State legislatures increasingly are using big data in new ways to develop more effective policy. Nineteen states now have chief data officers whose main job is to create data-driven solutions for a range of issues from criminal justice to natural disaster mitigation and response.

Big data is precisely what it sounds like: huge collections of information. The amount stored worldwide rose from three zettabytes in 2012 to 16 zettabytes in 2016. By 2025, it’s expected that we will have collected 163 zettabytes of data. How much is that? A lot. One zettabyte equals 1 billion terabytes or 931,322,574,615.48 gigabytes. Put another way, it’s the equivalent of “250 billion DVDs, 36 million years of HD video or the volume of the Great Wall of China, if you allow an 11-ounce cup of coffee to represent a gigabyte of data,” according to the tech website engadget.

These data collections are so vast that traditional data analysis no longer works. The valuable patterns and useful information that lie within the collections, however, can be studied by using predictive analytics software.

Five state agencies in Massachusetts, for example, analyzed their combined data to find patterns that might help in the fight against opioid deaths. Analysts found that most opioid-related deaths resulted from illegally obtained drugs, and that people recently released from prison were 56 times more likely to die of an overdose than others. As a result, alerts were added to the prescription monitoring system, and the Department of Public Health now works directly with the Department of Corrections on prison release procedures.

Big data is also big business. To encourage the development of the industry, some states offer tax incentives. In 2013, lawmakers in Arizona and Illinois passed bills exempting data center equipment from sales taxes. Texas lawmakers eliminated most of the sales tax on new data centers larger than 100,000 square feet and in which at least $200 million is invested.

Federal agencies have offered incentives as well. In 2015, for example, the Bureau of Justice Assistance awarded $22.5 million to state and local police departments that wanted to use, but couldn’t afford, body-worn cameras. The trove of information collected by the devices can be useful when developing state and local policy.

States and policymakers have greater access to big data than ever before. Using big data can save money and lead to innovative solutions, but it also can be misused. Most concerns relate to maintaining data owners’ privacy. Other concerns are political. As data analysts get better at precisely identifying voters and their preferences, for example, partisan gerrymandering could worsen.

Many observers, however, believe the analysis of big data will yield more good than bad, offering states an opportunity to save money, streamline bureaucratic processes and tackle a wide range of policy issues.

— Anna Smith and Riley Hutchings, NCSL interns
Training, Retaining Principals

Ask anyone over age 35 how they remember their school principals and you’re likely to hear words such as “authoritarian,” “powerful,” “strict,” “unapproachable.” The role of the school principal has historically been associated with these characteristics.

Today, the principal’s role has evolved, and these leaders play an ever greater part in a school’s success. For example, in a recent survey, conducted every 10 years by the National Association of Elementary School Principals, today’s leaders expressed much more concern over students’ mental health, family financial status, degree of adult supervision and physical safety than they did in previous surveys. Principals are now synonymous with leadership, instructional support and student advocacy. They have become change agents for all who enter their buildings.

Yet, despite principals’ vital role in student success, job turnover rates continue to rise. Through its “Principal Pipeline Initiative,” a recruitment, retention and preparation program for school leaders, The Wallace Foundation is just beginning to understand why: Although preparation is key to building strong leaders, hiring and placing those leaders are just as important to their retention.

Wallace developed the Leader Tracking System, a set of webpages, dashboards and tools that catalogs candidates’ experience, performance and competency to improve the likelihood of matching novice principals with appropriate schools. Determining the “perfect fit” when hiring principals may in fact be key in retaining them, according to Wallace research.

The Education Finance and Policy journal published a study in January examining the relationship between principals’ effectiveness and turnover rates. It revealed that turnover is higher, on average, among both less effective and highly effective principals than it is among average leaders. The researchers also discovered a link between performance and turnover that suggests hiring and placing effective principals in schools with large numbers of low-income or low-achieving students can decrease turnover rates.

Developing good preparation programs has been on the forefront of educational agendas for several years. Now, with an added focus on hiring, evaluating and supporting school leaders, states no longer adhere to the traditional one-size-fits-all solution for preparing and retaining good principals. Thirty-eight states introduced, and 13 states passed, legislation in 2017 on a variety of school leadership issues.

The American Institute of Research has warned that inconsistent hiring timelines and inadequate recruitment have limited the pool of prepared principal candidates nationwide. If these practices continue, the institute says, districts will continue to have trouble identifying school leaders and placing them in schools where they, and their students, can thrive.

—Ashley Idrees

Working for Benefits

The Trump administration began approving state requests this year to require adult Medicaid recipients to work, with exceptions for pregnant women and people who are elderly or have a disability. Others may receive a pass if they are engaged in community service or caregiving, school, job training or treatment for substance abuse. According to proponents, the requirement will reduce program costs and improve recipients’ health and well-being.

Arkansas, Indiana, Kentucky and New Hampshire, as of Aug. 29, have received approval for the Section 1115 waiver to look at instituting a work requirement as a condition of receiving Medicaid.

The potential impact of these policies to states and enrollees is unknown. But critics say these new rules are unnecessary and will be ineffective because they will affect so few. In 2016, an average of 60 percent of adult Medicaid enrollees were already employed, and 32 percent reported they were unemployed—because of caregiver duties, school, illness or disability—leaving a relatively small 8 percent who may be affected.

State experiences and evaluations will shed light on the effect these approaches have. But that will take time. Until then, the states will continue being the laboratories of democracy they’ve always been.

—Magazine staff
America’s seniors will be able to choose from an expanded list of medical and preventive health services beginning in 2020. The services include transportation to doctor appointments, home delivery of healthy groceries and meals, and in-home upgrades, such as bathtub grab bars, that can help patients with chronic conditions continue living at home.

The services will be available because of recent changes made to the Medicare Advantage program by the Centers for Medicare and Medicaid Services. Medicare Advantage is an optional, flexible program offered through private insurers for Medicare enrollees who can pay for services not offered in regular Medicare plans.

CMS is redefining which health-related extra benefits can be included in the Medicare Advantage program, with the goal of improving the health and quality of life for Medicare patients. The new services must be classified as primary health services covered by the Advantage plans.

CMS will allow state health insurance assistance programs and insurance departments to develop a longer list of supplemental benefits as long as each one diagnoses, prevents or treats a physical or psychological illness or injury, or reduces a patient’s likelihood of being admitted to an emergency room or readmitted to a hospital. Some health experts and providers welcome the added benefits as a much-needed change in the American health care system.

Many countries, especially those running national health programs, already classify some of these services, including transportation, nutrition and home-assistive devices, as preventive and primary care benefits. They have found these services can help lower the overall costs of running a national program, yield better health results in older populations and reduce hospitalization rates.

Others caution that while the expansion will be good for Advantage enrollees, it won’t help regular Medicare participants. About a third of Medicare recipients (20 million of 61 million) opt to pay for an Advantage plan, according to Kaiser Health News. Since Advantage enrollees are paying extra for their plans, opponents argue the changes demonstrate once again that choice in American health care is available only to those who can afford it.

State programs and providers also have expressed concerns that they may not be ready to offer the expanded services in time for the next Medicare open enrollment period, set for Oct. 15 to Dec. 7, 2018.

Expansion of Medicare Advantage services is breaking new ground, and time will tell if the changes and state programs can work together.

—Haley Nicholson

States’ rainy day funds increased for a seventh straight year in FY 2017, to a record $54.7 billion total. That was enough to run state government operations for an average of 20.5 days, also a new high. Early estimates show savings at near-peak levels in FY 2018 as well. Those figures are not yet finalized but will probably rise once missing and final data are counted.

Rainy day funds, sometimes called budget stabilization funds, vary greatly across the country. Alaska and Wyoming had saved enough money to last more than a year, while five states couldn’t have lasted more than a day on the savings in their funds. These reserve funds have become the largest component of states’ financial cushions, accounting for more than 70 cents of every $1 in total balances, compared with 44 cents of every $1 just before the recession. Despite budget pressure from slow tax revenue growth and pent-up spending demands following the recession, most states have used the current economic recovery to steadily replenish and expand their rainy day funds. And it looks like that will be continuing. At least 30 states said they expected to add to their savings in FY 2018, while only seven foresaw a drop, according to the National Association of State Budget Officers.

Even with rainy day funds at peak levels, however, most states’ total balances haven’t yet caught up to pre-recession levels. And even those levels, experts warned, were inadequate to plug huge budget gaps caused by the last recession.

—Magazine Staff
Getting Kids to School Safely

It’s rare for one to occur, but horrific when it does.

Crashes killed 68 children riding in school buses between 2007 and 2016, according to the National Highway Traffic Safety Administration.

Every day, more than 25 million children climb into 485,000 buses around the country. And even though school buses are statistically the safest form of transportation for school children, lawmakers continue to debate what can be done to ensure students arrive to and from schools safely, focusing often on whether to require seat belts and how to improve other drivers’ behavior around bus stops.

School buses are designed with structural safety features such as high, energy-absorbing seat backs and closely spaced seats so children are kept snug. But those features don’t necessarily protect children the way seat belts would during side-impact crashes or high-speed rollovers.

Eight states have passed a seat belt law for school buses, though some laws are contingent on available funding and local buy-in, and most laws are only for new school buses.

Sometimes tragedies bring about changes. After a student and a teacher died in a school bus crash in Paramus, N.J., in May, lawmakers responded by passing legislation requiring lap-shoulder (three-point) seat belts instead of solely lap-belts. The new requirement applies to buses manufactured beginning 180 days after the governor signed the bill.

The National Transportation Safety Board recommends three-point belts for all new buses. Others aren’t so sure seat belts are worth the cost. They point to good safety records and question the wisdom of spending an estimated $7,000 to $10,000 per vehicle to add belts to new buses. Others question whether children can quickly unbuckle and evacuate buses if there is a fire or they are submerged in water.

Even if we have self-driving school buses someday, lawmakers will continue to debate ways to ensure that kids who ride in school buses are as safe as possible.