TEACHING KIDS TO SUCCEED IN LIFE

Making WORKFORCE DEVELOPMENT work

MARIJUANA ADS: What parents should know

A history of TRUTH DECAY
School Leadership Interventions
This toolkit is designed primarily for administrators working in state and local education agencies considering school leadership improvement interventions as a school improvement lever.
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Superpowers and a Vision of World Affairs
“A power rises to preeminence not simply by dint of the force it wields, but by virtue of the vision it embodies,” says policy analyst Ali Wyne. In this commentary, Wyne explores whether U.S. influence in world affairs is declining and explains why shifts in power are more complicated than they seem.
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Back to School, Back to Work
An innovative program in Appalachia is getting workers back on the job and providing a 21st-century model of workforce development.

Social and Emotional Learning
School lessons on resilience, teamwork, and other skills can help students succeed in work and in life.

Commentary
In reckoning with today’s truth wars, look to America’s past.

Dave Jena, left, and his friend Michael Rock, both laid off from the steel mills of southwestern Pennsylvania, are now studying for high-demand jobs in the energy sector. RAND research is helping businesses, schools, and community groups in Appalachia better prepare workers with the skills they need to compete in an ever-changing labor market.
The Fine Print

3D printing represents one of the most promising advances of modern times, authors of a recent RAND study concluded—but with new possibilities come new perils.

The printers can already make everything from basketball shoes to airplane parts, building them up layer by layer. The potential for 3D-printed guns has made headlines in recent weeks. Researchers looked to the year 2040 and tried to anticipate how 3D printing might further change the world, for better and for worse.

One danger: cyber sabotage. If hackers could get into the computer files used by a 3D printer, they could introduce tiny but catastrophic flaws, invisible to the naked eye. That will make cybersecurity a potentially life-and-death challenge as more critical parts, such as airplane components, come off such devices.

A good printer can produce anything from a prosthetic hand to a toothbrush for about the same cost. That will revolutionize manufacturing but could put traditional factory workers out of a job. Those workers will need to be retrained to use 3D printers to avoid what otherwise could be massive job loss.

At the same time, countries will be able to keep more of their production in-house when it doesn’t save money to outsource it. That could weaken the economic ties that have helped bring together nations and promoted at least some international order. Rogue states like North Korea could also skirt international sanctions by printing whatever they need.

But there’s another danger here, and that’s overregulation. 3D printing will present some real challenges to security and global stability, but overreacting to those challenges could smother a new era of innovation. We may one day be able to print houses and heart valves—if we get it right.

What’s needed is a greater public discussion about how to address the potential negatives without stifling the positives, the researchers concluded. And that discussion needs to start now.

MORE AT www.rand.org/tr/PE283
The New House Call

In late summer 2017, Hurricane Harvey howled ashore in Texas, followed a few weeks later by Irma’s landfall in Florida. In the days afterward, amid power outages, blocked roads, and emergency curfews, nonemergency medical care was often out of reach.

A new kind of medical practice stepped in. Telemedicine companies provide live links to remote doctors through a website or phone app. The hurricanes provided one of the first large-scale tests of their services in a disaster. RAND researchers worked with one company, Doctor on Demand, to analyze how it worked.

The company provided more than 2,000 video doctor visits to victims of Harvey and Irma in the 30 days after the hurricanes made landfall. The diagnoses were similar to those made nationally in the same timeframe. Nearly a third were for acute respiratory illnesses, for example, which was almost exactly the same as the national average.

The telemedicine visits were a few percentage points more likely to be for chronic conditions; advice, counseling, and refills; or back and joint concerns. They were less likely to be for mental health concerns. In about 6 percent of the cases, the telemedicine doctor referred the patient to an emergency room, urgent care center, or other in-person clinic.

The results show that telemedicine can play an important role in the wake of a disaster, the researchers wrote. In these cases, at least, that role was not so much catastrophic care as it was handling the day-to-day conditions and concerns of people stuck at home.

MORE AT www.rand.org/t/EP67615

School Conditions, A Mental Health Challenge

Students who feel less safe at school experience higher rates of depression and anxiety, a recent RAND study found. That can have life-changing consequences: Those same mental health concerns were also good predictors of students at risk of dropping out.

The study focused on 22 schools in Baltimore, many of them run-down and slated for renovation or reconstruction. Researchers are following that effort to see whether new school buildings make a difference in student health, attitudes, and achievement. The initial study was the first step: the “Before” picture.

The researchers found the strongest correlations between student perceptions of school climate (in particular, of school safety) and student reports of depression and anxiety. They also found that teachers at less-safe schools reported less energy and more emotional problems, which interfered with their teaching.

The study adds to a growing body of research showing that school quality and climate can have a profound effect on young lives, far beyond test scores. Its finding that mental-health issues could be a warning sign for students thinking about dropping out underscores the importance of that research.

The Robert Wood Johnson Foundation funded the study, which involved around 400 students and 400 educators. It was designed to look for connections in the data, not establish cause and effect. The researchers plan to follow up to see whether the new school buildings change the story.

Their findings will have broad implications, especially amid concerns about school safety and quality. A 2014 report from the National Center for Education Statistics found that 53 percent of U.S. school buildings are in fair or poor condition and should be renovated or replaced.

MORE AT www.rand.org/t/RR2483
Your recent studies have focused on marijuana advertising. What have you been finding out?

We’ve been following several thousand adolescents since 2008, asking them about their experiences, their perceptions, and their substance use. In our latest study, we looked at their exposure to medical marijuana advertising. In 2010, around 25 percent of them reported seeing a medical marijuana ad in the past three months. By the time we hit 2017, it was about 70 percent. Youth who reported that they’d seen more ads also reported greater marijuana use and more positive beliefs about marijuana; they also said that they were more likely to use marijuana in the future and they experienced more consequences from their use. Now that recreational marijuana is legal in California, we will be asking youth about their exposure to those ads as well. We know that tobacco and alcohol advertising affect adolescent substance use, and those ads are regulated. It just amazed me that there were not more specific regulations around marijuana advertising in California.

Why is that concerning?

I’ve noticed that the way teens view marijuana is very different from the way they view alcohol, and part of that is the way it’s marketed. When I talk to teens, they’ll say, ‘Oh, I would never drink and drive, I know that’s really dangerous. But I could use marijuana and drive because it helps me focus, and it’s safe.’ So I think the way it’s been marketed—it’s medicinal, it’s safe, it’s natural—gives them a different perspective. Ads say: ‘Goodbye stress, hello marijuana.’ That’s advertising that you don’t really see for alcohol.

Do you have any tips for parents?

As a parent myself, the main thing I do is explain what medicinal marijuana means, that it’s typically for people who have health problems like cancer, and just because recreational marijuana is legal now doesn’t mean it’s something for teens to use. Their brains are still developing and substance use can affect that development. Alcohol is legal, too, but we don’t want 15-year-olds drinking beer. We have this extra component here, where marijuana is recreational but it’s also medicinal, and I think a lot of kids don’t quite get it. It’s important for parents and providers to be educated and explain the differences between the two.

Are there any efforts to rein in some of this advertising?

Los Angeles County used our work to create an ordinance that limits where you can
D’Amico, shown standing outside a Santa Monica, Calif., dispensary, snapped these photos of billboards alongside Los Angeles freeways.

have marijuana billboards and says you can only have one sign outside a store. That’ll be important, that they can’t have a ton of signage around their stores. We’ve also been contacted by the California Senate about how to best regulate advertising, like how tobacco and alcohol advertising are regulated. Every state is different in terms of what they allow.

**You’ve focused throughout your career on addressing substance use and abuse. Why?**

When I was 16, I really wanted this convertible yellow Mustang. I told my parents, ‘I want to figure out how we can get this yellow Mustang.’ They didn’t laugh at me, they didn’t shut me down. They were like, ‘OK, we’ll talk to you about it after dinner.’ I’d love to tell you that I got the yellow convertible Mustang. I didn’t, but my parents always made me feel like I was listened to. I feel like a lot of teens don’t get listened to, and so sometimes they make poor decisions. I was always interested in trying to talk to people and empower them to make healthier choices. My parents gave me a lot of choices where I could have gotten into trouble and I didn’t; and some of my friends who didn’t have choices did get into trouble. So I think it’s very important how we talk to teens and empower them to think, ‘Well, this is my life, this is my choice.’

**What’s next in your research?**

We just got funding to follow these same youth for four more years, so that’ll take us through when they’re 24, starting from when they were age 11. We’re looking at so many different things with that data. We do a lot of work trying to understand disparities; one of our papers found that as young as high school, minority youth already experience more negative consequences at the same levels of alcohol and marijuana use compared with white youth. We’re also looking at transitions to young adulthood, like going to college, starting relationships, and getting a job, and how alcohol and drug use might affect these transitions.

The exciting thing is that we’re going to follow these young people as they turn 21, the legal age for drinking and now marijuana use. So we’ll be able to look at a lot of things around that big transition and how turning 21 may affect their alcohol and drug use.
Back to School, Back to Work

An ambitious partnership in Appalachia is realigning the skills of the workforce with the needs of employers

By Doug Irving, Staff Writer

Dave Jena (right) and his friend Michael Rock leave class at the Community College of Beaver County. Both are students in a process technology program the college launched to meet the needs of the booming Appalachian oil and gas industry, including a sprawling Shell plant under construction nearby.
POTTER TOWNSHIP, PENN.—In the lean years, when the steel mills closed and jobs vanished, when families locked up their homes and left, it wasn’t clear how this community tucked into a bend in the Ohio River would even survive. The area “felt like it had had the breath kicked out of it,” one local council member said.

That was before companies discovered that the black shale beneath the ground here, once used to make schoolroom slates, harbored an enormous supply of natural gas. This part of Appalachia now produces more natural gas than Iran, and that means jobs. Head out toward the river here, and you can’t miss a skyscraping city of construction cranes piecing together an ethane plant that will soon employ 600 people.

But with new opportunity has come an old problem. America’s rusty system of workforce development has slipped further and further out of alignment with the needs of employers, sending workers into the labor market without the skills they need. In Appalachia, business leaders, schools, and other community stakeholders are now spending millions of dollars to recalibrate that system. With help from RAND researchers, they hope to build a model of workforce training for the 21st century.
Train and retain

“People are only now starting to understand that it’s not, ‘Let’s get an unemployed person into a six-week course and then that will get him or her a job,’” said Gabriella Gonzalez, a senior social scientist in RAND’s Pittsburgh office who has led the research effort in a region of Appalachia that includes parts of Pennsylvania, Ohio, and West Virginia. “That just doesn’t cut it anymore.”

For years now, RAND researchers have advised that America’s vocational schools, technical colleges, and other workforce development programs need to adapt to the changing demands of the labor market. Even hard-hat jobs now require soft skills like time management and communication, as well as technical skills. Yet too many programs skip over them in their rush to qualify workers in processes or operations.

There are good jobs out there. The so-called STEM fields—science, technology, engineering, and math—are expected to generate hundreds of thousands of new openings in the coming years, with an average wage that tops $30 an hour. They don’t always require a four-year college degree, but they do require advanced training, a solid grounding in math and science, and some management skills.

Workforce training needs to change to meet those new realities, and to better prepare the unemployed, the underemployed, the laid-off, and the low-skilled to seize those new opportunities. That has become so vital to economic well-being that RAND is writing it into the recovery plan for hurricane-battered Puerto Rico.

Researchers have been working with the Federal Emergency Management Agency and Puerto Rican agencies to evaluate everything from the island’s power grid and housing stock to its health services, and to provide recommendations to rebuild. A key part of that will be creating a workforce development system to train—and retain—workers with the skills they need to compete in the 21st-century labor market.

Researchers working on that project are applying the lessons they learned in the green hills of Appalachia.

Technical proficiency alone is insufficient

The gas boom there came out of nowhere. Fifteen years ago, most geologists thought the region held only modest supplies of natural gas. Then drilling companies began experimenting with a controversial technique known as hydraulic fracturing—“fracking”—to blast through the shale and release what turned out to be a fortune in gas.

Analysts now expect the shale gas industry to generate 1.9 million jobs by 2035, along with billions of dollars in revenue. But the local labor force has been slow to catch up. Many of the early jobs to start up drill sites went to veteran gas workers coming north from Texas and Louisiana. As one local business group lamented, the region had too many students taking cosmetology classes, and not enough taking machine tech.

In 2014, Chevron Corporation committed to investing $20 million to help build a homegrown STEM workforce in Appalachia to fill jobs in the energy and advanced manufacturing industries. It pulled together private foundations, major employers, and nonprofits to launch the Appalachia Partnership Initiative. The group has since supported programs in high schools, community colleges, training institutes, and even children’s museums to generate interest in STEM jobs. It also has worked to provide training for laid-off workers in the old steel and coal counties of Ohio, Pennsylvania, and West Virginia.

RAND was a founding member of the initiative, and the research lead. In previous work for the National Energy Technology Laboratory, it had found an urgent need in the region for training programs better aligned with the growing energy sector. Yet when researchers surveyed dozens of employers and training providers a few years later, they found that the disconnect remained.
Employers wanted applicants who were technically proficient, but could also think critically and solve problems, manage their time, and speak and write clearly. In the gas industry, one employer told the survey team, "the ability to communicate clearly and work well with others can have life-or-death implications." Training programs, meanwhile, had continued to focus in large part on the technical side, neglecting those soft skills.

Yet educators and employers were not working together to address those skill gaps. Schools were training students without knowing what jobs would be in demand. Employers wanted experienced applicants but had not reached out to local colleges to let them know what they were looking for in their employees, or to provide on-the-job training.

“It was all these different piecemeal efforts,” RAND’s Gonzalez said. “Now, stakeholders in the region are really trying to create a blueprint for collaboration, to bring together employers and education training providers, to even reach down to K–12 schools. The whole idea is to create a system that can adapt and respond to workforce needs that are ever changing.”

Which leads back to that sprawling construction site in Potter Township.

From the ground up

Business groups hailed it as a once-in-a-generation opportunity when Shell announced it would build its ethane processing plant there. “Everyone is very hopeful that this will be the industry that actually does create a new future for us,” said Rebecca Matsco, the chairwoman of the Potter Township board of supervisors. The local Community College of Beaver County, anticipating the announcement, had already started work on a new program to train the process technicians the plant would employ.

The college, which has partnered with members of the Appalachia Partnership Initiative, didn’t just bring in a few retired plant workers to teach some classes. It created an advisory council of industry representatives to build a technician program from the ground up. It sent administrators to Texas to see what worked there, and made sure it was purchasing the same equipment its graduates would use in the real world.

“We as a region had to acknowledge that something about the way that education has been prepping people has missed the mark,” said Betsy McIntyre, the director of the Tristate Energy and Advanced Manufacturing Consortium. “We’re really engaging industry in a different way, helping them understand very clearly the roles they can play. The process technology program is a good example of that.”

Dave Jena will soon be one of the first students to graduate from the program. He’s been out of work for three years now, ever since the steel mill where he worked shut down. On a recent afternoon, he sat at the kitchen table of a childhood friend—a fellow unemployed veteran of the steel mills, also a student in the program—and talked with new hope about the future.

He looked younger than his 49 years, in a worn ballcap and a USMC T-shirt, one arm slung across the back of his chair. He and his buddy laughed: The last time they were in school, the typing class used typewriters.

“It seems like the arrow’s pointing up, for sure,” Jena said. “We haven’t seen nothing like that in forever around here. Usually, we hear about mills shutting down and people going away, not something starting up. So yeah, it’s looking up.”

“We’ve definitely got experience,” he added. “We’re hoping we get an opportunity.”

They had reason for optimism. Earlier that week, an advertisement had appeared in the Beaver County Times. The Shell plant was starting to hire.
Social and Emotional Learning
Prepares Students for the Workforce
... and Life

By Doug Irving, Staff Writer
In schools across America, perseverance is making a comeback, respect is getting its due, and relationships are as much a part of the lesson plan as reading, writing, and arithmetic.

Teachers call it social and emotional learning, or SEL. Its goal is to give students the skills they need to work in teams, communicate their ideas, manage their emotions—even stand up to a schoolyard bully.

For anyone who has ever complained that kids these days don’t have the strength of character, the stick-to-it-iveness, of previous generations, here’s one way to better ensure they do.
But this is still a new frontier for American education. Only a handful of states have standards for social and emotional learning, and key federal education laws make no mention of it. RAND researchers have worked in recent years to better define what works in SEL, how more schools can implement it, and—importantly—how to assess student mastery of something like empathy or self-control.

“These are skills that students need to succeed in jobs and in life,” said Laura Hamilton, a senior behavioral scientist at RAND. “Employers and colleges have said that many high school graduates have not developed these skills adequately.”

Core competencies

Stephan Molder greets his ninth-grade students with high fives and fist bumps outside his classroom at Procter R. Hug High School in Reno, Nev. He’s an SEL specialist, and these are the front lines: six classes a day of teenagers trying to navigate the social and emotional warzone that is adolescence. He’s been known to drop an egg on the floor to show them what a lack of resilience looks like.

But one of his first lessons every year is on how to give a proper handshake. No finger squeeze, no soft touch. It’s a lesson, really, in self-confidence, poise, social awareness, and respect. “Life is all about relationships,” he says. “Kids need to practice a good handshake just as they need to know how to make a mistake and learn from it, how not to give up, how to have perseverance and grit and determination to do well.”

What’s new here is not so much the idea that social and emotional skills are just as important as reading comprehension and multiplication tables. It’s the approach. Once left mostly to the rough-and-tumble of the playground, social and emotional learning is now a daily part of the curriculum for hundreds of thousands of students.

That might mean a lesson on teamwork slipped into a tough math activity for a class of second-graders. Or it might mean a stand-alone class for high school freshmen, like the one Molder teaches, on how to live, work, and succeed.

There’s no single definition of what SEL is. But one popular framework, from the Collaborative for Academic, Social, and Emotional Learning, identifies five core competencies for students to master:

- self-awareness
- self-management
- social awareness
- relationship skills
- responsible decisionmaking.
Imagine an ideal teammate at work or the perfect neighbor. That’s the goal.

**Building the evidence base**

Hundreds of SEL programs and lesson plans have hit the market in recent years, with names like “Steps to Respect,” “Playworks,” and “Go Grrrls.” Yet school districts have had little guidance to help them weigh the pros and cons of different programs, or even separate those that work from those that don’t.

Researchers at RAND sifted through thousands of program evaluations to identify 60 of the most promising and proven SEL interventions. They found that the evidence base for those programs is strong enough to qualify them for federal funding under the Every Student Succeeds Act—even though the act itself does not formally recognize SEL.

Nearly three-quarters of the programs had a demonstrated track record of helping students work better with others by improving skills like teamwork or communication, the researchers found. More than half helped build up their confidence, initiative, or other personal skills. A quarter improved school safety and climate.

But how do you know when a student has mastered confidence or teamwork? When researchers dug into that question, they found dozens of tests meant to assess everything from childhood resilience to teenage decision-making—but, again, few resources to help schools and teachers choose the right one.

RAND researchers have compiled information on more than 100 SEL assessments, from how long they take to what skills they measure. In the coming months, they plan to publish their findings as a free, online repository that will allow educators to search for and compare assessments that best meet their needs.

“Good teaching depends on having good assessments,” Hamilton said. “Our hope is that this will give teachers the tools they need to understand where their kids are, what they need, and how they can build up those skills.”

RAND is working with the nonprofit Wallace Foundation to test some of those lessons in the real world.

Researchers are following six large, mostly urban school districts as they implement SEL strategies not only in the classroom but also in after-school activities and clubs—“really from the moment you get on the school bus,” Hamilton said. The study is one of the largest and most ambitious ever undertaken of social and emotional learning. Researchers expect it to take seven years.

**Promising signs of success**

That happens to be almost exactly how long Trish Shaffer has been at the center of one of the most pioneering SEL efforts in the nation.

She coordinates that effort in Washoe County, Nev., best known as the home to the biggest little city in the world, Reno. The district there, which is not part of the RAND study, expanded its classroom teaching to focus more on social and emotional skills as its graduation rate slipped toward 50 percent. It worked with social scientists and with students to develop its own assessments, brought in specialists, and has seen its graduation rate climb past 80 percent. Stephan Molder teaches life skills and good handshakes there.

Not long ago, Shaffer met a high school girl who had just survived a teenage rite of passage: a customer at the restaurant where she worked, furious at a fumbled order. The girl confessed that she would have once cried and run away. Instead, she calmly talked the customer down. It was nothing, she shrugged; they had practiced that exact scenario in class.

“That is a necessary skill for life effectiveness,” Shaffer said. “I think we owe that to our kids. That is a skill that many adults don’t have—and it’s a skill that most people desperately need.”

Social and Emotional Learning Interventions Under the Every Student Succeeds Act is available for free download at www.rand.org/t/RR2133
The Health Related Behaviors Survey (HRBS) is the U.S. Department of Defense (DoD)’s flagship survey for understanding the health, health-related behaviors, and well-being of active-duty service members.

- It allows leadership to better understand the readiness of the force.
- It is used to facilitate benchmarking in combination with Healthy People benchmarks (designed for the general U.S. population).
- Results are weighted to represent the 2015 active-duty force by service branch, pay grade, and gender.

Comparison to U.S. General Population

The 2015 HRBS shows that active-duty service members generally have better health and health-related behaviors than the U.S. adult population.

Exceptions include binge and hazardous alcohol use, common mental health conditions, and sleep problems.

Nicotine use is comparable to civilian populations; cigarette use is down, but e-cigarette use has significantly increased since the 2011 HRBS.

Obesity compares favorably to civilian populations and has been largely stable over recent HRBSs; percentage overweight is a possible concern, but measurement method may be an issue.

HIV testing among those at high risk may be an opportunity for improvement.

Currently, there are no military-appropriate benchmarks for comparison purposes.

Development of military-appropriate population benchmarks may facilitate goal-setting, command visibility, and incremental improvements in health-related readiness.

Limitations

A low overall response rate (8.6%) suggests that the results should be interpreted with caution and in conjunction with other existing data. New ways to improve survey response rates are needed, including focusing survey content, shifting to a confidential rather than anonymous survey, and addressing information technology issues related to use of a non-DoD email address. The above comparisons to the general adult population do not control for differences in demographic composition.

Deployment Experiences and Health

Among those who had ever deployed:
- 64.9% reported exposure to combat trauma
- 27.7% reported a deployment-related injury
- 11.9% screened positive for deployment-related mild traumatic brain injury
- 8.6% reported deployment-related postconcussive symptoms
- 67.6% reported substance use, mostly alcohol or cigarettes, during their most-recent deployment

Among those deployed in the past three years:
- 10.4% met survey criteria for probable depression
- 15.0% met survey criteria for probable generalized anxiety disorder
- 9.9% met survey criteria for probable posttraumatic stress disorder
- 37.8% reported chronic pain

Sexual Orientation, Transgender Identity, and Health

6.1% identified as lesbian, gay, bisexual, or transgender (LGBT)

LGBT personnel were more likely than their peers to report moderate and severe depression, self-injury, suicide ideation and attempts, risky sexual behavior, binge drinking, and current cigarette use.

Weight and Sleep Issues

- 29.9% were moderately or severely bothered by sleep-related lack of energy
- 8.6% took sleep medications daily or almost daily
- 65.7% were overweight or obese according to body mass index
- 56.3% reported less sleep than needed

Mental and Emotional Health

- 9.4% met survey criteria for probable depression
- 14.2% met survey criteria for probable generalized anxiety disorder
- 8.5% met survey criteria for probable posttraumatic stress disorder
- 6.3% thought about attempting suicide in the past year
- 1.4% reported a suicide attempt in the past year
- 29.7% reported a self-perceived need for mental health services in the past year
- 17.4% reported that someone else told them they needed mental health treatment in the past year
- 26.2% reported mental health service use in the past year
- 56.8% of that care was provided by a military health system provider
- 50.0% of that care was provided by a mental health specialist
- 35.0% said that seeking military mental health treatment damages one’s military career
- 17.9% of the sample met criteria for one of three mental health disorders (probable depression, probable generalized anxiety disorder, and probable posttraumatic stress disorder)

Substance Use

- Alcohol, Tobacco, Illicit Drugs, and Prescription Drugs
  - 30.0% binge drank in the past month (5+ drinks for men or 4+ for women in one sitting)
  - 5.4% were heavy drinkers (5+ drinks 5 or more times in the past month)
  - 68.2% viewed military culture as supportive of drinking
  - 13.9% were current cigarette smokers
  - 12.7% were current smokeless tobacco users
  - 12.4% reported using e-cigarettes in the past month
  - 0.7% reported illicit drug use (mostly marijuana or synthetic cannabis) in the past year
  - 4.1% used prescription drugs without a valid prescription (i.e., prescription drug misuse) in the past year
  - 0.9% used more of a drug than prescribed (i.e., prescription drug overuse) in the past year

Physical Health and Functional Limitations

- 38.6% reported diagnosis of at least one of nine chronic medical conditions (e.g., high blood pressure) in their lifetime
- 35.7% reported pain bothered them a lot over the past 30 days
- 42.5% reported a functional impairment in at least one domain—work or school, social life, or family life

Sexual Behavior and Health

- 19.4% had more than one sex partner in the past year
- 36.7% had sex with a new partner without a condom in the past year
- 1.7% reported contracting a sexually transmitted infection in the past year
- 20.9% were at high risk for human immunodeficiency virus (HIV)
- 19.4% of those not expecting or trying to conceive a child had vaginal sex without using birth control in the past year
- 2.4% reported having or causing an unintended pregnancy in the past year
Thirty-one newly minted graduates were celebrated at the June 2018 Pardee RAND Graduate School commencement ceremony, but not before a warm welcome from the school’s dean, Susan L. Marquis. In her opening remarks, Marquis implored graduates to examine the many ways in which their talents can be instrumental in building and creating the institutions and new communities needed for the 21st century. Visit www.prgs.edu/commencement2018 to watch videos of her full remarks, the keynote address by innovator John Seely Brown, and the student address by graduate Timothy Smith—and to read about this year’s remarkable honorary degree recipients.

On improving public institutions

Government, academic, religious [institutions]. Electoral systems and the press. These are the institutions that have long provided structure and political order across society. They define who we are as nations and people. Could they be better? Of course. Representative government has not always represented all the people. Economic disparities have increased. Social isolation cuts across every demographic, working class and celebrities alike. The roots of our modern school systems, whether K–12 or universities, lay in 19th-century management ideas and medieval traditions. Precisely because these institutions define our societies, they must be examined if they are to be strengthened.

On shifting social orders

We see the great promise of our networked world, with the possibility of new human connections that cut across traditional divides, and policy solutions from previously untapped resources. We have real-world examples of these new connections: Online communities like those found in [the online game] World of Warcraft or those that reconnect the home-bound elderly may offer refuge, strength, and unconditional support, reducing social isolation. Netflix has largely put aside traditional demographics to sort its subscribers. Instead of categorizing them by age, gender, race, or even country lived in, the internet-based service has organized 125 million subscribers from across the globe into more than 2,000 microclusters of “taste communities.” These new communities are making connections that even those in them don’t yet understand, defying our preconceptions when they bring together shared values and interests between a 75-year-old man in Denmark and a California teenager, both fans of the series Riverdale and thus potential fans of similar shows.

On the pros of a connected world

Social media has fanned the flames of hyper-partisanship, but it has also combined with the broader internet to power civil society and the private sector to partner and achieve new solutions to seemingly intransigent problems. A national coalition of allies has been built connecting the farmworkers in Florida, fast-food retailers, and industrial farms. Together, they have built wholly new institutions that are transforming agricultural labor across the southern U.S. and up the east coast. Chefs have partnered with suppliers and international and domestic NGOs, to provide immediate and massive disaster relief through their World Central Kitchen. They’ve moved faster and more effectively than traditional government relief organizations. Technology is changing everything.
In the 1890s, during the lead-up to the Spanish-American War, newspaper publisher William Randolph Hearst fanned prejudice against Spain with lurid headlines and sensationalized stories. “You furnish the pictures,” he famously told one of his correspondents, “and I’ll furnish the war.”

The approach employed by Hearst and his fierce competitor, Joseph Pulitzer, came to be known as yellow journalism, essentially a precursor to fake news. Presenting falsehoods as news might seem to be a recent development, but the phenomenon has emerged several times throughout American history.

During three periods in particular—the Gilded Age of the 1880s and 1890s, the Roaring Twenties through the 1930s, and the Vietnam era of the late 1960s and early 1970s—there is evidence of a shift away from reliance on facts. We call this trend “truth decay.”

As part of a broader inquiry, RAND examined these periods to see what each might teach us about the nation’s current fraught relationship with objective truths. In national political debate and discourse about public policy, facts seem increasingly irrelevant. Evidence of this can be found in disagreements over such issues as gun violence, immigration, and crime rates. Discord persists regarding these issues despite the availability of reliable data to resolve disagreement and enable compromise.

We were pleased to see that President Obama included our report on his summer reading list. If people take him up on his recommendation, they...
loids by adding “soft” features such as advice columns and short stories, a shift that came at the expense of fact-based content.

As in the other historical eras that concern us, the 1880s and 1890s were a period of social and economic transformation. The country was rapidly industrializing but economic inequality grew, fueling a populist movement. At the same time the information landscape underwent dramatic change with the growth of mass-produced newspapers and monthly journals.

Hearst and Pulitzer played a major role in increasing the flow of information to the public, but this information often included false and misleading reports and emphasized distinct political stances. Yellow journalism’s fevered coverage of events, including the sinking of the USS Maine in Havana Harbor in 1898, likely helped fuel public support for the United States’ entry into the Spanish-American War.

Sensationalism surged again during the Roaring Twenties, in the form of tabloid journalism that emphasized sex and crime and helped turn news into entertainment. More established papers tried to compete with the tabloids by adding “soft” features such as advice columns and short stories, a shift that came at the expense of fact-based content.

In the 1930s, radio took off, offering hard-news journalists like Edward R. Murrow a new platform and enabling the wide dissemination of opinions. Radio personalities such as the Rev. Charles Coughlin, a priest who preached hatred for Jews and tolerance for Nazis, and Huey Long, the Louisiana politician who used the medium as a megaphone for his populist views, drew massive followings. They influenced the political and social thought of their day much as some cable TV commentators do today.

The 1960s and 1970s are well-known as a time of disillusionment, marked by protests against the Vietnam War, the government, racial discrimination, and other social ills. Against this backdrop of change, new voices arose in journalism. Writers such as Norman Mailer, Gay Talese, and Tom Wolfe borrowed techniques from fiction to produce compelling, highly personal narratives that did not necessarily equate truth with objectivity. In many instances, this approach made it difficult to discern reported facts from judgments.

The erosion of the line between fact and opinion is one of the strongest trends linking the Gilded Age, the Roaring Twenties, and the Vietnam era to today.

Gilded Age

In this 1898 cartoon, Joseph Pulitzer and William Randolph Hearst are satirized for their role in drumming up U.S. public support for a war with Spain.
Radio gave powerful broadcasters a vehicle to spread their opinions to a wide audience. Opinions and commentary dominated these shows, much like cable television today.

Roaring Twenties

The spread of television and photojournalism in the 1960s and early 1970s provided a new type of access to news information but also made it easier for that information to be manipulated in ways that blurred the line between fact and fiction.

Vietnam era

trends linking the Gilded Age, the Roaring Twenties, and the Vietnam era to today. Other key elements of truth decay can be detected in each era, including declining public confidence in key societal institutions, such as government and the media, and the increasing volume and resulting influence of opinion and anecdote over factual information observed in yellow journalism and tabloid journalism.

To some extent, bouts of truth decay may wax and wane over time. But in the three historical periods, countervailing forces helped restore trust in and demand for facts.

In the 1920s and ’30s, factual information gained respect after the creation of government agencies like the Federal Communications Commission and the Farm Security Administration, which were empowered to collect and analyze data to inform public policy. In the other earlier periods, journalistic excesses were countered by an upswing in investigative reporting and, in some cases, the emergence of new codes of conduct for journalists.

The new demand for facts was driven partly by recognition of the problems that result from trying to operate without them. The turn toward data-based policymaking in the 1930s was at least partly a reaction to the Great Depression and the consequences of uninformed economic policies. Momentous events such as World War II and the Vietnam conflict also sharpened public demand for facts and objective analysis.

The final element of truth decay—rising disagreement over the basic veracity and legitimacy of facts—is largely missing from the earlier eras we explored. The same cannot be said about the present.

Intractable debates on important questions persist today despite knowable answers, often because those answers do not conform to entrenched opinions. For example, attacks on vaccines—an increasingly politicized issue—are based almost entirely on false or misleading information, including disproven reports that vaccines cause autism. The consequences of decisions made without facts are evident in a recent report from Europe, where the measles virus found its way into areas with high numbers of unvaccinated children, leading to a quadrupling of measles cases in 2017.

This declining regard for factual evidence may be a defining characteristic of our current age. Previous eras suggest it is within society’s power to restore respect for objective facts. Humankind just needs to put it on the agenda.

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This commentary was originally published by CNN Opinion (www.cnn.com/opinions) in June 2018.
Lovida Coleman, Jr., thought of an old phrase as she watched news coverage of protests in Ferguson, Mo., following the 2014 police shooting of an unarmed black teenager there.

What was missing in Ferguson—and in Baltimore, Cleveland, Cincinnati, Tulsa, Baton Rouge, Minneapolis—was freedom from fear. “In my mind,” she wrote to a friend, “effective law enforcement respected and appreciated by all communities is essential to secure the right to ‘Freedom from Fear.’”

Coleman was never one to sit back and wait for an answer. In 40 years of practicing law, she had built a reputation as a relentless seeker of justice and truth. As she watched protests in one city after another, she became convinced that RAND needed to get involved.

Coleman had been a part of RAND for much of her life, as a donor, an adviser, and a longtime member of the Board of Trustees. In that, she had followed her father, William T. Coleman, Jr., a former U.S. Secretary of Transportation and a lawyer who cowrote the legal brief in the landmark civil rights case, Brown v. Board of Education.

“She understood what RAND could do, and she understood that RAND should be more of a voice,” said Anita Chandra, a senior policy researcher at RAND.

Another prominent attorney with a long connection to RAND had started to ask the same question: What could RAND do? Terry Lenzner, with his wife, Margaret, was putting together a fund to support a venture at RAND that might improve police–community relations. Coleman became a driving force of that effort.

She had a prodigious Rolodex. She had worked as an attorney in the U.S. Department of Justice, a partner at a top Washington, D.C., law firm, and a risk management consultant. She was an active supporter of the NAACP Legal Defense and Educational Fund.

“Freedom from fear, she wrote in an email to the Lenzners, required law-enforcement practices that could de-escalate tensions and restore confidence, especially in minority communities. It also meant more-effective policing to reduce crime: “Being able to sit on a stoop or play hopscotch or ball are elements of Freedom from Fear that too many neighborhoods lack,” she wrote.

Her vision helped inspire a tabletop exercise developed at RAND to bring together communities around questions of policing. The exercise is designed to help police, local government officials, and community groups think through how they would respond to a crisis, and how they could de-escalate it.

“She brought the drive,” Margaret Lenzner said. “She was very committed—very diligent about trying to make something happen.”

“She was,” Lenzner added, “a champion of justice.”

Coleman died unexpectedly earlier this year. RAND’s president, Michael D. Rich, remembered her as “a valuable and trusted adviser, an incisive critic, and a very good friend.” She was 68 years old.

She had left a bequest to RAND of more than $250,000. In her honor, the fund pursuing her vision of police–community relations free from fear was renamed: the Lenzner-Coleman Challenge Fund.

Fueled by philanthropic gifts and RAND’s income from operations, RAND Ventures is an important way to pursue visionary ideas; address critical problems that are underresearched; shape emerging policy debates; and devise innovative approaches for solving acute, complex, or provocative policy challenges. To learn more about RAND Ventures, visit www.rand.org/giving.
Before the Apple Newton and the Palm Pilot, there was the RAND Tablet.

Developed in the 1960s, the 10-inch-square tablet used a handwriting recognition program that RAND called GRAIL (for Graphical Input Language). Holding a stylus, users could draw shapes and text on the tablet, which GRAIL smoothed out and rendered correctly on a larger monitor in real time. GRAIL was programmed to identify 53 hand-drawn numbers, letters, symbols, and geometric shapes. Even more innovative was the use of gestures to manipulate what’s on-screen: Users could delete things by scribbling them out or writing over them, for example, or they could grab a shape and move it or change its size.

Alan Kay, whose work for Xerox PARC resulted in many Apple innovations, sometimes shows a film of GRAIL in action during appearances, pointing out features later used in Apple products.

“What a remarkable system that was,” Kay said in one presentation. “I felt like I was sticking my hands right through the display.”

Initially, RAND’s economists and programmers used the technology to create flow charts and write code. The economists in particular needed the tablet because “none of us can type,” they reportedly told GRAIL’s developers. But the technology found fans beyond RAND: The military used it to annotate maps, and a later version could translate Mandarin.

So why isn’t there an r-Pad sitting on your coffee table? For one thing, the tablets cost $18,000 apiece—or nearly $140,000 today. Which makes the iPad Pro look like a bargain.

The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest.

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