

Assessment of online content discussing initiation, switching, and cessation of pharmaceutical opioids

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Introduction

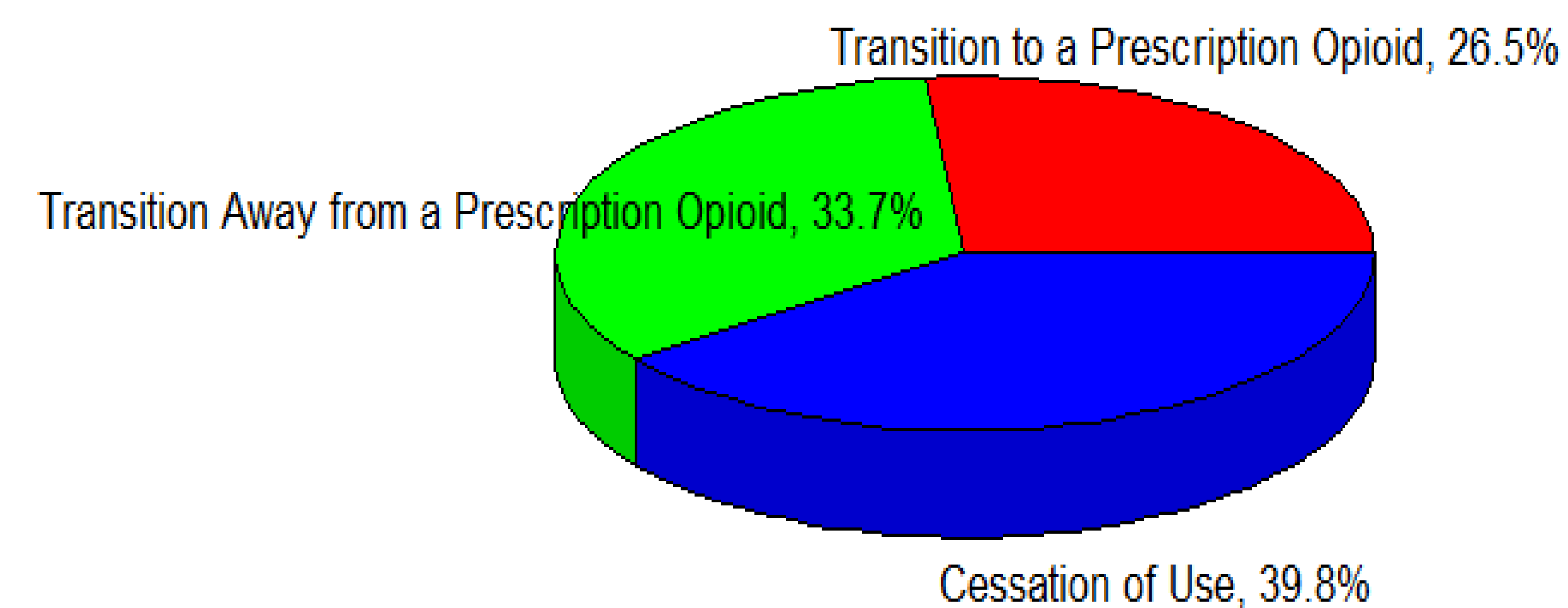
Online data increasingly contributes to public health research and pharmacovigilance. The objective of this analysis is to describe the behaviors discussed online regarding transition between drug products among opioid users transition behaviors

Methods

The RADARS[®] System Web Monitoring Program collects web content related to the use of pharmaceuticals as described by online content posters. Over 150 million publicly available websites were scraped from 2019Q3 to 2020Q2 for posts mentioning hydrocodone, morphine, oxycodone, and oxymorphone. A stratified random sample of posts was qualitatively analyzed for transitional behavior in drug use (e.g. initiation or cessation, drug switching), perceived effectiveness of the transition, and other drugs involved.

Figure 1: Transition Behavior

Web Monitoring Program Transition Behavior



Results

Of 5,945 total sampled posts, 83 (1.4%) discussed transition behavior for a drug of interest, with little variation by opioid. Of the 83 posts, 22 (26.5%) described transitioning to a prescription opioid from another drug, 28 (33.7%) described transitioning away from an opioid to another drug, and 33 (39.8%) described cessation of use.

Among online authors who discussed initiating an opioid, all cases involved transitioning from a different prescription opioid (effective = 4, ambiguous = 12, ineffective = 6). Of the 28 authors who transitioned away from opioids, 15 transitioned to a different opioid (effective = 1, ambiguous = 9, ineffective = 5), 8 transitioned to a cannabinoid (effective = 6, ambiguous = 1, ineffective = 1), 4 to an OTC product (ambiguous = 4), and 1 author transitioned to kratom (ambiguous = 1).

Conclusions

Results show that, although drug use is often discussed online, content about switching between drugs is rare. Posts discussing transitioning to or from an opioid most frequently named another opioid. Notably, switching to cannabis was seen as effective for pain in 6 out of 8 cases. Ultimately, public internet posts may not contain sufficient data to quantify generalizable patterns of drug switching behavior.

Limitations

- Results here are only generalizable to English-speaking post authors
- The sampling frame of online posts limits generalizability, is it does not include private websites, which likely contain pertinent information
- There is inevitable ambiguity in the qualitative coding of unstructured data. To address this, inter-rater reliability is assessed to ensure that the agreement between the coders is consistent

Figure 2: Transition to Select Products as Described by Online Users

Transition To Select Products within the Web Monitoring Program

