

# RADARS<sup>®</sup>

S Y S T E M

<b>Title:</b>	Micromedex <sup>®</sup> Clarification of Suboxone <sup>®</sup> Products Increases Coding Accuracy in the RADARS <sup>®</sup> System Poison Center Program
<b>Authors:</b>	Winter EJ, Martinez EM, Lavonas EJ, Bucher Bartelson B, Poppish L, Green JL, Dart RC
<b>Meeting:</b>	North American Congress of Clinical Toxicology (NACCT) Annual Meeting
<b>Date:</b>	September 2013
<b>Location</b>	Atlanta, GA

## Abstract:

**Background:** Misclassification of product-specific codes affects the accuracy of poison center (PC) data. Differential misclassification associated with Specialists in Poison Information (SPI) choosing the first listed code in Micromedex<sup>®</sup> (MMX) has been described. We sought to quantify the accuracy of product-specific coding within the RADARS<sup>®</sup> System Poison Center Program before and after the clarification of formulation for specific Suboxone<sup>®</sup> products.

**Methods:** During the study period, the Poison Center Program captured drug exposures from 50 United States PCs. SPIs record case data, including product codes and narrative notes using standardized electronic forms, and RADARS System staff verify coding accuracy. When narrative notes and product codes conflicted, the SPI narrative notes with substance formulation are used. Total exposures to Suboxone tablets and oral film from 2Q – 4Q2011 (before) and 2Q – 4Q2012 (after) the coding clarification were reviewed. The change was made in 1Q2012. PCs installed the new MMX version on various dates, so this transition quarter was not analyzed. A Chi square test was used to test the difference in number of recodes after the MMX listing change compared to before. This test is done separately for recodes from tablet to film and from film to tablet. McNemar's test for correlated proportions describes whether the recoding from tablets to film compared to film to tablet was differential. This test was done separately for the before and after period.

**Results:** There were 3610 cases, 1763 before MMX change and 1847 after. There was a significant decrease in recodes from tablet to film for before MMX change (n=20, 1.1%) compared to after (n=3, 0.2%, p = 0.0002). There was also a significant decrease in recodes from film to tablet for before (n=577, 32.7%) compared to after (n=57, 3.1%, p < 0.0001). Coding for tablets was 98.9% (n=1743) accurate, and film was 67.3% (n=1186) accurate before MMX change. After MMX change coding for tablets was 99.8% (n=1844) accurate, and film was 96.9% (n=1790) accurate. The misclassification of Suboxone was differential for both the before period (p < 0.0001), and after period (p < 0.0001).

**Conclusion:** Data from the National Poison Data System and individual PCs are frequently used to study adverse events related to product-specific medication use. The reliability of this research relies on accurate product coding. This study shows that differential misclassification may introduce systematic bias, in which PC data over-reports the first listed formulation in a product class. Clarifying formulation listing in Micromedex can correct many of these errors.