Background
Polypharmacy is extensive in people with chronic non-cancer pain (CNCP) and many of these medications are associated with adverse effects, including sedation.

Unwanted sedation can decrease quality of life and independently, sedative medications and sedation have been associated with hospitalisation [1], particularly in relation to falls [2] and overdose [3].

RCTs on the efficacy on concurrent use of sedative medications report sedation either remains the same or increases in comparison to single medication use [4].

However, these trials do not necessarily reflect the complexity and combinations of medications used by patients within the community.

Sedative load (SL) Index
The cumulative effect of multiple sedative medications has previously been assessed using a number of indices among community samples of the elderly (≥65 years old).

The sedative load (SL) quantifies medications based on their potential to cause sedation, by rating medications according to the level of sedation the medication tends to cause (i.e. whether the action of the medication directly causes sedation or whether medication tends to cause (i.e. whether the action of the medication directly causes sedation or whether sedation is a common or rare adverse effect [5,6].

Simul sedative indices have reported associations with falls and hospitalisation [7-10].

Aims
1. Measure and describe SL in the sample;
2. Assess whether SL is associated with self-reported drowsiness/fatigue;
3. Assess whether SL is associated with demographic factors, pain, physical health, sleep and anxiety and/or depression;
4. Assess the association of SL and ambulance use.

Methods
Participants were recruited from community pharmacies across Australia.

Eligible participants had current CNCP (pain lasting longer than 3 months) and had been prescribed a schedule 8 opioids for 6 weeks or longer. This study examines 1166 participants where baseline telephone interview and medication diary data was available (77% of the sample).

Sedative Load Index
Medications were classified according to the Anatomical Therapeutic Chemical (ATC) classification [11]. Using the SL index, medications were classified into 3 groups and had a corresponding sedative rating:

- Group 1- primary sedatives → sedative rating of 0
- Group 2- medications with a sedating component and medications with sedation as a prominent adverse effect → sedative rating of 1;
- Group 3- medications with sedation as a potential adverse effect and medications with no known sedation → Sedative rating of 2.

The ratings for medications used in the past week were added together to create a total score.

Results
The mean SL for the group was 3.76 (S.D. 2.22) and ranged from 0-13 (Figure 5.0.1) and equates to a mean of 3.2 sedative medications and ranges from 0-10.

Almost half of the sample had taken a primary sedative (group 1; 46%, 95%CI= 42.7-48.4) Most (50%, 95%CI=55.0-45.0) of the sample had also used a non-opioid medication from group 2 (Table 1).

There were many combinations of medication use in the sample (Figure 1) with at least 1 psychoanaleptics, psychostimulants and antiepileptic.

Non-opioid medications contributed on average 45% (S.D. 29.9%) of the SL scores. However, this vary considerably (Figure 2).

Conclusions
Non-opioids contributed to half of the SL index and many combinations of non- opioid nervous system sedative medications were used.

SL was higher than most previous studies in the elderly [6,7].

Sedative load associated increasingly complex health and demographic profiles.

SL was not associated with ambulance use when controlling for other factors including other physical health problems and this is not surprising considering the comorbidity in the sample and CNCP more widely.

The SL is just one approach to assessing outcomes related to polypharmacy in CNCP. Further research is needed to assess whether SL is associated with other medication related outcomes.

References