Abstract:

**Background/Objective:** The increasing prevalence of chronic pain associated with an aging population suggests that older adults may be a high risk group for prescription opioid abuse/misuse. We aimed to describe recent trends in abuse or misuse of prescription opioids among older adults as reported to poison centers in the U.S.

**Methods:** We analyzed poison center call counts for prescription opioids (oxycodone, fentanyl, hydrocodone, morphine, oxymorphone, methadone, buprenorphine, hydromorphone, tramadol, and tapentadol) that were reported to participating poison centers of the Researched Abuse, Diversion and Addiction Related Surveillance (RADARS®) System. Calls were identified as intentional abuse or intentional misuse (including suspected suicide) exposures among adults aged 20 years or older between 1Q2006 and 4Q2013. Cases were categorized into two age groups: 20-59 years and 60+ years. Population rates of exposure were calculated using quarterly counts of abuse or misuse exposures reported to the RADARS System and using age-specific population data for the coverage area from the US Census 2010. Linear regression models, with and without the addition of a quadratic term, were used to identify linear and non-linear trends over the time period.

**Results:** We identified 150,403 calls reporting intentional abuse or misuse of a prescription opioid among adults during the 8-year time period. Of the total calls, 8% were from the 60+ age group at an average rate = 23.8 per 100,000 population over the time period and 92% of the total calls were from the 20-59 year age group at an average rate of 98.5 calls per 100,000 population over the time period. Population rates of abuse or misuse were lower among the 60+ year age group than the 20-59 year age group at each quarter. Among the older age group there was a significant linear upward trend in intentional exposures across the entire time period (p<0.0001). In contrast, rates for adults aged 20-59 showed a significant (p<0.0001) non-linear trend of increasing rates from 1Q2006 through 3Q2012 and then decreasing rates from 4Q2012 through 4Q2013.

**Conclusions:** Although population rates of intentional exposures to prescription opioids were lower for older adults than younger adults during the time period, recent rates for older adults continued to trend upward while recent rates for younger adults trended downward. These results suggest a potential for a moderate increase in the prevalence of prescription opioid abuse and misuse as the population ages and portends the possible acceleration of rates among older adults.