White Paper

Beyond the Patient Protection and Affordable Care Act: Enduring Trends in Healthcare

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TRUVEN HEALTH ANALYTICS™

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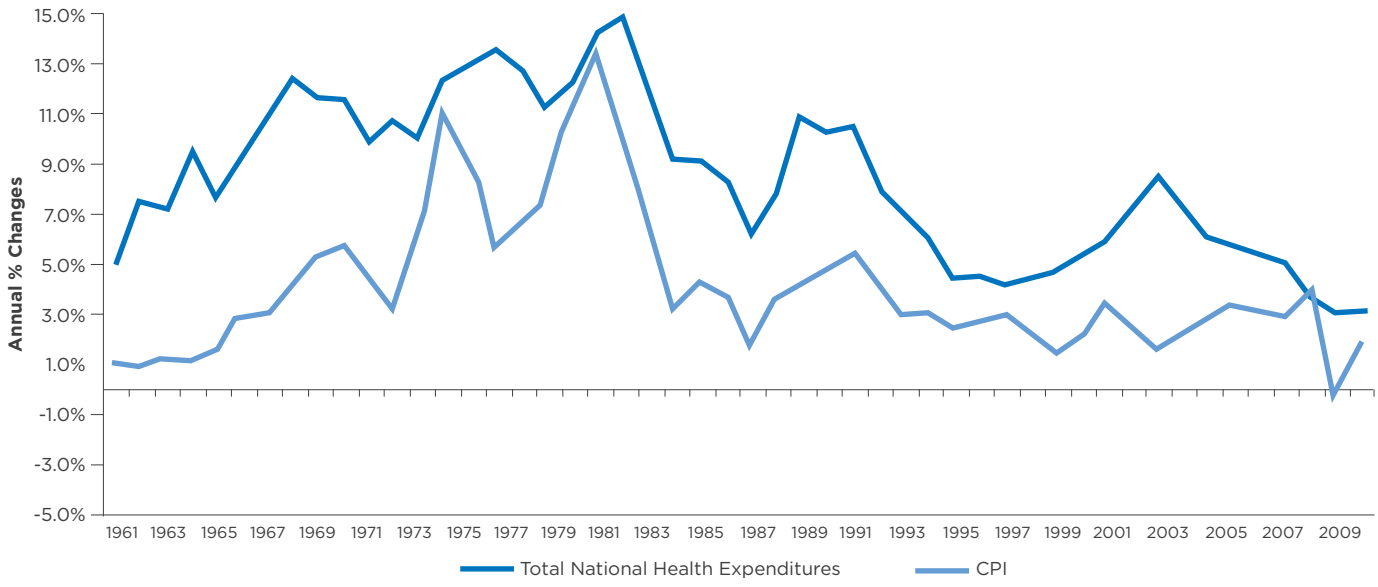
Introduction

Regardless of the decisions recently made by the U.S. Supreme Court and regardless of any future legislation passed by Congress, there are several trends already well underway that are creating a more enduring American healthcare system.

Pressures resulting from unsustainable healthcare costs; the poor performance of the U.S. healthcare system relative to other countries; and the realization that there are widespread, unexplained variations in care are all forcing change. But it is the financial pressures that are particularly acute. As the nation expands access to care through the Patient Protection and Affordable Care Act (PPACA) to as many as 40 million more covered lives, healthcare spending simply cannot grow faster than the economy. For this reason, closing the gap between the rate of increase in healthcare spending compared to the Consumer Price Index (CPI) must be a priority (Figure 1).

Figure 1: Escalation of National Health Expenditure Relative to Consumer Price Index (CPI) as Measure of General Inflation



Source: Bureau of Economic Analysis, http://www.bea.gov/national/index.htm#gdp

Market Expert® data shows that congestive heart failure (CHF) patients may have as many as 19 different access points of care annually.

Stimulus money already spent and earmarked is having an impact on health delivery as well. For example, providers are implementing electronic medical records; research in comparative effectiveness is increasing; a need for outcomes improvement is increasing interest in clinical decision support; and benchmark efforts in performance excellence, healthcare spending efficiencies, and bending the cost curve are demonstrating results from new approaches. Employers, payers, and providers are all focused on reducing the variation in cost, quality, and access.

This paper focuses on five key trends that are creating an enduring American healthcare system:

- Building collaborative relationships
- Striving for excellence
- Paying with integrity and on merit
- Promoting transparency and accountability (also known as consumerism)
- Improving health and wealth and understanding the link between them

Trend One

Building Collaborative Relationships

The fragmentation of the present healthcare delivery system drives dissatisfaction among all constituencies. Without coordination, patient care provided by multiple caregivers poses risks. Incomplete information challenges providers when they develop treatment plans. Patients and caregivers alike are overwhelmed by the challenge of coordinating many care providers, particularly when seeking care for complex or multiple conditions.

For example, the Truven Health Analytics℠ analysis of our Market Expert® data shows that congestive heart failure (CHF) patients may have as many as 19 different access points of care annually. In order to be cost-effective and clinically responsible in this situation, cardiologists caring for CHF patients need coordinated professional relationships with the patient's other caregivers and full access to integrated information about the patient's care. If patient-centered care sites want to collaborate with other specialists and care service sites, it will require synchronized information, treatment plans, and execution. The best heart doctors establish collaborative relationships with internists, pulmonologists, neurologists, and other specialists who are also taking care of their patients.

Figure 2: Patient Populations Need Collaborative Care

Congestive Heart Failure as an Example

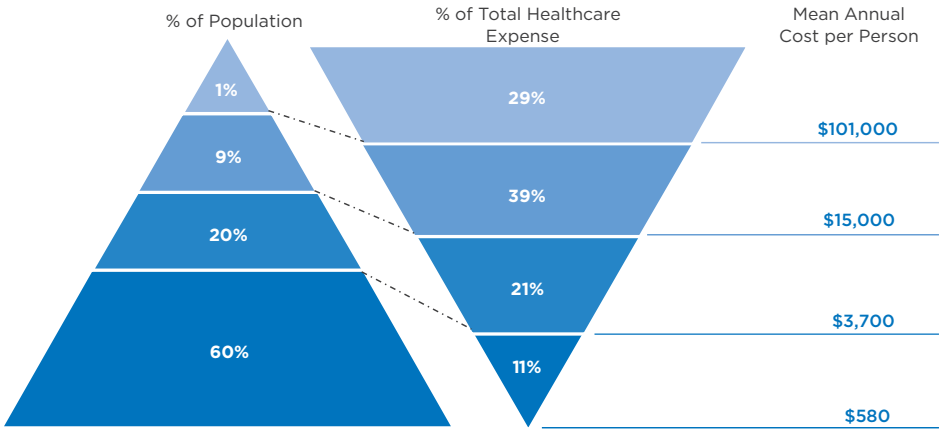
Disease	Prevalent Total Cases	Total Office Visits	Emergency Department Visits	Inpatient Visits	Hospital Outpatient Visits	Nursing Home Patients	Home Health Discharges	Hospice Discharges
CHF	1,000	640	175	240	440	16	100	6

Source: Truven Health Market Expert®: Continuum of Care

To evaluate the local delivery pattern of specific prevalent diseases and conditions, this CHF profile shows that in this population of 413,000 people, every 1,000 cases of CHF will produce 640 office visits, 175 ER visits, 240 inpatient visits, and 440 hospital outpatient visits.

Building advanced collaborative relationships will produce an early return in the form of better management of the chronically ill. Why? Because these are the patients who cost the system disproportionately and spend more than their share of healthcare dollars. In a study of healthcare usage in Camden, NJ, 1 percent of the total number of patients accounted for 33 percent of the healthcare costs.[1] This underscores the huge impact in cost savings the industry would experience if the medically complicated patients were better managed[1] (see Figure 3).

Figure 3: Disproportionate Spending on the Chronically Ill

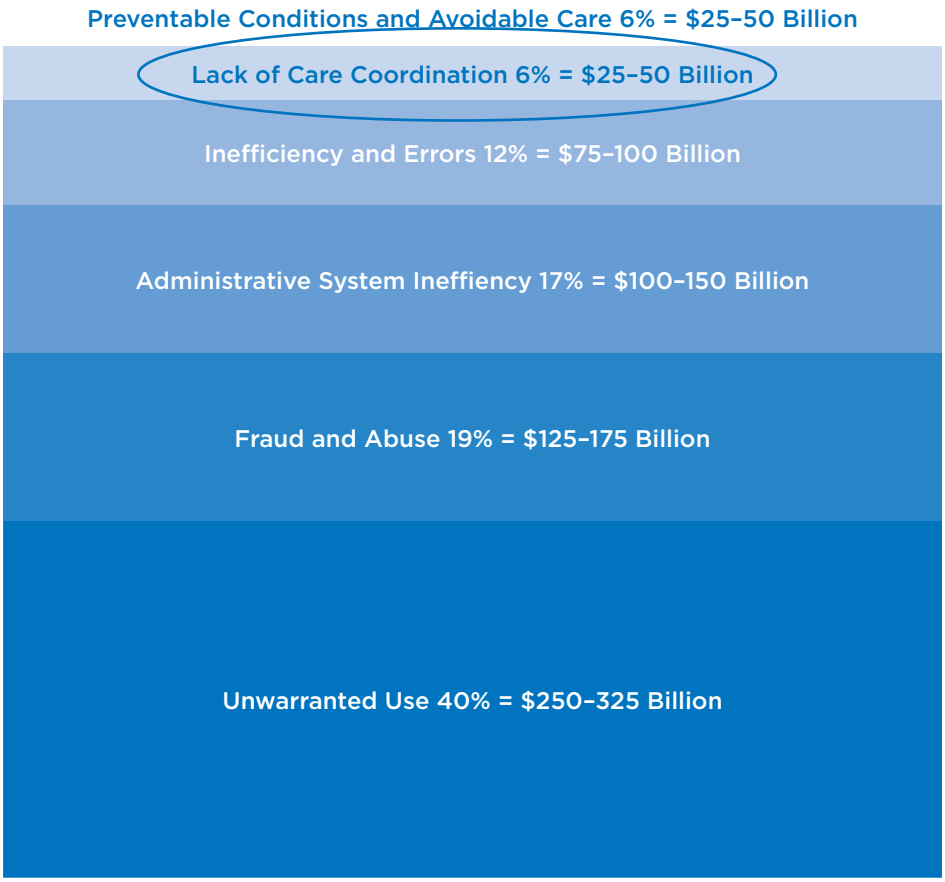


National sample of 21 million insured Americans between 2003 and 2007

Source: Truven Health MarketScan® Database

Additionally, Truven Health research estimates that $25 to $50 billion in annual savings could come from eliminating waste due to a lack of care coordination[2] (see Figure 4).

Figure 4: Total Cost of Healthcare System Inefficiency Identified



Source: "Where Can $700 Billion in Waste Be Cut Annually From the U.S. Healthcare System?," Truven Health, October 2009

Patient-Physician Relationship

Building these relationships begins at the interface between patients and their trusted clinicians. Trust and commitment between patient and physician is tied to better compliance[3] and medication adherence.[4] Those people who take the time to develop collaborative relationships with a primary care office receive better care.[5]

And yet, studies suggest that somewhere between 20 to 50 percent of people do not have a meaningful relationship with a primary care practice. In fact, 28 percent of the time, new conditions are diagnosed in the emergency room setting[6] with a doctor the patient has never seen before. While the extended care continuum advocates for the patient-centered medical home (PCMH) to promote advanced primary care practice, first the medically homeless — patients without any connection to medical care — must be addressed. In the 2011 Commonwealth Fund International Health Policy Survey of Sicker Adults in Eleven Countries published by the Commonwealth Fund in Health Affairs, findings showed that primary practices with accessible clinicians who know patient medical history and help coordinate care (like those in a PCMH), are less likely to experience coordination gaps or report medical errors and tend to have patients who rate care higher.[7] While outcomes are positive for patients who visit a provider practice, affiliations with a specific provider within that practice lead to stronger clinical compliance, satisfaction, and outcomes (see Figure 5).

Figure 5: Physician-Connected Patients

Performance Measure	Physician-Connected Patients (%)	Practice-Connected Patients (%)	p Value
Mammography	78.1	65.9	<.001
Cervical cancer	86.4	80.2	<.001
Colorectal cancer	72.1	58.0	<.001
HbA1c in past year	90.3	74.9	<.001
HbA1c <8%	74.7	70.5	.004
LDL in past year	83.2	61.2	<.001
LDL<100mg/dl	77.0	67.2	.64

- Study involved 155,590 patients seen in one of 13 primary care practice network sites
- Patients attributed to physician, practice, or neither based on validated algorithm

Source: Atlas SJ, et al. Ann Intern Med. 2009; 150:325-335

So employers and health plans can take a step toward improving the health status of their workforce or membership by facilitating, or incentivizing, the process of building collaborative relationships with trusted clinicians. It is much easier to establish such relationships during regular periodic interactions, like well visits, with a person's primary care physician. However, many medical societies have moved away from recommending an annual physical on the scientific grounds that it is unlikely to identify illness or disease requiring treatment — particularly during periods of early adulthood. That said, there is an increasing body of knowledge suggesting that these visits could provide significant value when they focus on reducing health risks, eliminating unhealthy lifestyles, and maximizing wellness — and when they foster the crucial collaborative patient-physician relationship.

Well visits could provide significant value when they focus on reducing health risks, eliminating unhealthy lifestyles, and maximizing wellness.

Patient-Centered Medical Home

Establishing trusted relationships with primary care providers and eliminating the medically homeless should be precursors to the PCMH movement. All primary care centers today should be encouraged to transition to National Committee for Quality Assurance (NCQA) certified medical homes, which require PCMHs to provide these seven tenets:

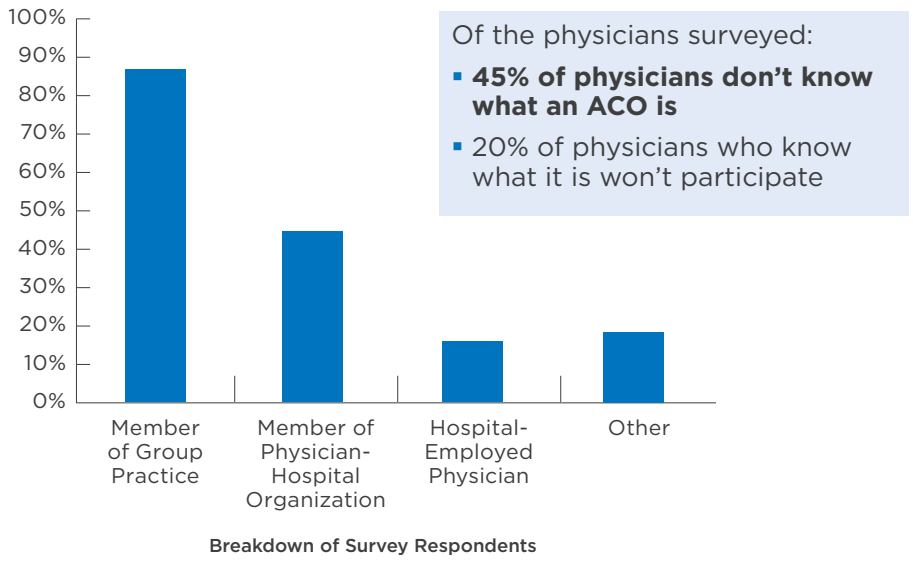
1. **Personal Primary Care Provider**: Patients have an ongoing collaborative relationship with a primary care provider
2. **Practitioner-Led Medical Practice**: The primary practitioner leads a team of clinicians and non-clinicians to provide ongoing care
3. **Holistic Approach**: This team either provides the care or arranges for the needed care that is beyond the practice's scope
4. **Coordination of Care**: Recordkeeping links treatment across the care continuum and facilitates the surveillance and coordination of elements of care
5. **Quality and Safety**: This includes exercising shared decision making; implementing clinical decision support tools; and the recording, analysis, and reduction of medical errors and near misses
6. **Access to Care**: These medical homes should have expanded hours, open scheduling, and better avenues of communication between clinicians and patients
7. **Enhanced Payment**: These practices should be rewarded by the payment systems for the increased effort required and for the improved outcomes

Accountable Care Organizations

PCMHs will be the foundation of accountable care organizations (ACOs). ACOs, in which physicians are accountable for the care of a population across the care continuum, are a giant step toward greater collaboration. As margins in healthcare continue to get squeezed, the marketplace will force practitioners to work in larger groups to reduce overhead expenses and become more efficient. With the exception of rural communities, there is a trend of building greater collaborative business relationships that culminate in the creation of ACOs. Single-doctor practices are merging with others to form both single-specialty and multi-specialty group practices. Group practices are collaborating to provide independent practitioner associations for health plans. They are also working with hospitals to provide full-service, integrated delivery systems (IDS).

At a minimum, these efforts reduce expenses through creating economies of scale that enable practices to cost less and be more efficient. Compensation systems that provide global payment and shared savings methodologies will entice providers to form ACOs and collaborate to achieve greater income. However, many doctors are not knowledgeable about ACOs yet. A Truven Health survey completed in July 2011 suggested that many are not even aware of the term. Others who know about ACOs are not interested in participating in them. Going forward, promoting the benefits of ACOs to doctors will be important.

Figure 6: Physicians Report Lack of ACO Knowledge

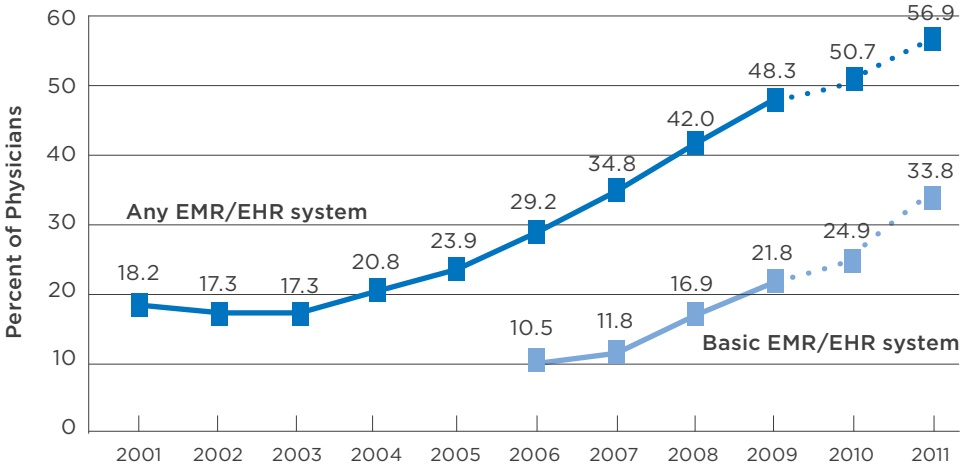


Source: 2011 National Physicians Survey, HCPlexus and Truven Health Analytics

Leveraging Technology

With the help of a system-wide electronic medical record (EMR) and its input to a broader regional health information exchange (HIE), PCMHs and ACOs have the potential to support patients as they navigate the healthcare system and help coordinate all of their care. Personal health records also offer great promise. Some say the American Recovery and Reinvestment Act (ARRA) legislation that provided economic stimulus in 2008 and 2009 will have a greater impact on healthcare than any other legislation because it provided both an incentive and a potential penalty to encourage the use of EMRs. And the provider base is responding. It is possible that nearly all physicians will be utilizing electronic medical records by 2016.

Figure 7: Healthcare Reform: The Impact of the Stimulus Package



Notes: EMR/EHR is electronic medical record/electronic health record. "Any EMR/EHR system" is a medical or health record system that is all or partially electronic (excluding systems solely for billing). Data for 2001-2007 are from the in-person National Ambulatory Medical Care Survey (NAMCS). Data for 2008-2009 are from combined files (in-person NAMCS and mail survey).
Data for 2010-2011 are preliminary estimates (dashed lines) based on the mail survey only. Estimates through 2009 include additional physicians sampled from community health centers. Estimates of basic systems prior to 2006 could not be computed because some items were not collected in the survey. Data include nonfederal, office-based physicians and exclude radiologists, anesthesiologists, and pathologists.

Source: CDC/NCHS, National Ambulatory Medical Care Survey

This should provide medical homes with a strong technology to help organize their practice and coordinate care. The emergence of electronic systems that connect EMRs within a delivery system provides further opportunity to leverage technology to link the care across practices and establish collaborative relationships between doctors who have patients in common. Finally, the government-based efforts to connect hospitals and IDSs into regional HIEs will promote the exchange of information between competing health systems and foster more collaboration on behalf of patients who may access care from physicians working for, or with, those competing healthcare organizations.

Unfortunately, consumers' adoption of personal health records has not paralleled providers' adoption of EMRs. According to the Truven Health PULSE™ Healthcare Survey, only 17.1 percent of adults reported use of a personal health record. Despite efforts from companies to partner with multiple medical societies, or with large employer purchasers, the public appears to prefer to use computers for social media rather than to keep track of their medical history or to assist with collaboration among their many care providers. Perhaps this will change with the development of social media sites that have a health and wellness focus, or as providers using EMRs begin to accept the electronic transmission of information and communications with patients.

Only 17.1 percent of adults reported use of a personal health record.

As providers band together to form more efficient and effective organizations with improved patient information systems, the electronic platform of healthcare will further collaboration through the adoption of EMRs and HIEs. Imagine a day when a doctor can make a diagnosis after being able to access all of a patient's medical information, then establish — and deliver — on a treatment plan in collaboration with each of the other care providers. This day is not far off.

Trend Benefit

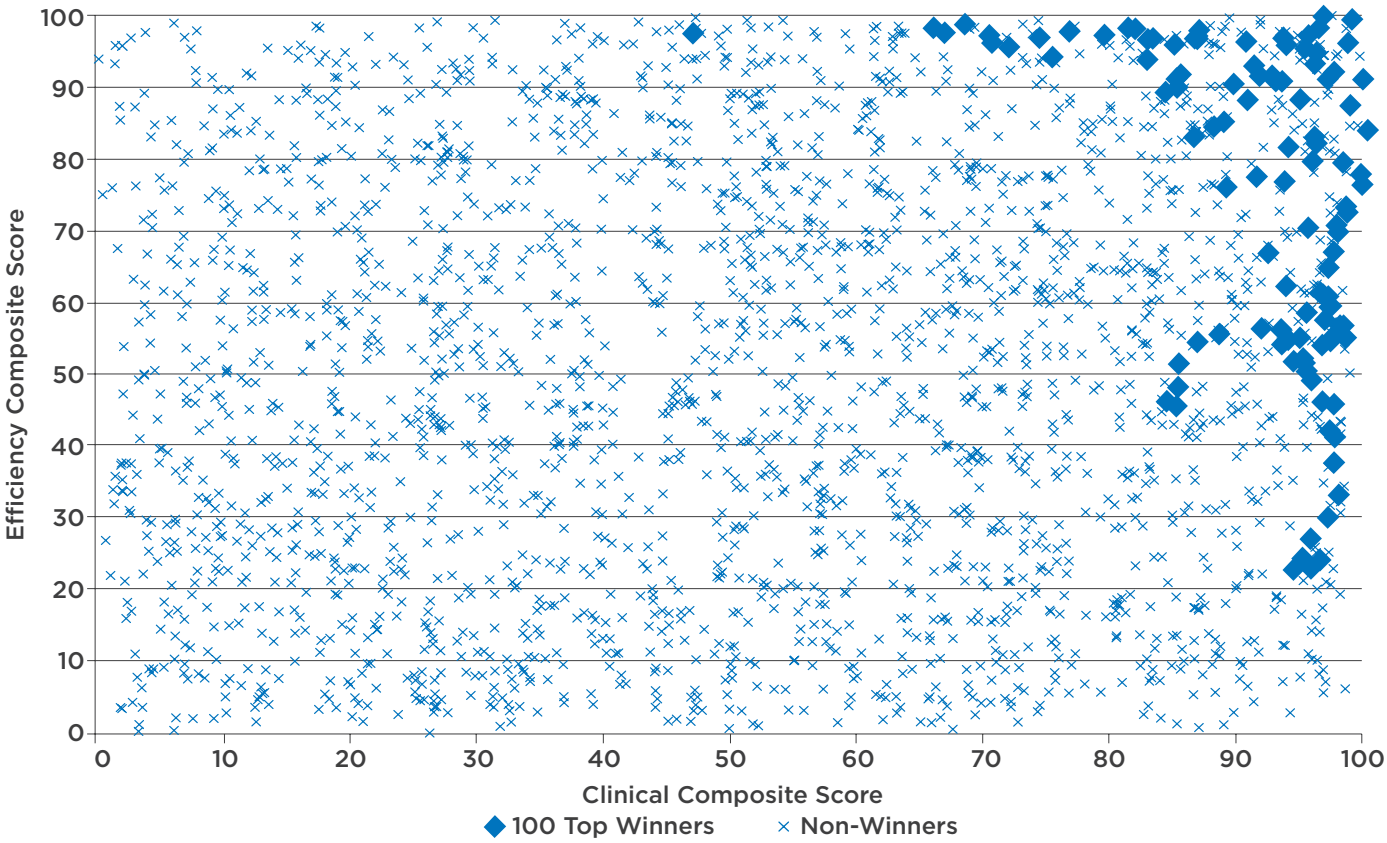
The opportunity to establish more collaborative relationships through the proliferation of PCMHs, IDSs, and ACOs offers tremendous, far-reaching promise to not only contain costs, but also to deliver a higher quality of care. At the patient level, collaboration in the healthcare system will foster the identification of appropriate diagnoses and treatment, eliminate service duplications, and reduce risks of incompatible therapies to achieve the best results. Overall, with an increasing need for improvements in quality and reductions in cost, the trend of "building collaborative relationships" will continue to foster a healthier system.

Trend Two

Striving for Excellence

The trend called "striving for excellence" is built upon other industries' successful implementations of system process improvement programs such as Continuous Quality Improvement, LEAN, Six Sigma, and the Baldrige Criteria. A fundamental component of these methodologies is to identify benchmark efforts and replicate them. Truven Health studies hospitals through its 100 Top Hospitals® program, using a comparable set of measurements across a framework called a National Balanced Scorecard. Hospitals are compared against a set of measures that evaluate performance excellence in clinical care, patient perception of care, operational efficiency, and financial stability. To yield fair comparisons, hospitals are measured against peers of similar size and teaching status. Each year, the relevant benchmarks and robust findings assembled for the 100 Top Hospitals studies provide numerous examples of excellence.[8]

Figure 8: Clinical and Efficiency Composite Scores: 100 Top Hospital Winners and Non-Winners



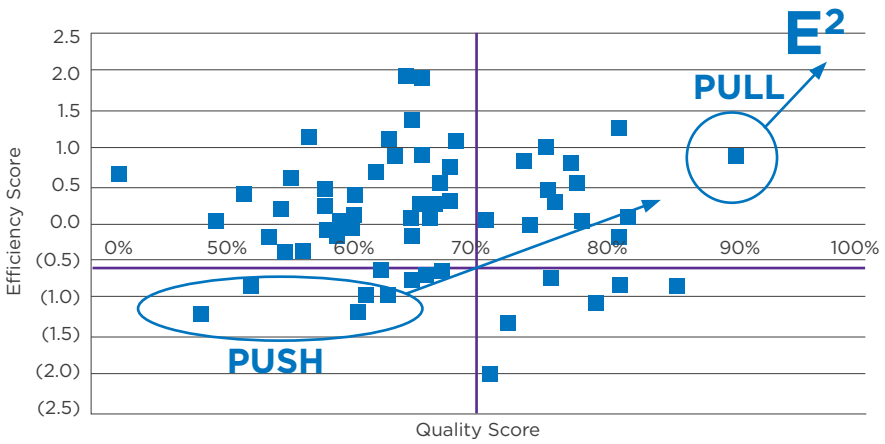
Comparison of 100 Top Hospitals to peers shows a stronger performance in the upper-right quadrant of efficiency and effectiveness.

Source: Truven Health 100 Top Hospitals® Database

Determining these examples of excellence requires data. Now that more health data is collected, it is possible to analyze it and determine which care providers are both efficient and effective. Many in the industry are starting to call these high achievers E2 or E-squared providers. With the need to control healthcare's spiraling costs, it is important to identify and study these benchmark providers who are delivering a much higher value of care. After identifying the top E2 providers in a community or region, other providers can improve their own performance by emulating the processes and methods used by the best. This is a "push" approach to quality improvement.

Another approach is to place additional resources within the best practices so these providers can proliferate and establish even better benchmarks. In other words, give the top E2 physicians tools and resources to further improve their efficiency and effectiveness, then provide feedback to all the other providers so they can chase the E2 doctors' performance and attempt to catch up. This is a "pull" approach to quality improvement.

Figure 9: Sample Physician-Group Quality Effectiveness and Efficiency Performance Tiers



The goal for this physician group comparison is to push and pull performers into the top-right quadrant.

Source: Truven Health 100 Top Hospitals® Database

Figure 10: Eliminating Medical Error — 100 Top Hospitals vs. Non-Winners

Performance Measure	Median		Winners Compared With Non-Winners		
	Winning Hospitals	Non-Winning Hospitals	Actual	%	Winners Have...
Mortality index	0.94	100	0.06	6.3%	Lower mortality
Complications index	0.96	0.99	0.03	3.4	Lower complications
Patient safety index	0.87	100	0.13	13.0%	Better patient safety
Core measures mean percent (%)	95.5	93.4	2.1	n/a	Better core measures performance
30-day mortality rate	12.3	13.0	0.7	n/a	Lower 30-day mortality rate
30-day readmission rate	20.4	20.8	0.5	n/a	Lower 30-day readmission rate
Average length of stay (days)	4.69	516	0.48	9.2%	Shorter ALOS
Expense per adjusted discharge ($)	5,359	6,022	663	11.0	Lower expenses
Operating profit margin (%)	9.1	2.5	6.7	n/a	Higher profitability
Hospital Consumer Assessment of Healthcare proividers and Systems (HCAHPS) score	263	253	10	4.0%	Higher hospital rating

This chart shows the 100 Top Hospitals' performance compared to peer hospitals.

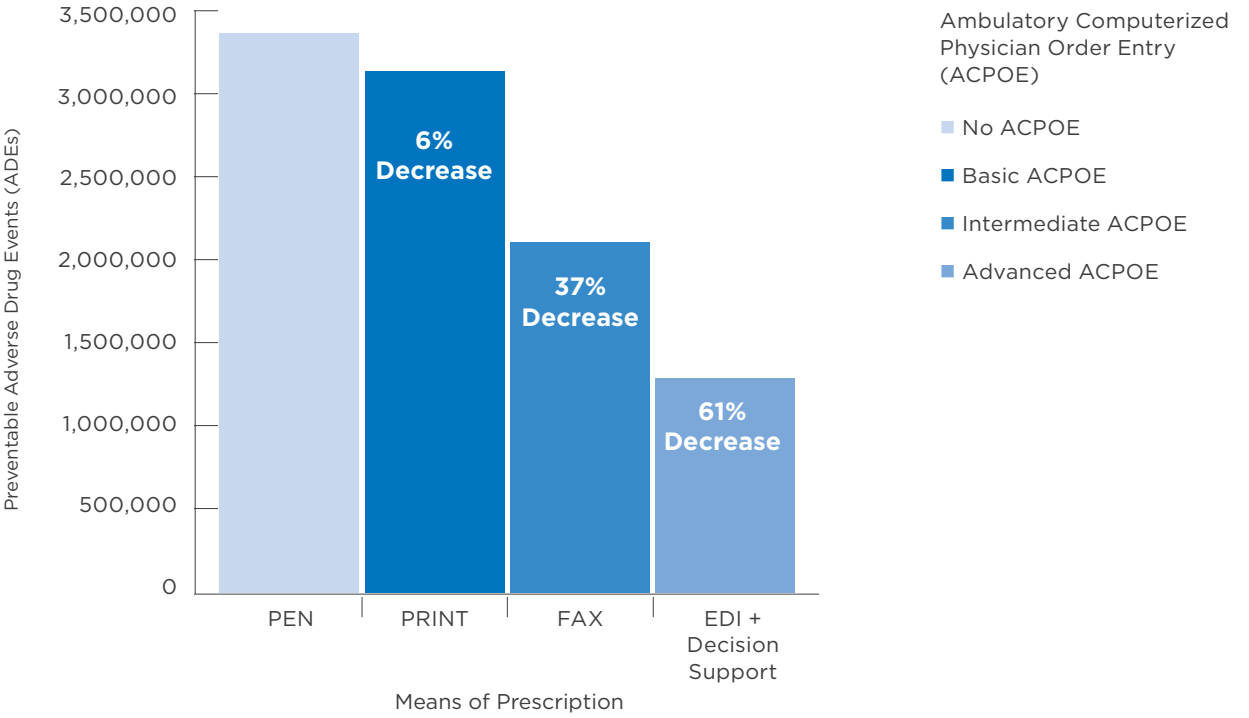
Source: Truven Health Analytics, HealthLeaders Fact File: Hospital Performance, July 2010

Preventable Medical Errors

The present healthcare system is far from perfect. The Institute of Medicine (IOM), in their seminal work on patient safety "To Err Is Human: Building a Safer Health System," estimated that between 44,000–98,000 patients die each year in hospitals due to preventable medical errors. While in medical school, physicians are taught to "first do no harm." However, the clinical delivery system victimizes patients daily through medication mistakes, surgical accidents, and nosocomial or hospital-acquired infections (HAIs).

Fortunately, efforts are continually emerging to develop ways to eliminate these errors. Borrowing from other industries, surgical suites are reducing the variation of treatment plans for the same type of patient and medical services by adopting evidence-based guidelines of care. These standards are increasingly embedded within the EMR systems in the form of clinical decision support (CDS) tools (see Figure 11).

Figure 11: E-Prescribing and CDS Reduce Drug Misadventures by 61%



By deploying e-prescribing and clinical decision support (CDS), the communication between the prescribing and dispensing clinicians markedly improves, enhancing patient safety.

Source: Center for Information & Technology Leadership, http://www.physicianspractice.com/display/article/1462168/1589170?pagenumber=3

In another example, instead of each orthopedic surgeon in a hospital having their own surgical tray and their own preferred approach to joint surgery — which makes pre- and post-care difficult, there is a trend toward limiting the equipment choices and developing a more uniform treatment plan across a hospital specialty or an episode of care. This is similar to the successful LEAN process implemented with excellence within the Toyota Motor Corporation. Both federal government and professional societies have dedicated intensive efforts to identify practices that are evidence-based from those that are not. Remarkably, the majority of medical practice is not built upon well-established research, but has evolved through the tradition of practitioners handing down their knowledge in a master-to-apprentice format. However, this is changing. And it must.

Comparative Effectiveness Research

As a nation, the U.S. needs to limit its healthcare expenditure to treatments and care that demonstrate good outcomes. To that end, more money and emphasis is being placed on comparative effectiveness research (CER). It is extraordinary how little of the medical literature is dedicated to studying whether one version of treatment is superior to another. Most peer-reviewed studies compare a treatment plan to doing nothing. As a consequence, both providers and patients are often faced with the dilemma of picking between courses of therapy with limited scientific guidance.

The goal for CDS is to deliver the right information to the right provider, at the right time, through the right intervention format and channel.

Fortunately, with CER, it is now possible to compare courses of treatment quickly using large data warehouses of medical information in real-world settings. With little more than a push of a button, both the short- and long-term outcomes of various medications or surgical alternatives for patients suffering from the same problem can be compared. For example, if two cohorts of several hundred diabetics are on two different diabetic medications to treat their disease, their course can be followed to see if one group has less need to use emergency and hospital services as a proxy for better outcomes.

Clinical Decision Support (CDS)

CDS tools are also a great aid to reaching a more perfect healthcare system. By delivering real-time health information at the point of care, providers and patients alike can make better choices between options. Once practitioners are on EMRs, it will be incumbent upon them to use this platform meaningfully to receive government-sponsored incentives. Ultimately, this will require doctors to demonstrate an improvement in outcomes for their panel of patients. CDS tools will be necessary to accomplish this. With millions of health and science articles published annually,[9] it is impossible for any provider to personally keep up with all the patient-applicable, scientific advancements without consulting CDS tools. The goal for CDS is to deliver the right information to the right provider, at the right time, through the right intervention format and channel. Doing this will support a healthcare system's pursuit of performance improvement and high-quality outcomes.[10]

Trend Benefit

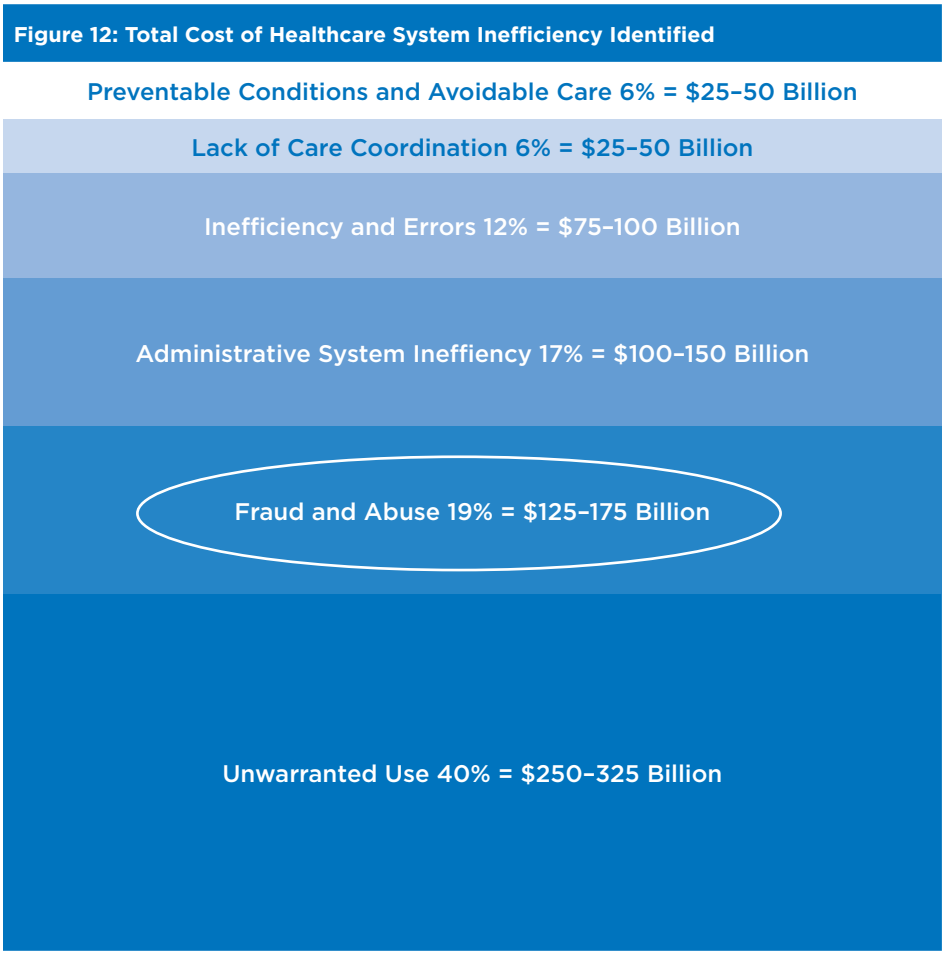
Disseminating clinical guidelines, determining best diagnostic and treatment options, broadly using CDS tools, and eliminating medical errors through system process improvement will move all practitioners toward E2 performance and enhance and prolong the trend of "striving for excellence."

Trend Three

Paying With Integrity and on Merit

The trend entitled "paying with integrity and on merit" is a combination of the work being done to eliminate fraud and abuse in the healthcare delivery system (payment integrity), and the movement called "pay for performance" that either rewards or penalizes providers for meeting or not meeting targets. By paying with integrity and on merit, the system recognizes providers who are honestly delivering quality care and "criminalizes" those who are fraudulent and abusive. Few participants in the healthcare industry appreciate the magnitude of this problem. Truven Health research estimates suggest that between $125 to $175 billion is wasted each year on fraudulent and abusive healthcare practices. (See Figure 12).

Figure 12: Total Cost of Healthcare System Inefficiency Identified



Source: "Where Can $700 Billion in Waste Be Cut Annually From the U.S. Healthcare System?", Truven Health, October 2009

Moreover, the Federal Bureau of Investigation (FBI) estimates that fraudulent billings to public and private healthcare programs account for 3–10 percent of total health spending, or $75–$250 billion in fiscal year 2009. Fraud and abuse makes up the extreme component of unnecessary services and offers significant potential savings from eliminating these practices. Some expose patients to the risk associated with unnecessary procedures. Examples of the intentional provision of unnecessary or inappropriate services include:

- Billing for services never provided often with patients' participation in the fraud, often for deceased patients
- Kickbacks for referrals for unnecessary services
- Abuse of the healthcare system by patients to receive harmful services, such as Medicaid recipients with drug addictions enrolling in multiple states[11]

By setting a standardized fee for a bundle of services, it "incentivizes" the providers to efficiently utilize resources while providing effective care.

Fortunately, government programs are recognizing fraud and abuse as wasteful spending — particularly Medicare and Medicaid. These programs, through their contractual requirements, have practiced a pay-and-chase policy — meaning their prompt payment approach has forced them to try to recover money after it has been paid to fraudulent and abusive providers. Challenges arise as criminal rings often close and move elsewhere after receiving large payments, staying one step ahead of the law. While there are unprecedented battles in Washington, D.C. between the two political parties, the notion of improving payment integrity has strong bipartisan support. This problem affects all of the constituencies of healthcare delivery. Everyone must participate in the process of eliminating this drain on the system. By doing so, money will be freed up for balancing the budget, reducing the escalation of medical costs, and possibly funding programs upstream to promote healthy lifestyles and wellness.

Payment Integrity

Data systems using both clinical and non-clinical sources of information are increasingly able to identify both questionable billings from providers and outstanding practitioners who have generated a remarkable track record of billing with integrity. The first group justifies further scrutiny before payment and may need to be referred to law enforcement agencies and the latter group needs to be relieved of administrative burdens and "gold-carded." This process allows the payment system to focus on the outliers while recognizing and removing the same level of scrutiny on the honest vast majority of providers.

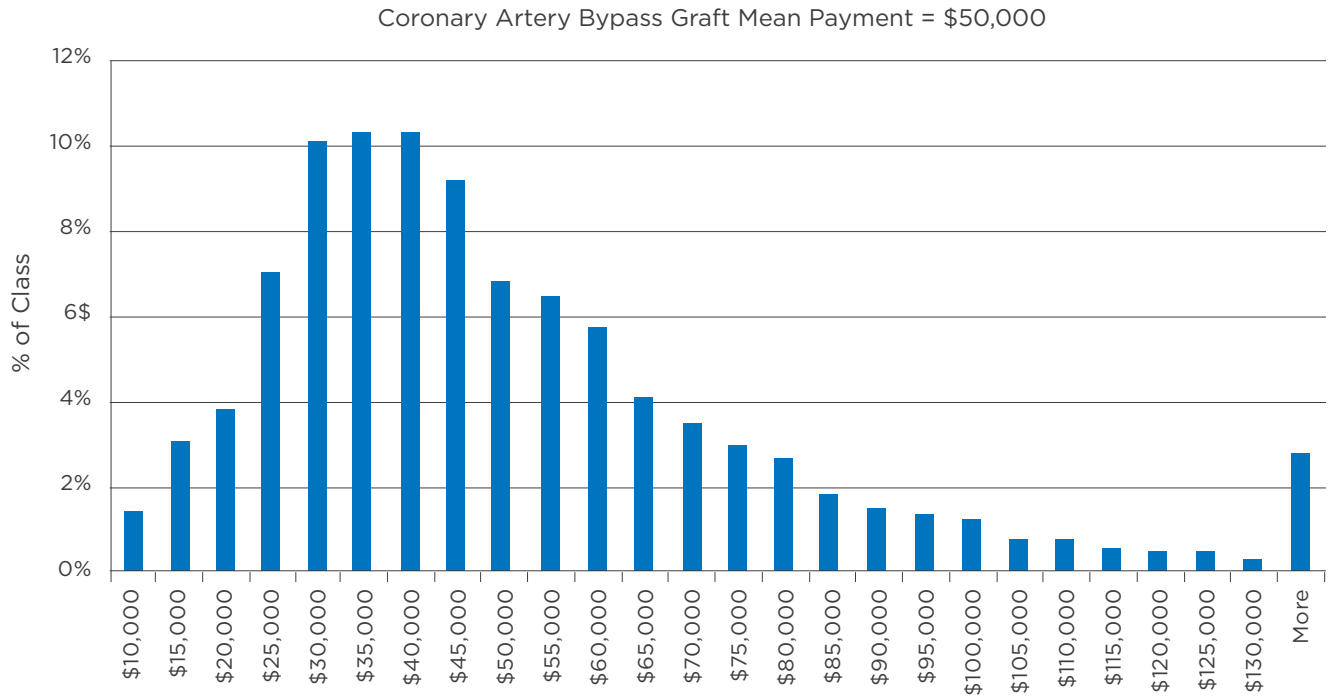
Compensation Reform

Fee-for-service payment has generated its own set of challenges, including lack of alignment, lack of coordinated care, and fraud and abuse sufficient to warrant payment overhauls. New models such as bundled payment appear to resolve the incentives for overuse of services and favor coordinated care in such a way that many fraud and abuse issues may also be avoided. Compensation reform for providers and payers is needed and that means significant opportunities for shared-risk arrangements. In fact, payment integrity calls into question the entire fee-for-service compensation system, supporting bundled payment and global compensation practices instead.

In the current system, physicians working in a hospital setting do not generally have their incentives aligned with the hospital; each bills payers separately. Therefore, physicians may treat equipment, drugs, inpatient support (such as nursing and supplies), as well as other hospital services, as "free" goods and receive little reward to manage their use efficiently. Further, under a "fee-for-service" model, more treatment and services (procedures, imaging, lab, etc.) equate to higher revenue and compensation.

A bundled payment system is one way to address this situation. By setting a standardized fee for a bundle of services, it "incentivizes" the providers to efficiently utilize resources while providing effective care (See Figure 13). In the case of multiple care providers, there would be great motivation for all affected providers to coordinate, since their compensation would be dependent on the combined performance of all involved. If the cost of care is less than the bundled amount, the providers could be rewarded with the difference. Alternatively, if the cost of care is greater than the bundled payment, the providers bear the financial burden.[12]

Figure 13: Bundled Payments Reduce Variation in Payments and Reward E2 Efforts



Understanding variation among payment levels is critical for both care coordination and payment coordination purposes.

Source: "Vocabulary of Healthcare Reform," Truven Health, January 2012

The U.S. healthcare industry compensates providers who perform procedures and services based on volume. The more they do, the more they receive in revenue — regardless of the quality or outcome of their care. Thankfully, this approach is being questioned more than ever. During the 1990s, the spotlight was on using a capitation or prepayment system. But ultimately, this methodology was questioned because it provided incentives to deliver less care. Neither fee-for-service nor capitation payment processes reward the best providers of care.

Pay for Performance

Paying for performance or "on merit" is where the system is moving. As it becomes easier to identify E2 doctors and hospitals, they should be handsomely rewarded. The slogan coined is "income for outcomes." Two programs leading this effort are Bridges to Excellence and the California Pay for Performance initiative (See Figure 15). Both utilize sophisticated data warehouses, adjusted by severity, to compare the performance of like providers and promote bonus payments for those who distinguish themselves by delivering efficient and effective care.

Figure 14: Paying Providers With Integrity and on Merit

CALIFORNIA P4P PROGRAM

- Scoring
  - Clinical 50%
  - Health Information Technology Meaningful Use 30%
  - Patient Satisfaction 20%
- Bonus Pool – $50 Million
- Participation – 35,000 physicians
- Results – statewide performance improvement with reduced variation
- 2013 moves to a shared savings plan

- Recognized physicians deliver better quality care:
  - medical record data
  - claims-based quality measures
- Recognized physicians deliver lower cost of care:
  - Savings by Diabetes Care Link physicians is $400 per patient per year
  - Savings by Physician Office Link physicians is $245 per patient per year

Trend Benefit

The trend of "paying with integrity and on merit" will greatly influence the way healthcare is actually delivered and will encourage practitioners to provide greater value for each healthcare dollar spent. All constituencies should promote this trend — especially those who purchase care. Without a movement to eliminate fraud and abuse, and one that converts revenue gains from volume to value, the current level of "runaway" spending will be impossible to correct.

Trend Four

Promoting Transparency and Accountability

The trend called "promoting transparency and accountability" is an amalgamation of two concepts related to consumerism. First, consumers are increasingly interested in receiving information to help them make better healthcare decisions. Historically, this has been called "demand management;" now it is more often referred to as "transparency." The concept begins with the idea that adults consider affordability essential to selecting a quality provider.[13] Consequently, they seek pricing information and estimate their personal cost of care before deciding to receive elective procedures and determining specifically which physician or hospital they will use. Under the best of circumstances, the decision-maker (the patient, caregiver, or family member(s)) would also have the benefit of knowing the comparative outcomes, so they can choose one facility (such as a hospital) over another or one surgeon over another, based on quality and cost.

Secondly, as the healthcare delivery system provides greater transparency, it requires consumers to be more accountable. With the increasing cost of healthcare shifting to consumers, managing healthcare expenses is becoming an important part of a person's financial planning. Due to increasing out-of-pocket expenses, patients obviously select less costly alternatives if all other things are equal. In an effort to help employees combat the cost of healthcare, employers are creating value-based benefit designs that reward employees who take better care of themselves. In some cases, accountable consumers can "earn" better benefits.

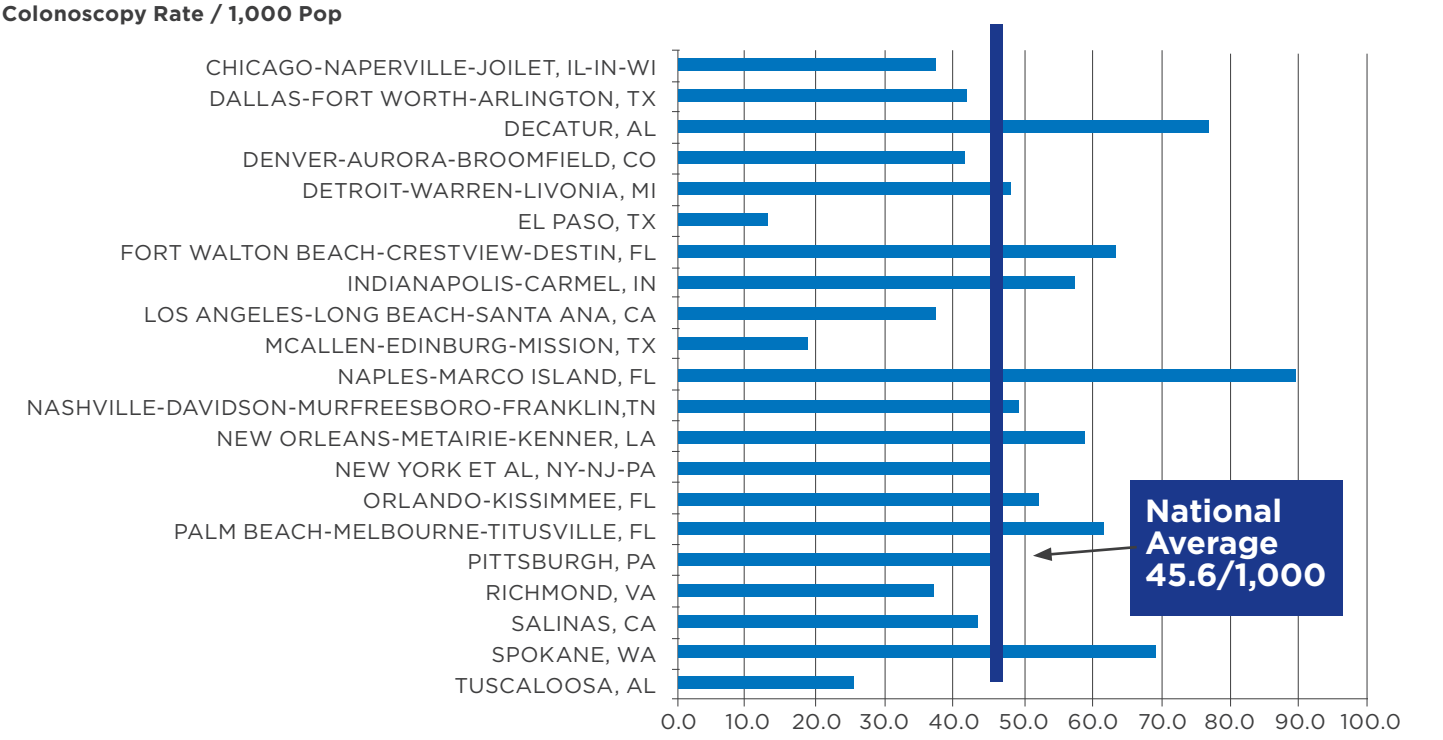
Under the best scenario, price and quality transparency is provided so consumers and primary providers can use this information to choose wisely and navigate the healthcare system more effectively. The recent Truven Health white paper on this subject, "Saving $36B in U.S. Healthcare Spending Through Price Transparency," suggests that, conservatively, the American healthcare system could save $36 billion annually from price transparency alone.[14] With the emergence of consumer-driven health plans (CDHPs) and health savings accounts (HSAs), consumers are actively shopping to minimize their out-of-pocket costs. Due to both limited coverage and budgeted dollars, the consumer's goal in using these plans is to spend money more wisely. However, these benefit-design vehicles will not have the necessary and intended impact on health delivery without greater transparency and accountability.

The American healthcare system could save $36 billion annually from price transparency alone.

Regional Variation

Another aspect of this trend is the remarkable variation in service-usage and pricing within a region or between regions. There are vast differences from one city to the next in the amount spent on healthcare for Americans with employer-sponsored health plans and Medicare recipients alike. Truven Health research published in the paper, "Geographic Variation in Spending and Utilization Among the Commercially Insured," found that healthcare spending by local market ranges from $2,623 (Ogden-Clearfield, Utah) to $7,231 per person (Anderson, Ind.) when assessing the use and cost of services among 24 million commercially insured individuals in 382 metropolitan statistical areas (MSAs).[15] These findings are comparable to the deep variation in markets using Medicare data found by Dartmouth Atlas researchers in 2010 and published in the *New England Journal of Medicine*.[16]

Figure 15: Utilization Is Local: Colonoscopy Utilization Varies Widely on a Market-by-Market Basis



Sources: Truven Health Outpatient Procedure Estimates, Nielsen

Remarkably the patterns of variation in the commercially insured population were quite different than those identified within the Medicare populations demonstrated in the Dartmouth Atlas. The high-cost regions identified in the Medicare data research from Dartmouth Atlas are often low-cost areas for the commercially insured and vice-versa. Communities identified by Dartmouth Atlas to be high utilizers of medical services (via Medicare) were low users of medical services in the Truven Health commercial study and vice-versa. These findings alone support the trend for greater transparency. As consumers and providers are exposed to comparative information, variation in cost and utilization should moderate.

Figure 15 shows the marked variation in rates of colonoscopy use by specific markets. Studies show that the cost, coverage, local practice, and demographics all influence this variation.

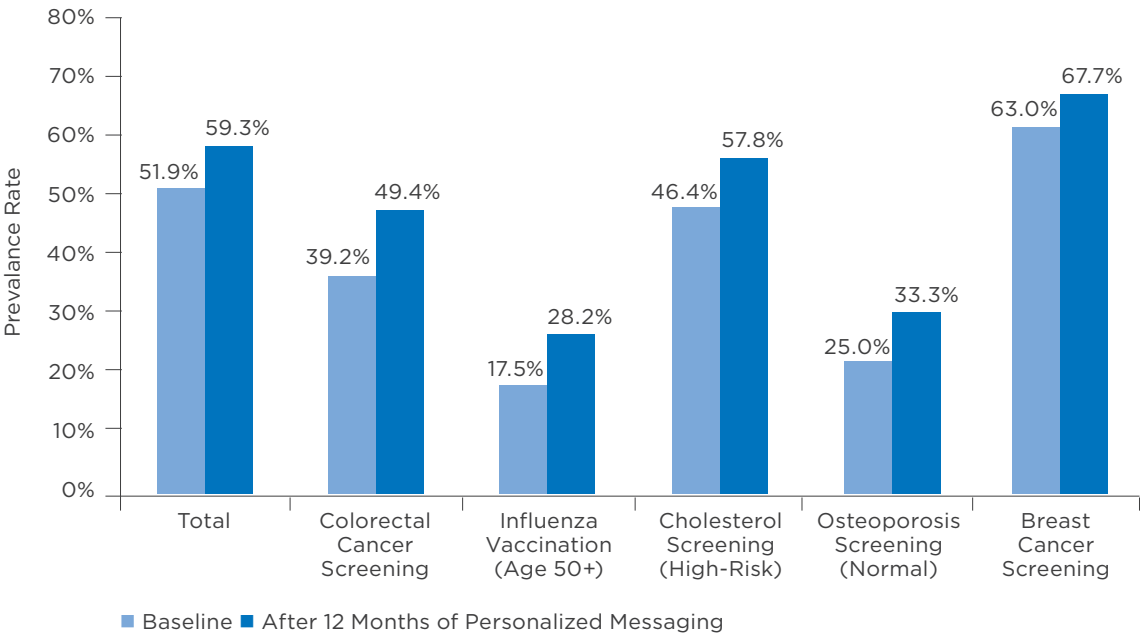
Consumer Engagement

Both personalized messaging and behavioral economics are being deployed as part of the effort to engage consumers in their healthcare costs and treatment. The science of engagement and participation in self-care is expanding. The use of information and the spectrum of incentives are both finding their influence. Delivering personalized, timely messages to consumers can drive a positive change in consumer behavior (see Figure 16). To be effective, the messages need to be:

- Written using simple English
- Formatted and customized with thoughtful recognition of the many population segments
- Preferably sent from trusted clinicians

A variety of lessons learned from behavioral economics can be applied to influence

Figure 16: Promoting Transparency and Accountability Using Personalized Messaging

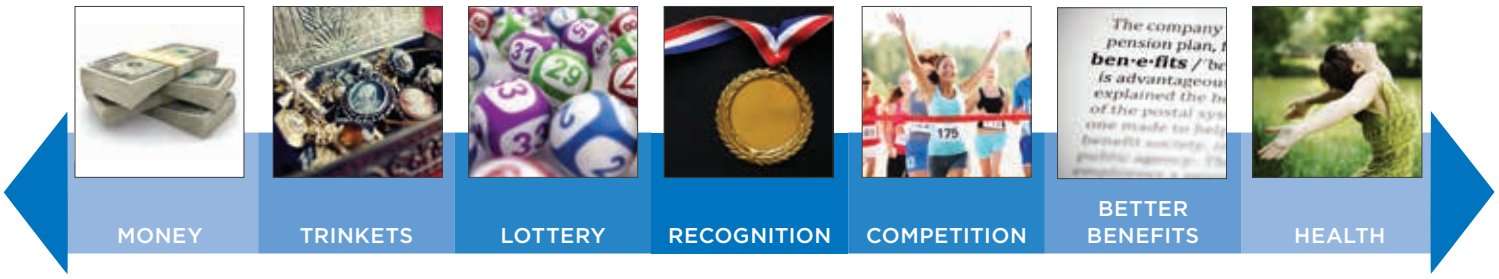


Source: Truven Health Case Study, "Tailored Messages Motivate Employees and Improve Health," 2010

results. For example, more and more frequently, companies are rewarding and recognizing their employees for engagement and continued participation in health programs and self-care. This is seen primarily among employers and their employees who are making a concerted effort to build a culture of health.

Figure 17: Paying Consumers on Merit: Behavioral Economics

Moving Rewards From Extrinsic to Intrinsic



There are several ways to engage and motivate employees to take part in their own health. They can include financial incentives for employees, or trinkets that promote branding and increase loyalty. A facility may institute a lottery among specific categories of employees having completed a health activity (like rehab). They can award framed recognition certificates to health-conscious employees or organize a competition to determine those who take the best care of themselves. An employer can also provide better benefits or a lower rate to employees engaged in healthy pursuits.

Source: "Beyond the Politics: Enduring Healthcare Trends to Shape Strategic Planning," Fabius, R., 100 Top Hospitals® Summit, June 2012

Additionally, some employers are utilizing mandates and penalties. Benchmark efforts provide employees with a tiered benefit plan. Those employees who demonstrate the greatest effort in maintaining their health can achieve the highest level of benefits.

Johnson & Johnson launched a program to impact employee health risks and costs from 2002 to 2008. The result was a near flattening of their medical spending growth rate with a return on investment showing $3.92 saved for every program dollar spent.

Trend Benefit

The trend of "promoting transparency and accountability" relies on consumers to utilize information to make the best and most cost-efficient decisions about their care. It is also a response to wide variations in cost and use. And it encompasses the fact that companies are continuing to find ways to engage and reward employees who pay attention to their health.

Trend Five

Improving Health and Wealth

The final trend, "improving health and wealth," is one that connects the healthcare industry to the greater issues of productivity in the marketplace. There is now a plethora of peer-reviewed literature connecting the health of a workforce or a community to the wealth they generate. Corporate medical directors have realized for a long time that there is a connection between health and safety, particularly for employees engaged in physical labor. For this reason, they have deployed work-hardening and work-readiness programs along with ergonomics and medical surveillance examinations. Disability managers often lament that workers lost due to health concerns could have remained productive if they had received better support earlier in their care. Every day employees perform tasks less well because they are not feeling up to par. Sometimes business proposals are not accepted as a consequence and revenue is compromised. Having employees who are not well can impact both customer satisfaction and the bottom line.

Impact on Productivity

For every dollar spent treating employees who are ill, employers and communities lose approximately three dollars in reduced productivity.[17] Every time a worker is admitted to the hospital, they are removed from the workforce.

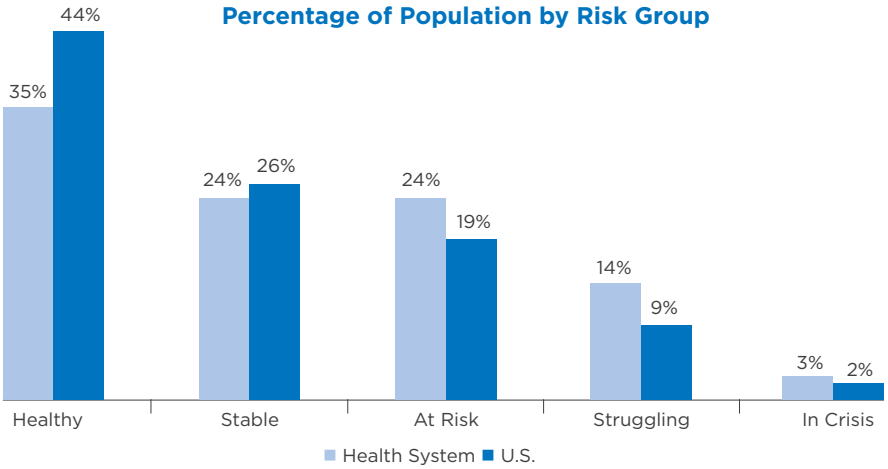
This impacts the healthcare industry as well. Local health delivery systems with the highest levels of medical utilization are negatively impacting the prosperity of the community they serve. As this trend becomes more established, it will be necessary to consider this concept when compensating health providers. Pay-for-performance systems will ultimately need to recognize those providers who are keeping their patients functioning and at work. It is in the best interest not only of the patients, but also of the employers and the community as a whole.

For this reason, some benchmark companies have decided to include the health of their employees as part of their mission. Johnson & Johnson launched a program to impact employee health risks and costs from 2002 to 2008. The result was a near flattening of their medical spending growth rate with a return on investment showing $3.92 saved for every program dollar spent.[18]

Providers as Employers

Hospitals and IDSs are also using their role as employers to improve employee health and productivity. According to the recent Truven Health white paper, "10 Steps to Developing a Culture of Health for Hospital and Health System Employers," hospital employees with chronic conditions are more likely to be at risk, struggling, or in crisis when compared to the U.S. workforce overall. This causes the medical bills for hospital workers to be higher than they need to be.

Figure 18: Burden of Illness for Hospital Employees Compared to the U.S. Workforce



On a diagnostic cost group or DCG-adjusted severity basis, hospital employees with chronic conditions had a higher burden of disease, particularly in the "at risk" and "struggling" categories.

Source: Truven Health MarketScan data, 2012

In fact, healthcare workers were less healthy, consumed more medical services, carried a higher burden of chronic illness, and accrued higher healthcare costs than the U.S. workforce at large (See Figure 18). Overall, their healthcare costs were 9 percent higher on an age- and sex-adjusted basis. Medical care and prescription drug costs for hospital employees and their dependents were higher. They were more likely to be diagnosed with asthma, obesity, and depression than the average U.S. worker and had higher utilization of the emergency department and higher hospital admission rates for chronic conditions. Hospital workers and their dependents were hospitalized 5 percent more than U.S. employees overall and had lower compliance with common preventive service measures.[19]

This is yet another heavy burden on the nation's cost of care. Clearly, one of the reasons why healthcare costs are high is because hospital systems must charge more for their services to provide healthcare for their own employees and employees' family members. According to Truven Health research, "for the average medium-sized community hospital, 68 percent of operating profit is consumed by healthcare benefits for employees and their families. This equates to all operating profit generated from January 1 until the end of August each year."

As IDSs and hospitals embark on delivering "accountable" care to populations, making improvements within their own workforce would be a good start. Since most are self-insured, the health of their employees directly impacts the wealth of their organization.

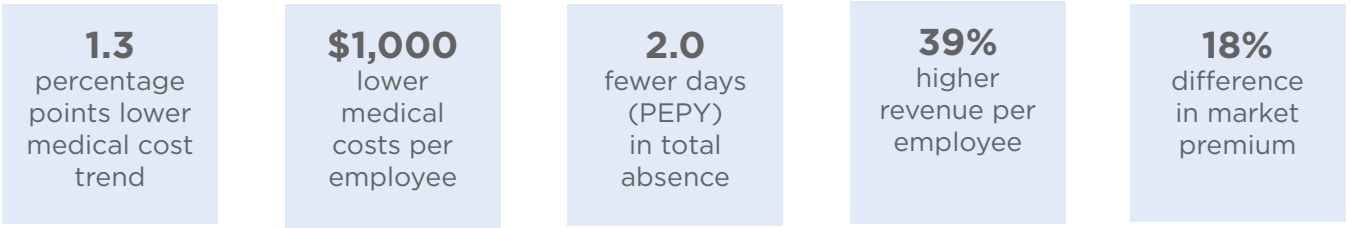
Impact on Companies, Individuals, and the Nation

Opportunities to reduce costs of medical, pharmacy, and disability benefits have impacted and will continue to impact the employers' budget and bottom line. For employers who are self-insured, every one of those dollars spent on healthcare benefits is a dollar that could have otherwise added to the bottom line or been invested in research to make the business more successful. Towers Watson recently completed a study showing that employers who emphasize the importance of the

health of their workforce are delivering better results for their shareholders (See Figure 19). These companies have a 1.3 percent lower medical cost trend, spend $1,000 less on medical costs per employee, enjoy two fewer days of absence per employee per year, generate 39 percent more revenue per employee, and have an 18 percent difference in market premium.

Figure 19: Healthy Employees Yield Wealthy Employers

Companies with the most effective health and productivity programs have:



Healthy employees correlate with wealthy employers; these study results show stronger outcomes in health benefits expenses for employers with comparatively healthy employees. Measures shown here include medical cost trends, medical cost per employee, medical cost per employee per year, revenue per employee, and market premium comparisons.

Source: Towers Watson

At an individual consumer level, it's becoming increasingly clear that people may not be able to save enough money for retirement if they find themselves in poor health. It's estimated that the average couple who retires at 65 and lives into their 80s may need to save as much as $250,000 just to pay for their out-of-pocket healthcare costs — if they're of average health.[20] The price is much higher if they're not well (see Figure 20). This is yet another reason it's important to stress to people the value of taking good care of themselves — because there is a powerful connection between health and wealth.

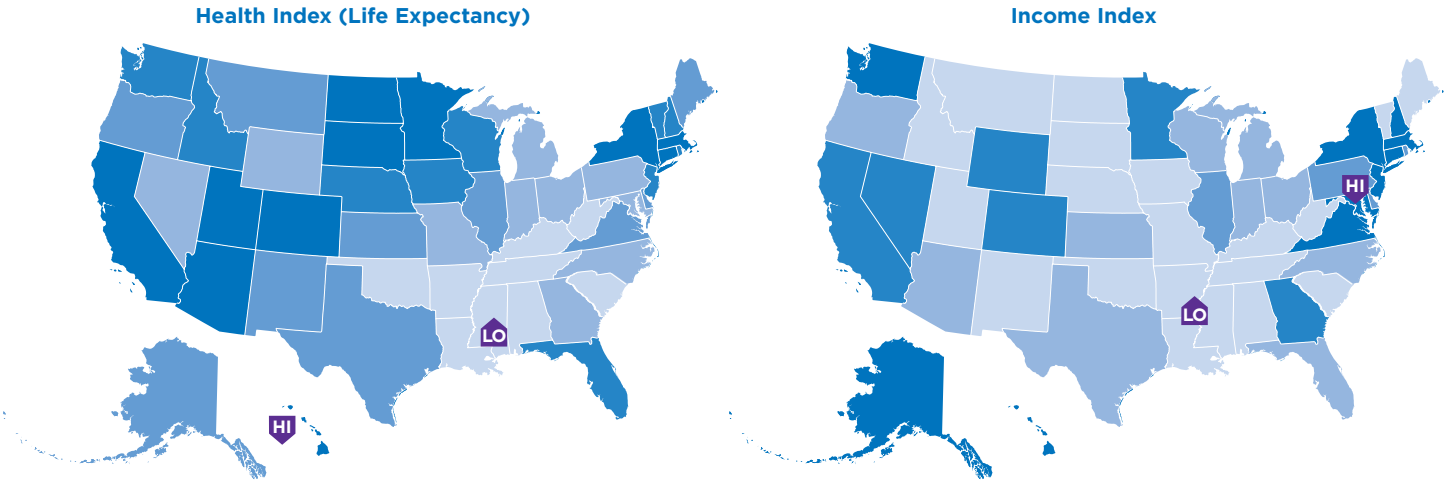
Figure 20: Improve Health and Wealth at the Individual Level

Age Group	Cost for Those in Perceived Fair to Excellent Health Status	Cost for Those in Perceived Poor Health Status	Poor Health Status Costs More Than Fair to Excellent Health Status
65–69	$6,636	$22,254	235%
70–74	$7,810	$32,097	311%
75–79	$9,889	$17,558	78%
80–84	$9,557	$19,440	103%
85 + years	$14,917	$17,682	19%

Source: AHRQ Medical Expenditure Panel Survey, www.meps.ahrq.gov

This concept of health and wealth also extends to communities and to states. Studies show that states with the highest life expectancy are more likely to have the highest average mean incomes in the U.S. as well. This suggests that a healthy citizenship leads to community wealth.[21]

Figure 21: Life Expectancy Correlates With Income



When comparing personal household income across the country, there is an apparent relationship between the national indices for health (left) and income (right). The national health index average is 5.25. State indices with darker colors have higher scores and those with lighter colors have lower scores — ranging from a high of 6.19 to a low of 3.67. For the income index, the national rating is 5.09. Again, darker colors indicate states with higher indices — ranging from 7.2 to 3.44.

Source: Mapping the Measure of America, 2010–2011, Towers Watson, used by permission, http://measureofamerica.org/maps/

The connection between health and wealth can also be seen at a national level. Countries that have a healthier workforce generate more GDP and have a greater likelihood of prosperity. Innovative studies have demonstrated a view over 200 years of the association of increasing health and wealth globally.[22]

Trend Benefit

Due to population health and prosperity achievements, the life expectancy and mean income of billions of people have significantly improved. With further globalization and advancement, and the recognition of the importance of "improving health and wealth," there is great hope for more efficient and effective healthcare delivery — enabling most of the world's inhabitants to be both healthy and prosperous.

Conclusion

As the healthcare system continues to challenge consumers, providers, payers, and purchasers to remedy its unsustainable spending and improve its performance, Truven Health presents these five enduring trends as a means to inform strategic planning and innovation. These trends offer great promise in the ongoing effort to create a more perfect American healthcare system:

- **Building collaborative relationships**: Through collaboration, providers will produce better outcomes.
- **Striving for excellence**: By using a variety of tools and comparative feedback loops, physicians will more easily strive for and achieve excellence. In doing so, top performers will be recognized and emulated.
- **Paying with integrity and on merit**: Physicians producing the best results will receive the highest reimbursements. Eliminating fraud and abuse within the system should significantly reduce healthcare costs and perhaps divert funds for better use.
- **Promoting transparency and accountability**: Providing consumers with more information while holding them more accountable will improve their health outcomes and reduce healthcare costs.
- **Improving health and wealth**: As the nation realizes the connection between health and wealth, the culture will shift from tolerating unhealthy lifestyles to promoting wellness as a social "good."

All of these trends require data aggregation, integration, and analytics to advance their impact. What gets measured gets improved. The sustainability of the economy and the country's position as a global leader requires the progression of these five trends to support a more enduring healthcare delivery system. Fortunately, they are all well underway and moving forward independent of the political debate on healthcare.

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FOR MORE INFORMATION

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