Annual rates of opioid prescriptions continue to increase along with utilization of emergency medical services for opioid abuse and misuse. Clinicians remain unsure whether patients with chronic, nonmalignant pain benefit from chronic opioid therapy. Benefits and risks associated with chronic opioid therapy can vary by patient and depend on tenuous demographic, psychiatric, and abuse history factors. Previous opioid therapy studies have focused on: Urban and suburban areas Minority populations Abuse rather than therapeutic use

The goals of this study were to: Investigate therapeutic chronic opioid use in a rural population Determine how patient-specific factors impact quality of life and therapeutic outcomes

Methods

• We are reporting preliminary results (N=133) of an IRB-approved, prospective observational study that will ultimately enroll 1000 patients with chronic non-malignant pain.
• Each patient completed validated survey tools (detailed in the Survey Tool section) as well as a questionnaire including demographic information, a psychological assessment, recreational drug use history, and abuse history.
• The Research electronic data capture (REDCap) application was used to collect and store all data.
• Physicians supplied participant-specific medical information, PADT, and DIRE tools (see Survey Instruments section).

Specific aspects of quality of life strongly correlated with demographic and medical information. Positive correlations

Educational Status with
• Role limitations due to emotional problems (p=0.0003, r²=0.2499)
• Physical functioning (p=0.0007, r²=0.2271)
• Emotional well being (p=0.0038, r²=0.1738)
• Role limitations due to health problems (p=0.0433, r²=0.1323)

Household income with
• Physical functioning (p=0.0002, r²=0.2474)
• Role limitations due to emotional problems (p=0.0004, r²=0.2427)
• Emotional well being (p=0.0022, r²=0.0260)
• Social functioning (p=0.0126, r²=0.1719)

Negative correlations

PHQ-9 Depression Assessment with
• Emotional well being (p=0.0017, r²=0.5500)
• Vitality/Energy (p=0.0011, r²=0.4731)
• General health (p=0.0001, r²=0.4572)
• Social functioning (p=0.0001, r²=0.4005)
• Role limitations Due to Emotional Problems (p=0.0011, r²=0.3930)
• Body pain (p=0.0011, r²=0.2640)
• Role limitations due to health problems (p=0.0011, r²=0.2509)
• Physical functioning (p=0.0001, r²=0.2396)
• Health change (p=0.0001, r²=0.2095)

Daily Opioid Dose with
• PHQ-9 Opioid Risk score (p=0.0039, r²=0.1991)
• Social functioning (p=0.0200, r²=0.1705)
• Body pain (p=0.0469, r²=0.1653)
• Emotional well being (p=0.0125, r²=0.1398)

Statistical Analysis Plan

Kendall Tau b Correlation coefficients were calculated. Propensity scores were computed based on demographic, lifestyle, and baseline measurements, and subgroup members were matched.

• Patient quality of life (RAND 36), treatment efficacy (DIRE), and opioid risk abuse (DIRE, ORT, PADT) scores were correlated with:
  • Demographic factors
  • Concurrent treatment with antidepressants or anticonvulsants
  • Daily Opioid Dose
  • History of sexual or physical abuse
  • Tobacco use and amount

Results

Despite the small sample size, these preliminary results suggest that depression assessment, educational status, and household income predict patient quality of life and opioid abuse risk just as well as, if not better than, opioid quantity-related factors.

Conclusions

• These results indicate that patients’ demographic characteristics and medical information influence outcomes just as much, if not more than a substance abuse history.
• This study will eventually enroll 1,000 participants to increase study power. Genomic analysis related to opioid use and misuse will be included. We hope that this study will ultimately provide insight into which patient-specific factors influence chronic opioid therapy as well as aid in predicting which patients will have the best risk/benefit profiles.

References

1 IMS’s National Prescription Audit (NPA) & Vector One®: National (VONA).