## DocFlows: A Web-Based, Interactive App to Explore the Interstate Migration of Residents-in-Training and Practicing Physicians

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**Issue:** Federal efforts to reform graduate medical education (GME) have stalled and states are actively exploring ways to use Medicaid and state appropriations to produce the workforce needed to meet population health needs. In our previous work, we documented these efforts and noted that states have voiced the need for better data. To address this need, we developed the DocFlows web app (http://docflows.unc.edu), which allows users to query, download and share maps/graphs of interstate moves by residents and actively practicing physicians in 35 specialties.

**Methods**: The 2009 and 2015 American Medical Association Masterfiles® were merged and physicians' practice locations in each year were compared. These data are reported separately for the 672,606 physicians who were in active practice in both years and for the 116,799 residents who were in training in 2009 and in active practice in 2016.

**Findings**: California, Florida, and Texas were the largest net importers of physicians and had the highest retention rates for actively practicing physicians, keeping over 90% of their actively practicing physicians in-state between 2009 and 2015. Wyoming had the lowest retention rate, keeping just 18% of residents and 76% of practicing physicians.

**Discussion**: The DocFlows app gives states information about where their physician workforce trained and the out-migration of their workforce to other states. There is significant migration between states of newly trained and actively practicing physicians, and many of these moves are between regions. Any change a state implements to expand GME or increase retention will affect other states.

**Key Words:** graduate medical education, physician migration, physician workforce, state workforce analysis

**HWRC Website Link:** http://docflows.unc.edu