

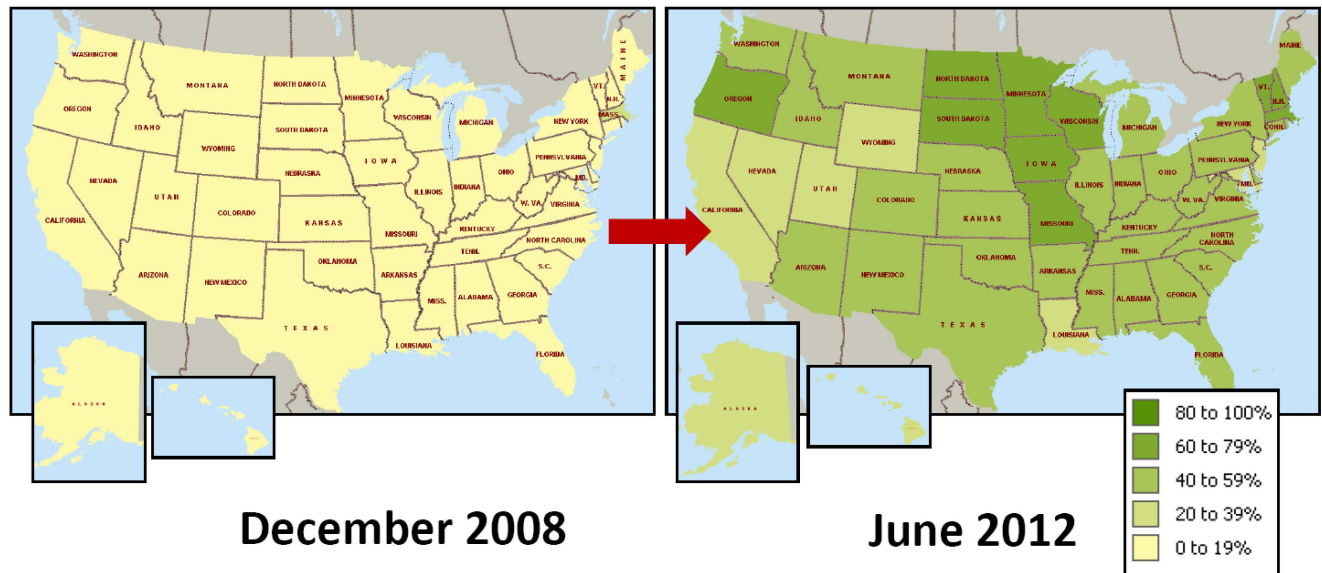
State Variation in E-Prescribing Trends in the United States

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In 2000, the Institute of Medicine (IOM) published a report entitled “To Err is Human: Building a Safer Health Care System,” which described preventable medication errors associated with paper prescribing practices and called for the use of health information technology such as transmitting prescriptions electronically (e-prescribing) to improve patient safety.^{1,2} Recognizing the importance of e-prescribing in improving patient care, the Centers for Medicare & Medicaid Services requires certain eligible health care providers to electronically prescribe as part of meaningful use of certified electronic health record (EHR) technology for which they may qualify for incentive payments.³ This brief describes changes in e-prescribing at the national and state level between December 2008 and June 2012. We examined changes in rates of physician e-prescribing, pharmacy capability to accept e-prescriptions and the volume of e-prescriptions.

The percent of physicians e-prescribing using an EHR has increased in all 50 states and in the District of Columbia.

Figure 1. Percent of physicians e-prescribing using an EHR in December 2008 and June 2012

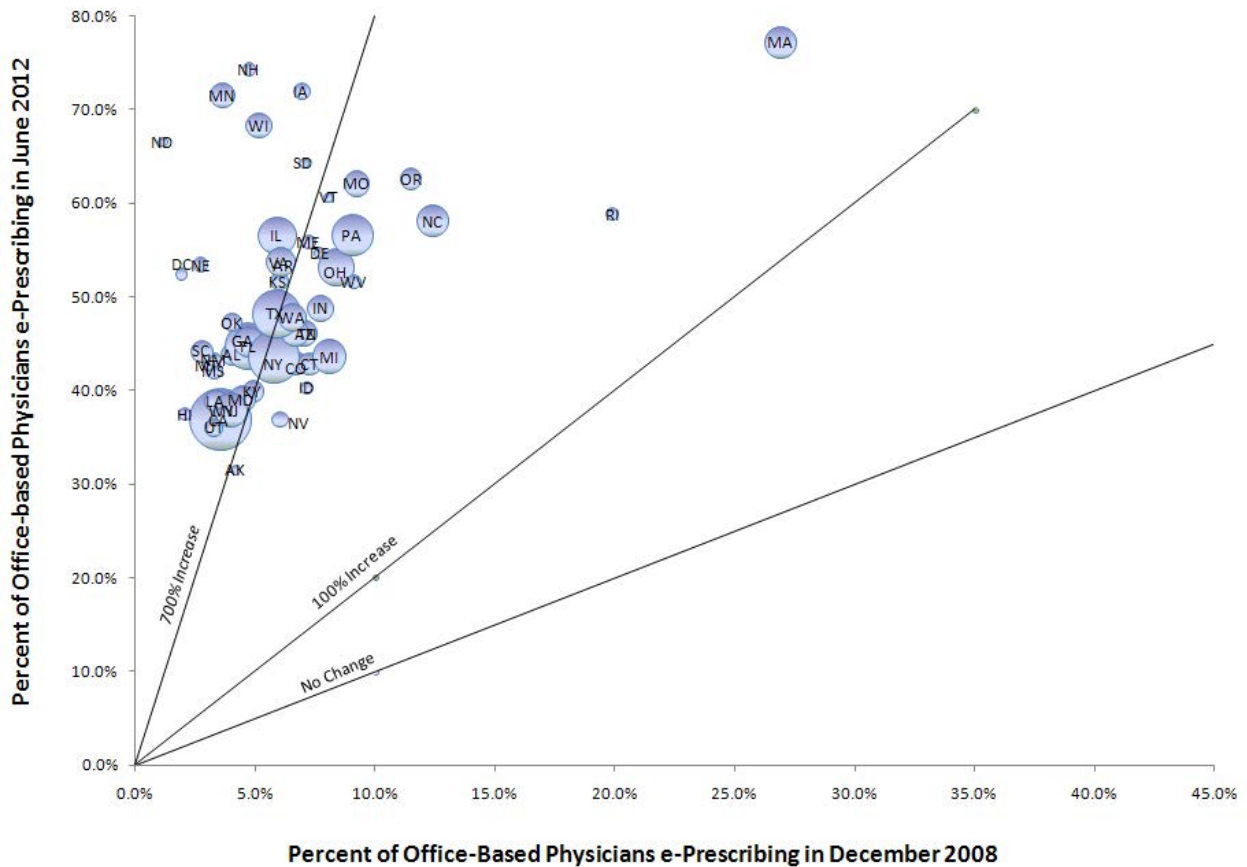


SOURCE: ONC analysis of physician prescriber data from Surescripts. Denominator from SK&A 2011 full-year file.

- ★ In December 2008, 7% of physicians in the U.S. were e-prescribing using an EHR; by June 2012, almost half (48%) of physicians were e-prescribing using an EHR on the Surescripts network (Figure 1).
- ★ As of June 2012, twenty-three states had more than half of their physicians e-prescribing using an EHR on the Surescripts Network.

All States showed double-digit increases in the proportion of physicians e-prescribing using an EHR between December 2008 and June 2012.

Figure 2. Percent of physicians e-prescribing using an EHR in December 2008 and June 2012, by state.



Bubble size represents the number of physicians within a state compared to other states
 SOURCE: ONC analysis of annual prescription data from Surescripts Data

- ★ States that had the highest growth in percent of physicians e-prescribing using an EHR include New Hampshire, North Dakota, Wisconsin, Iowa, and Minnesota from December 2008-June 2012. (Figure 2).
- ★ The range in growth in physicians' e-prescribing at the state-level was between 28 to 70%.
- ★ States that had low rates of physicians' e-prescribing as of December 2008, such as North Dakota (1%), Hawaii (2%), District of Columbia (2%), Utah (3%), and Louisiana (3%) all increased by at least 30 percentage points.



As of June 2012, almost half of physicians nationwide e-prescribe through an EHR, representing a 41% increase since December, 2008

Table 1: Growth in the percent of physicians e-prescribing through an EHR; December 2008 and June 2012

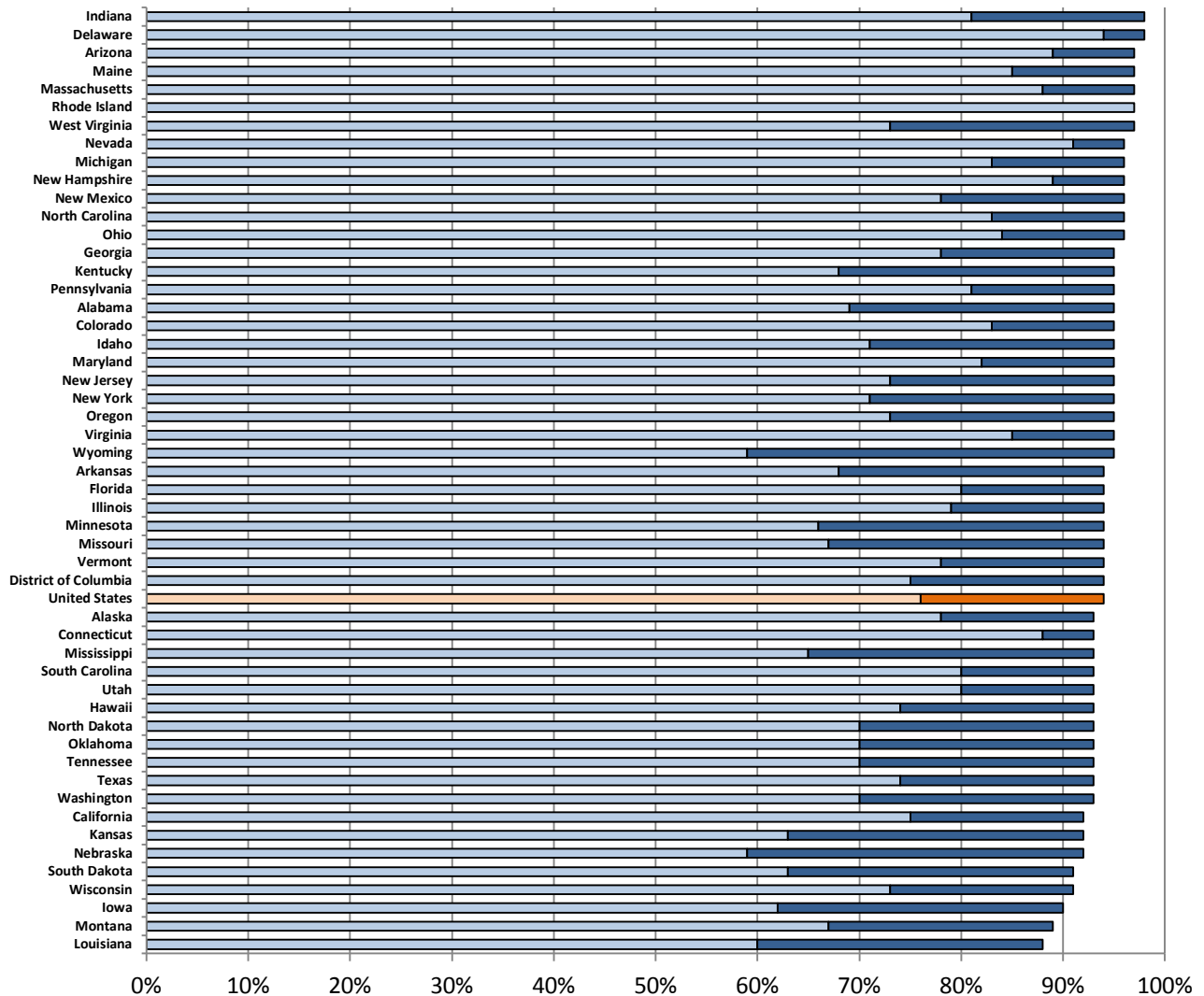
State	Dec 2008	June 2012	Percentage Point Increase	State	Dec 2008	June 2012	Percentage Point Increase
United States	7%	48%	41	Missouri	9%	62%	53
Alabama	4%	44%	40	Montana	3%	43%	40
Alaska	4%	32%	28	Nebraska	3%	53%	51
Arizona	7%	46%	39	Nevada	6%	37%	31
Arkansas	6%	54%	48	New Hampshire	5%	74%	70
California	4%	37%	33	New Jersey	4%	38%	34
Colorado	7%	43%	36	New Mexico	3%	43%	40
Connecticut	7%	43%	36	New York	6%	44%	38
Delaware	8%	55%	47	North Carolina	12%	58%	46
District of Columbia	2%	52%	50	North Dakota	1%	67%	65
Florida	5%	45%	40	Ohio	8%	53%	45
Georgia	5%	45%	40	Oklahoma	4%	47%	43
Hawaii	2%	38%	36	Oregon	11%	63%	51
Idaho	7%	41%	34	Pennsylvania	9%	57%	48
Illinois	6%	57%	51	Rhode Island	20%	59%	39
Indiana	8%	49%	41	South Carolina	3%	44%	41
Iowa	7%	73%	66	South Dakota	7%	64%	57
Kansas	6%	52%	46	Tennessee	7%	46%	40
Kentucky	5%	40%	35	Texas	6%	48%	42
Louisiana	3%	39%	36	Utah	3%	36%	33
Maine	7%	56%	49	Vermont	8%	61%	53
Maryland	4%	39%	35	Virginia	6%	54%	48
Massachusetts	27%	77%	50	Washington	7%	48%	41
Michigan	8%	44%	36	West Virginia	9%	52%	43
Minnesota	4%	72%	68	Wisconsin	5%	68%	63
Mississippi	3%	42%	39	Wyoming	4%	38%	34

SOURCE: ONC analysis of annual prescription data from Surescripts Data

- ★ In June 2012, states rates of physicians e-prescribing through an EHR ranged from 32% to 77% (Table 1).
- ★ Massachusetts (77%), New Hampshire (74%), and Iowa (73%) had the highest rate of physicians e-prescribing through an EHR.
- ★ From December 2008 to June 2012, nineteen states increased the percent of physicians e-prescribing through an EHR by 50% or more.

In 2012, the vast majority of community pharmacies across the country are enabled to accept e-prescriptions.

Figure 3: Growth in the percent of pharmacies enabled to e-prescribe; December 2008 to June 2012, by state.

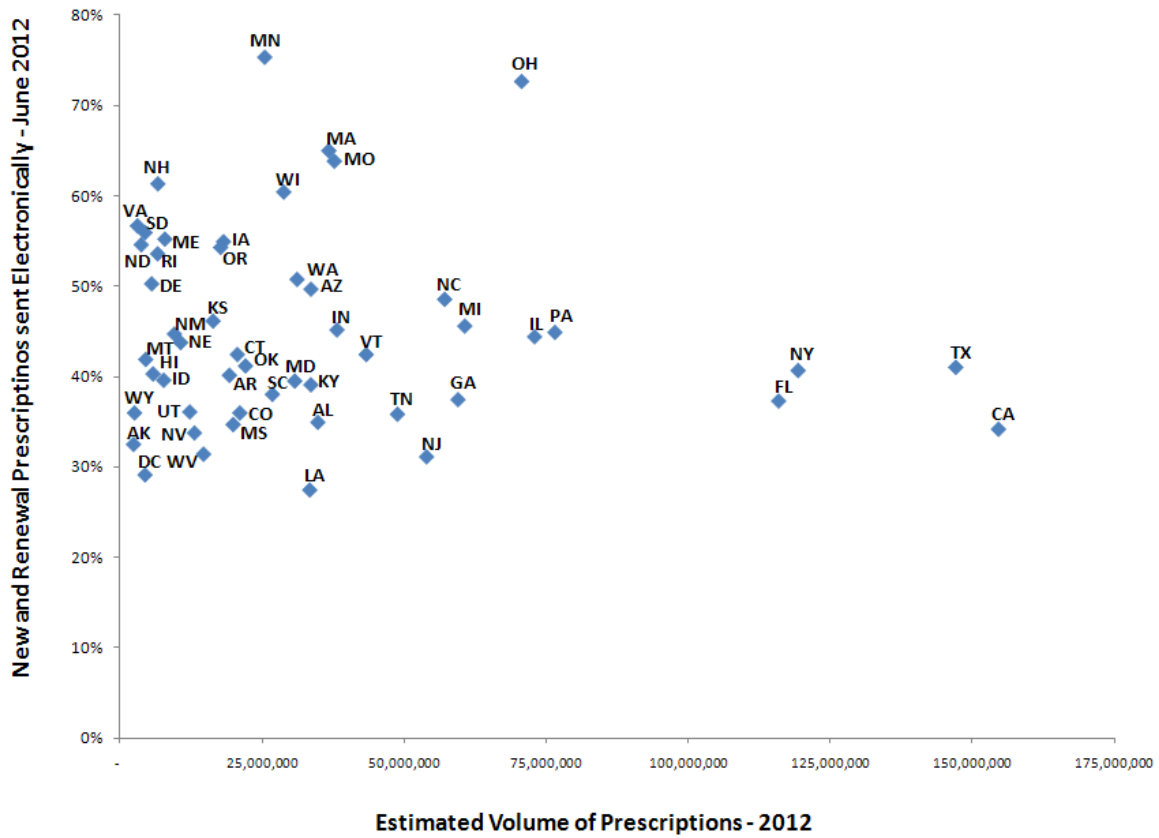


SOURCE: ONC analysis of pharmacy data from Surescripts

- ★ From December 2008 through June 2012, community pharmacies enabled to accept e-prescriptions increased from 76% to 94% (Figure 3).
- ★ Wyoming experienced the largest increase in community pharmacies enabled to accept e-prescriptions (36%); conversely, Rhode Island remained stable with 97% of pharmacies enabled to accept e-prescriptions.
- ★ As of June 2012, all states have a rate of at least 88%.

In 2012, approximately 45% of new and renewal prescriptions were sent electronically.

Figure 4: Percent of new and renewal prescriptions sent electronically in 2012, by state.



SOURCE: ONC analysis of annual prescription data from Surescripts, June 2012
 Forecasting for 2012 based upon Surescripts data from the first half of 2012 (383 million new and renewal prescriptions sent electronically)

- ★ In 2012, all states have at least 20% transmitted electronically (Figure 4).
- ★ Sixteen states send over half of their new and renewal prescriptions electronically.
- ★ The four states with the highest volume of prescriptions are below the national average for new and renewal prescriptions sent electronically.



The volume of new and renewal prescriptions sent electronically has increased ten-fold.

Table 2: Volume of New and Renewal Prescriptions Sent Electronically in 2008 and 2012, by state.

State	New and Renewals 2008	New and Renewals 2012	Percentage Point Increase	State	New and Renewals 2008	New and Renewals 2012	Percentage Point Increase
United States	4%	45%	41	Missouri	4%	65%	61
Alabama	2%	35%	33	Montana	1%	42%	41
Alaska	2%	33%	31	Nebraska	2%	44%	42
Arizona	6%	50%	44	Nevada	9%	34%	25
Arkansas	2%	40%	39	New Hampshire	3%	61%	58
California	3%	34%	31	New Jersey	5%	31%	27
Colorado	4%	36%	32	New Mexico	2%	45%	43
Connecticut	6%	42%	36	New York	3%	41%	37
Delaware	7%	50%	43	North Carolina	6%	49%	42
District of Columbia	3%	29%	27	North Dakota	0%	55%	54
Florida	4%	37%	33	Ohio	4%	73%	68
Georgia	2%	37%	35	Oklahoma	2%	41%	39
Hawaii	1%	40%	39	Oregon	4%	54%	50
Idaho	4%	40%	35	Pennsylvania	6%	45%	39
Illinois	4%	44%	41	Rhode Island	17%	54%	36
Indiana	3%	45%	42	South Carolina	1%	38%	37
Iowa	2%	55%	53	South Dakota	1%	56%	55
Kansas	3%	46%	43	Tennessee	4%	36%	32
Kentucky	3%	39%	36	Texas	3%	41%	38
Louisiana	3%	27%	25	Utah	1%	36%	35
Maine	6%	55%	49	Vermont	4%	57%	52
Maryland	5%	40%	34	Virginia	3%	42%	39
Massachusetts	20%	64%	44	Washington	4%	51%	47
Michigan	8%	46%	37	West Virginia	3%	31%	28
Minnesota	4%	75%	72	Wisconsin	2%	60%	58
Mississippi	1%	35%	34	Wyoming	2%	36%	34

SOURCE: ONC analysis of annual prescription data from Surescripts Data
 Forecasting for 2012 based upon Surescripts data from the first half of 2012 (383 million new and renewal prescriptions sent electronically)

- ★ In 2012, states rate of new and renewal prescriptions sent electronically range from 27% to 75% (Table 2).
- ★ Minnesota (75%), Ohio (73%), and Missouri (65%) have the highest rate of new and renewal prescriptions sent electronically.
- ★ It is estimated that 45% of new and renewal prescriptions will be sent electronically in 2012.

Summary

The percent of physicians e-prescribing using an EHR increased from 7% in December 2008 to almost half of physicians (48%) in June 2012. Increases occurred in all fifty states and the District of Columbia. Twenty-three states had more than half of their physicians e-prescribing using an EHR, with New Hampshire, Minnesota, Iowa, North Dakota, and Wisconsin experiencing the largest increases since December 2008.

The growth in e-prescribing has not been limited to physicians. In the same period, the percent of community pharmacies enabled to accept e-prescriptions grew from 76% to 94%. Wyoming, Nebraska, and Kansas had the largest increases in community pharmacies enabled to accept e-prescriptions. The vast majority of pharmacies are enabled to accept e-prescriptions in Rhode Island (97%), Delaware (98%), and Nevada (96%). These three states also had the highest percentages in December 2008, and therefore showed the smallest increases in pharmacies enabled to accept e-prescriptions.

The growth of physicians and pharmacies e-prescribing has corresponded with a ten-fold increase in the growth of new and renewal prescriptions sent electronically. In 2008, only 4% of new and renewal prescriptions were sent electronically. Our forecasting using data through June 2012 predicts that 45% of new and renewals prescriptions will be sent electronically in 2012. Minnesota (75%), Ohio (73%), and Missouri (65%) have the highest rate of new and renewals sent electronically. However, the four states with highest volume of prescriptions: California, Texas, New York, and Florida, are all below the national average. This challenge presents an opportunity to increase the proportion of new and renewals sent electronically among these states.

Data Source and Methods

This study examined trends in e-prescribing using data from Surescripts, a leading e-prescribing network. Surescripts is an e-prescription network utilized by approximately 95% of all community pharmacies in the U.S. routing prescriptions, excluding closed systems such as Kaiser Permanente.⁴ All 50 states and the District of Columbia were included in the analysis. This analysis included chain, franchise, and independently owned pharmacies. Medical device manufacturers, nuclear, government/military, and infusion pharmacies are excluded using pharmacy type variables provided by National Council for Prescription Drug Programs.

Data for annual percentages of new and renewal prescriptions routed through the Surescripts network data exclude controlled substances, which are not yet permitted on the Surescripts network.

Physician denominators was developed with SK&A, a propriety data set using a combination of the title and specialty variables.⁵ The counts were de-duplicated to correct for individual providers who are observed at multiple sites.

Definitions

E-Prescribing: the electronic transmittal of a prescription to a pharmacy from the prescriber.

Enabled pharmacy: Pharmacy that has connected with the Surescripts network and is capable of receiving e-prescribing transactions.

Community pharmacy: A chain, franchise, or independently owned pharmacy. Medical device manufacturers, nuclear, government/ military, and infusion pharmacies are excluded.

New prescription: New prescriptions electronically routed from prescribers to pharmacies (including mail order).

Renewal prescription: Renewal responses electronically routed between prescribers and pharmacies (including mail-order).

Electronic health record: A collection of electronic health information that is capable of being shared across different health care settings. Electronic health records may include patient demographics, medical history, medications, allergies, immunization status, laboratory test results, radiology images, and vital signs.

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The authors are with the Office of the National Coordinator for Health Information Technology, Office of Economic Analysis, Evaluation and Modeling.

Acknowledgements

The authors would like to thank Emily Hogin, Max Sow and Andre Fowlkes for their help with data interpretation. Additionally, the authors would like to thank Peter Banks and Erica Galvez from the State HIE Program for their assistance with this brief.

Suggested Citation

Hufstader M, Swain M, Furukawa MF. State Variation in E-Prescribing Trends in the United States. *ONC Data Brief, no. 4*. Washington, DC: Office of the National Coordinator for Health Information Technology, November 2012.