Use of Both Individuals Filling Prescriptions and Population Rates in Assessing Abuse Potential of Prescription Opioids

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**Background:** National surveys assessing nonmedical prescription drug use (NMPDU) provide population estimates. However, estimates of NMPDU relative to the number of individuals prescribed a drug is also informative.

**Aim(s):** This study examines differences in rates per population and per unique recipients of dispensed drug (URDD) across different prescription opioid classes.

**Methods:** Using two RADARS® System programs (Poison Center and Drug Diversion), rates of product mentions by intentional exposure cases and diversion incident reports from 1st quarter 2010 through 2nd quarter 2012 were calculated by year/quarter. Rates were calculated per population and URDD for seven prescription drug classes: hydrocodone, oxycodone, fentanyl, oxymorphone, buprenorphine, hydromorphone, and morphine.

**Results:** Using negative binomial regression models, we found that the average hydrocodone rate was more than 7 times higher than the average rate of other products (with the exception of oxycodone) per population (p<0.001). However, findings reversed when rates were calculated per URDD, with other substance rates being at least 2.5 times more likely than hydrocodone (p<0.001). Oxymorphone showed low population rates but the highest rates in both programs per URDD. Oxycodone has relatively high rates per URDD and per population.

**Conclusion:** URDD rates are a useful supplement of existing estimates by providing perspective on the extent of NMPDU of a product relative to the number of prescriptions and may indicate new products with a high abuse potential more rapidly.