

VA



U.S. Department
of Veterans Affairs



**UW Center for
Tobacco Research and Intervention**

UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

VA Career Development Award Proposal: Reciprocal Relationship Between Chronic Pain and Cigarette Smoking

Jesse T. Kaye, PhD

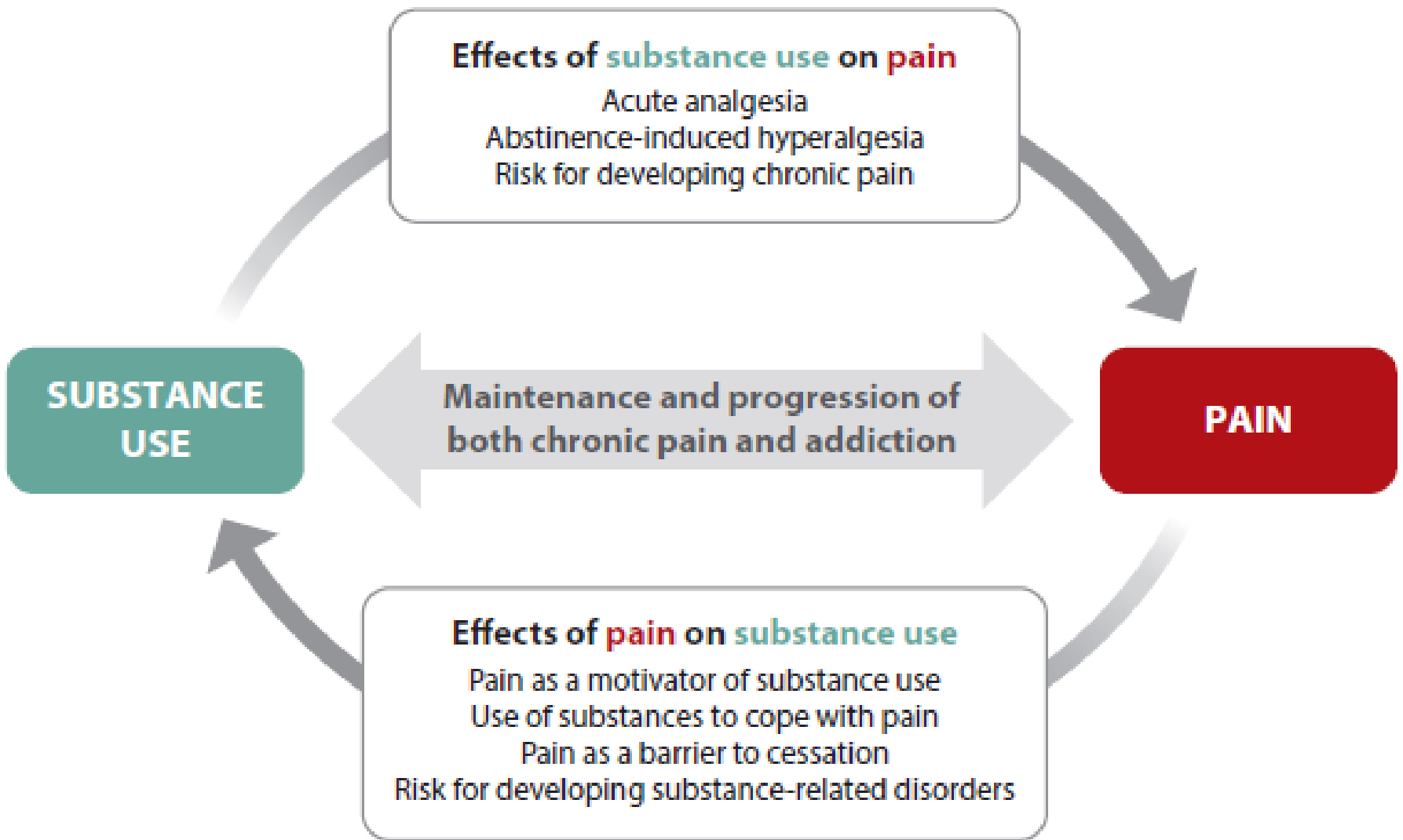
William S. Middleton Memorial Veterans Hospital

UW Center for Tobacco Research and Intervention

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Clinical & Public Health Impact

- Veterans are disproportionately affected by cigarette smoking and chronic pain.
- Patients with chronic pain:
 - Smoke at high rates (>40% prevalence)
 - Make fewer quit attempts
 - Are less successful at quitting
- Quitting smoking may reduce pain in the long term among Veterans with severe pain.



Ditre, Zale, LaRowe, Annual Review Clin Psych, 2019

Gaps in the Literature

- Does nicotine deprivation-induced hyperalgesia provoke smoking motivation in Veterans who smoke?
- Do the dynamic relations between pain and smoking differ between smokers with vs w/o chronic pain when assessed in daily life?
- Does VHA first-line pharmacotherapy (C-NRT) effectively mitigate withdrawal-related hyperalgesia and reduce cigarette craving among smokers w chronic pain (vs w/o)?

Specific Aim 1

Examine how smokers w/ vs w/o chronic pain differ in pain sensitivity, cigarette craving, and tobacco withdrawal during continued smoking and early tobacco abstinence.

Specific Aim 2

Examine whether the effects of C-NRT (vs. placebo) on pain sensitivity, cigarette craving, and tobacco withdrawal severity during early tobacco abstinence differs in those w/ vs. w/o chronic pain.

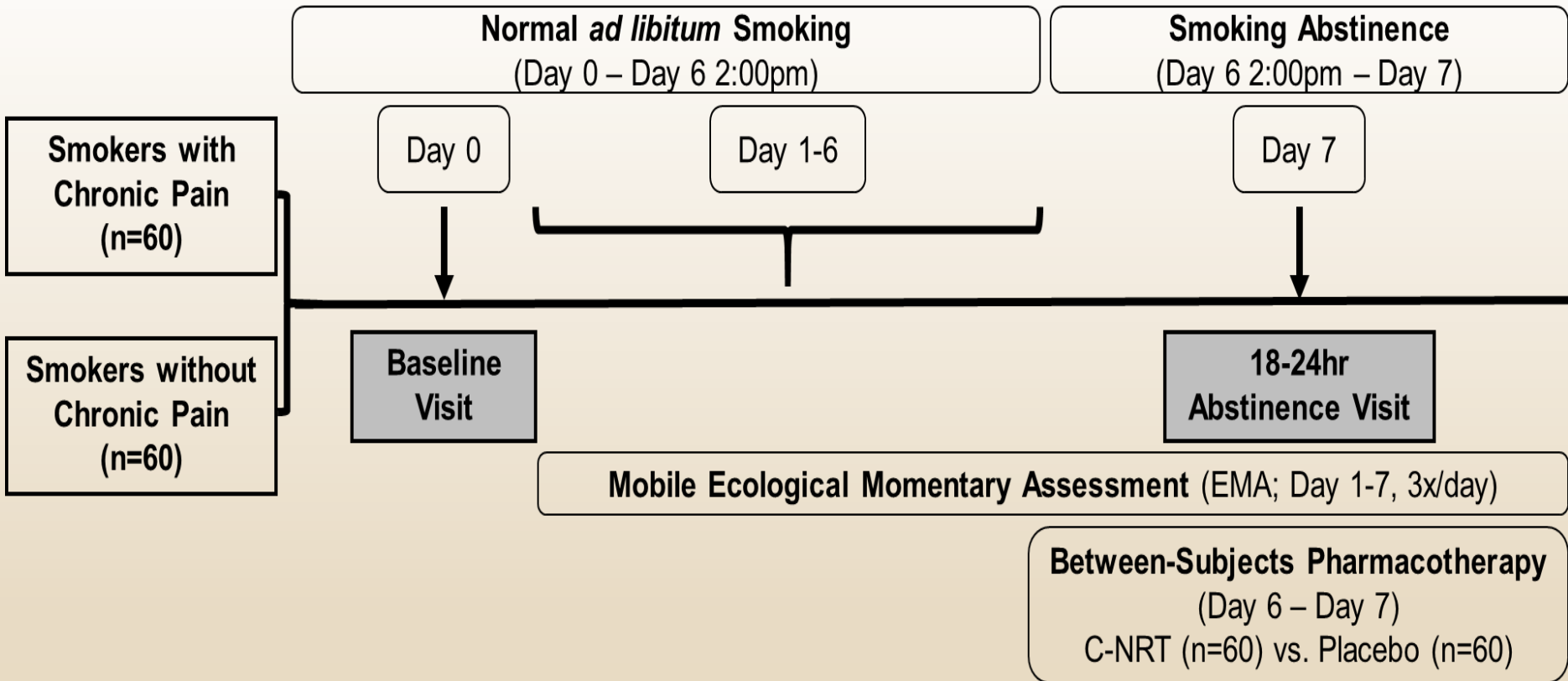


Specific Aim 3

Characterize the dynamic relations and covariation between pain and smoking among smokers w/ and w/o chronic pain in daily life intensive longitudinal data collection.



Design Overview

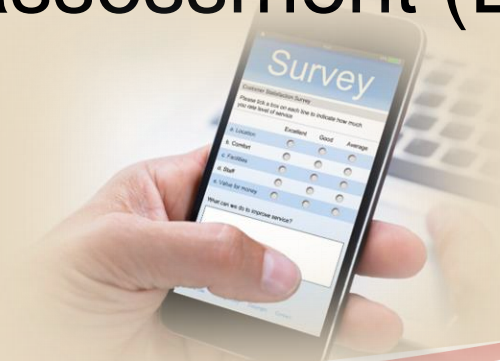


Laboratory and Mobile Assessment

- Experimental pain assessment



- Ecological momentary assessment (EMA)



Future Directions

- If strong evidence of C-NRT efficacy:
 - Increase reach (e.g., VA pain clinical teams, proactive targeted outreach)
 - Behavioral approaches (e.g., prn NRT for pain coping)
- If weak evidence of C-NRT efficacy:
 - Explore alternative pharmacologic strategies (e.g., varenicline, high dose NRT, clonidine, CBD)
 - Experimental therapeutics approach to novel and repurposed drug screening

Mentors and Collaborators

- Jessica Cook (Madison VA)
- Dane Cook (Madison VA)
- Tim Baker (UW-CTRI)
- Joe Ditre (Syracuse U)
- Dan Bolt (UW)
- Madison VA Tobacco Treatment Clinic
- UW Center for Tobacco Research & Intervention
- Anonymous VA Scientific Reviewers

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Thank you!



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