geoMapr: An analytic dashboard for prescription drug utilization with geographically referenced data enrichment and machine learning

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Abstract

- In post-market drug safety surveillance, pharmacy dispensing data provide valuable insights to FDA of drug utilization patterns.
- We have developed a web-based interactive tool, called ***geoMapr***, to analyze nationally projected data for prescription drug dispensing from a proprietary database available to the Agency.

Disclaimer

- This presentation reflects the views of the authors and should not be construed to represent FDA's views or policies.

Future Directions

- The ***geoMapr*** is continuously updated to address important needs in regulatory decision-making.
- A planned enhancement is to explore the feasibility of signal detection of infectious disease outbreaks related to intravenous injection of opioids.

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Figure 1. Home screen of *geoMapr* describes software objectives and the database.

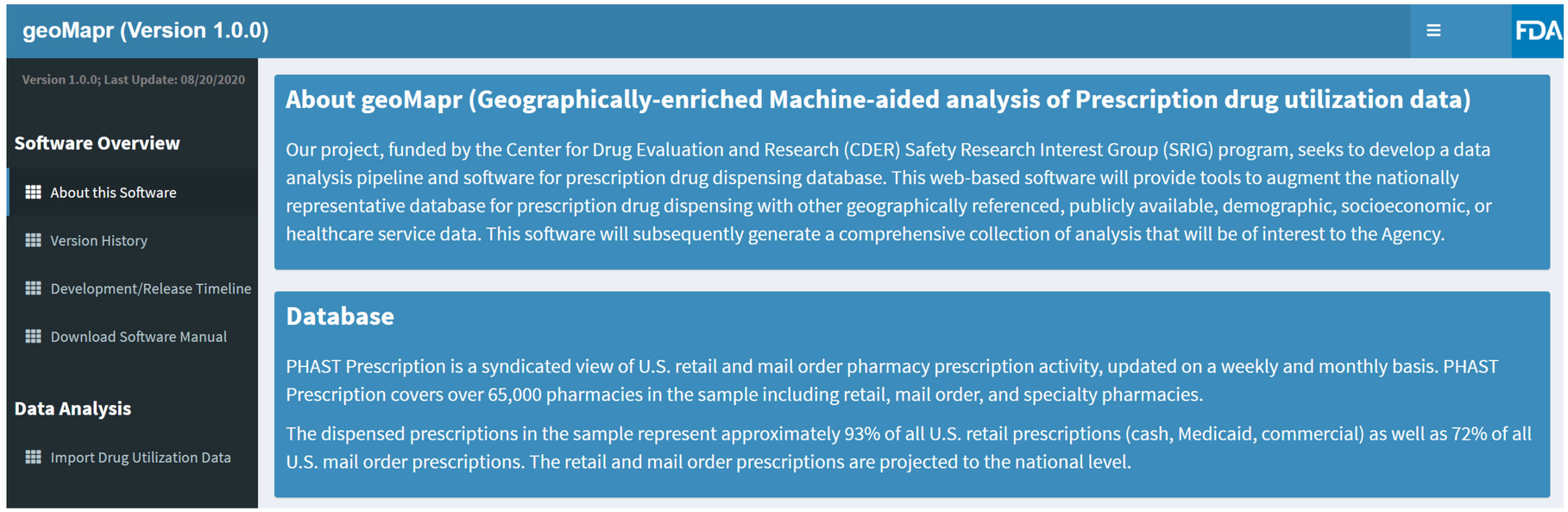

Figure 2. Example analysis of naloxone prescriptions dispensed from U.S. from January 2014 through December 2018.

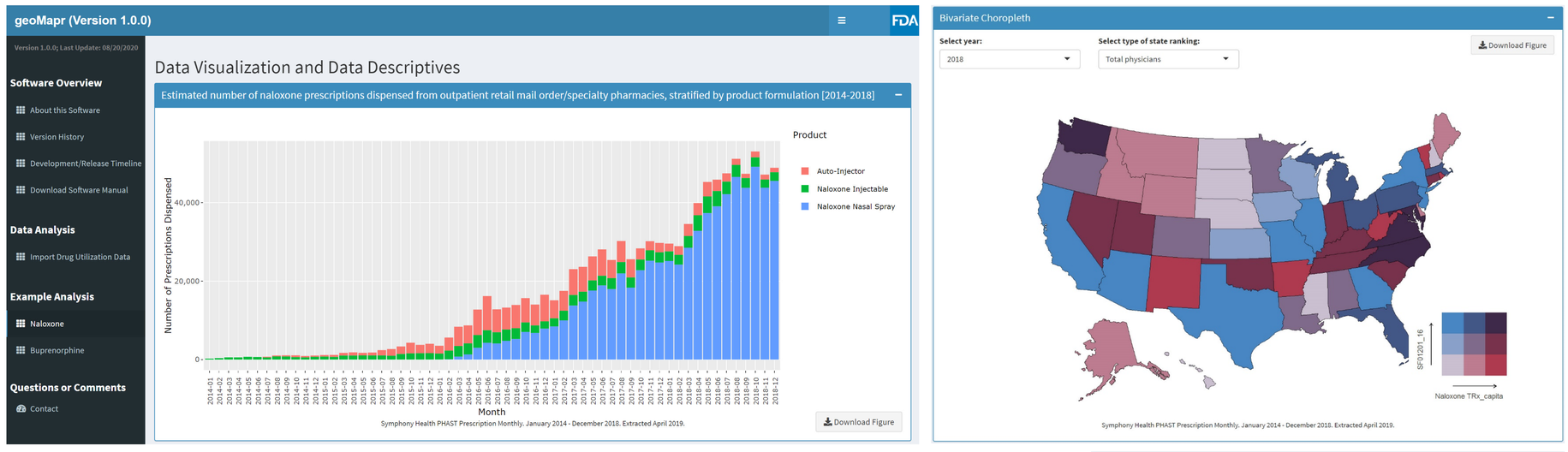

Figure 2 Note. Naloxone prescriptions dispensed from U.S. retail, mail-order/specialty pharmacies is included in the software to guide users. Current capabilities of the software include data visualization, comparison of per-capita dispensing using standardized scoring, and time series analysis. Results of this exploratory analysis can inform further investigations, as the data are not a reflection of the total use across all settings and availability of drug and do not directly measure the product's ultimate use.