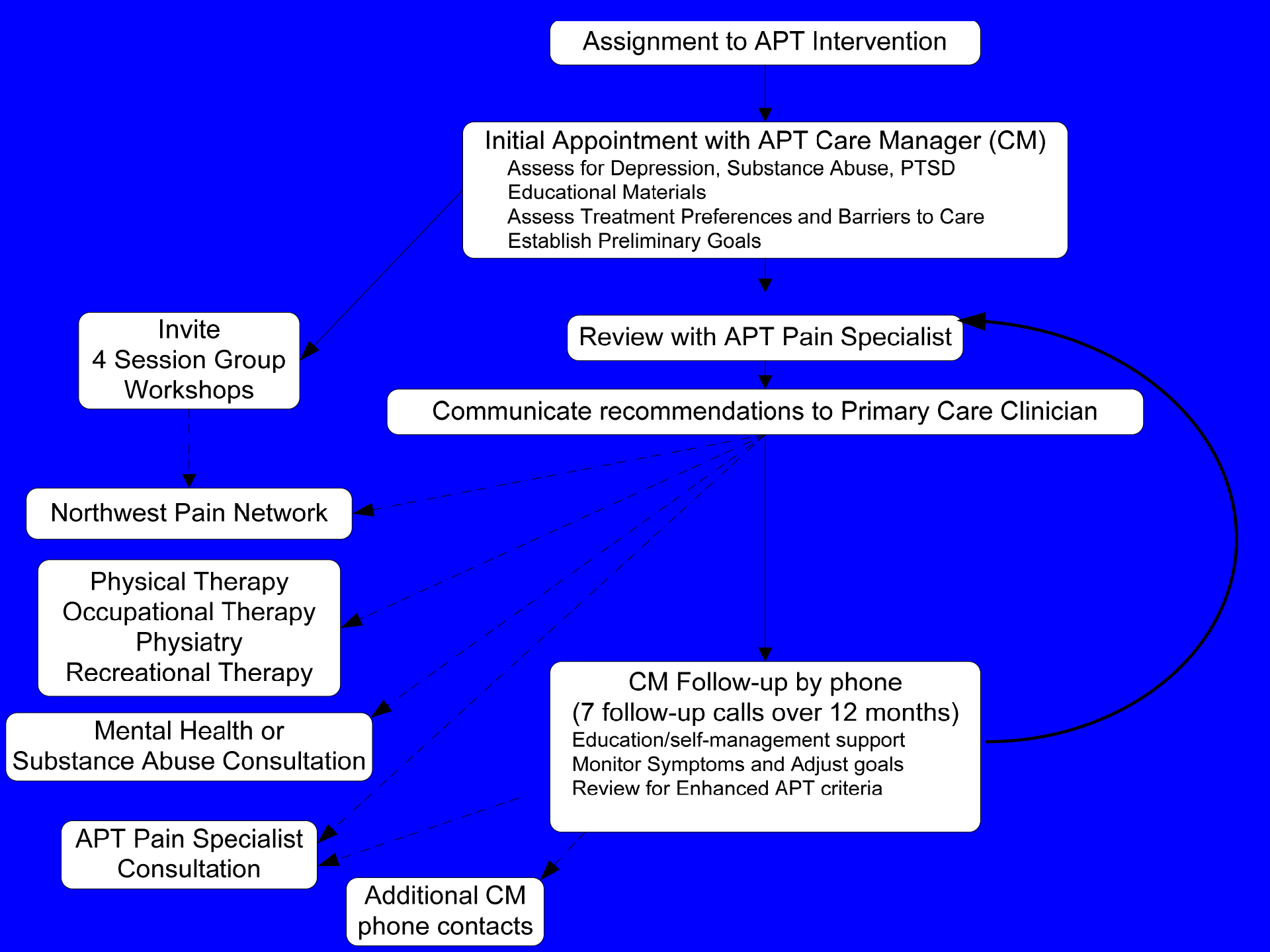
- Chronic illness and stepped care models
- Biopsychosocial framework—highlight function
- Use evidence-based and promising approaches
  - Multidisciplinary
  - CBT/Behavioral interventions
  - Monitor adherence and educate toward self-management
- Shared-decision making for clinicians
- Brief counseling models (Von Korff and Balderson)
  - Educate and Activate
  - Set individualized, functional goals
  - Address fears of physical activity
- Medical group visit model

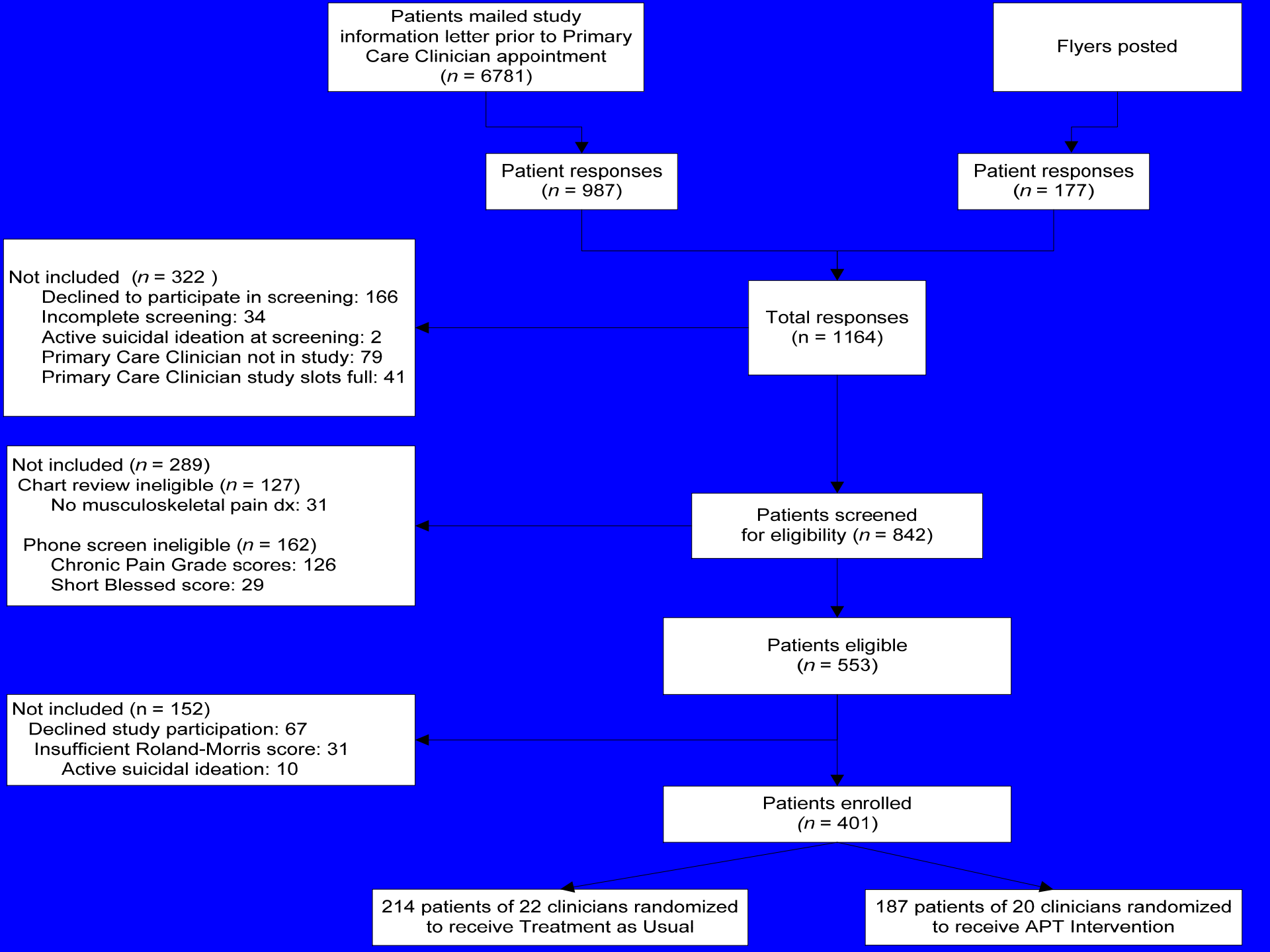
Intervention: Assistance with Pain Treatment (APT) Team

- Full-time Care Manager/Pain Consultant
- Up to 1 day per week Physician Pain Specialist (internist from primary care clinics)

Intervention clinician interactions

- Two 90-minute sessions
  - Shared decision making skills (Sullivan)
  - Intervention orientation
  - Solicit preferences
- Ongoing communications with APT Team via charts, email, phone, in-person


Assignment to APT Intervention
Initial Appointment with APT Care Manager (CM)
Assess for Depression, Substance Abuse, PTSD
Educational Materials
Assess Treatment Preferences and Barriers to Care
Establish Preliminary Goals
Invite
4 Session Group
Workshops
Review with APT Pain Specialist
Communicate recommendations to Primary Care Clinician
Northwest Pain Network
Physical Therapy
Occupational Therapy
Physiatry
Recreational Therapy
Mental Health or
Substance Abuse Consultation
CM Follow-up by phone
(7 follow-up calls over 12 months)
Education/self-management support
Monitor Symptoms and Adjust goals
Review for Enhanced APT criteria
APT Pain Specialist
Consultation
Additional CM
phone contacts


Patients mailed study information letter prior to Primary Care Clinician appointment (n = 6781)
Flyers posted
Patient responses (n = 987)
Patient responses (n = 177)
Not included (n = 322)
Declined to participate in screening: 166
Incomplete screening: 34
Active suicidal ideation at screening: 2
Primary Care Clinician not in study: 79
Primary Care Clinician study slots full: 41
Total responses (n = 1164)
Not included (n = 289)
Chart review ineligible (n = 127)
No musculoskeletal pain dx: 31
Phone screen ineligible (n = 162)
Chronic Pain Grade scores: 126
Short Blessed score: 29
Patients screened for eligibility (n = 842)
Patients eligible (n = 553)
Not included (n = 152)
Declined study participation: 67
Insufficient Roland-Morris score: 31
Active suicidal ideation: 10
Patients enrolled (n = 401)
214 patients of 22 clinicians randomized to receive Treatment as Usual
187 patients of 20 clinicians randomized to receive APT Intervention

Follow-up rates

As of 9/14/07:

- 97% completed 3 month questionnaires
- 91% completed 6 month questionnaire
- 90% completing 12 month questionnaire

Clinician Characteristics (N=42)

Characteristic	Value
Physicians, %	71%
Nurse Practitioners/Physician Assistants, %	29%
Female, %	50%
Mean years since training, yr (sd)	17.4 (9.2)
Mean number of patients in panel, n (sd)	668 (393)
Mean % pts. in panel prescribed opioids, (sd)	16.4 (6.7)
Mean job satisfaction subscale score[1], (sd)	4.3 (.90)
Mean satisfaction with pain resources[2], (sd)	2.5 (1.0)
Moderately to strongly:	
Confident in ability to treat chronic pain, %	71%
Agrees skilled pain management is high priority, %	73%
Patients with chronic pain are major source of frustration, %	76%
Influenced by concerns about physical dependence on opioids, %	39%
Dissatisfied with ability to provide optimal care, %	37%

[1]Ave. of 5 items (Likert scale, range 1-6). n=41; [2]Ave. of 3 items (Likert scale, range 1-6).

Primary Care Provider Preferences (N=21)

Mode of Communication, n (%)	
E-mail	20 (95%)
Telephone or pager	14 (67%)
In-person discussion	6 (29%)
Prefers in-depth discussions when time permits	11 (52%)
Prefers intervention team assess patient first	16 (76%)
Prefers co-sign all intervention team notes	11 (52%)
Prefers nurse included in communications	10 (48%)
Prefers intervention team write orders first	15 (71%)

Preferences continued

- None of the PCPs with panel sizes above the median preferred in-depth discussions, while 10/12 (83%) with panel sizes below the median preferred in-depth discussions *when time permits* (Fisher's exact $p<0.001$).

<u>Conclusions</u>

- Panel-size has a powerful effect on communication and desire for information
- A one-size fits all approach to primary care-based collaborative care may not be the most effective (or desired)

Patient Demographics (N=401)

Characteristic	Value
Mean age, y (sd)	61.7 (11.8)
Male, n (%)	368 (92)
Ethnicity (self-reported)	
Caucasian, n (%)	357 (89)
Black/African American, n (%)	7 (1.8)
American Indian/Alaskan native, n (%)	13 (3.2)
Other or not given, n (%)	24 (6.0)
Married, n (%)	236 (59)
Caregiver for others, n (%)	141 (35)
Education beyond high school, n (%)	301 (75)
Worked during past 12 months, n (%)	127 (32)
Currently receiving disability payment, n (%)	259 (65)
Ever received disability payment, n (%)	300 (75)
Disability application in process, n (%)	77 (19)
% disability apps./payments related to pain, n (%)	209 (66)

Patient Clinical Characteristics (n=401)

Characteristic	Value
Years self-reported duration of pain	
Mean, (sd)	14.8 (12.7)
Median	10
Range	3 mos.–64 yrs
Musculoskeletal pain diagnoses	
Back pain, n (%)	67%
Neck/joint pain, n (%)	65%
Rheumatism/Osteoarthritis/Arthritis, n (%)	49%
Roland-Morris Disability score (0-24), mean (sd)	14.7 (4.4)
Chronic Pain Grade current pain severity (NRS) (1-10) (sd)	5.2 (2.2)
Meets PHQ-9 Major Depression diagnosis (Spitzer) criteria, %	18%
PHQ-9 score $\geq$ 10, %	37%
Active PTSD (positive stem and PCL-17>=50), %	17%
PRIME MD Generalized anxiety disorder, %	13%
PRIME MD Panic attacks, %	17%

Patient Clinical Characteristics—Continued

Characteristic	Value
AUDIT-C SCORE ≥ 6, %	5%
Endorses drug misuse past 6 months, %	7%
Reports previous substance use disorder treatment, %	16%
Reports previous mental health treatment, %	38%
On antidepressant at study entry, %	36%
On opioid at study entry, %	30%
Attitudes:	
Willing to take opioids, %	78%
Feels (very true) pain a sign of damage, %	39%
Avoids activities causing pain (very true), %	60%
Recent steps taken that don't rely on docs, %	65%
Pain-related satisfaction (baseline)	
% ever treated by VA clinician for chronic pain	55%
Of those treated, % reporting good or better treatment effectiveness	54%

Preliminary intervention results

Initial Assessments 182/187 (97%) completed

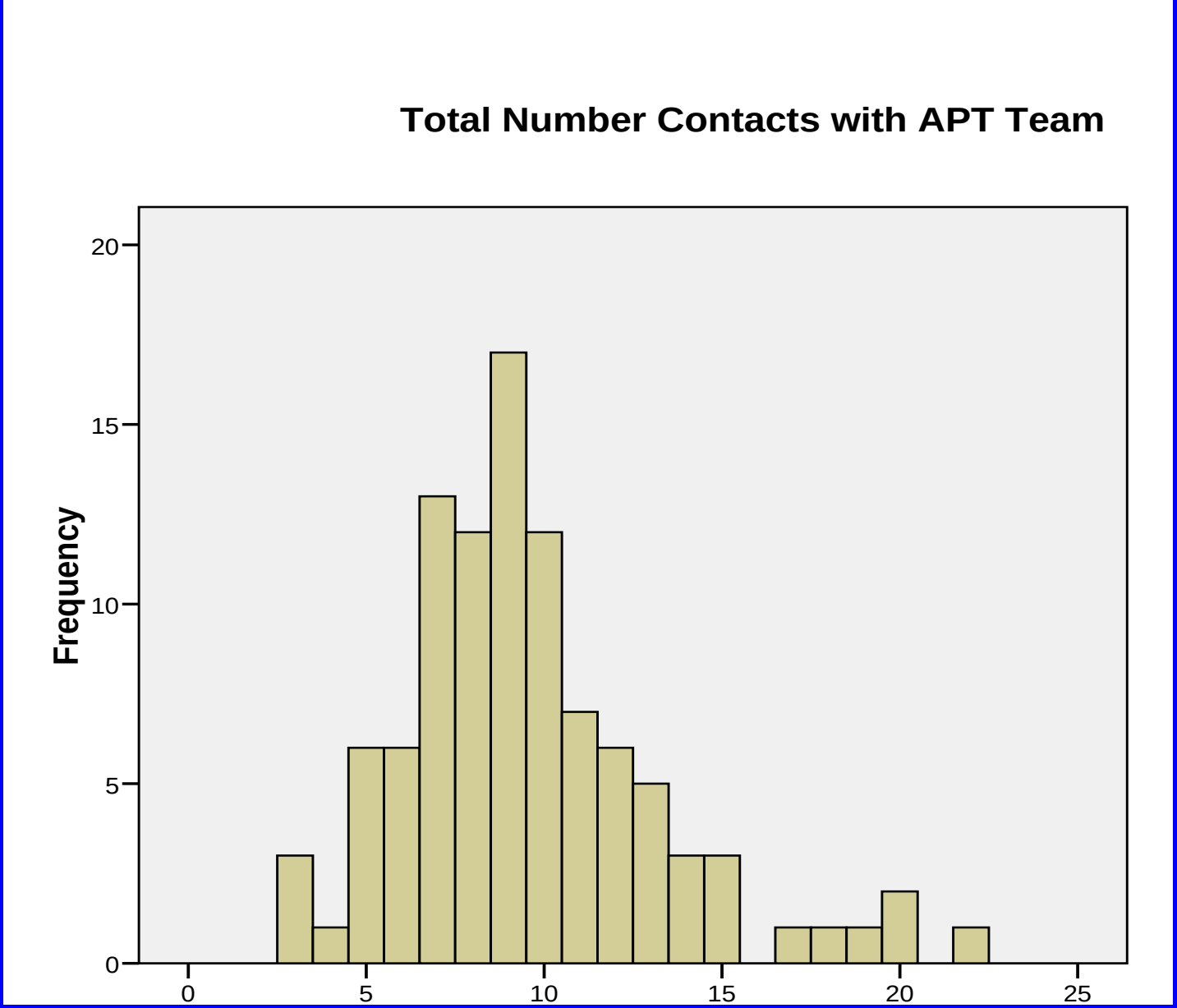
Group Workshops

- 74 pts (40%) attended ≥ 1 group workshop
- 47% of pts. in metro. area attended ≥ 1 workshop
- 26% overall attended 3 or 4 workshops

First 100 patients:

- Ave # completed CM phone contacts: 4.4 (sd=1.5)
- Ave # completed Pain Specialist contacts: 1.6 (sd=1.8)
- 25% had in-person consultation with Pain specialist

- 76% agree/strongly agree APT helpful overall



Mean # contacts with team: 9.6 (sd=3.7); N=100

Key findings so far

- Clinicians place high priority on pain, find pain patients frustrating, and lack support
- Patients want to participate
- Comorbid conditions are common
- Fear-avoidance also common
- Intervention
  - Fewer workshop attendees than hoped for
  - More Pain Specialist phone calls than expected
  - Patient satisfaction fairly high

Future directions and ideas for collaborating

- Sub-analyses:
  - Provider preferences and outcomes
  - Patient and provider attitudes and outcomes
  - Opioid misuse outcomes

- If effective, further testing and dissemination?
- Combined pain and PTSD approaches
- Adapt and test collaborative approaches for OEF/OIF veterans with pain