

**US Heroin in Transition (part one): Supply changes, adulteration and consequences** (Oral abstract 1403)

**Introduction:** The US heroin overdose crisis stems from rising heroin use initiation and emergence of new source-forms and contamination of the heroin supply. Evidence for persistent, widespread distribution of synthetic opioids since 2013 is mounting, including fentanyls sold covertly as “heroin” or as fentanyl adulterated heroin. This presentation will examine 1, the changing US heroin supply; 2, evidence for synthetic adulteration and sourcing; and 3, national trends and regional differences in heroin-related overdose, 2006-13, corresponding to supply dynamics.

**Methods:** US government data from the Drug Enforcement Administration (DEA) and National Forensics Laboratory (NFLIS) will illustrate changes in heroin supply, form and contamination. Analyses of hospitalizations utilizing national healthcare databases will examine national and regional trends in heroin-related overdose rates.

**Results:** DEA data reveal rises in “unknown” source heroin in the Midwest and entry of Mexican-sourced heroin in the Northeast, displacing heroin sourced from Colombia. The NFLIS data show a 134% increase in fentanyl seizures from 2009 to 2014 that are more dramatic in the Midwest and Northeast consistent with higher heroin-related overdose rates in those regions. National rates of heroin-related overdose rose 8% annually from 2006 -13, but there are crucial regional differences: while increases were recorded in 8 out of 9 regions, East/South Central (Kentucky, Tennessee, Mississippi, Alabama) rates went up approximately 50% and the Northeast and Atlantic Seaboard regions rose by 30-40%.

**Discussion:** Our analysis suggests that the "heroin" epidemic may be not a single phenomenon. Feeding these regional epidemics are emerging heroin source-types including mimics. Mexican- sourced heroin has dramatically increased in supply with new routes throughout the Midwest and Northeast and novel forms with likely adulteration. This, and the presence of fentanyls, makes heroin use more unpredictable and deadly than ever before.

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