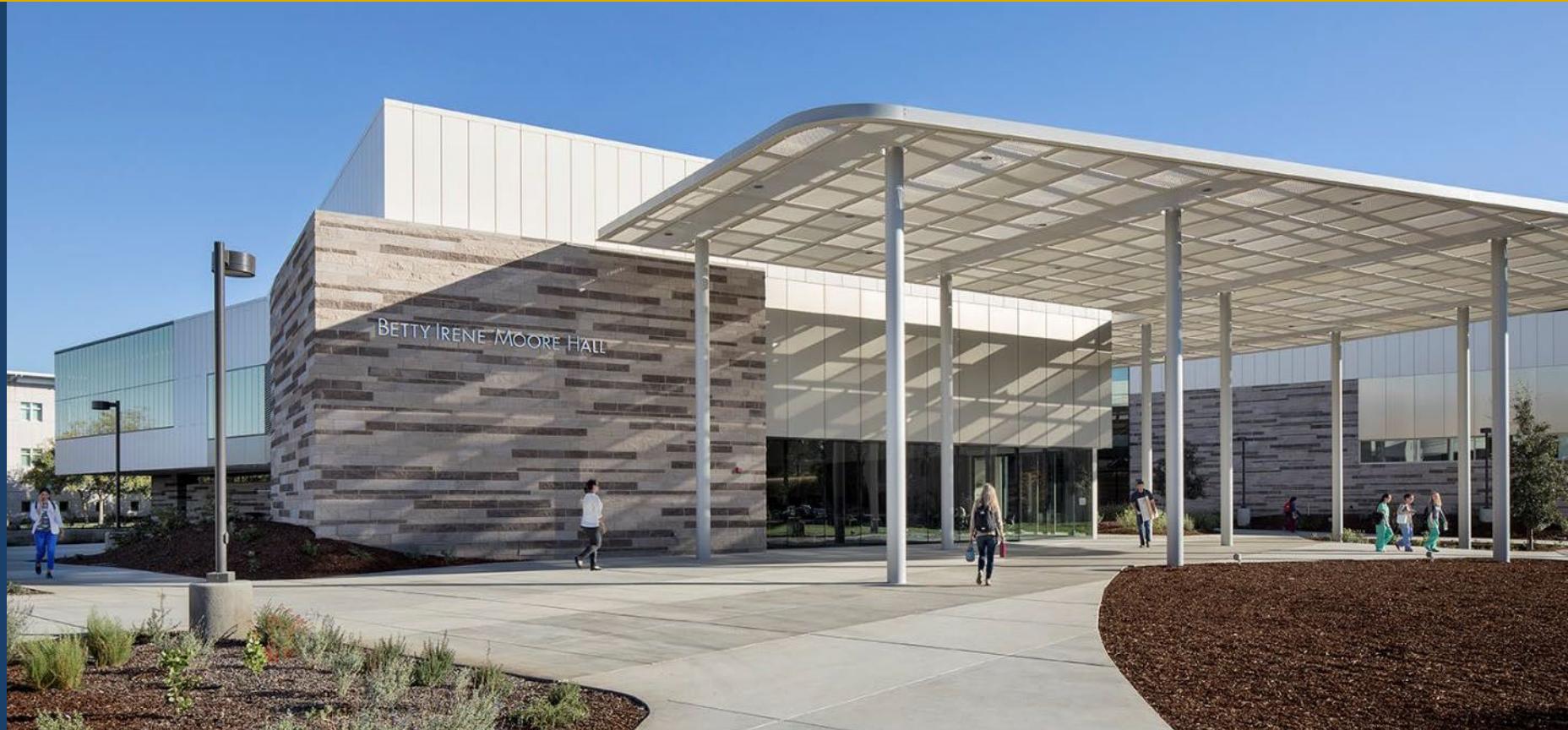


The Role of the Problem List in Chronic Pain Management

BETTY IRENE MOORE SCHOOL OF NURSING

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Thank you!

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Overview

Part one: Background

Part two: Methods

Part three: Results



Definition^{1,2,3}



Chronic Pain is defined as pain that is persistent and last more than the normal healing time, usually identified as 3 or more months.

20% suffer
chronic pain⁴

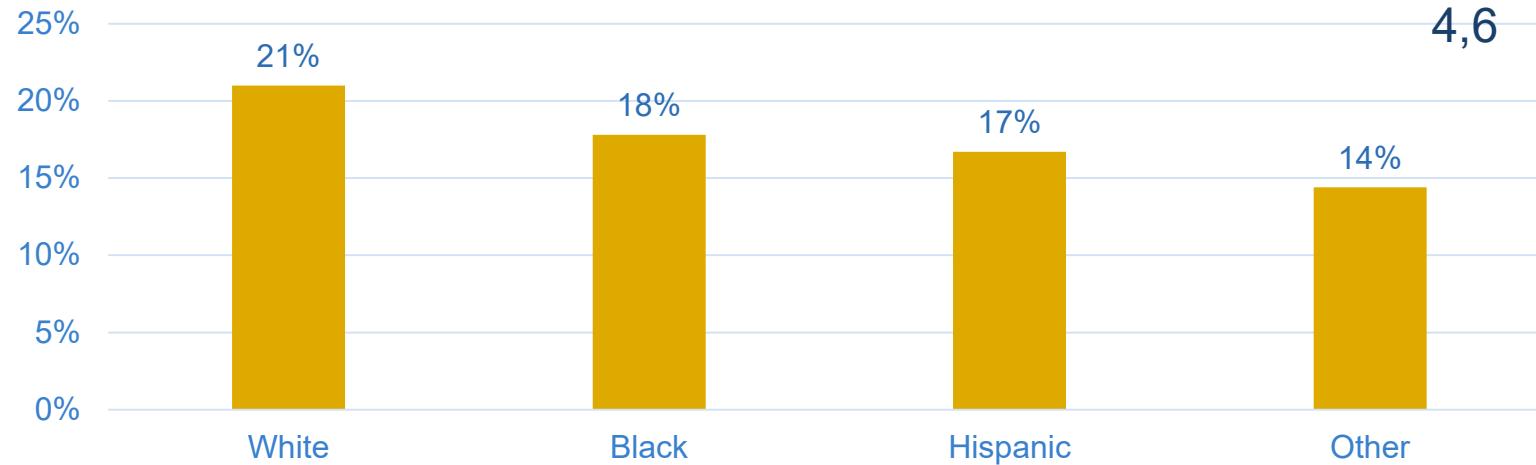


\$560
billion/year⁵

18% Male



20% Female⁴



CDC Recommendations⁵

- Non-pharmacologic therapy and nonopioid pharmacologic therapy
- Opioids when benefits outweigh risks
- Reassessment
- Recurring evaluation



CDC Recommendations⁵

- Non-pharmacologic therapy and nonopioid pharmacologic therapy
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- Reassessment
- Recurring evaluation

56%



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Unmanaged Pain⁶⁻⁸

- ↓ Sleep
- ↓ Cognitive processes and brain function
- ↓ Mood and mental health
- ↓ Cardiovascular health
- ↓ Sexual function
- ↓ Quality of life

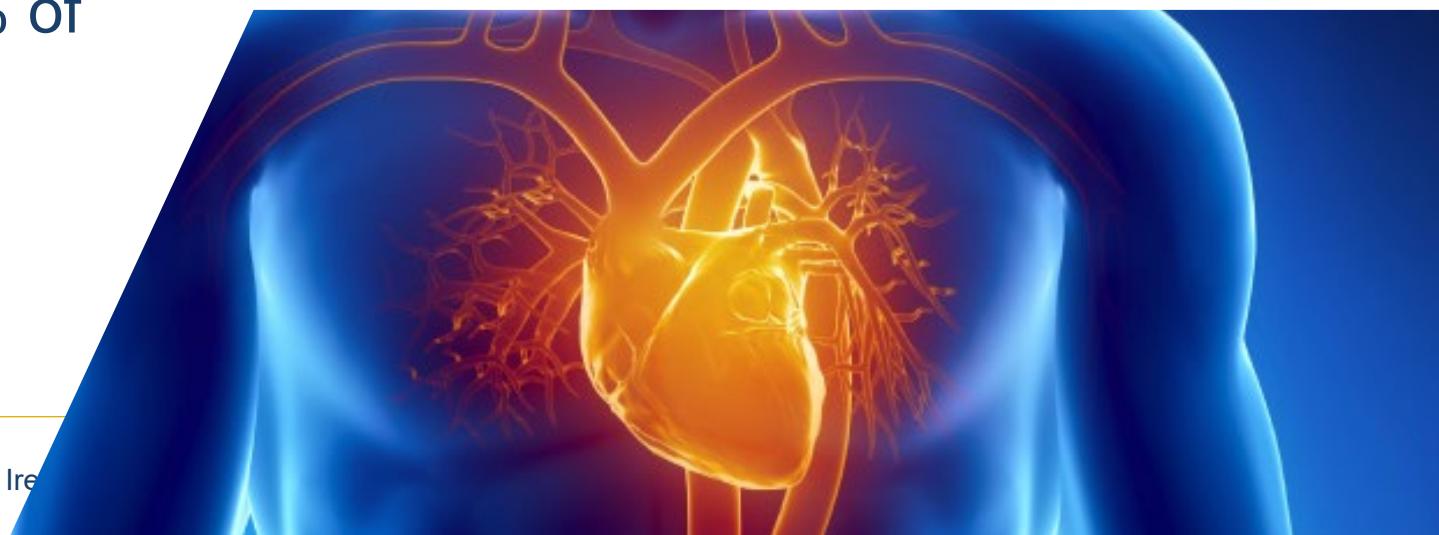
Problem list as a tool

- Dr. Lawrence Leonard Weed's POMR⁹
 - Diagnoses, abnormal findings, or symptoms
- Required component of Meaningful use stages 1 and 2¹⁰



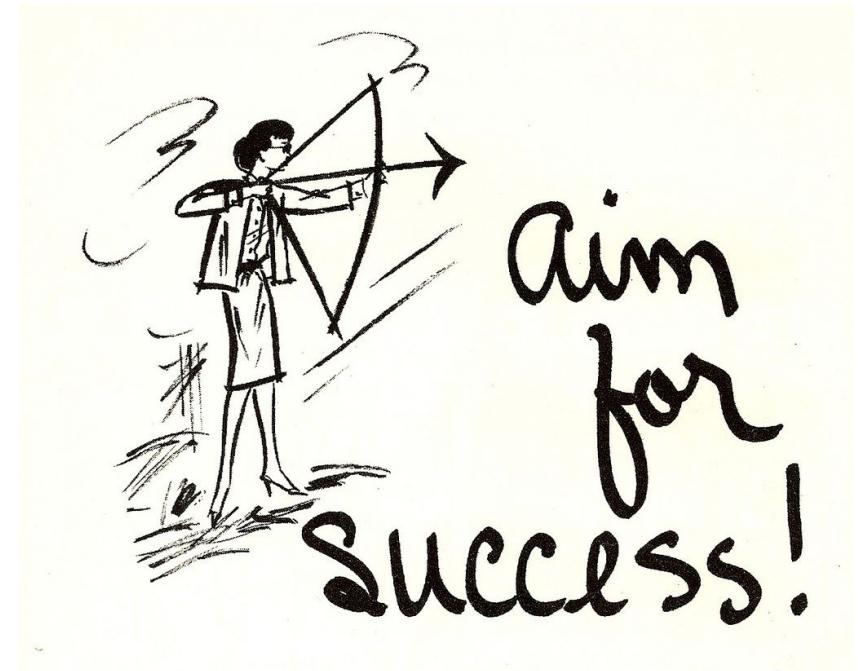
Chronic Kidney Disease and Heart Failure

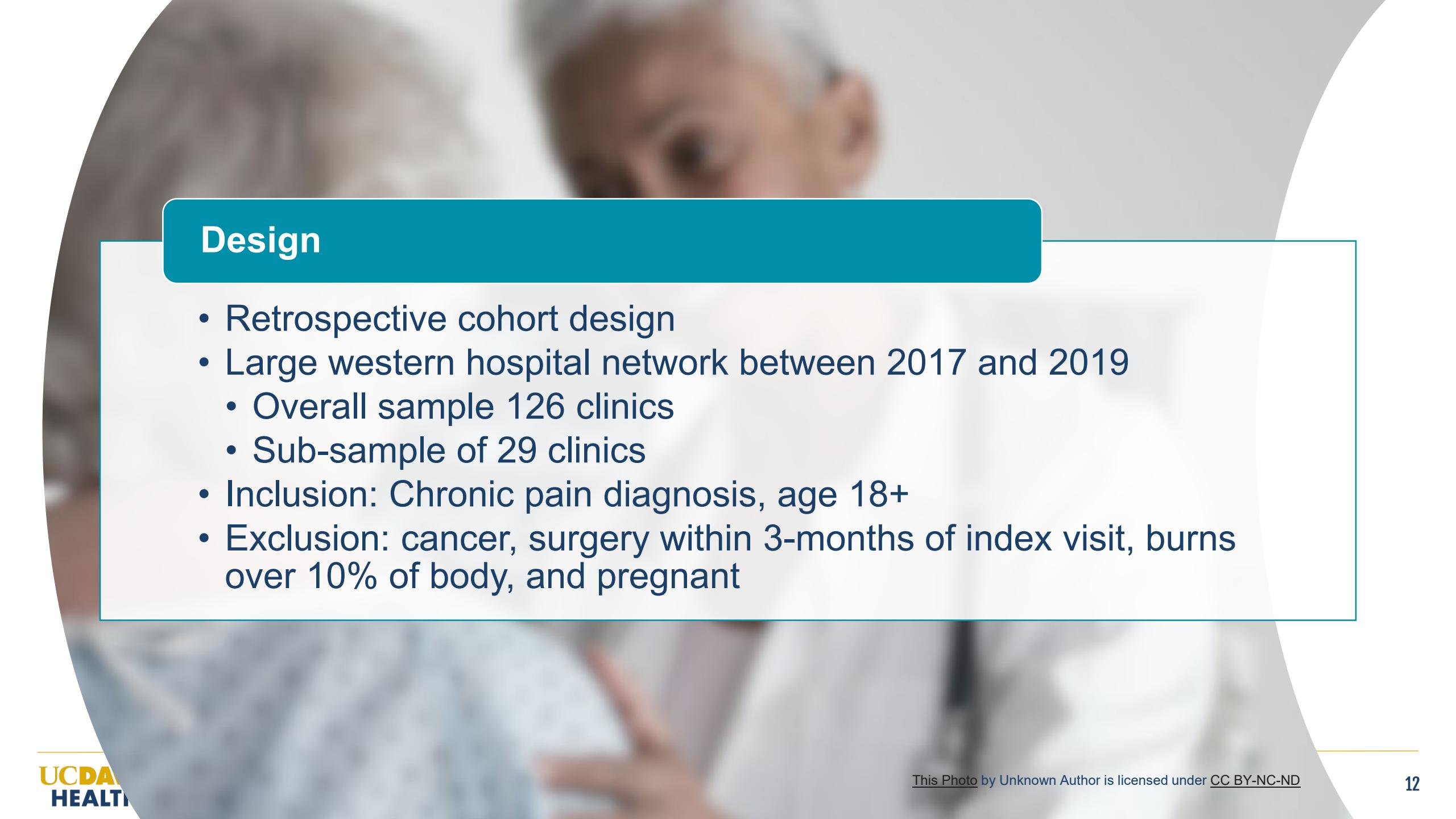
- Chronic Kidney Disease^{11, 12}
 - CKD on problem list 11 – 16% of the time
 - Fewer CKD specific lab results ordered
 - Less scheduled visits for follow-up
- Heart Failure¹³
 - HF on problem list 54.4% of the time
 - Given drug 92% of time versus 77%



Research Aims

1. Determine what factors among patients with chronic pain predict chronic pain documentation on their problem list specifically in the primary care setting.
2. Examine the extent to which chronic pain on the problem list is associated with utilization of pain specialty care.





Design

- Retrospective cohort design
- Large western hospital network between 2017 and 2019
 - Overall sample 126 clinics
 - Sub-sample of 29 clinics
- Inclusion: Chronic pain diagnosis, age 18+
- Exclusion: cancer, surgery within 3-months of index visit, burns over 10% of body, and pregnant

Chronic pain codes¹⁴⁻¹⁹

| ICD-9 | ICD-10 | Description |
|---------------|---------|----------------------------------------------------------------------------|
| 338.29 | G89.21 | Other chronic pain |
| 338.21 | G89.22 | Chronic pain due to trauma |
| 338.22 | G89.28 | Chronic post-thoracotomy pain |
| 338.28 | G89.29 | Other chronic postoperative pain |
| 338.4 | G89.4 | Chronic pain syndrome |
| 346.0 | G43.109 | Migraine with aura |
| 346.7 | G43.709 | Chronic migraine without aura, not intractable, without status migrainosus |
| 346.7 | G43.719 | Chronic migraine without aura, intractable without status migrainosus |
| 346.7 | G43.701 | Chronic migraine without aura, not intractable, with status migrainosus |
| 346.7 | G43.711 | Chronic migraine without aura, intractable with status migrainosus |

Study flow



Index visit: first visit with primary care provider during the study period with a qualifying chronic pain diagnosis



Cohort selection: patients with chronic pain on problem list and patients without chronic pain on problem list



Follow-up: patients were followed for 365-days to determine utilization of specialty pain care

Documentation of Chronic Pain on the Problem List

13,678

Chronic pain patients

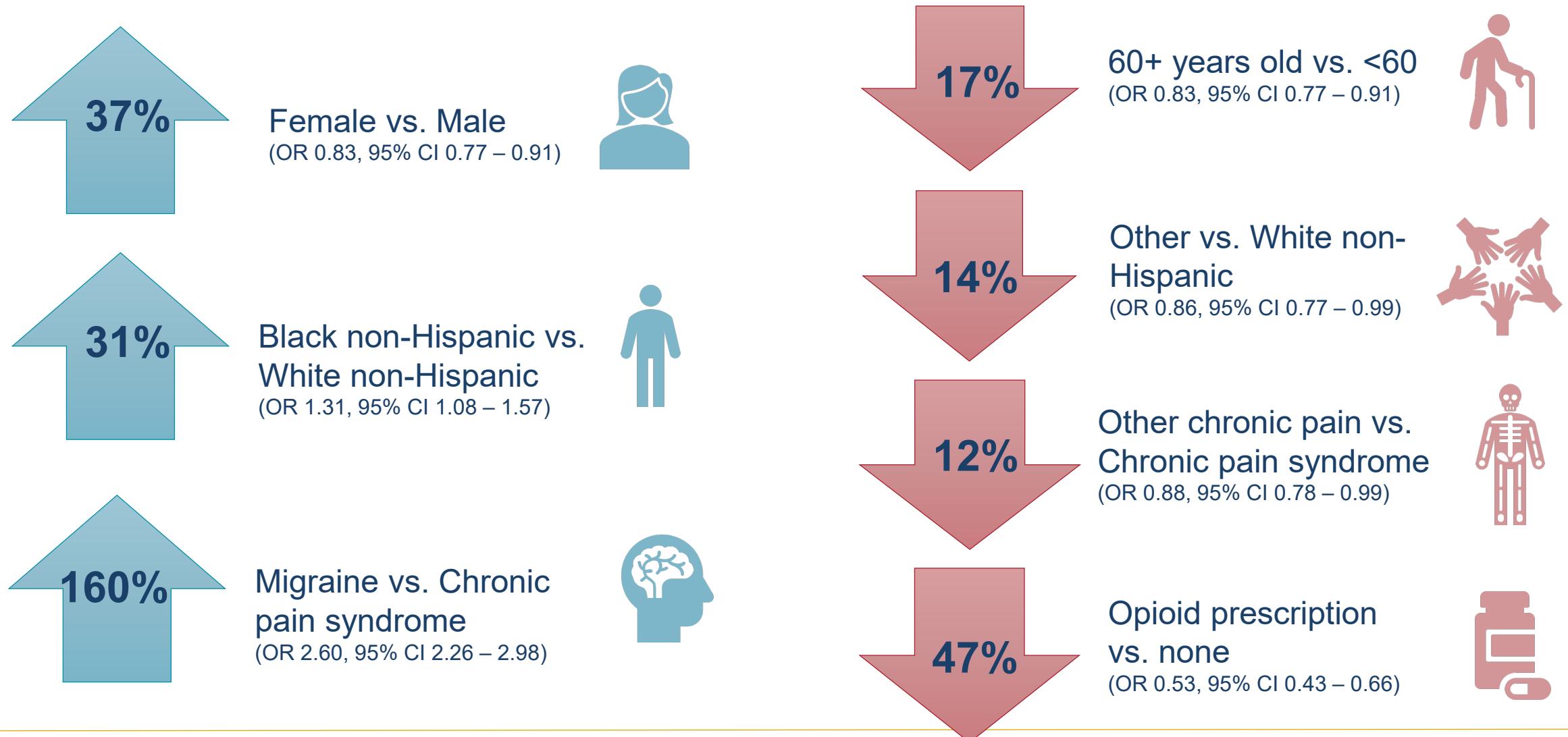
56.9

Average age of sample

52.1%

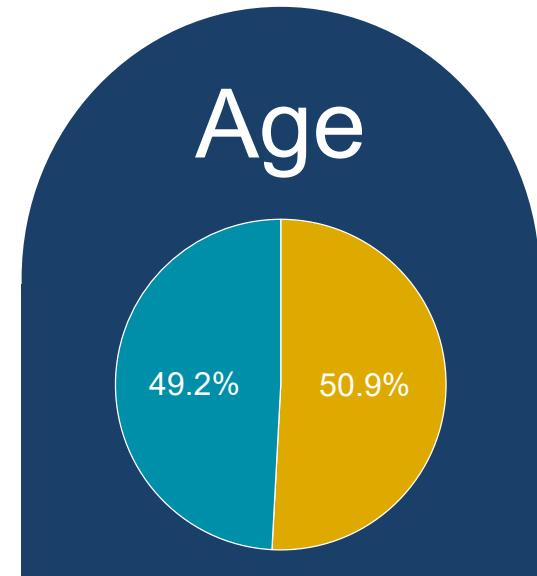
Chronic pain documentation

Documentation of Chronic Pain on the Problem List

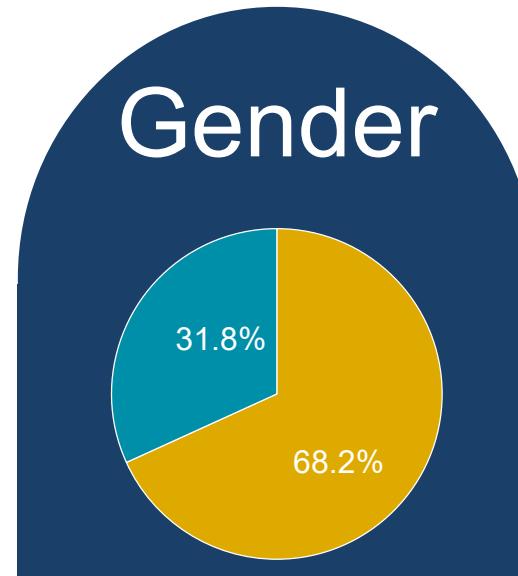


Sub-sample of Sacramento area clinics (n = 4,531)

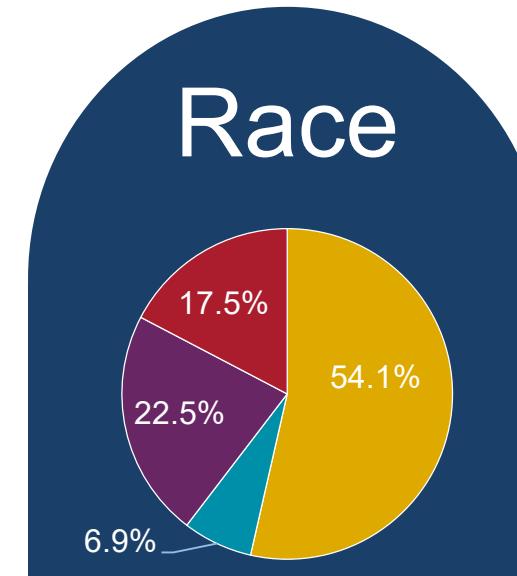
82.5%
**Chronic
Pain on
Problem
List**



■ Under 60 ■ Over 60

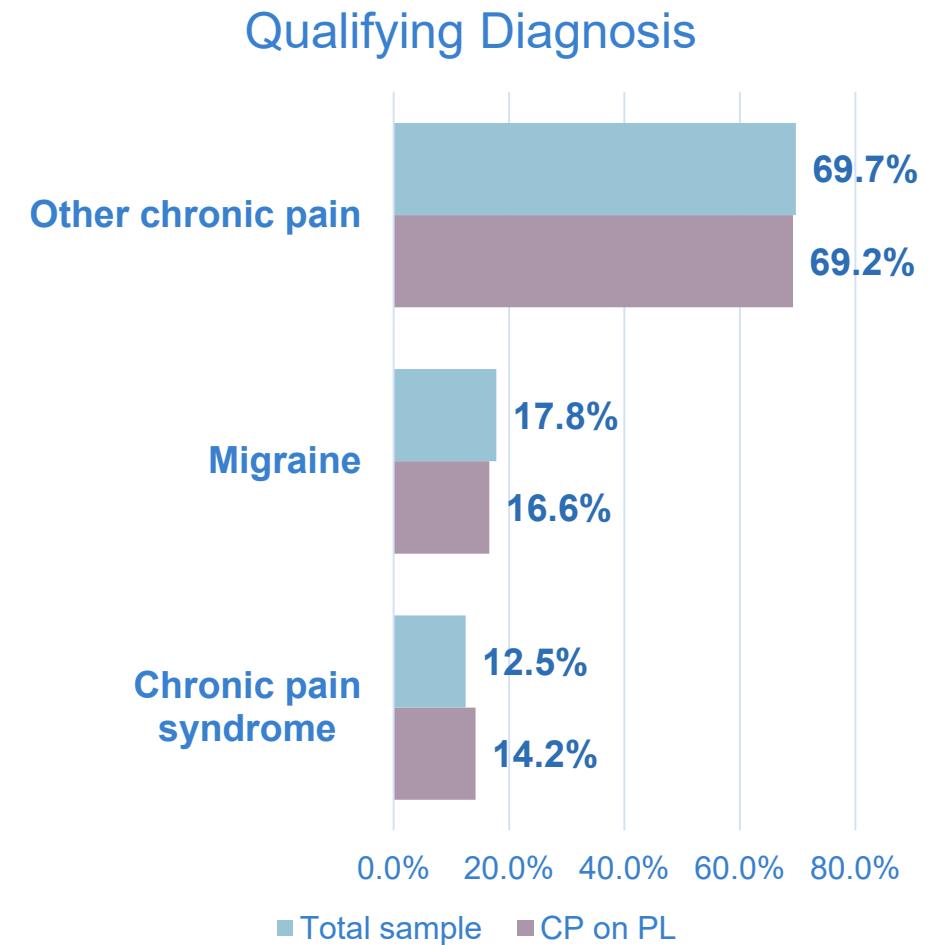
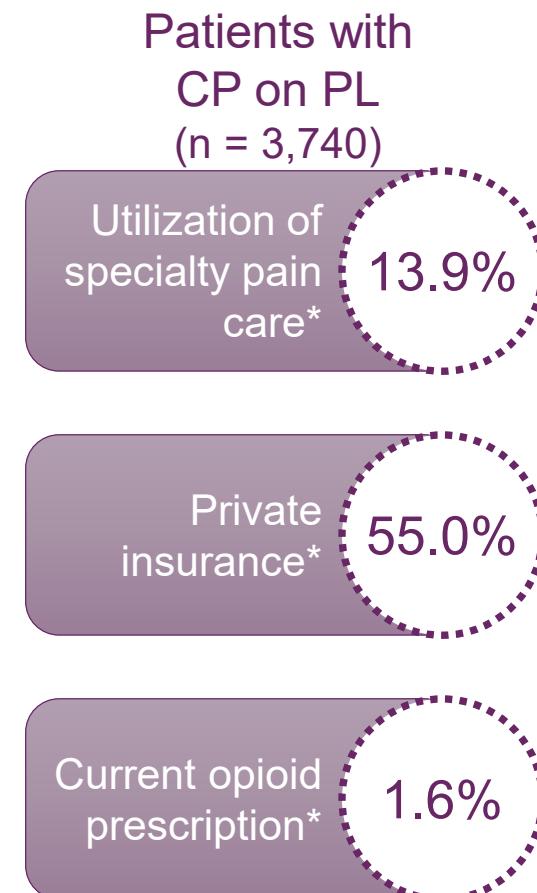


■ Female ■ Male

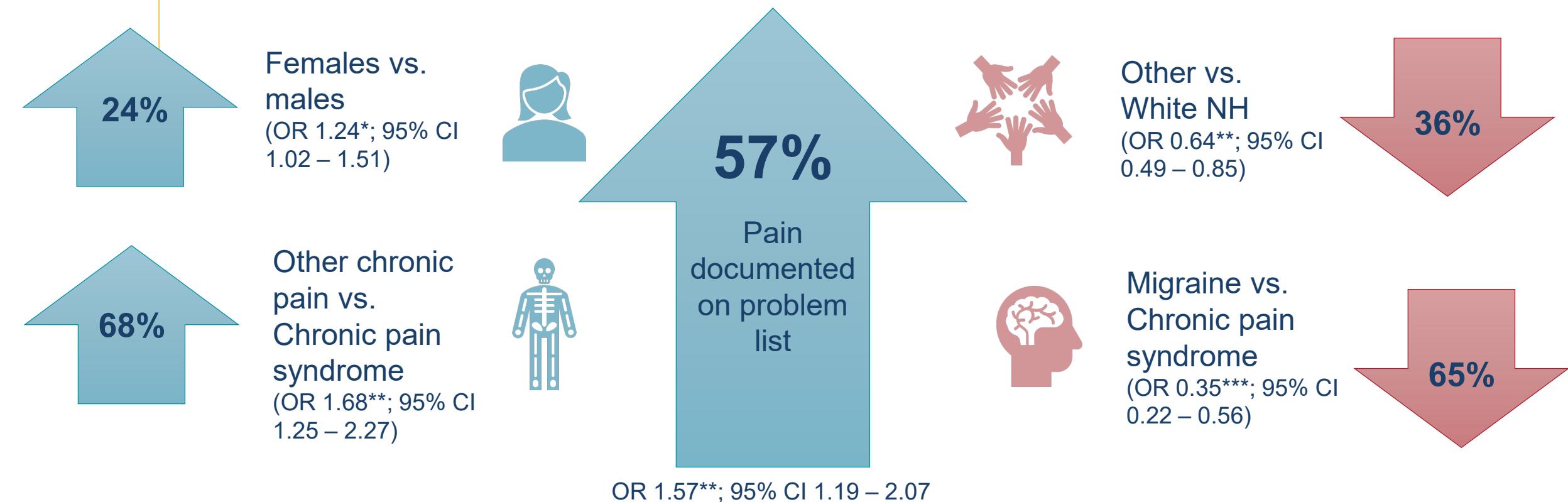


■ White NH ■ Black NH
■ Hispanic ■ Other

Documentation of chronic pain on the problem list



Factors associated with utilization of specialty pain care



Limitations

- Absent provider characteristics
- Open healthcare network
- Unmeasured psychosocial factors

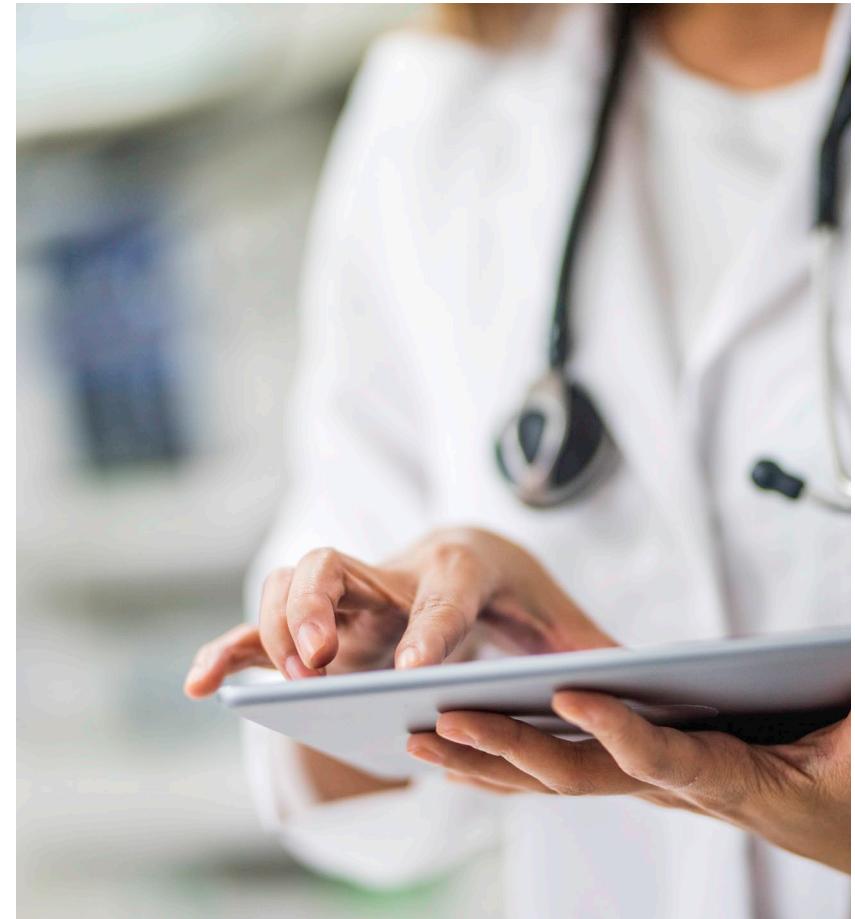
Strengths & Summary

Strengths

- Large number of clinics and patients
- Contributes evidence supporting value-based care
- Adds clarity to the importance of the problem list

Summary

- Documentation on the problem list was 52% in larger sample and 83% in sub sample
 - More than a training study (0.5%) ¹⁰
 - Different patient characteristics associated with documentation on problem list
- Documentation of chronic pain on problem list associated with utilization of specialty care
 - Consistent with chronic kidney disease and heart failure studies ^{11,12,13}





Questions

References

1. Monica JJ, Hoffman JF. The Management of Pain with Special Emphasis on the Use of Analgesic Blocks in Diagnosis, Prognosis, and Therapy. *Anesthesia & Analgesia*. 1954;34(5).
2. Classification of chronic pain: Descriptions of chronic pain syndromes and definitions of pain terms. *Pain*. 1986;Suppl 3:226-226.
3. Pain management definition medical from Medline
4. Dahlhamer J, Lucas J, Zelaya C, et al. Prevalence of Chronic Pain and High-Impact Chronic Pain Among Adults - United States, 2016. *MMWR Morbidity and mortality weekly report*. 2018;67(36):1001-1006.
5. Centers For Disease C, Prevention Public Health Service USDOH, Human S. Guideline for Prescribing Opioids for Chronic Pain. *Journal of pain & palliative care pharmacotherapy*. 2016;30(2):138-140.
6. Fine PG. Long-term consequences of chronic pain: mounting evidence for pain as a neurological disease and parallels with other chronic disease states. *Pain Med*. 2011;12(7):996-1004.
7. Bruehl S, Olsen RB, Tronstad C, et al. Chronic pain-related changes in cardiovascular regulation and impact on comorbid hypertension in a general population: the Tromso study. *Pain*. 2018;159(1):119-127.
8. Brennan F, Carr DB, Cousins M. Pain management: a fundamental human right. *Anesth Analg*. 2007;105(1):205-221.
9. Weed LL. Medical records that guide and teach. *The New England journal of medicine*. 1968;278(11):593-600.
10. Canada RE, DiRocco D, Day S. A better approach to opioid prescribing in primary care. *The Journal of family practice*. 2014;63(6):E1-8.
11. Samal L, Linder JA, Bates DW, Wright A. Electronic problem list documentation of chronic kidney disease and quality of care. *BMC nephrology*. 2014;15(1).
12. Jolly SE, Navaneethan SD, Schold JD, et al. Chronic kidney disease in an electronic health record problem list: Quality of care, ESRD, and mortality. *American Journal of Nephrology*. 2014;39(4):288-296.
13. Hartung DM, Hunt J, Siemenczuk J, Miller H, Touchette DR. Clinical implications of an accurate problem list on heart failure treatment. *Journal of General Internal Medicine*. 2005;20(2):143-147.
14. Harle CA, Marlow NM, Schmidt SOF, et al. The effect of EHR-integrated patient-reported outcomes on satisfaction with chronic pain care. *The American journal of managed care*. 2016;22(12):e403-e408.
15. Canada RE, DiRocco D, Day S. A better approach to opioid prescribing in primary care. *The Journal of family practice*. 2014;63(6):E1-8.
16. Coffelt TA, Bauer BD, Carroll AE. Inpatient characteristics of the child admitted with chronic pain. *Pediatrics*. 2013;132(2):e422-429.
17. Hser Y-I, Mooney LJ, Saxon AJ, Miotto K, Bell DS, Huang D. Chronic pain among patients with opioid use disorder: Results from electronic health records data. *Journal of substance abuse treatment*. 2017;77:26-30.
18. Orhurhu V, Olusunmade M, Urits I, et al. Trends of Opioid Use Disorder Among Hospitalized Patients With Chronic Pain. *Pain practice : the official journal of World Institute of Pain*. 2019;19(6):656-663.
19. Tian TY, Zlateva I, Anderson DR. Using electronic health records data to identify patients with chronic pain in a primary care setting. *Journal of the American Medical Informatics Association : JAMIA*. 2013;20(e2):e275-e280.



Thank you!