



## STATE SPOTLIGHT OF EVIDENCE IN ACTION:

# Washington State's Evidence-Informed Approach To Monitor Antibiotic Use In Children

### What's the prescribing landscape in Washington State?

While Washington State currently does not have regulatory policies specifically related to antibiotic prescribing, there are many ongoing multi-stakeholder initiatives to improve antimicrobial stewardship. For example, the Department of Health (DOH) provides stewardship program implementation guides for small hospitals, long-term care facilities and outpatient clinics; recognizes hospitals with antimicrobial stewardship programs; collects antibiograms from across the state; and convenes the Antimicrobial Stewardship Advisory Committee, which advises the DOH on various activities.

Other state-based organizations active in antimicrobial stewardship include the University of Washington, whose Tele-antimicrobial Stewardship Program (TASP-ECHO) brings various hospitals together with weekly teleconferences, telementoring, remote grand rounds, and regular site visits. The Washington State Hospital Association (WSHA) also partners with hospitals around the state and creates toolkits, policies, and site visit opportunities for physician engagement on this topic.

The Washington State Health Care Authority (HCA), which leads health care transformation efforts for the state's Medicaid program, Apple Health, does not have specific antimicrobial stewardship programs, but does have activities in this area related to payment incentives and data collection. The HCA partners with the WSHA

in the Medicaid Quality Incentive Program, in which hospitals may receive an incentive payment based on the achievement of specific goals, including the achievement of WSHA Antimicrobial Stewardship program components. Additionally, the HCA may collect antibiotic prescribing data as part of quality measure reporting, such as in Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis.

### How does Washington State Currently Disseminate Clinical Findings?

Several Washington State agencies are committed to keeping up-to-date with and disseminating new, evidence-based findings related to quality clinical interventions. The HCA currently disseminates and implements new evidence through various channels based on the nature of the clinical intervention studied. Some channel examples include:

- The Pharmacy and Therapeutics (P&T) committee, which has oversight over the state's preferred drug list and pharmacy policies. Evidence of efficacy and safety is incorporated into the development of coverage policies and criteria.
- The Health Technology Assessment Program (HTAP), which evaluates diagnostic and therapeutic technologies to determine coverage for Medicaid, public employees, and Labor and Industries.

The Medicaid Medical Director Network (MMDN) focuses on the development and use of evidence-based medicine, measurement and improvement of health care quality, and the redesign of health care delivery systems. A Medicaid Medical Director promotes and disseminates clinical policy reforms that improve utilization management and delivery system transformation, to improve the health or quality of care for beneficiaries. This use case provides an overview of current antibiotic prescribing trends in Washington State and strategies a Medicaid Medical Director might use to disseminate evidence-based research.

- The Bree Collaborative, a group with public and private sector members that works to improve quality, health outcomes and cost effectiveness by incorporating evidence based best practices. The group has representation from health plans, purchasers, providers including physicians and hospitals, quality improvement organizations, and community experts. Recommendations from this group are developed on specific topics every year and then sent to the Health Care Authority for review.

Research implementation through the Medicaid agency in Washington State may not be as effective as implementation through other state agencies such as the Department of Health. However, partnering and sharing clinical findings with those collaborative programs mentioned above, could help foster new ways to improve data collection (i.e. claims data) for the purposes of creating provider prescribing reports.

### **What are the lessons learned for Medicaid medical directors in other states?**

The initiatives that are ongoing in Washington State can be cumbersome as it takes various stakeholder groups to implement clinical change. Yet, the Washington State MMDs play a unique role in clinical dissemination, as they have access to rich sources of admin-

istrative data and can use payment and/or policy incentives to drive initiatives and improve data exchange between agency partners. However, given the multiple Medicaid initiatives most MMDs oversee and constant competing priorities, it can be difficult to serve in a primary disseminator role. With the different programs and stakeholders involved, the MMD is one of the many voices that references and implements clinical findings to improve quality of care for various patient populations. In addition to other strategies already mentioned, creating implementation toolkits targeted towards Medicaid leadership could be effective. MMDs who create synthesized policy cases on applicable research studies will help increase the efficiency of contacting appropriate stakeholders. Ultimately, all stakeholders in health care are aligned around a common goal – improving the lives of those we serve, while making the most of the limited resources available. Robust conversations about evidence and quality of care are necessary to further that goal, and from the vantage point of public agencies covering millions of lives, MMDs are well positioned to help lead those discussions.

### **Endnotes**

1. <https://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/Healthcare-ProfessionsandFacilities/HealthcareAssociatedInfections/AntibioticResistance/Stewardship>
2. <https://www.uwtasp.org/>

## STATE SPOTLIGHT OF EVIDENCE IN ACTION:

# Kentucky's Evidence-Informed Approach To monitoring Antibiotic Use in Children

### What's the antibiotic prescribing landscape in Kentucky?

Kentucky currently does not have Medicaid policies regarding outpatient antibiotic use as most Managed Care Organizations (MCOs) in the state do not have antibiotic stewardship programs. However, in 2016 the Department for Medicaid Services (DMS) began a partnership with the University of Louisville<sup>1</sup> to investigate antibiotic prescribing within the Medicaid population. As a result of

this partnership, Kentucky has patient and prescriber educational<sup>2</sup> resources on antibiotic use. The University of Louisville traveled to areas of the state with high antibiotic prescribing to present to provider groups and conduct parent and provider interviews to assess antibiotic use. The partnership also analyzed statewide claims data on provider prescribing trends, displayed in the table below.

### Current Provider Prescribing Trends

Kentucky Statewide Prescribing Data	2012	2013	2014	2015	2016	2017
Number of antibiotic prescriptions for children filled	740,014	678,021	650,129	696,124	737,624	774,293
Number of Children receiving an antibiotic prescription <sup>3</sup>	300,793	286,139	287,844	303,297	317,728	327,492

Table 1: This table illustrates how the number of antibiotic prescriptions for children filled has increased from 2012 to 2017. In addition, the number of children receiving at least one prescription has also increased.

The Medicaid Medical Director Network (MMDN) focuses on the development and use of evidence-based medicine, measurement and improvement of health care quality, and the redesign of health care delivery systems. A Medicaid Medical Director promotes and disseminates clinical policy reforms that improve utilization management and delivery system transformation, to improve the health or quality of care for beneficiaries. This use case provides an overview of current antibiotic prescribing trends in Kentucky and strategies a Medicaid Medical Director might use to disseminate evidence-based research.

**How does Kentucky Currently Disseminate Clinical Findings?**

Kentucky recognizes the need for antibiotic prescribing practice changes. As an example, their Medicaid pharmacy and medical claims data indicated that Cefdinir, increased in usage from approximately 8% in 2012 to 13% in 2016. At the same time, Medicaid spending on Cefdinir increased from \$2.3M in 2012 to \$4.7M in 2016, resulting in an increase from 15% to 27% of all antibiotic spending. Kentucky Medicaid currently disseminates and implements antibiotic clinical findings through MCO provider information/educational flyers, with two out of five MCOs already receiving material on the use of antibiotic prescribing. Kentucky plans to disseminate the results through category two continuing medical education (CME) activities (e.g. peer consultation, development and review of quality data, medical writing, self-assessment activities, etc.) for all provider groups and their professional organizations throughout the state.

In addition, KY Medicaid employs various strategies to address the increase in prescribing rates. For one, they note the value in having a dialogue with MCO medical directors on potentially developing an outpatient antibiotic stewardship program to address the increase in prescribing rates. Using existing provider dashboards as an incentive for prescribing habits and developing additional provider dashboards, can foster healthy competition between provider groups. The measures in the dashboards track

over time to see if the intervention is working, thus quantifying impact. Additionally, they leverage their contractual partnerships with their state university researchers. Working with the University of Louisville researchers, Kentucky Medicaid was able to retrieve and disseminate data to create the clinical case that prescribing patterns need to change in Kentucky. Finally, Kentucky is also considering ways to disseminate key information through existing taskforces made up of MCOs, Academic Medicine infectious disease specialists, pharmacists and Medicaid leadership, which can further implement change in this area.

**What are the lessons learned for Medicaid medical directors in other states?**

The Kentucky Medicaid Medical Director serves as an important disseminator, as they have access to their state's MCOs and can streamline the use of Medicaid data and performance improvement projects. However, MMDs are seen serving in an administration role versus a provider role. As a result, any MMD recommendations on clinical practices can be perceived as intrusive by other physicians who do not want to have their prescribing habits on display. However, MMDs can learn from some of Kentucky's successes and strategies to disseminate clinical findings. Through inter-agency collaboration and identifying data gaps, the Kentucky MMD is an important actor when improving care quality for various patient populations.

**Most Commonly Prescribed Antibiotics<sup>4</sup>**

Antibiotic	2012	2013	2014	2015	2016	2017
Amoxicillin	617	602	566	601	633	632
Azithromycin	435	372	326	309	302	277
Cefdinir	140	139	158	188	209	217
Amoxicillin-Clavulanate	178	167	145	152	152	152
Total prescriptions per 1000 children	1370	1280	1195	1250	1296	1278

Table 2: This table illustrates that prescribing rates for amoxicillin and cefdinir increased from 2012 to 2017, while rates for azithromycin and amoxicillin-clavulanate decreased. Overall, there is a general downward trend for antibiotic prescribing.

**Endnotes**

1. [uofl.edu/ky-antibiotic-awareness](http://uofl.edu/ky-antibiotic-awareness)
2. <https://louisville.edu/medicine/departments/pediatrics/divisions/child-adolescent-research-design/KYAbxAwareness/kaa-implementation-workbook>
3. Children are receiving more than one prescription per calendar year
4. <https://academic.oup.com/jpids/advance-article/doi/10.1093/jpids/piz084/5673102?guestAccessKey=076e3f1b-534d-4ab1-a205-4ff81a8f9bf>



## STATE SPOTLIGHT OF EVIDENCE IN ACTION:

# New York's Evidence-Informed Approach To Monitoring Antibiotic Use In Children

### What's the antibiotic prescribing landscape in New York?

New York State (NYS) has actively focused on antibiotic prescribing among adults, with a limited focus on children. In a recent analysis of pharmacy claims data from NYS Medicaid during October 2018 through September 2019, 44% of all members (children and adults) combining both fee-for-service and Medicaid managed care membership, had an antibiotic prescribed. Amoxicillin was the number one antibiotic prescribed, followed by azithromycin. To address this prescribing rate, NYS has established stakeholder advisory committees to develop strategies across various health sectors. NYS had a budget initiative this past fiscal year (2019-2020) addressing antibiotic usage and is currently working on a prescriber education program (PEP) relating to the appropriate utilization of antibiotics.

New York recognizes the importance of monitoring and limiting prescribing practices as evident by other work, such as the United Hospital Fund study. The United Hospital Fund in NY undertook

a study in adults to determine which populations were affected most by potentially inappropriate use of antibiotics, and prescribing rates were examined by patient and health plan characteristics.

**“As New York State’s public health laboratory, the Wadsworth Center has made bacterial drug resistance one of its priority focus areas and is directly addressing the President’s Council of Advisors on Science and Technology (PCAST) recommendations. As part of our Public Health Genomics Initiative, we will develop genomics methods that will directly benefit the State’s surveillance activities, and our bacterial drug resistance research group is focusing on understanding the biology of bacterial drug resistance to allow us to further combat this phenomenon.”**

The analysis illuminated the distribution of potentially inappropriate antibiotic prescribing for adults with ARIs in New York’s Medicaid program, and examines questions about various patient, provider, and plan-level factors that may be contributing to inappropriate antibiotic use. “As New York State’s public health laboratory, the Wadsworth Center has made bacterial drug resistance one of its priority focus areas and is directly addressing the President’s Council of Advisors on Science and Technology (PCAST) recommendations. As part of our Public Health Genomics Initiative, we will develop genomics methods that will directly benefit the State’s surveillance activities, and our bacterial

drug resistance research group is focusing on understanding the biology of bacterial drug resistance to allow us to further combat this phenomenon.”

The Medicaid Medical Director Network (MMDN) focuses on the development and use of evidence-based medicine, measurement and improvement of health care quality, and the redesign of health care delivery systems. A Medicaid Medical Director promotes and disseminates clinical policy reforms that improve utilization management and delivery system transformation, to improve the health or quality of care for beneficiaries. This use case provides an overview of current antibiotic prescribing trends in New York State and strategies a Medicaid Medical Director might use to disseminate evidence-based research.

### How does New York Currently Disseminate Clinical Findings?

NYS Medicaid disseminates clinical findings through monthly “Medicaid Updates” for providers and, for specific issues, in their pharmacy Prescriber Education Program (PEP). Medicaid is currently finalizing a PEP module on appropriate antibiotic utilization expected to be released in February 2020. In addition, education and dissemination to NY’s Medicaid managed care plans is provided through quarterly meetings with the plans’ medical directors and, separately, quarterly meetings with their pharmacy directors.

NYS has various effective dissemination channels, successfully coordinating multi-stakeholder groups to implement clinical change. The New York Medicaid Medical Directors are stewards for clinical dissemination as they have access to managed care plan medical directors and their network providers. Their leadership role provides the ability to use state government authority to implement clinical change among said stakeholder groups. However, there could be a disconnect between fee-for-service providers and managed care providers, as the former is more difficult to directly access. NYS MMDs have several options for dissemination of clinical findings, such as their pharmacy and medical director meetings with health plans and collaborative processes with the Office of Public Health (OPH). NY’s Medicaid managed care plans have the ability to further disseminate information to their medical provider networks as shared from the NYS OPH and DOH. NYS MMD Medicaid Updates, which include information on antibiotic utilization, is an additional resource payers share with providers.

### What are the lessons learned for Medicaid medical directors in other states?

For a state like New York that has an identified prescribing problem for adults, there is a need for additional studies in order to move the policy needle. However, identifying PCORI studies that focus on particular populations like adolescents provides an opportunity for NYS Medicaid to disseminate and implement key findings on pediatric antibiotic utilization and allow for greater partnerships with public health colleagues. An MMD has the ability to work with select health care stakeholders, such as MCO Medical Directors, and develop materials that can further synthesize and translate research findings. In addition, an MMD has the capability to address clinical gaps in Medicaid policies and can be a champion for enacting policies that serve populations. With the different programs and stakeholders involved, leveraging the MMD as one of the many voices that instills and implements clinical findings is a productive strategy in improving quality of care for various patient populations.

### Endnotes

1. [https://uhfnyc.org/media/filer\\_public/88/65/88650c52-3302-4ea5-8b3c-11b0f0b-227cf/antibioticprescribingny Medicaid\\_20180622\\_5.pdf](https://uhfnyc.org/media/filer_public/88/65/88650c52-3302-4ea5-8b3c-11b0f0b-227cf/antibioticprescribingny Medicaid_20180622_5.pdf)
2. <https://www.wadsworth.org/research/areas/bacterial-drug-resistance>
3. [https://www.health.ny.gov/health\\_care/medicaid/program/prescriber\\_education/presc-educationprog](https://www.health.ny.gov/health_care/medicaid/program/prescriber_education/presc-educationprog)
4. OPH has a major emphasis on antibiotic resistance, and just had a campaign where children made signs about appropriate antibiotic usage and antibiotic resistance. [https://www.health.ny.gov/professionals/protocols\\_and\\_guidelines/antibiotic\\_resistance/](https://www.health.ny.gov/professionals/protocols_and_guidelines/antibiotic_resistance/)