



White Paper

Vocabulary of Healthcare Reform

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Executive Summary

The provision and administration of healthcare are undergoing major transformation in the United States under the pressures of market forces, public and private demand, and the passage of several legislative bills. These forces are pushing the system to significantly expand coverage, improve patient care, rein in costs, and reduce waste. The federal health reform agenda has been established with the Patient Protection and Affordable Care Act (PPACA), and the Health Care and Education Reconciliation Act of 2010. The PPACA reforms both private and public health insurance programs by both increasing coverage to currently insured individuals and newly covering uninsured individuals.

As medical community members look for ways to implement these changes, a new vocabulary is evolving to describe the proposed solutions. Many of these new terms — such as bundled payment, meaningful use, and accountable care organization — still cause confusion to those not directly involved with these changes.

With this new lexicon comes a lack of clarity. Recent surveys show that many decision makers may not be familiar with the evolving language. For example, the 2011

HCPlanet/Truven Health AnalyticsSM National Physician Survey found that 45 percent of the responding doctors did not fully understand the term, “accountable care organization.”

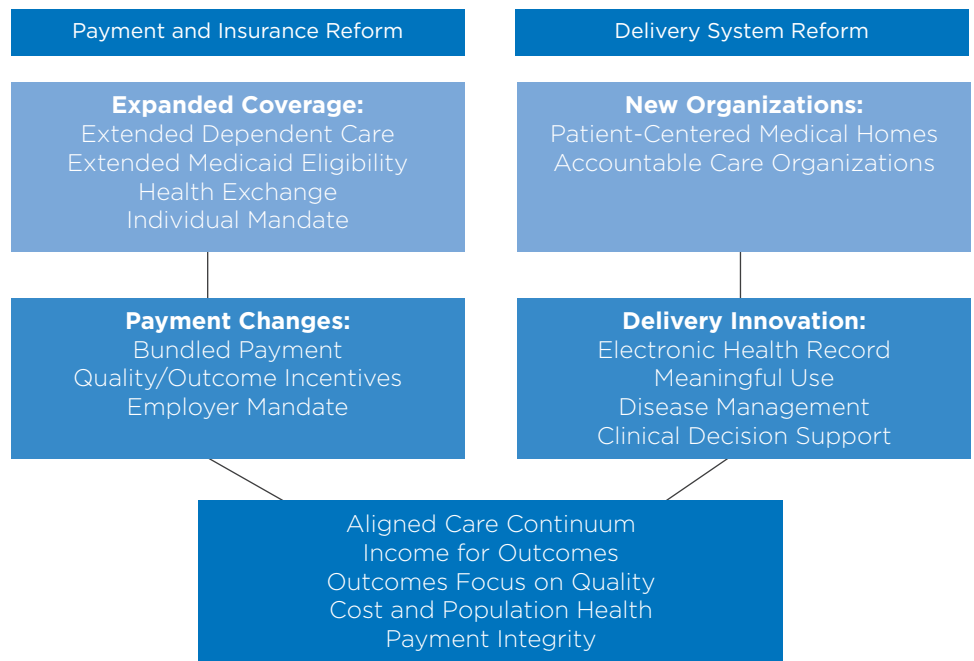
Employers are also focused on gaining a better understanding of the impact. In 2010, 94 percent of employers saw a need to educate their senior management about reform, and 84 percent believe that educating their employees on reform and the implications is crucial to responding appropriately.¹

To advance the discussion, Truven Health has created this document to explain the new reform terminology, with insights to augment the definitions of these terms. The intent is to demonstrate how having the right definitions and analysis can provide the critical knowledge necessary to establish reform response strategies and initiatives. The potential cost of missteps is minimized by having the critical knowledge an organization needs to make difficult choices during this transformational time.

The four sections of defined terms include:

- Healthcare Reform Goals
- Payment and Insurance Reform
- Healthcare Innovation and Technology Reform
- Organizational and Operational Reform

Figure 1: Health Reform Changes Both Payment and Delivery Systems



Source: Truven Health

Healthcare Reform Goals

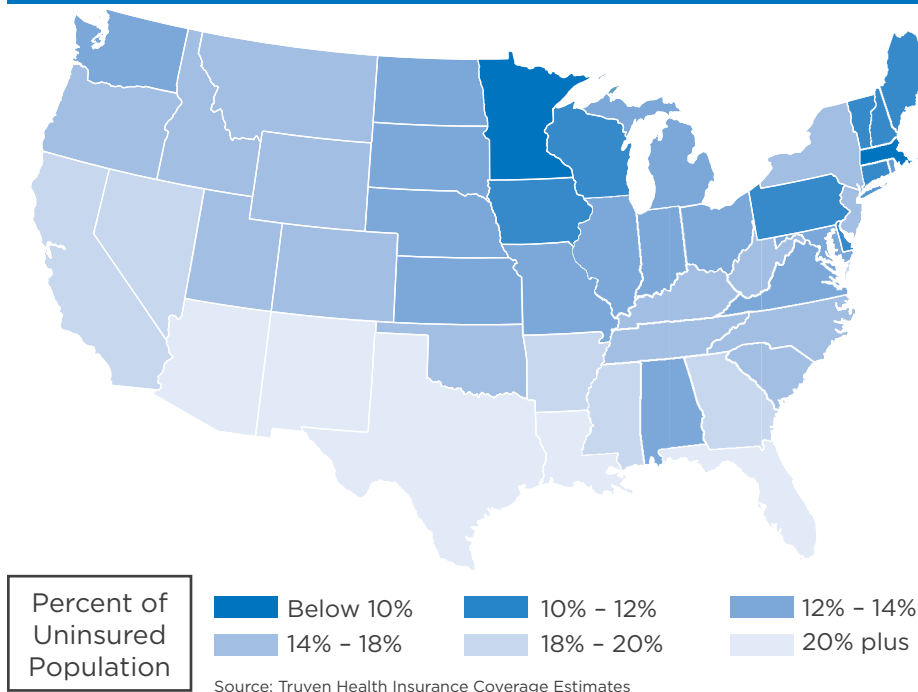
Access to Health Services

A consumer's view of the quality of care starts with access. The healthcare reform movement is focused on providing greater access to healthcare, particularly as it relates to coverage, but access encompasses a broader concept. The definition of access according to Penchansky and Thomas is, "the measure of fit between characteristics of providers and health services, and characteristics and expectations of clients, incorporating five reasonably distinct dimensions: availability, accessibility, accommodation, affordability, and acceptability."²

Access may also be defined by factors influencing entry or use of services. These factors include:

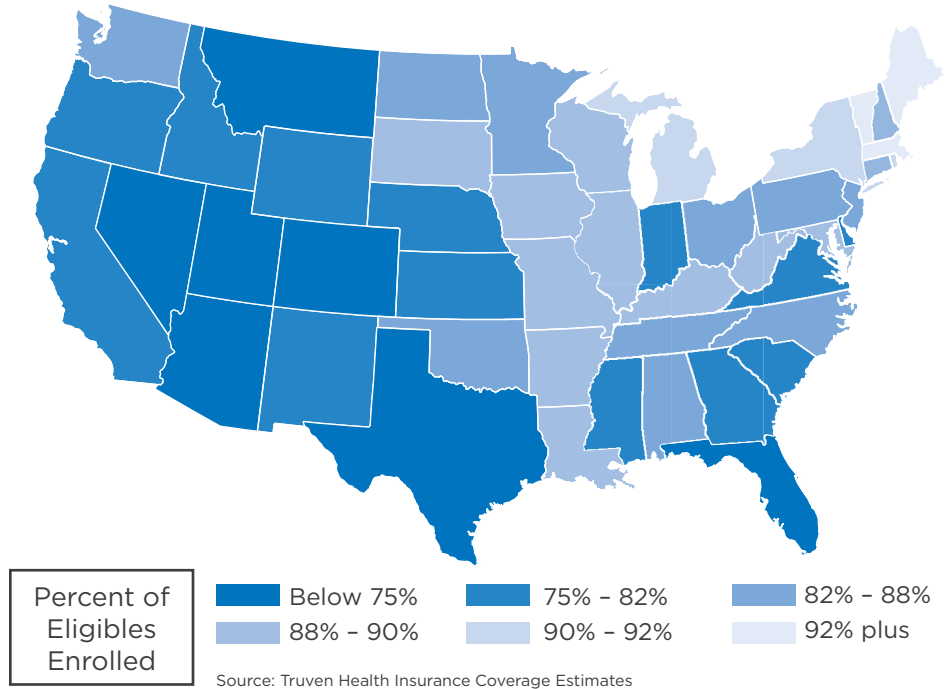
- **Geographic access** – Where the patient is located in relation to where the provider practices. The full range of medical services is usually concentrated in population centers, and persons removed from those centers will have to travel (sometimes considerably) to access the appropriate medical care.
- **Patient-dependent access** – This form of access is dependent on the individual's mobility and competence (mental or otherwise) in seeking and accessing care.
- **Temporal access** – Access to care within a reasonable time period for the individual.
- **Sociocultural access** – An important factor in multicultural societies. Aspects include cultural and language differences between care provider and patient, and differing beliefs regarding medical processes by patient (cancer fatalism, distrust of medical establishment).
- **Financial access** – Based on access to health insurance coverage or appropriate finances.³

Figure 2: Uninsured by State 2010



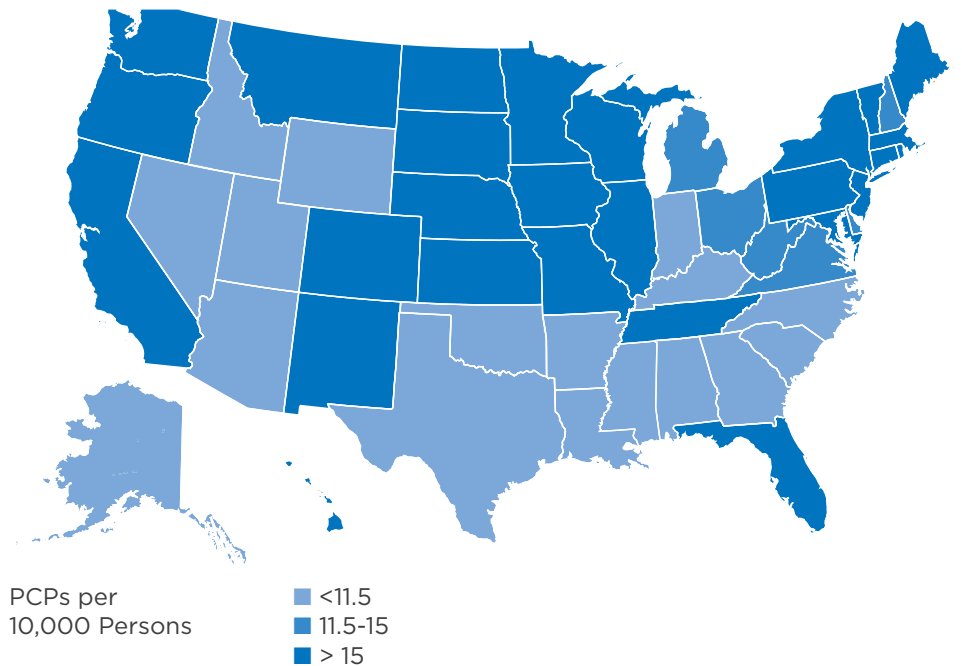
Access to insurance is limited in the U.S. This map shows the current uninsured by percentage of the population in each state as of 2010.

Figure 3: Current Medicaid Enrollment



Actual access to eligible Medicaid benefits is also limited given the local lack of enrollment among eligible Medicaid beneficiaries. In some markets, up to one in four eligible adults is not currently enrolled in Medicaid. It is expected that some of these adults may seek to enroll when health reform enrollment commences via the “Woodwork Effect” — when awareness of Medicaid opportunities are made public, some Americans who were eligible but never enrolled are expected to also join.

Figure 4: State Variation in the Supply of Primary Care Physicians (PCPs)



Source: Health Resources and Services Administration 2008 Area Resource File

Access to primary care providers also varies across the country. This map underscores the comparative access limits by state.

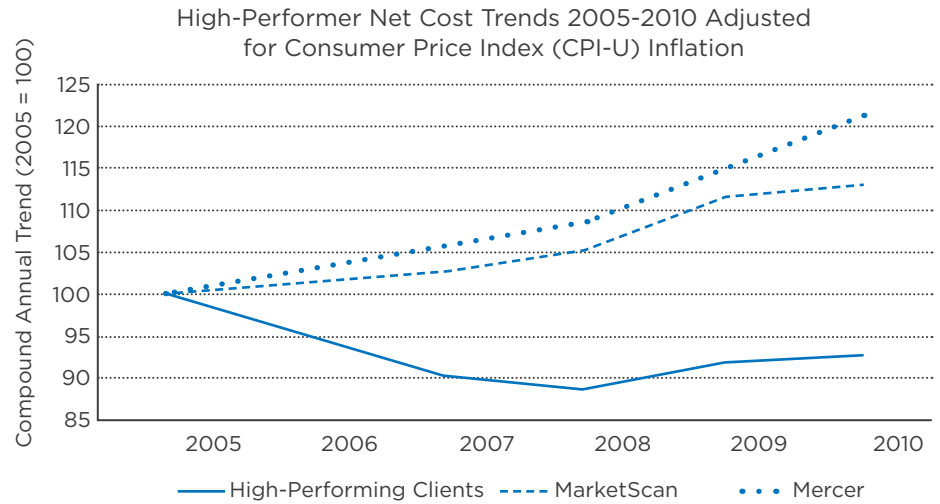
Bending the Curve

This term refers to changing the present trend of rising healthcare costs which has been tracking at two to three times inflation and is therefore making the public entitlements of Medicare and Medicaid not unsustainable financially. As a consequence of this rise, the U.S. is now spending nearly double what other industrial nations spend on healthcare, creating a disadvantage in the global market. As of 2008, American healthcare spending had surpassed \$2.3 trillion. This sum was three times the \$714 billion spent in 1990 and eight times the \$253 billion spent in 1980.⁴ Furthermore, between 1999 and 2007, the share of the Gross Domestic Product (GDP) devoted to healthcare rose from 13.7 percent to 16.2 percent, making American healthcare one of the most expensive systems in the world.⁵ In fact, the growth rate has hovered around 7 to 8 percent each year over the last decade. If the present growth trend continues, by 2025 a quarter of the GDP will go toward healthcare spending, and costs will consume half the GDP by 2082.⁶

The push for healthcare reform was in part inspired by the necessity to curb the unsustainable rise in healthcare spending. The PPACA has several provisions and initiatives that attempt to bend the cost curve downward. The act attempts to reduce unnecessary costs related to wasteful procedures, medical errors, and paperwork. The act encourages the reform of care delivery through accountable care organizations and medical homes and the adoption of electronic medical records. This not only addresses internal needs and reduces paperwork, but also serves as a method to coordinate care between disparate care providers.

The movement toward institutional reform is augmented by a strategy to promote healthcare innovation. This is evidenced by the creation of numerous demonstration projects focused on finding new and better methods of delivering care, especially through the newly established Center for Medicare and Medicaid Innovation (CMMI).

Figure 5: Bending the Cost Curve

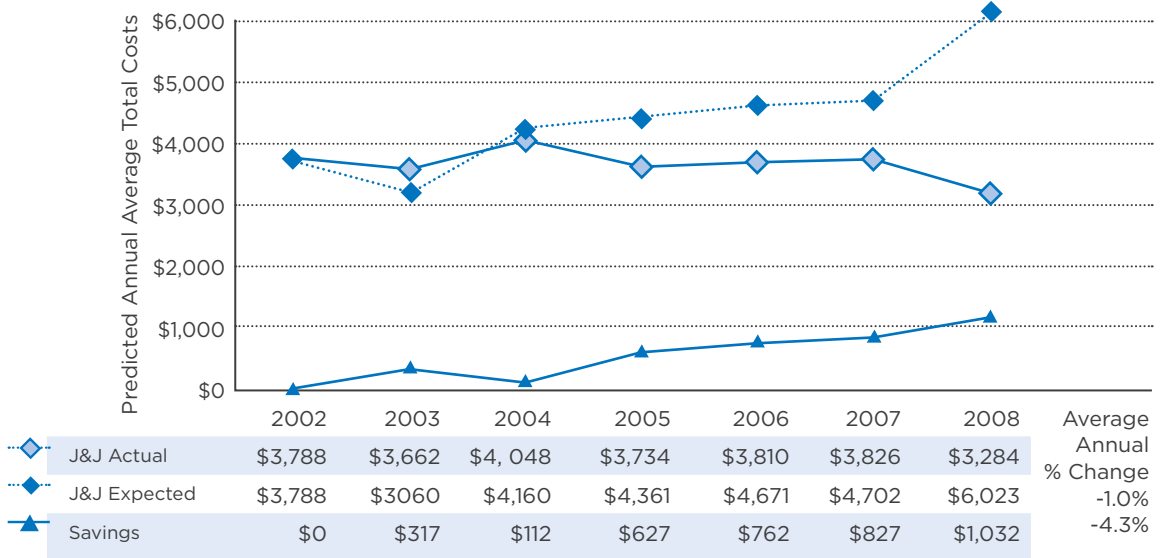


- **Truven Health High-Performing Clients:** a group of employers, with self funded plans, spanning multiple industries who also utilize Truven Health decision support and analytic consulting services. These clients consistently outperformed net-pay trend rates of the broader client group each year and cumulatively from 2005–2010. As a group, they have consistently made innovative use of healthcare data to support all aspects of population health, productivity, and plan management.
- - - **MarketScan:** a group of Truven Health clients with 5 million members covered in self-funded plans that have contributed to MarketScan continuously since 2005.
- • • **2010 Mercer National Survey of Employer Sponsored Health Plans:** a survey of 2,836 U.S. employers. Reflecting the average reported healthcare trend rates across group size, geographic region, and industry type.

Source: Truven Health

Top-performing employers with self-funded plans who have deployed benchmark health and productivity plan management demonstrate significantly better cost-containment performance versus the comparative groups. In fact, adjusted for inflation, their healthcare costs have decreased.

Figure 6: Culture of Health Cost Impact



Comparison group and Johnson & Johnson percentage annual change amounts derived from growth curve model estimates retransformed to dollars and adjusted for inflation. *Expected cost if Johnson & Johnson had comparison group growth trend.

Source: R. Goetzel. National Business Group on Health (NBGH) presentation, "New Studies: Impact of Johnson & Johnson's Culture of Health on Health and Economic Outcomes"

Johnson & Johnson's medical care costs show comparatively lower costs due to active interventions that help build and sustain a culture of health.

Expanded Coverage

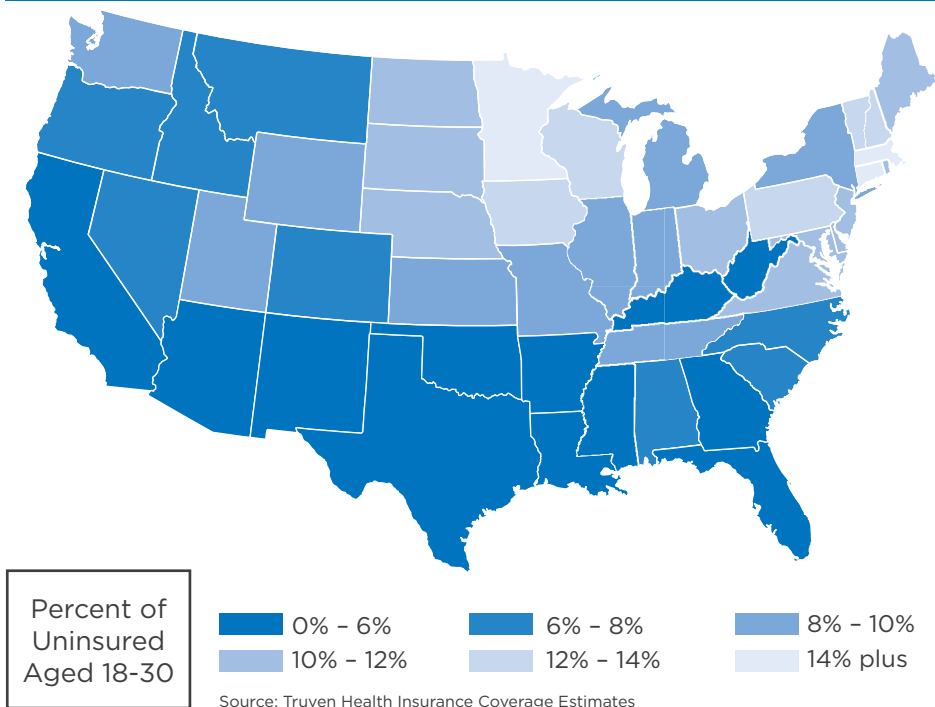
One of the major goals of the PPACA is to ensure nearly universal health insurance coverage. This means finding ways to provide coverage for the approximately 45 million people in the U.S. who are currently uninsured.

This will be achieved by several means. Individuals, regardless of their employment status, can purchase insurance from Health Insurance Exchanges starting in 2014. The individual is also protected against the practice of rescission (the retroactive cancellation of a health insurance policy) unless there is deliberate fraud on the part of the individual. Additionally, in the future, employers will be taxed if they do not provide coverage. Uninsured persons with pre-existing conditions can purchase health insurance as part of a joint state and federal program known as the Pre-existing Condition Insurance Plan or through state-run, high-risk pools.

Families with annual household incomes of less than \$88,000 (or individuals with incomes less than \$43,000) can receive tax credits and/or subsidies to help purchase insurance. Parents can also maintain their children on their health insurance plans until they are 26 years old.

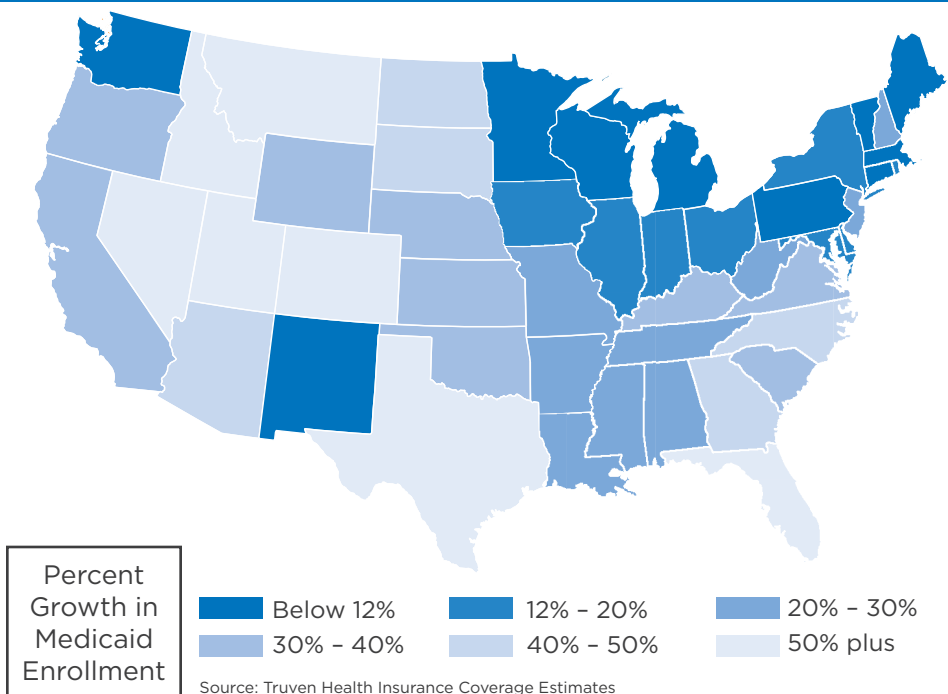
By 2014, the changing coverage will include established individual mandates, insurance exchanges, Medicaid expansion, as well as broader coverage. The broader coverage includes eliminating pre-existing condition clauses for children, no lifetime limits, full coverage for approved preventive services, Centers for Medicare & Medicaid Services (CMS) incentives for behavior modification, and reductions to out-of-pocket limits, waiting periods, and deductibles.

Figure 7: Young Adult Coverage Extension



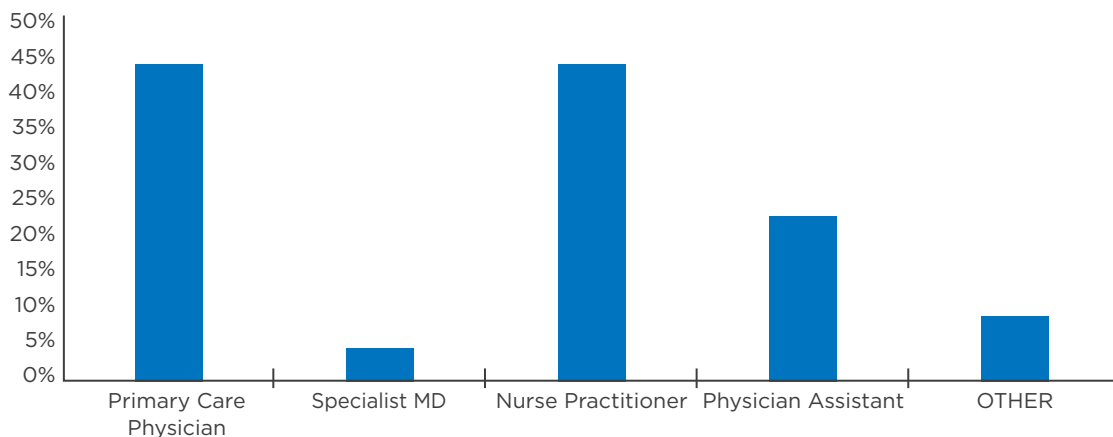
Expanded coverage will cover young adults who can stay on their parents' plans until they reach age 26.

Figure 8: Medicaid Growth by 2020



Growth in Medicaid will vary by market through 2020, with growth of up to 50 percent or more in some markets.

Figure 9: Physician Predictions — Who Will Treat Newly Insured



Source: 2011 National Physicians Survey, Truven Health and HCPlexus

Physicians believe that the estimated 32 million newly insured Americans who will receive health coverage under healthcare reform will mainly be treated by primary care physicians, nurse practitioners, and physician assistants.

Quality Healthcare

The healthcare reform movement is dedicated to maintaining and improving the quality of U.S. healthcare while improving access and reducing costs. What constitutes as quality healthcare is subjective and dependent on a stakeholder's relation to the healthcare system. The patient demands whatever care will bring relief, the payer would like care that provides maximum utility for minimum cost, and the care provider would like to provide care that results in health-status gains, a satisfied patient, and sufficient remuneration.

A more formalized framework of what constitutes quality healthcare is provided by the Agency for Healthcare Research and Quality. This framework was developed to provide an accurate measure of the state of healthcare in America. The organization measures 250 metrics that are divided among six categories: effectiveness, patient safety, timeliness, patient centeredness, efficiency, and equitable access to care.⁷

Figure 10: National Performance Comparisons

Performance Measure	Medians		Winners Compared with Non-Winners		
	Winning hospitals	Non-winning hospitals	Actual	Percent	
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
30-day readmission rate (%)	20.4	20.8	0.5	n/a	Lower 30-day readmissions
Average length of stay (days)	4.69	5.16	0.48	9.2%	Shorter ALOS
Expense per adjusted discharge (\$)	5,359	6,022	663	11.0%	Lower expenses
Operating profit margin	9.1	2.4	6.7	n/a	Higher profitability
HCAHPS* score	263	253	10	4.0%	Higher hospital rating

* Hospital Consumer Assessment of Healthcare Providers and Systems

Source: Truven Health Fact Files, Hospital Performance, July 2010

Truven Health 100 Top Hospitals® award winners demonstrate better quality and financial performance than peers by reducing complications and increasing operating profits over the last few years.

Patient Safety

One way to improve healthcare and reduce costs is to build a delivery system that emphasizes and promotes patient safety. Patient safety is defined as the ability to prevent and reduce the chance of injury that may be caused by a patient's interaction with the medical system.

The issue of patient safety and the prevalence of medical errors were brought to the forefront by the seminal 1999 Institute of Medicine report, *To Err is Human*. The report placed the number of Americans killed by preventable medical errors to be between 44,000 and 98,000 a year, with many more touched by adverse events that required additional hospital stays and treatment.

In recent years, there has been a concerted effort on the part of both private and public entities to promote patient safety. A major component of this work is to intelligently use information technology to improve coordination between care providers, collect information for process improvement, provide alerts and reminders to physicians, and aid in real-time decision-making. Other initiatives include the adoption of evidence-based medicine and pushing for research to improve the quality and effectiveness of treatment.

Figure 11: Possible Lives Saved

100 Top Hospitals	Non-winning hospitals		Average number of possible lives saved		Average number of additional patients that could be complication-free	
	Number of hospitals 2008	Number of discharges 2008	Total	Per hospital	Total	Per hospital
Major teaching hospitals	158	869,259	9,231	58	23,135	146
Teaching hospitals	398	2,179,344	13,715	35	52,631	132
Large community hospitals	318	1,773,219	25,679	81	34,028	107
Medium community hospitals	1,008	2,580,360	49,099	49	65,475	65
Small community hospitals	944	913,157	16,071	17	31,985	34
All hospitals	2,826	8,315,339	98,432	35	197,194	70

Source: Truven Health

If all Medicare inpatients received the same level of care as those in the nation's best hospitals — winners of the 100 Top Hospitals® award — across all categories, more than 98,000 additional patients would survive each year, 197,000 patient complications would be avoided annually, and the average patient stay would decrease by half a day.

Payment and Insurance Reform

Bundled Payments/Episodic Payment Model

One of the most problematic aspects of the present healthcare system is the fee-for-service payment methodology presently deployed. This approach to compensation does not reinforce care coordination. It allows care to be delivered in a fragmented way without a focus on the outcome of various treatments and services provided.

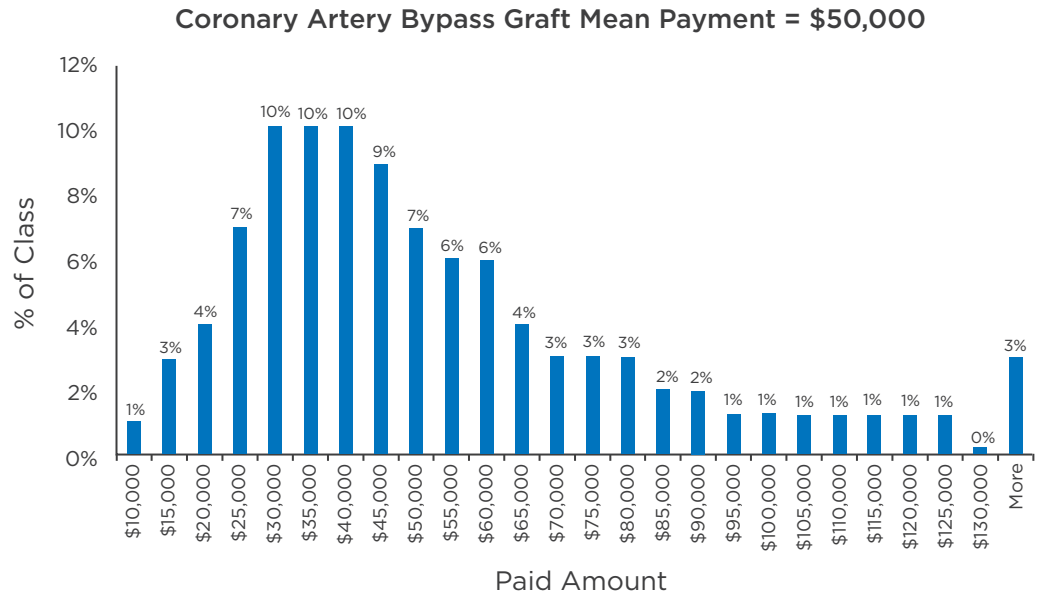
One way to reward coordination is by providing a single payment per episode of care by bundling related costs. In this way, all providers involved would need to collaborate with each other in a way that provides a comprehensive service for a comprehensive price. A bundled or episodic payment model allows for that single, standardized payment to be delivered to a care provider (or multiple providers) for all services related to a specific treatment or condition. For example, a patient or insurance carrier would make one payment for all services related to a hip replacement or for all services used to manage ongoing care for an asthmatic over the course of a year.

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 have no incentive 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.

The bundled payment system addresses this situation by setting a standardized fee for a bundle of services, thereby incentivizing the providers to efficiently utilize resources while providing effective care. 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.

The Patient Protection and Affordable Care Act (PPACA) supports the testing of this payment reform model to determine if providers can be incentivized to manage costs by taking responsibility for the costs of both acute conditions/procedures and chronic conditions. Over the next five years, the Center for Medicare and Medicaid Innovation will be releasing and regulating eight different bundled payment models in partnership with providers to determine which models are most effective at controlling costs, while improving the quality of care for Medicare beneficiaries. These models are also being studied by commercial payers who are interested in achieving similar goals.

Figure 12: Variations in Payment for Coronary Artery Bypass Graft (CABG) Episode



- Average hospital payment is between \$30,000 - \$40,000
- High-cost outliers result in payment of \$50,000

Source: Truven Health MarketScan®

There is a wide range of payments for the same treatment (in this case CABG) in any given market. To define bundled payment rates, it is essential to have detailed cost and utilization data.

Cadillac Tax

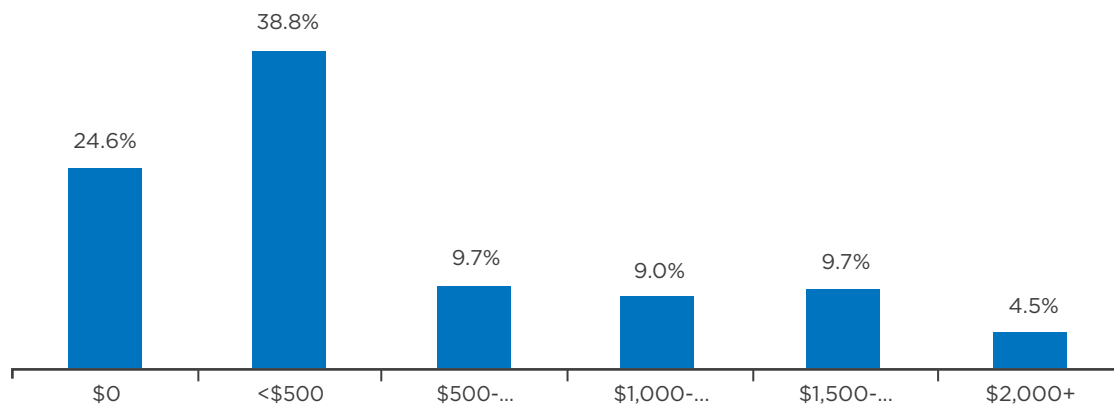
There is a school of thought that “rich” health benefit plans that broadly cover all aspects of care with little expense to the consumer may foster over-utilization. For this reason, the PPACA established a methodology to tax such plans and use this revenue to fund other aspects of reform. “Cadillac, or gold-plated,” insurance plans are high-premium insurance plans (provided at low or no cost to members or employees) that often have low deductibles and benefits covering the most expensive of treatments. Cadillac plans are not exclusively offered to well-compensated executives. In fact, these types of plans are very common in many industries, particularly those with strong union affiliations.

A Cadillac health plan is defined as a plan that costs, on a 2018 basis, more than \$10,200 annually for an individual or \$27,500 for a family. These specified amounts include both worker and employer contributions to flexible spending/health savings accounts. Employees with higher-than-average health costs, caused by increased illness burdens or a predominance of elderly or female workers, will receive a break in the form of a higher cost threshold.⁸

The tax goes into effect in 2018 and requires employers to pay a nondeductible 40 percent on the annual value of their health plan costs. This delayed implementation date was intended to allow health plans to reap cost savings from other aspects of healthcare reform. Truven Health analysis finds that more than 70 percent of employers could be subject to the excise tax in 2018 under the present thresholds, as detailed in the chart on the next page.

Figure 13: Excise Tax Impacted Employers and per Employee per Year

Percentage of Employers and Projected 2018 PEPY Excise Tax



Source: Truven Health MarketScan®

Most employers will need to identify strategies to reduce future trend rates to avoid the excise tax or face significant additional cost burdens for providing group benefits. Assuming a 7 percent average annual medical and pharmacy trend rate, roughly 25 percent of our sample of large employers would not be required to pay an excise tax. Another 39 percent would pay less than \$500 PEPY (per employee per year) in taxes in 2018. The remaining 33 percent would pay in excess of \$500 PEPY in excise taxes.

Employer Mandate/Pay or Play

The employer pay or play system, also called the employer mandate system, requires that employers either offer health insurance coverage or pay a fine, which in turn will subsidize health insurance for those without access. Such systems have been put into place on state levels (like Massachusetts) or city levels (like San Francisco) and were considered on a national scale as a framework for the healthcare reform debate. The new PPACA does not contain an explicitly defined employer mandate, though large employers (those with 50 or more employees) who do not offer coverage will have to pay an assessment of \$2,000 per full-time employee beyond their first 30 employees. This assessment will cover the tax credits provided to employees to buy their own insurance. Therefore, employers who operate businesses of greater than 50 employees will need to decide whether they will provide health benefits and “play” in the new system or whether they will not participate directly and “pay” the fine instead.

Global Payment/Global Capitation

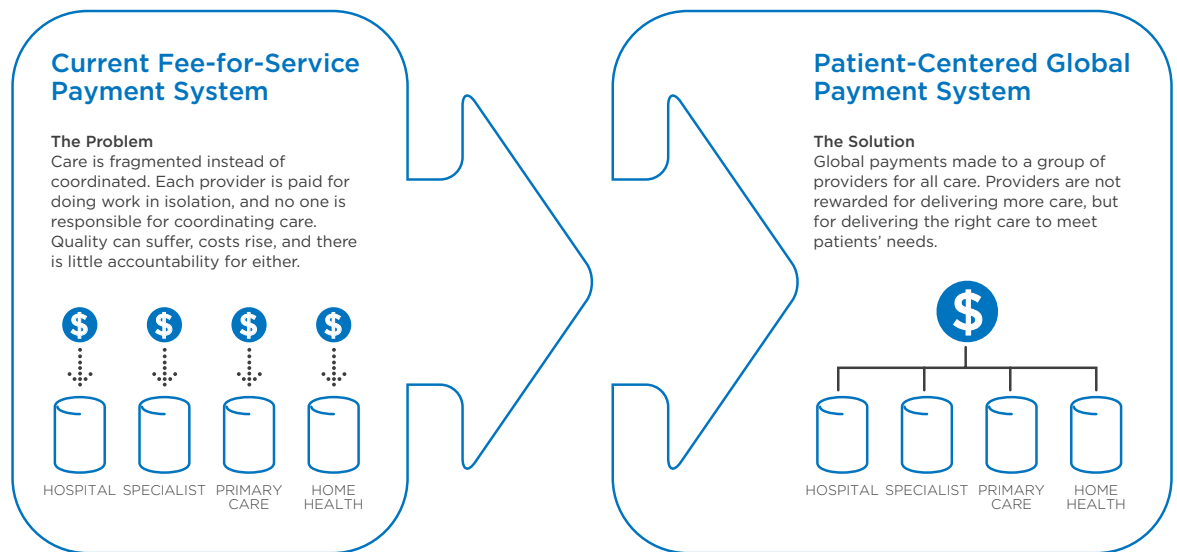
Global payments are a proposed reform model that provides an incentive for reducing unnecessary healthcare procedures and expenditures by compensating a care delivery system with an all-inclusive payment. This system requires the care-providing organization to assume full risk for all of the care of the patient — in exchange for a fixed fee paid per patient (dependent on demographic data and other considerations). The payment per patient differentiates this method from the bundled payments model, which is based on payment per procedure or treatment grouping.

Given that the care-providing organization receives one fixed rate per patient, there is no reward for delivering an excessive volume of services. This type of payment system also encourages the utilization of high-value preventive measures, such as health screenings and immunizations. Preventive measures help keep the patient population healthy and limit the need for potentially expensive treatment, thereby lowering expenditures.

Another difference between a global payment system and bundling is that a provider receiving bundled payments only has to account for the care provided to the patient and plan for any complications arising during the specific care episode(s) as defined by the bundle. An organization receiving global or capitation payments not only has to account for the care delivered to each individual patient, but also the health of the population it serves. After all, the organization's provision of care (and revenue) may be affected by the local population's health status and the larger community's health-related environment.

The challenge for the global payment system will be the allocation of the fixed sum. Alignment will be easier to achieve if the payment percentage is allocated in an evidence-based manner. This would help overcome potential tension between those who deliver specialty care and primary care as they compete for a larger share of the fixed payment.

Figure 14: Transition from Fee-for-Service System to Global Payment System



Source: Recommendations of the Special Commission on the Health Care Payment System, July 2009.

The fee-for-service system shift to global payment systems is intended to align the providers in care delivery, payment, and outcomes.

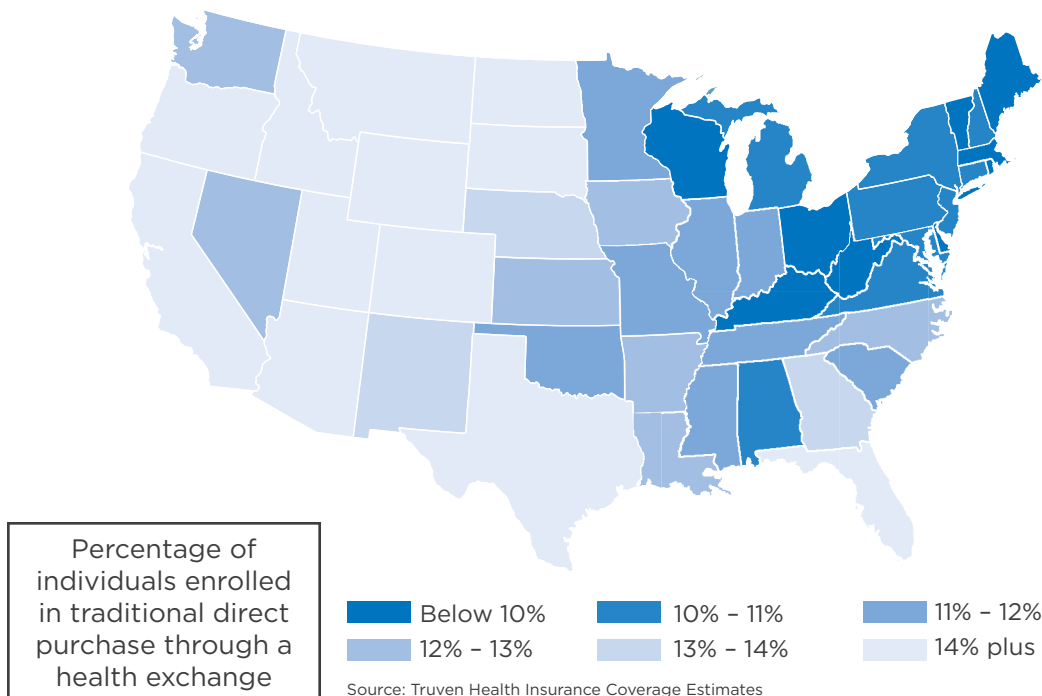
Individual Coverage Market

For people unable to receive health coverage through their employer or the government, the health reform legislation will create a competitive marketplace for buying coverage from an insurer. This individual coverage market presently serves 14.5 million people (or almost 5 percent of the population). Historically, the individual buyer bought health coverage at a high premium, often with fewer benefits, since the risk could not be spread across a larger insurance pool.

Given the individual mandate imposed by the PPACA, the individual market will soon serve a significantly greater portion of the population. Perhaps it will more than double the present number.⁹

By expanding the population involved through the individual coverage mandate, it is likely that premiums will become more affordable. Insurers will be able to capture large populations of individuals through this marketplace, reducing the risk in their coverage and lowering the cost.

Figure 15: Individual Insurance Growth, 2010–2020



The growth in individual insurance coverage will vary by state; however, the highest amount of growth is expected in the southern and western states.

Medical Loss Ratio (MLR)

An important component of recent healthcare reform limits the amount of money insurance companies can spend beyond what they pay out for the medical expenses and healthcare improvement for their insured customers. This concept is addressed in the reform legislation by providing limits on the medical loss ratio.

The medical loss ratio is the amount of spending dedicated to providing health services to the covered population as compared to the total collected insurance premium revenue. The PPACA sets minimum medical loss ratios of 85 percent for large group health plans and 80 percent for small group health plans. This means that any spending not dedicated to providing health services, such as maintaining business operations, administrative expenses, and earning a profit, is limited to 15 percent and 20 percent of total revenue, respectively.

Even though the first MLR reports were submitted to the U.S. Secretary of Health and Human Services in June 2011, there remains a lack of clarity about what constitutes medical expenses and quality improvement as compared to administrative costs. For example, fraud investigation is considered an administrative expense, but some argue against that categorization.

Risk Pool

The need for health insurance arises from the fact that medical services are nondiscretionary spending and can be financially burdensome to individuals or insurance providers. That is why it is advantageous to spread the cost of these potentially catastrophic events over a group of people, referred to as a risk pool, with each participant bearing only a fraction of the total costs in the form of premiums.

One of the goals of the recent legislation is to provide near-universal healthcare coverage. The Congressional Budget Office has projected that the PPACA provisions will provide health insurance for 32 million Americans.¹⁰ This greatly increases the risk pool for the companies providing insurance coverage, in theory making premiums more affordable.

Payment Integrity

Payment integrity refers to the process of ensuring that the correct payment is made on behalf of the correct patient for the correct service to the correct provider.

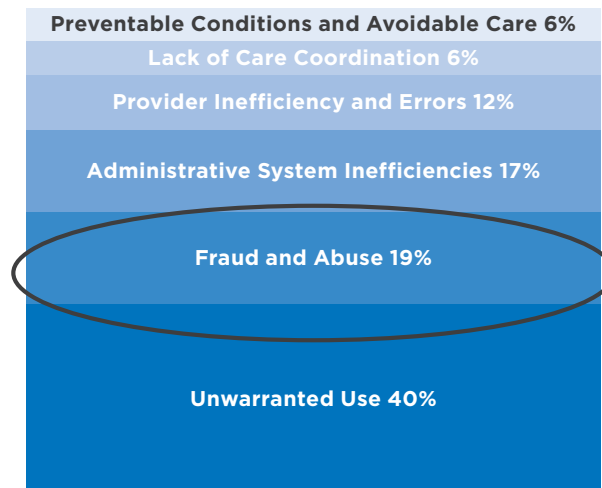
This process involves detecting and minimizing fraud, waste, and misuse of healthcare dollars. While it may seem an easy task to receive a healthcare bill and pay it, there is considerable complexity. Multiple steps must be taken to prevent problems with payment integrity, such as:

- The eligibility of the patient must be checked.
- Services must be reviewed for medical necessity and appropriateness.
- The provider needs to be classified as participating within the network plan (or not).
- Services billed need to be reviewed to determine to what extent they are covered under the benefit plan.
- Covered services need to be paid based on the contractual agreement the insurer has with the provider.
- Copayments and coinsurance need to be calculated before the payment can be determined.

This complexity is exacerbated by the “pay-and-chase” method by which government payers, such as Medicare and Medicaid, attempt to recover potentially fraudulent or erroneous remunerations after they have been paid. Due to Medicare and Medicaid’s laudable commitment to paying providers quickly, bills are adjudicated often before they can be identified as problematic. This can make recovery very difficult.

Figure 16: Fraud Waste and Abuse Costs

	Cost in Billions
1. Unwarranted Use	\$250-325
2. Fraud and Abuse	\$125-175
3. Administrative Inefficiencies	\$100-150
4. Provider Inefficiency and Errors	\$75-100
5. Lack of Care Coordination	\$25-50
6. Preventable Conditions	\$25-50
	\$600-850



Source: Truven Health White Paper, "Where Can \$700B of Waste Be Cut Annually from the U.S. Healthcare System?"

Payment integrity's major focus is on the most blatant fraud and abuse activities. Truven Health has projected this problem to be as great as \$175 billion annually.

Pre-existing Conditions

Pre-existing conditions are health conditions that exist prior to the individual's enrollment in a health plan. Pre-existing conditions can preclude an individual from finding affordable coverage or any coverage at all. The PPACA aims to address this problem by barring insurers from denying coverage or charging higher premiums as a result of pre-existing conditions. This protection already covers children under 19 and will extend to the rest of U.S. population in 2014. A temporary program, the Pre-existing Condition Insurance Plan, administered by the states and the U.S. Department of Health and Human Services will provide insurance to individuals with pre-existing conditions (as well as those without insurance for at least six months) until 2014.

Coverage Limits

Coverage limits dictate the number of dollars spent on benefits per individual. These limits come in two forms — annual and lifetime. These coverage limits are one of the primary features of a class of insurance policies known as mini-medical plans. These are low-cost, prevention-oriented plans that cover a limited amount of doctor's visits and tests, but provide little, if any, hospitalization coverage.

The PPACA moves the industry toward eliminating these limits. Lifetime coverage limits on most benefits were banned outright for all policies renewed or beginning on Sept. 23, 2010, while no annual dollar limits are allowed on most covered benefits beginning on Jan. 1, 2014.¹¹

Figure 17: Coverage Limit Transition

The new law restricts and phases out the annual dollar limits that all job-related plans, and those individual health insurance plans issued after March 23, 2010, can put on most covered health benefits. Specifically, the law says that none of these plans can set an annual dollar limit lower than:

- \$750,000 — For a plan year or policy year starting on or after Sept. 23, 2010, but before Sept. 23, 2011
- \$1.25 million — For a plan year or policy year starting on or after Sept. 23, 2011, but before Sept. 23, 2012
- \$2 million — For a plan year or policy year starting on or after Sept. 23, 2012, but before Jan. 1, 2014.

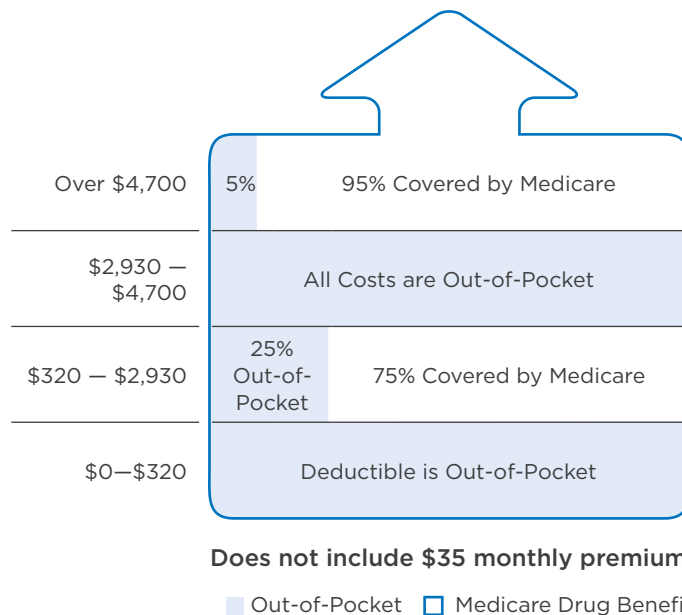
No annual dollar limits are allowed on most covered benefits beginning on Jan. 1, 2014.

Source: healthcare.gov/law/provisions/limits/limits.html

Medicare Drug Coverage Gap/“Donut Hole”

Medicare Part D is a voluntary medication benefit program that began in 2006. It was enacted as part of the Medicare Prescription Drug, Improvement and Modernization Act of 2003. In 2012, participants with a standard plan have an initial deductible of \$320. Participants with a standard plan have 75 percent of their drug expenses covered until they reach a benefit limit of \$2,930. Once expenses reach \$2,930, the participant has reached the coverage gap, also called the “Donut Hole,” in which all expenses are covered out of pocket until the expenses reach the catastrophic limit of \$4,700. Expenses above this limit have a small (approximately 5 percent) coinsurance rate attached to them. In 2012, Part D enrollees will continue to receive a 50 percent discount on the total cost of their brand-name drugs while in the coverage gap. The full retail cost of the drugs still counts toward the accounting for the catastrophic limit of \$4,700. Enrollees will pay a maximum of 86 percent copay on generic drugs while in the coverage gap.^{12,13}

Figure 18: Closing the Donut Hole



Source: “Public Education - Modernization Act of 2003,” The AGS Foundation for Health in Aging. Web. 25 Aug. 2011, healthinaging.org/public_education/prescDrug_bill3.php

The PPACA targets closing the coverage gap by 2020 while also implementing a series of stop-gap measures, beginning in 2010, to relieve individuals affected by the donut hole, as illustrated here.

Early Retiree Reinsurance Program

The Early Retiree Reinsurance Program is a temporary \$5 billion program established by the PPACA. This program came into effect on June 1, 2010, and will be phased out by Jan. 1, 2014. The purpose of this program is to help businesses and unions cover the healthcare costs of Medicare-ineligible early retirees, their spouses (or surviving spouses), and other dependents. The program does this by providing 80 percent of claims costs for benefits between \$15,000 and \$90,000. Applicants to the program have to apply to the U.S. Department of Health and Human Services for approval and funds. In 2014, participants will be directed to purchase coverage from the health insurance exchanges.

Figure 19: Early Retiree Reinsurance Components

The PPACA provides \$5 billion in financial assistance to employers, unions, and state and local governments to help them maintain coverage for early retirees age 55 and older who are not eligible for Medicare.

Employers, unions, and governments can use the savings to reduce their own healthcare costs, provide premium relief to their workers and families, or both.

The U.S. Department of Health and Human Services will reimburse medical claims dating back to June 1, 2010 — three weeks before the statutory deadline for establishing the program. This allows more insurance claims to qualify for reinsurance payments for plans this year.

Employers who are accepted into the program will receive reinsurance reimbursement for medical claims for retirees age 55 and older who are not eligible for Medicare, and their spouses, surviving spouses, and dependents.

Health benefits claims that qualify for relief include medical, surgical, hospital, prescription drug, and other benefits that may be specified by the Secretary of Health and Human Services, such as coverage for mental health services.

The amount of this reimbursement to the employer is up to 80 percent of medical claims costs for health benefits between \$15,000 and \$90,000. Claims incurred between the start of the plan year (often January 1) and June 1 are credited toward the \$15,000 threshold for reimbursement. However, only medical expenses incurred after June 1, 2010, are eligible for reimbursement under this program.

Source: errp.gov/download/TheAffordableCareAct.pdf

Healthcare Innovation and Technology Reform

Center for Medicare and Medicaid Innovation (CMS)

The healthcare reform movement has identified the need to develop new and better ways to deliver care. In an effort to stimulate this, the Center for Medicare and Medicaid Innovation (CMMI) was created with the passage of the PPACA. The Center works with an array of stakeholders in the healthcare field to create solutions focused on three primary areas:

- **Better Care for Individuals** — Create a system that is patient-centered, efficient, timely, equitable, and safe
- **Community Care Models** — Explore steps to improve public health with a focus on major challenges, such as obesity, smoking, and heart disease
- **Coordinating Care to Improve Health** — Develop new models of care delivery, such as medical homes for primary care and ACOs

The Center will generate “open innovation communities” to serve as testing grounds for new practices and to help care providers adopt established best practices. The Center’s initial focus is on creating patient-centered medical homes, advanced primary care practice within community health centers, and comprehensive treatment practices for dual eligibles — the citizens within our population who are severely ill and qualify for coverage under both Medicaid and Medicare.

Demonstration Projects

The PPACA authorized the creation of 30 demonstration projects and five pilots to test and evaluate delivery and payment reform models. Among the concepts tested include payment bundling, pay-for-performance, and gain-sharing. Other demonstration projects focus on testing reform delivery models, such as patient-centered medical homes (PCMHs) and ACOs.

It is hoped that federal funding of these creative efforts to reform payment and care delivery will lead to the more generalized use of better methods. The emphasis is being placed on greater care coordination and compensating for improved outcomes, and is moving away from fragmented, fee-for-service medicine that dominates the American healthcare landscape today.

Electronic Medical Record/Electronic Health Record

Healthcare reform globally is recognizing the importance of an electronic platform to store and communicate medical information. The American Recovery and Reinvestment Act (ARRA) stimulus legislation has created a payment incentive system for every doctor who qualifies by using electronic medical records “meaningfully” (see Meaningful Use on page 23). To receive this incentive, physicians will need to demonstrate that they are tracking their performance against core quality measures and improving over time. This effort could go a long way toward reducing wasteful healthcare spending and improving results.

Often, the terms “electronic medical records” and “electronic health records” have been used interchangeably by the numerous stakeholders in the healthcare system, but there is a nuanced distinction between the two systems.

Electronic medical records (EMRs) are created internally within an organization (and as such, the data belongs to the care-delivery organization and is available to the patient). EMRs encompass such tools as documentation of patient demographics, the ability to take clinical notes, as well as the ability to send prescriptions electronically to pharmacies. The electronic medical records are intended to be shared among care providers for the purposes of effective care coordination.

Electronic health records (EHRs) include such capabilities as patient registries for management of a patient population, web applications, and personal patient health records, as well as other features that could include clinical decision support and the ability to securely exchange health information with other entities. Given that electronic health records are primarily used for transferring health information between entities (care providers or otherwise), it requires the initial and widespread adoption of electronic medical records to serve as a base for a system of secure data transfer.

Figure 20: Provider EMR Satisfaction Findings – Case Study

Questions (n = 46)	Agree	Neutral/ Disagree
Speed: Cronbach's Alpha = 0.79		
I can develop a synopsis of a patient faster.	66% (27)	34% (14)
New results for patients are available to me sooner.	86% (36)	14% (6)
When a patient calls on the telephone I can answer his/her questions faster.	93% (37)	7% (3)
Accuracy: Cronbach's Alpha = 0.84		
Documents are contained in the correct patient's chart more often.	73% (30)	27% (11)
Documents are more legible.	88% (35)	12% (5)
Individual patient records are more complete.	68% (28)	32% (13)
Efficiency: Cronbach's Alpha = 0.75		
It takes less effort to research web-based literature.	59% (23)	41% (16)
It takes less effort to review a patient's medical history.	86% (36)	14% (6)
It takes less effort to communicate with my staff.	88% (37)	12% (5)
It takes less effort to review records when interpreting lab results.	83% (35)	17% (7)
Outside Access to System: Cronbach's Alpha = 0.84		
I like the ability to access my message basket while away from the clinic.	84% (38)	16% (6)
I like the ability to access new results while away from the clinic.	82% (37)	18% (8)
The new system intrudes into my life while I am away from the clinic in an unwelcome way.	20% (9)	80% (36)
I value the ability to access the system from home.	80% (36)	20% (9)
The new system makes it easy for me to look up a patient's past medical history when I am at home.	83% (38)	17% (8)
Communication: Cronbach's Alpha = 0.76		
The messaging in Starpanel allows me to respond more quickly to communication with my staff concerning patients.	93% (39)	7% (3)
Sending and receiving messages in my clinic is now more convenient.	90% (37)	10% (4)
When I send a message now, it is available to the intended recipient faster.	88% (37)	12% (5)
There is more effective communication between attendings and residents.	50% (22)	50% (22)

Overall Cronbach's alpha = 0.89

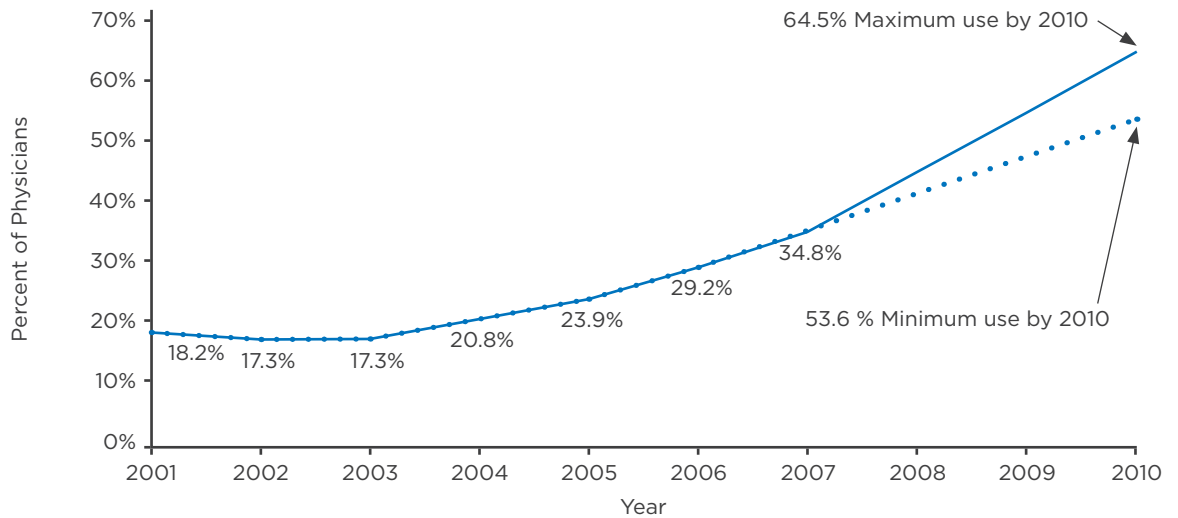
*excluded from outside access system.

**excluded from communication.

Source: "An Electronic Medical Record in Primary Care: Impact on Satisfaction, Work Efficiency, and Clinic Processes." Web. 25 Aug. 2011. ncbi.nlm.nih.gov/pmc/articles/PMC1839545/

After the implementation of an EMR, the Department of Biomedical Informatics at Vanderbilt University surveyed the doctor end user. The results provided here demonstrate strong acceptance of an EMR among physicians in adult primary care. Features such as remote access and electronic messaging were surprisingly useful and appreciated as primary care practice enhancements.

Figure 21: Growth of Office-Based Physicians Using EMRs



Note: Minimum estimate of use by 2010 includes “Yes” responses to plans for installing new electronic medical record (EMR) systems by 2010. Maximum estimate of use by 2010 includes “Yes” and “Maybe” responses to plans for installing new EMR systems by 2010.

Source: “Electronic Medical Record Use by Office-based Physicians and Their Practices: U.S. 2007,” National Health Statistics Report, March 31, 2010, #23, cdc.gov/nchs/data/nhsr/nhsr023.pdf

Electronic medical records use by office-based physicians was virtually flat from 2001-2003, with a steady growth through 2007, and an additional average gain of 8 percent per year forecasted through 2010.

Health Information Exchange

Given that one of the major goals for healthcare reform is coordination of care between care providers and organizations, a major initiative in the reform process is using the combination of meaningful-use incentive dollars and interoperability standards to stimulate the exchange of electronic health data between providers. Health Information Exchanges (HIEs) will provide a means for this to occur.

The American Recovery and Reinvestment Act (ARRA) blueprint calls for each state to build a statewide health information exchange that serves as the interstate highway for the transfer of clinical data between the region’s electronic medical platforms. Hospitals and providers are incented under “Meaningful Use” in the blueprint to apply for stimulus dollars they can use to purchase certified EMRs that have been preapproved to exchange clinical data following prescribed standards. Once installed, the certified EMRs serve as an on-ramp to a regional or local exchange, or directly to the state’s interstate highway — which then enables interstate exchange between providers, regional health information exchanges, Medicaid, public health, and other “nodes” connected to the state HIE. The state HIE also provides a means for intrastate exchange, in addition to a variety of federal agencies, including the CDC, VA, DoD, and CMS.

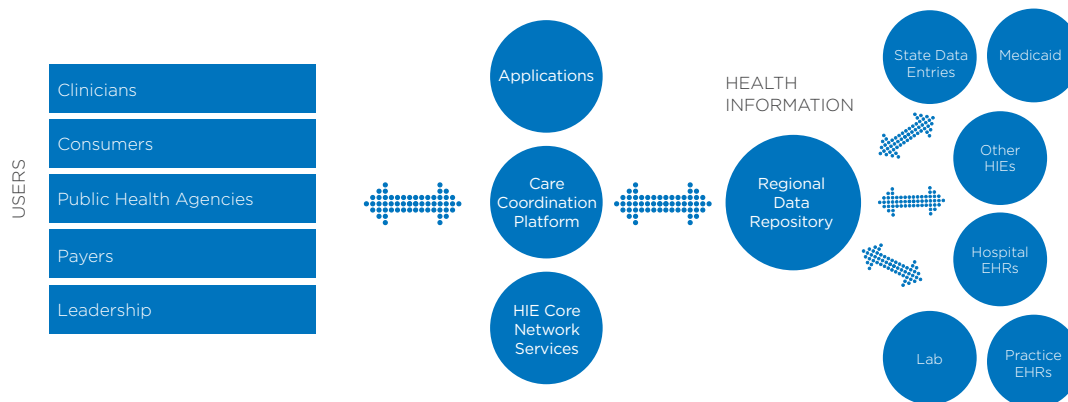
By stimulating exchange at the local, regional, state, and national levels, it is hoped that an architecture will be built that can serve multiple functions, including public health reporting, biosurveillance, streamlined administrative transactions, and ultimately, the capacity to build the virtual single patient record for every citizen.

Once physicians and other caretakers have real-time access to the virtual single patient record, a number of benefits will be realized, including vastly enhanced care coordination, improved quality outcomes, reduction in unnecessary testing, and streamlined administrative costs, to name a few.

This level of dramatic transformation is not without its social and political challenges. Privacy and security policies and standards are the first and foremost concern at all levels of personal health information (PHI) exchange concepts, with healthy debate still unfolding regarding the level of patient consent and control. Additionally, new legal frameworks to handle the increased flow of data in terms of the Health Insurance Portability and Accountability Act (HIPAA) data rights, and malpractice are still being developed.

In spite of these challenges, the vision of future functionality is compelling: If a patient is away on vacation or business and accesses care far from home, HIEs should allow for his/her medical history to be available to the caring clinicians. When patients arrive for emergency care and cannot speak for themselves, providers will no longer need to act blindly. They will be able to access a patient’s health history and learn of any advanced directives through the exchange. The more comprehensive the virtual single patient record, the more access to rich clinical data physicians will have — to avoid ordering duplicate tests or recommending misinformed treatments.

Figure 22: Health Information Exchange System



Source: Truven Health

Successful development of HIE systems will require investment into sophisticated information technology and the collaboration of payers, providers, and patients.

Meaningful Use

The American Recovery and Reinvestment Act of 2009 included funding from Medicare and Medicaid incentives for the “Meaningful Use” (MU) of “certified” electronic health records. The intent of the legislation is to promote the use of EHR technology to:

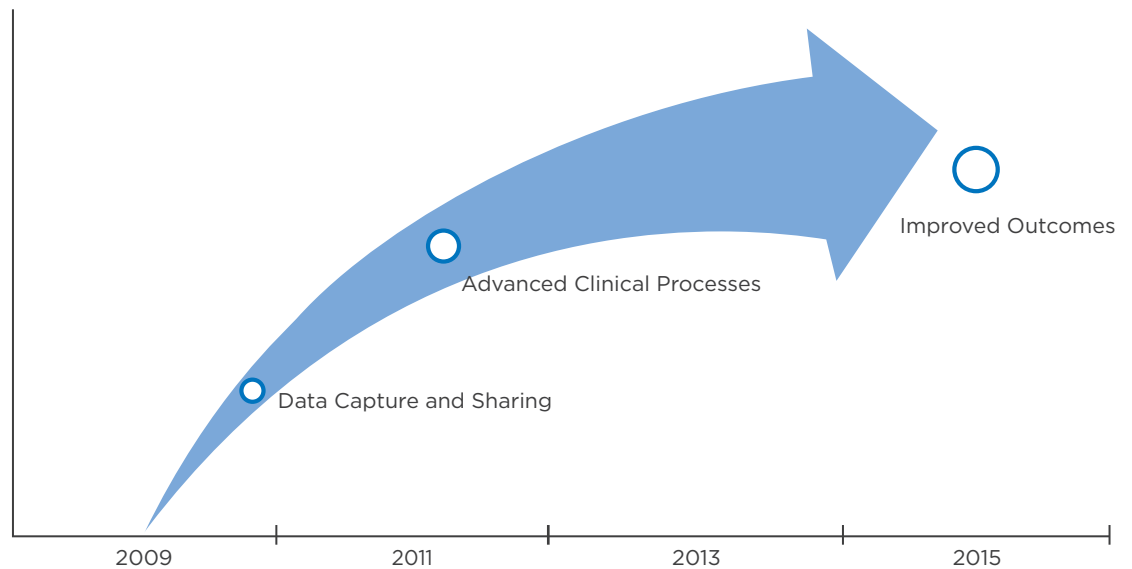
- Improve quality, safety, and efficiency
- Reduce health disparities
- Engage patients and families in their healthcare
- Enhance care coordination
- Support population and public health

To expedite implementation, incentives (and later, penalties) were included in the legislation to induce the adoption of “certified” health information technology by providers and hospitals, and to promote their “meaningful use.” Certification is provided by the not-for-profit, private organization, the Certification Commission for Healthcare Information Technology (CCHIT).

The elements of “meaningful use” were set by the Centers for Medicare and Medicaid Services and are introduced as three phases:

- Phase one is intended to incentivize the mass usage and proliferation of EHRs and computerized physician order entry.
- Phase two is intended to expand the criteria of meaningful use into areas such as clinical decision support, medication management, and patient access to health records, as well as foster information exchanges between providers to improve coordination of care.
- Phase three will introduce quality and safety measurements to improve care over time. A participating physician or organization has to report results acquired over a 90-day period during the first two years of participation via attestation. An eligible provider must successfully complete 15 core objectives. The provider also has to fulfill five (out of 10 total options on a menu set) additional objectives and achieve six clinical quality measures (three core/alternate core measures and three out of 38 alternate measures). Hospitals have to fulfill 14 core objectives and five out of 10 alternate measures, and achieve 15 clinical quality measures.

Figure 23: Meaningful Use of Health Information



Source: “A Roadmap and THE Definition of Meaningful Use.” Wellsphere - Health Knowledge Made Personal. Web. 25 Aug. 2011. wellsphere.com/healthcare-industry-policy-article/a-roadmap-and-the-definition-of-meaningful-use/748126

The meaningful use of information captured by EMRs will progress over time and lead to advanced clinical processes that support improved outcomes as a result of actionable information.

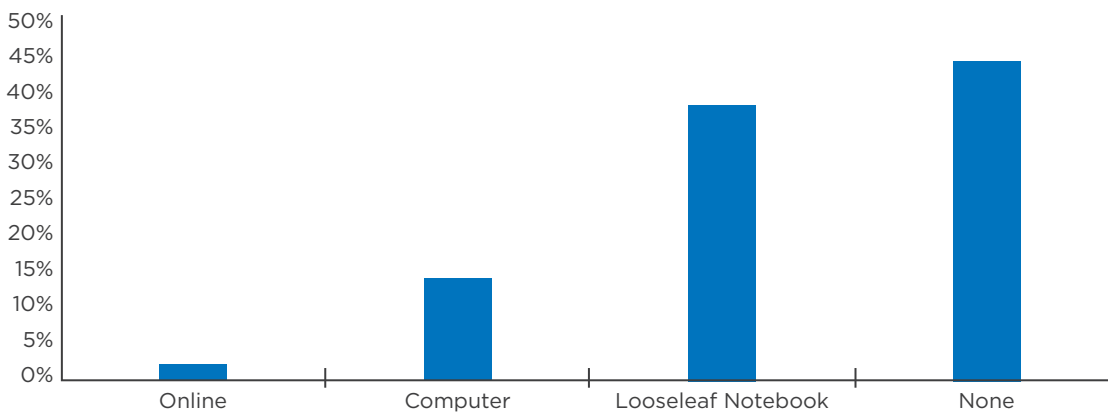
Personal Health Record

An important component of healthcare reform is encouraging patients to actively participate in managing their health. Studies show that patients who actively participate in their care have better outcomes. One significant way to have patients engage in their care is through the use of a personal health record (PHR). A PHR is a collection of an individual's health information; the format of this record may not necessarily be electronic.

Given the recent advances in information technology, a substantial push has been made by government and private sources to create a standardized, accessible, and portable electronic system for maintaining personal health information. The PHR differs from related systems, such as EMRs or EHRs, in that the sole control of the PHR is in the hands of the individual. EMRs and EHRs are controlled by care providers. Key components of the PHR include past medical history, present medications, lifestyle health risks, family history, and living wills. When visiting a doctor for the first time, individuals are often asked to complete a form that will help the physician evaluate the patient during the visit. It is anticipated that electronic PHRs could feed pertinent data to providers prior to such interactions.

According to the American Health Information Management Association, 42 percent of American adults keep some form of personal health records, and such health records often contain data not found in physician-based medical/health records. Once electronic medical and personal health records can communicate, the gaps of information between these data repositories will only be limited to those that the patient would prefer not to share.

Figure 24: Self-Managed Medical Record



Source: "Informatics: Electronic Personal Health Records: Nursing's Role." American Nurses Association. Web. 25 Aug. 2011.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/Columns/Informatics/Electronic-Personal-Health-Records.aspx

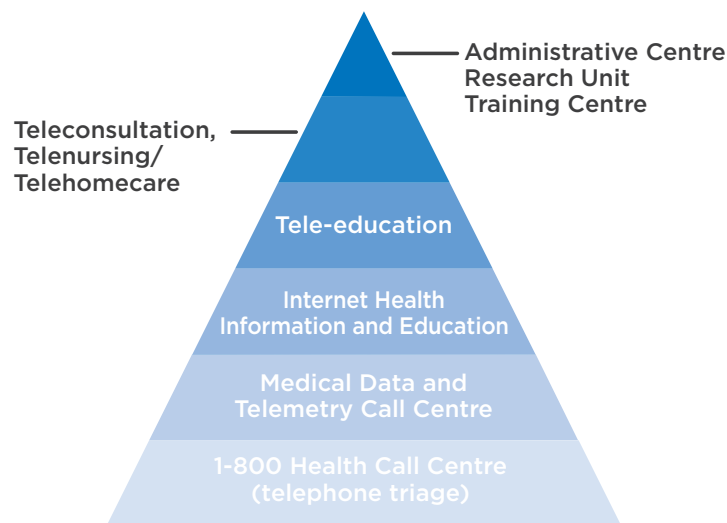
Relatively few Americans (only about 55 percent) actually keep their own medical record, with the majority (38 percent) using a manual system in a notebook.

Telehealth

Telehealth involves the use of electronic information systems and telecommunications technology to support long-distance delivery of care. Advances in telecommunication technologies have ensured the ability to communicate in real time over long distances. This can be used by care providers to conveniently diagnose, receive, and transfer appropriate health data, address questions, provide information, and oversee treatments and therapies for patients who cannot physically meet the provider.

The federal government has identified the potential utility of the widespread adoption of telehealth, and the Health Resources and Services Administration has been tasked with promoting and increasing the use of this tool through the provision of grants and the documentation of best practices for dissemination.

Figure 25: Telehealth Pyramid



Source: "Intro to Telehealth." Digital Telehealth Inc. Web. 25 Aug. 2011. telehealth.ca/intrototelehealth.html

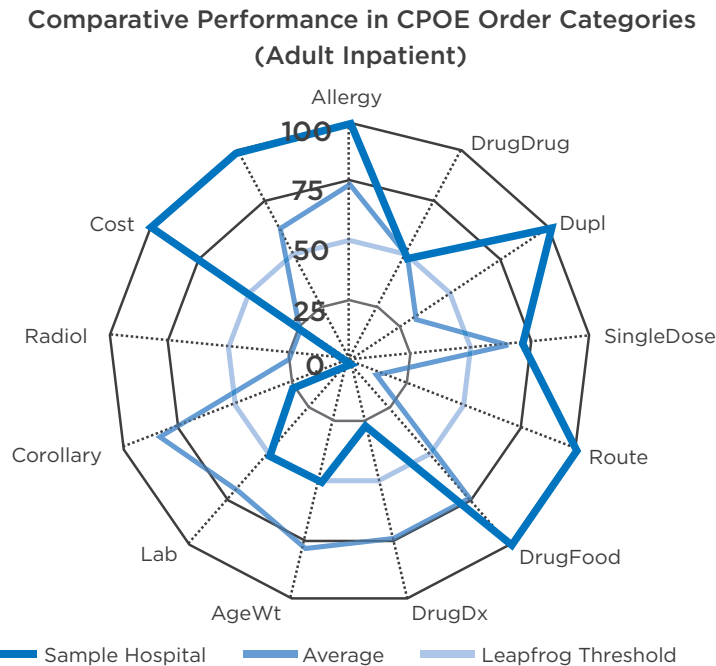
A pyramid of the applications for telehealth shows opportunities for new modes of delivering care.

Computerized Physician Order Entry

Computerized Physician Order Entry (CPOE) is the electronic entry and transmission of physician orders, such as prescription drugs, lab tests, and radiology studies. CPOE avoids handwriting or transcription errors and avoids delay in care delivery due to slow transmission at the point of care. This can result in more efficient and effective care.

CPOE requires the clinician to use an electronic format to order care. Studies have shown that CPOE can decrease costs, shorten length of stay (LOS), decrease medical errors, and improve compliance with several types of guidelines.¹⁴

Figure 26: Comparative Performance in CPOE Categories versus Leapfrog Thresholds



Source: leapfroggroup.org/media/file/HospitalCPOESampleReport.pdf

This Leapfrog CPOE (a national comparison of hospital performance on standards of safety, quality, and efficiency) sample report shows a visual indication of how a hospital performs compared to benchmark targets. In this example, this hospital performed very well alerting allergy concerns but did not do well in drug to disease evaluations.

Clinical Decision Support (CDS)

System optimization teaches us that most errors occur due to imperfections in the process. In healthcare, there are a growing number of evidence-based clinical guidelines for doctors to follow, that are based on an expanding medical literature and knowledge base. Healthcare reform encourages the use of clinical decision support to assist physicians and providers at the point of care. Much like other pieces of health information technology, clinical decision support is intended to improve healthcare outcomes and the quality of care.

The clinical decision support system is most often a computerized tool that incorporates information gathering (forms and templates) and monitoring and delivery systems (alerts and reminders) to ensure optimal decision-making on the part of the clinician. Clinical decision support systems tend to operate in tandem with other pieces of health information technology, such as EMRs, and EHRs to provide “meaningful use.”

Clinical decision tools support healthcare service delivery relating to these CDS five “rights:”¹⁵

1. The **right information** – Evidence-based, suitable to guide action, pertinent to the circumstance
2. To the **right person** – Considering all members of the care team, including clinicians, patients, and their caretakers

3. In the **right clinical decision support intervention format** — Such as an alert, order set, or reference information to answer a clinical question
4. Through the **right channel** — For example, a clinical information system (CIS), such as EMRs, PHRs, or a more general channel (e.g., Internet or mobile device)
5. At the **right time in workflow** — For instance, at time of decision/action/need

Patient Registry

Patient registries are usually computer-based tools used for managing large patient populations. Healthcare reform recognizes the value of managing groups or cohorts of patients, within a doctor’s panel or within a health plan’s covered pool of members, who have similar healthcare issues and can benefit from similar treatments and services. Patient registries have been created to group and track the care of these population subsets.

Basically, registries are aggregations of data regarding patients. Typically these registries contain data concerning specific conditions, such as diabetes, heart failure, or other chronic conditions. The data might include patient demographic information, as well as procedures performed and their outcomes. This information can be used on an individual level to track the condition of the patient against others with similar conditions and tailor specific interventions based on his/her needs. Registries can also be used to identify trends on a population level and thereby allow the creation of initiatives to address the needs of specific cohorts.

Figure 27: Patient Registry Use

Use of Patient Registry Information	Industry	Clinical Research Organizations	Academia
Number of responses	213	104	63
Compile additional outcomes data	32%	33%	38%
Explore ‘real world’ product use	32%	65%	26%
Compile safety data	15%	16%	14%
Meet regulatory mandates	16%	10%	6%
Other	5%	5.16	16%

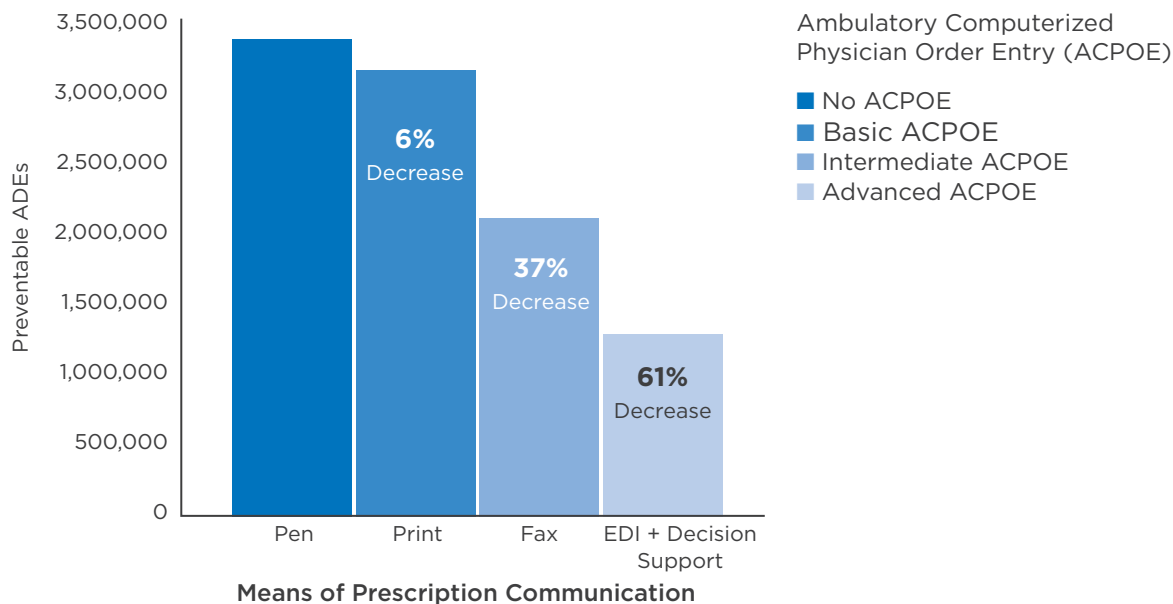
Source: “Use of Patient Registries: Results of the ISPOR Patient Registry Special Interest Group Survey.” International Society For Pharmacoeconomics and Outcomes Research. Web. 25 Aug. 2011. ispor.org/news/articles/dec05/Patient_registries.asp

This chart displays how three healthcare domains have used patient registries. As shown, there are many ways they can add value — tracking outcomes, matching patients to products and services, improving safety, or meeting regulatory requirements.

E-prescribing

E-prescribing provides physicians the ability to electronically transfer medication orders to pharmacies. This technology has been prescribed as a cure for one of the most common sources of error plaguing the medical system — medication errors. The federal government has identified the utility of e-prescribing and has supported its adoption since 2003 with the passage of the Medicare Modernization Act. This act required drug plans participating in Medicare Part D to support e-prescribing. An incentive plan was implemented in 2008 as part of the Medicare Improvements for Patients and Providers Act (MIPPA). In exchange for a payment worth 2 percent of a participant’s Medicare Part B fees, the participant (or practice) must show significant and meaningful use of the new e-prescribing tool.

Figure 28: Impact of E-prescribing on Preventable Adverse Drug Events (ADEs)



Source: "Operations: Practices and Pharmacies — Can't We All Just Get Along?" Shirley Grace. Page 3 - Physicians Practice. Web. 25 Aug. 2011. physicianspractice.com/display/article/1462168/1589170?pageNumber=3

Organizational and Operational Reform

Accountable Care Organization

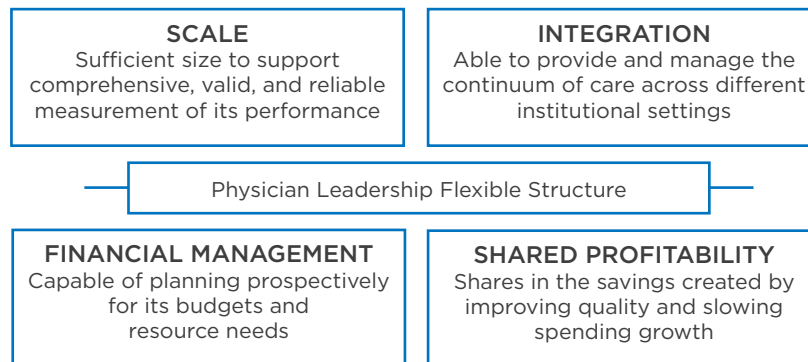
The accountable care organization (ACO) is a model of payment and delivery reform that has drawn the attention of lawmakers and other groups as a potential solution to America's healthcare conundrum. The ACO is a grouping of physicians, specialists, and hospitals that are responsible for providing efficient and effective care for a patient population (such as Medicare beneficiaries in a healthcare delivery system).

Section 3022 of the PPACA created a shared savings program for Medicare and authorized the creation of ACOs by Jan. 1, 2012. These organizations will serve as a method to integrate care providers into a cohesive unit that will provide comprehensive quality care and curb unnecessary costs. Those unnecessary costs can be reduced by eliminating wasteful spending related to such things as redundant costs, overutilization of procedures, and medical errors. ACOs are also required to adopt data collection and reporting systems and utilize evidence-based decision support to reduce variances in care and spending. For an organization of healthcare providers to qualify as an ACO, it must:

- Establish a formalized legal structure with a mechanism to distribute compensation among providers
- Have a complement of primary care providers capable of serving at least 5,000 beneficiaries
- Be willing to participate for a minimum of three years
- Collect information to allow the assignment of beneficiaries and measurement of the cost and quality of care provided
- Preferably be accomplished through the adoption of health information technology such as e-prescribing and EHRs.

The classic model is a voluntary association between hospitals, specialists, and primary care providers in which participants receive bonuses for meeting benchmarks and face no penalties for failing. MEDPAC proposed that the ACO should set a series of quality and cost benchmarks based on past spending trends and a national spending allowance (which could vary depending on location). The providers would be paid on a fee-for-service basis, as in the current system. They would, however, be incentivized to control costs and limit services to only necessary procedures through the shared savings bonus payments. If the organization collectively met the quality benchmarks and limited costs to a level below the cost benchmarks, a portion of the generated savings would be distributed as bonuses.

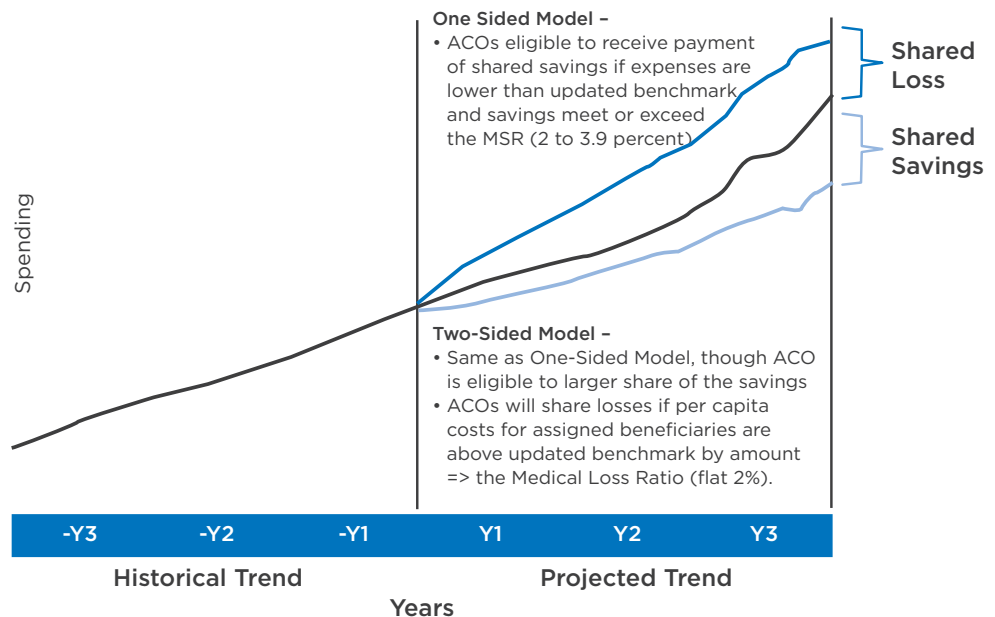
Figure 29: Key ACO Characteristics



Source: Fabius, Ray, Chief Medical Officer, "Moving from Volume to Value" presentation at Truven Health 100 Top Hospitals® Conference, 2011

ACOs need four key characteristics for success: Sufficient size, delivery capability to provide integrated care across settings, financial management capability to plan and budget prospectively, and mechanisms to share profitability when savings are realized.

Figure 30: CMS ACO Shared Savings Models



Source: HCPlanet/Truven Health National Physician's Survey

ACO must also meet quality standards to qualify for shared savings.

Comparative Effectiveness Research

Comparative effectiveness research (CER) identifies what treatment options work best for which patients under what circumstances.¹⁶

Physicians and their patients are often faced with several treatment options for a condition. Remarkably, there is no systematic synthesis of research, if the research is even available, comparing therapeutic approaches. Doctors and patients alike must decide which treatment to select based on the information available — measuring the impact of alternatives that have been studied separately usually against a placebo or no treatment at all.

CER is designed to inform the patient of the potential benefits, harms, and effectiveness of alternative medications, therapies, and procedures. The goal is to ensure optimal decision-making on the part of the healthcare consumer.

Comparative effectiveness is also part of a major movement to guarantee that recommended and accepted procedures have a scientifically proven track record of effectiveness.

While the notion that medical treatments and procedures should have evidence to justify their usage seems obvious, this is often not the case. The Institute of Medicine estimates that only 4 percent of treatments and tests are backed up by validated scientific proof of their value, and more than half have little to no evidence supporting their use. Other industrial nations already have government organizations (such as the National Institute for Health and Clinical Excellence in Great Britain and the Federal Joint Committee in Germany) that publish clinical guidelines on the use of medical devices, procedures, and drugs after evaluating their effectiveness in terms of cost and quality. In 1985, the U.S. Congress created the Agency for Health Care Policy and Research (AHCPR) to fulfill the role of performing CER and providing medical resources guidance. The AHCPR later became the Agency for Healthcare Research and Quality (AHRQ).

CER has received \$1.1 billion in funding through the stimulus legislative package allocated to the U.S. Health and Human Services Department. The idea of CER has the gained support of such prominent figures as Hillary Clinton and President Obama, as well as former U.S. Senate Majority Leader Tom Daschle, as a means of reducing the country's excessive healthcare costs.¹⁷ Critics state that CER based on broad population studies may ignore differences between various demographic groups (for instance, drugs may work differently for women than men) and may unfairly malign procedures that are extremely effective for specific but small cohorts. In this regard, CER may be counter to the personalized medicine movement.

Regardless of the debate, all would likely agree that the more evidence available to assist in the decisionmaking process the better.

Figure 31: Seven Steps of Clinical Effectiveness Research

1. Identify new and emerging clinical interventions.
2. Review and synthesize current medical research.
3. Identify gaps between existing medical research and the needs of clinical practice.
4. Promote and generate new scientific evidence and analytic tools.
5. Train and develop clinical researchers.
6. Translate and disseminate research findings to diverse stakeholders.
7. Reach out to stakeholders via a citizens' forum.

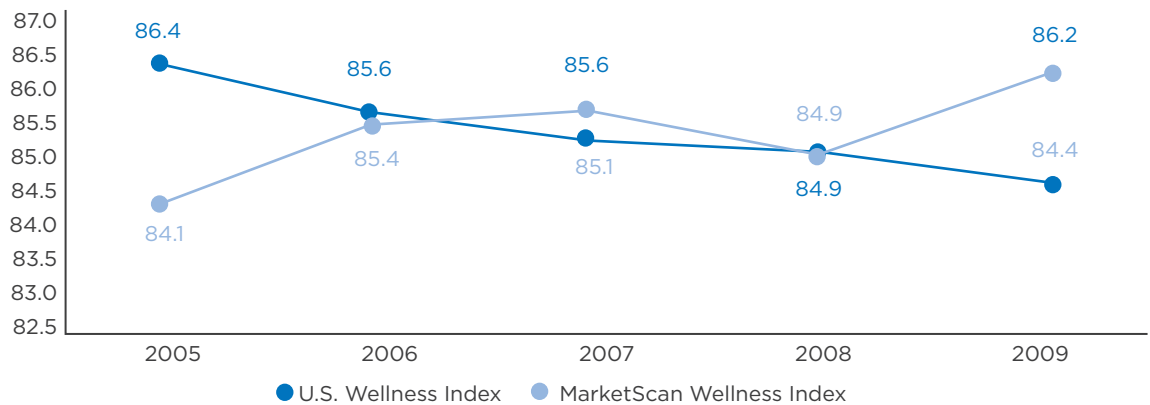
Source: healthcare.gov/law/provisions/limits/limits.html, effectivehealthcare.ahrq.gov/index.cfm/what-is-comparative-effectiveness-research1/

Culture of Health

Increases in employer costs per employee — medical claims rose from \$4,020 in 2002 to \$5,618 in 2008; pharmacy costs grew from \$1,030 to \$1,312 in the same timeframe — as well as employee costs — out-of-pocket expenses rose from \$827 to \$1,260 between 2002 and 2008 — have necessitated the need for a change in how business organizations view their healthcare expenditures.

The “culture of health” is an ideological transformation of an organization from one that passively accepts rising, unsustainable healthcare costs to a proactive entity that encourages the holistic wellbeing of each employee. A culture of health requires a strong message that emphasizes the core organizational value of personal health to the employees. Furthermore, such a program requires the commitment and participation of senior leadership. The organization must provide resources to employees to help improve their health. This could be as simple as changing the cafeteria menu to provide more healthy meals to something more resource-intensive as onsite fitness centers and health clinics.

Figure 32: Workforce Wellness Index Tracking



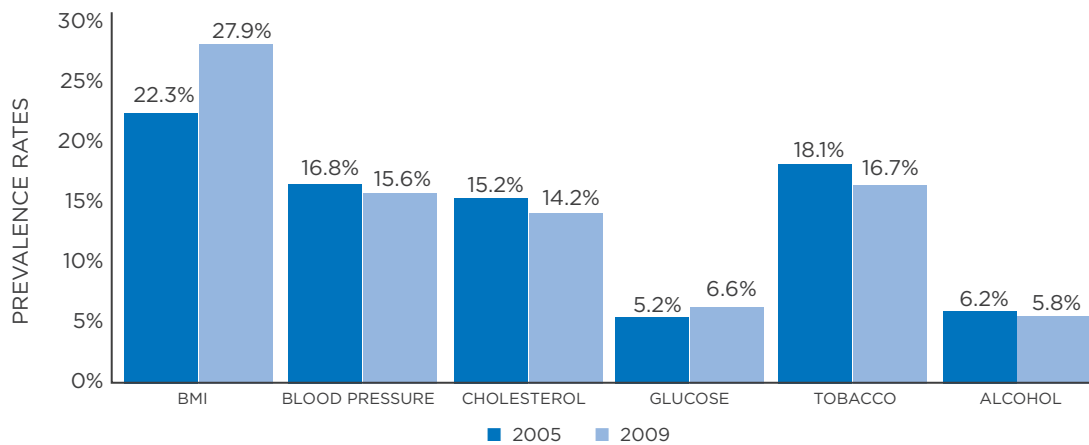
Source: Truven Health 2009 Report of the Workforce Wellness Index

From 2005-2009, the Truven Health U.S. Workforce Wellness Index declined, with notable differences compared to a select MarketScan® Wellness Index, underscoring the opportunity to introduce initiatives to improve wellness. The index measures the healthcare cost impact of behavioral risk factors (body mass index, blood pressure, cholesterol, glucose, tobacco use, and alcohol use) in employed populations. The select index shows the trend of employees who participated in employer-sponsored Health Risk Appraisals, as well as other wellness activities. This cohort shows improving health compared to deterioration at the national level. The nearly two-point difference represents a \$134 savings in health-related costs per employee.

A culture of health is intended not only to improve the health of the 20 percent of employees who are responsible for 80 percent of the healthcare costs, but also to maintain the wellness of the remaining 80 percent. After all, the health of the workforce is tied to the productivity of an organization; a healthier workforce means fewer productivity losses due to absenteeism and presenteeism (when an employee is present at work but not working to the full extent of his or her ability due to debilitating health conditions).

The health reform legislation recognizes the importance of employer efforts to improve the health status of its workforce, and for that reason the PPACA allows companies to leverage as much as 30 percent of health benefits for rewarding healthy lifestyles.

Figure 33: Prevalence Rates for Behavioral Risk Factors in U.S. Workforce (2005 and 2009)



Source: Truven Health

Risk-factor prevalence rates for employed, insured adults ages 18 to 64 are factors in determining the U.S. Workforce Wellness Index. Reduced prevalence existed for four factors, but prevalence of a high body mass index and blood sugar significantly increased to nearly 28 percent and 7 percent of the population, respectively.

Care Continuum

Healthcare reform is providing needed attention to the entire care continuum — the range of services dedicated to addressing healthcare needs from birth to death:

- Prenatal Care – focuses on pregnancy and birth — improvements in lowering maternal and infant death rates, survival of low birthweight babies, etc.
- Health Promotion – focuses on the adoption of behaviors that enhance wellness (health screenings, proper diet, exercise, etc.)
- Health Protection – focuses on public health issues and threats, such as epidemics and bioterrorism
- Disease Prevention and Treatment
 - Primary Care – provides appropriate wellness care, preventive services, treatment of common diseases, the provision of essential drugs, and dental care under the direction of medical homes
 - Secondary Care – provides ambulatory care for episodic illness or chronic conditions delivered in emergency rooms and outpatient clinics, as well as acute inpatient hospital facilities
 - Tertiary Care – focuses on complex procedures, such as organ transplants and other expensive procedures often delivered within centers of excellence
- Palliative Care – compassionate end-of-life care

Figure 34: Care Continuum for a Population with a Chronic Illness

Disease	Prevalent Total Cases	Total Office Visits	Emergency Department Visits	Inpatient Discharges	Hospital Outpatient Visits	Nursing Home Patients	Home Health Discharges	Hospice Discharges	Death
Congestive Heart Failure	5,013	3,270	870	1,272	2,266	82	495	37	75

Source: Market Expert: Continuum of Care

To evaluate the local delivery pattern of specific prevalent diseases and conditions, this congestive heart failure profile shows that in this population of 413,000 people, there are an estimated 5,000 cases of Congestive Heart Failure (CHF). These cases will likely produce more than 3,200 office visits, nearly 900 ER visits, 1,300 inpatient visits, and 2,300 hospital outpatient visits.

Disease Management

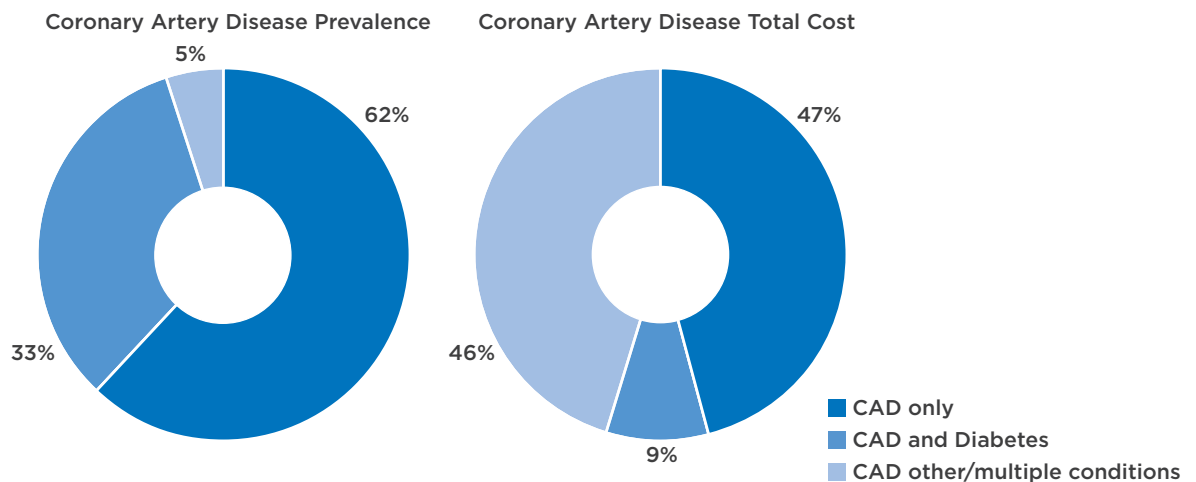
Disease management programs are used to address subsets of populations affected by chronic illnesses to reduce the costs and deleterious effects of these illnesses.

These programs:

- Identify worthy patients for participation
- Encourage enrollment and retention
- Establish evidence-based interventions
- Measure the results

A successful disease management program, as identified by the Disease Management Association of America, involves effective tools to measure population data, to gauge outcomes of care provided by the program and a means of process improvement. The program should foster cooperation between patient and doctor, as well as provide the appropriate resources and education to the participant (such as behavior modification training, methods to ensure compliance, and healthy behaviors) to successfully enhance self-care.

Figure 35: Disease Prevalence versus Cost Drivers



Source: Truven Health MarketScan®

These two pie graphs demonstrate the marked increase in cost when patients have multiple conditions. Only 5 percent of the coronary artery disease (CAD) patients have multiple conditions, but they are responsible for 46 percent of the related CAD costs.

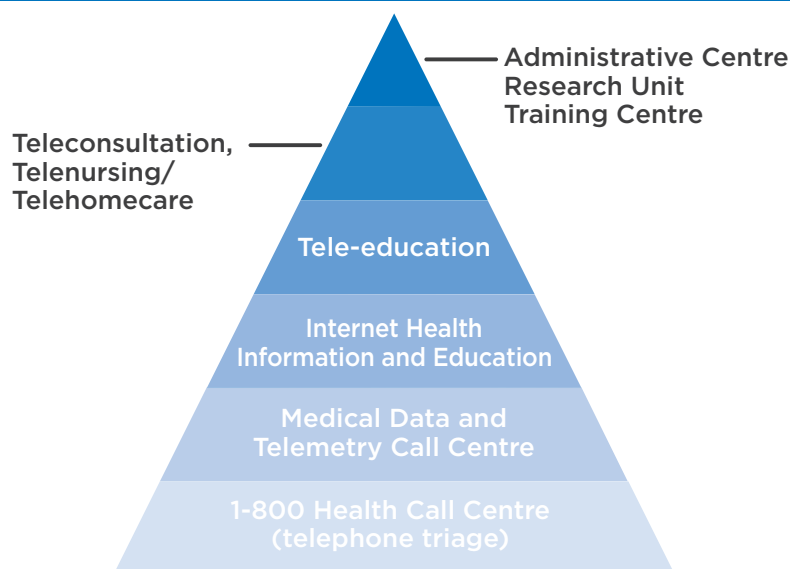
Evidence-Based Medicine (EBM)

Healthcare reformers have called for the elimination of unwarranted care. Remarkably, the majority of recommended treatments and procedures are performed with limited scientific research documenting its value. Evidence-based medicine refers to care that has strong scientific validation. By practicing evidencebased medicine, the use of wasteful procedures or care not supported by proof can be eliminated or substantially reduced. Comparative Effectiveness Research helps to generate evidence-based medicine.

Evidence-based medicine is a best-practice synthesis of individual, on-the-ground clinical experience and evidence garnered by external systematic research. Interested clinicians or organizations methodically review published and online research to find practices backed by concrete data (usually derived from random controlled trials or systematic reviews). The clinician or organization then proceeds to analyze the action to determine whether it is appropriate for use. Once a decision has been made, implementation guidelines are established. The clinician must have a system to accurately measure the efficacy of the procedure and if necessary, refine it for greater efficiency and effectiveness. This process is dynamic and requires the care provider to remain up to date in terms of procedures, indicators, and other treatments. That means evidencebased medicine requires a significant investment of time and resources.

Organizations committed to EBM must dedicate staff to the process, which should be supported by health information technologies, including clinical decision support tools.

Figure 36: Evidence Insight Sources



Source: "SUNY Downstate EBM Tutorial." Medical Research Library of Brooklyn. Web. 25 Aug. 2011. library.downstate.edu/EBM2/2100.htm

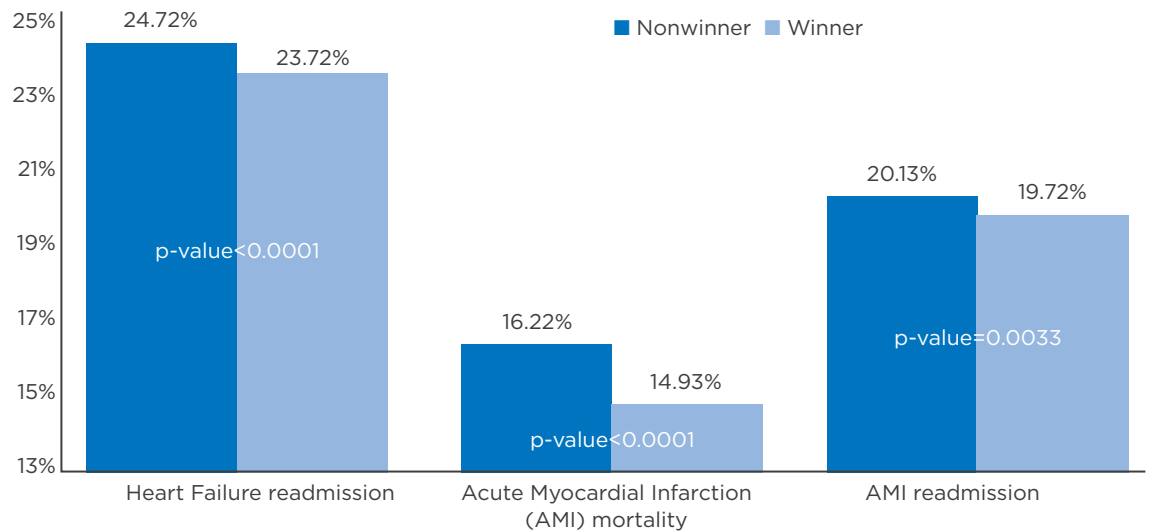
This figure shows the levels of research that support evidence-based medicine. The most comprehensive levels are at the top of the pyramid, with 100 percent systematic reviews being the most reliable.

Hospital Value-Based Purchasing/Pay for Performance

Value-based purchasing and pay-for-performance programs are two interrelated concepts that rely on providing monetary incentives to improve care outcomes. These programs require that the care-providing organizations have a comprehensive system of accurate measurements to gauge performance. For instance, a hospital measures readmission rates, length of stay, etc. If the hospital has achieved the performance goals set by the sponsor of the program, the organization receives a monetary reward. Examples might be savings generated by the newfound efficiency or additional bonuses to current payments for service excellence.

The PPACA authorized the creation of a hospital value-based purchasing program as part of a larger initiative to link payment with quality. The program covers five conditions: acute myocardial infarction, heart failure, pneumonia, healthcare-related infections, and surgeries.¹⁸ Insurance plans are also creating methods to profile providers and identify top performers. Once identified, some payers are offering top performers additional compensation for the improved performance.

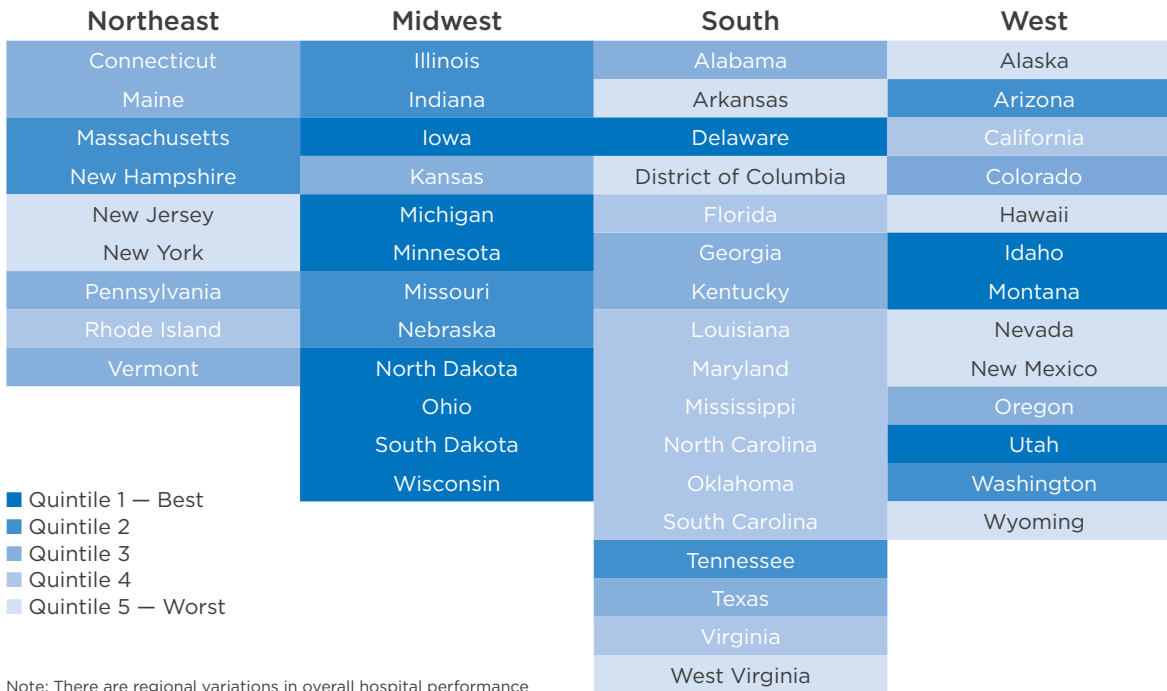
Figure 37: 100 Top Hospitals Avoid Readmission Penalties



Source: Truven Health

Among 100 Top Hospitals Cardiovascular winners in 2010, those winning hospitals had lower readmissions than their peers. The Patient Protection and Affordable Care Act Value-Based Insurance Design program has financial penalties for hospitals that have higher than expected cases of readmissions.

Figure 38: Hospital Performance by Region



- Quintile 1 — Best
- Quintile 2
- Quintile 3
- Quintile 4
- Quintile 5 — Worst

Note: There are regional variations in overall hospital performance across the U.S., as measured by 100 Top Hospitals® methodology.

Source: Truven Health July 2010 Fact Files, Hospital Performance

The methodology of the 100 Top Hospitals® study adjusts for patient severity, urban/rural geography, wage differences, and other factors. In the end, regional variations in hospital performance remained clear. Half of all the 100 Top Hospitals award-winning hospitals for 2009 were located in the Midwest.

Integrated Healthcare Delivery Systems

Integrated delivery systems (IDS) are essential to healthcare reform, as payment models transition to covering patient care services across the continuum of care settings. Specifically, an IDS is a network of healthcare providers and organizations that provides or arranges to provide a coordinated continuum of services. Services provided by an IDS can include one or more acute care hospitals (community and/or tertiary), home healthcare and hospice services, primary and specialty outpatient care and surgery, social services, rehabilitation, preventive care, and health education.

By organizing care providers together in a unified service model, care should be more effective and efficient. The integrated model promotes increased communication among physicians and other healthcare professionals across multiple settings in both the ambulatory and inpatient sectors.

One of the important ways to create integrated delivery systems is through the introduction of information technology. By placing all care providers within a system on the same or compatible electronic medical record platforms, integration becomes easier. These integrated, multidisciplinary organizations migrate away from transaction-like, clinician-centered procedures that only address acute care. Integrated delivery systems attempt to ensure the wellbeing of the patient by transitioning from reactive models of care to preventive ones. This is achieved by encouraging coordination and communication among providers, and education and empowerment of patients, so that they have an active input in the process. Such entities can provide comprehensive medical services and are more prepared to contract for global payments.

Figure 39: National Health System Performance Comparisons

Performance Measure	Medians		Differences		
	Winning Health Systems	Peer Group of U.S. Health Systems	Difference	Percent Difference	
Mortality Index ¹	0.72	1.02	-0.31	-29.8%	lower mortality
Complications Index ¹	0.82	0.94	-0.12	-13.29%	lower complications
Patient Safety Index ²	0.87	1.01	-0.14%	-13.9%	better patient safety
Core Measure Mean Percent ³	96.6	94.5	2.1	N/A	better core measure performance
30-Day Mortality Rate (%) ⁴	11.7	12.7	-0.9	N/A	lower 30-day mortality
30-Day Readmission Rate (%) ⁴	21.0	20.9	0.1	N/A	higher 30-day readmissions
Average Length of Stay (ALOS) (days) ¹	4.7	5.2	-0.5	-9.4%	shorter ALOS
HCAHPS Score ³	263.5	257.2	6.3	2.4%	higher patient rating of hospital care

1. Based on present on admission (POA)-enabled risk models applied to MedPAR 2009 data. Ratings greater than 1.0 indicate more adverse events than expected, ratings less than 1.0 indicate fewer.

2. Based on AHRQ PDA-enabled risk models applied to MedPAR 2008 and 2009 data. Eight PSIs included. See Appendix C of source document for list.

3. From CMS Hospital Compare 2009 calendar year data. See Appendix C of source document for included core measures.

4. From CMS Hospital Compare data set, July 1 2006, through June 30, 2009. Includes heart attack, heart failure, and pneumonia 30-day rates.

Source: 100 Top Hospitals® Health Systems, 2011 100tophospitals.com/assets/Health%20Systems%20Abstract_2011.PDF

In this example, top performer health systems (Truven Health 10 Top Health Systems) are compared to every U.S. system with two or more acute care members hospitals and outperform peers in several performance measures. The top-performer health systems saved more lives and caused fewer patient complications, with 30 percent lower mortality rates and 13 percent lower complications rates. In addition, industry-recommended standards of care were followed more closely, fewer patient safety errors were made, patients were released a half a day sooner, and scores were higher on overall patient satisfaction surveys.

The Patient-Centered Medical Home (PCMH)

Healthcare reform recognizes the essential role that primary care plays in coordinating care. Historically, several past efforts have attempted to enhance the relationship between consumers and trusted primary care providers. This was especially true during the managed care era when health maintenance organization (HMO) members were required to select and seek all care through their primary care providers. The patient-centered medical home is a new and enhanced model that places a greater accountability on the primary providers themselves.

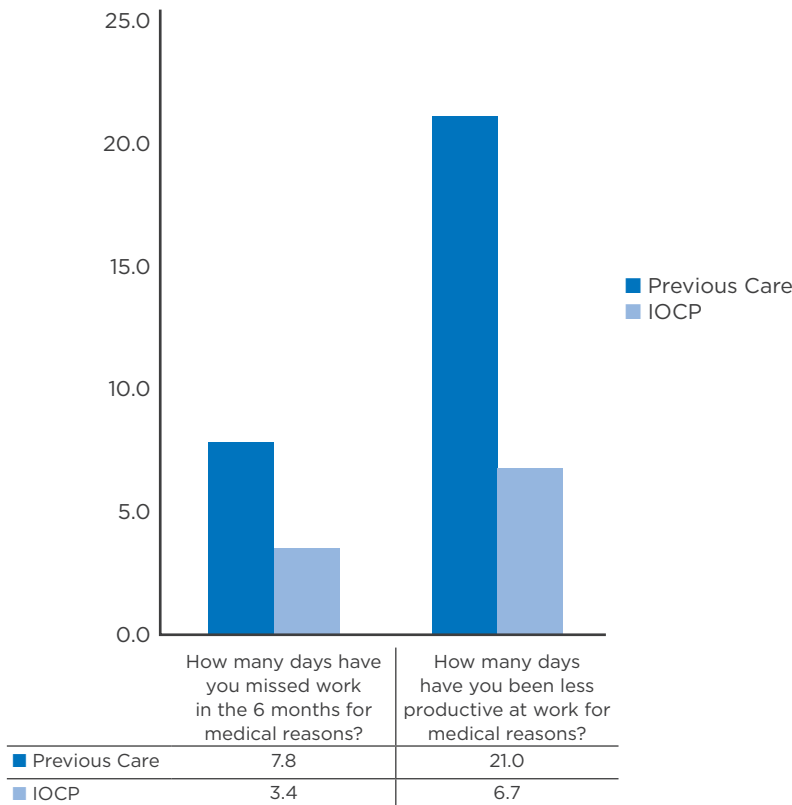
The concept of the medical home was first conceived by the Council on Pediatric Practice, a part of the American Academy of Pediatrics, in 1967. The idea developed in response to the fact that children with special needs received care from independent practitioners who did not coordinate or communicate, leading to duplicative procedures, medical complications, and other issues — a fragmented system reminiscent of the current status quo. The medical home was to serve as a storehouse for all of a particular child’s information, and the practitioner was to serve as a care coordinator and patient advocate.

Modern advocates of the concept seek to expand the scope of the medical home to incorporate all age groups, thereby providing a strong primary care basis for the American healthcare system. This vision also attempts to counteract the historical trend of bypassing primary care in favor of early access to specialty doctors.

In 2007, a group of physician organizations, including the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the American Osteopathic Association, released the “Joint Principles of the Patient-Centered Medical Home”, a document defining the parameters of this organization. The document posited that a medical home should be composed of a personal physician who has an ongoing relationship with the patient and should help provide comprehensive and continuous care that covers the patient’s multiple care needs, including acute care, chronic care, preventative services, and end-of-life care. This comprehensive range of services would be provided by a team of providers, headed by the personal physician. Other aspects of the model include the usage of electronic health records, registries and exchanges to coordinate care, and enhanced access to the physician by offering features like expanded office hours, open scheduling, and communication via telephone and email between provider and patient.

Additionally, the medical home model hopes to reform the payment system to reflect improvements in quality of care, enhanced care coordination, reduction of costs, and the adoption of health information technology.

Figure 40: Improved Work Performance After Patient-Centered Medical Home Implementation



Source: Patient Centered Medical Home Performance Metrics for Employers 2011, Patient-Centered Primary Care Collaborative

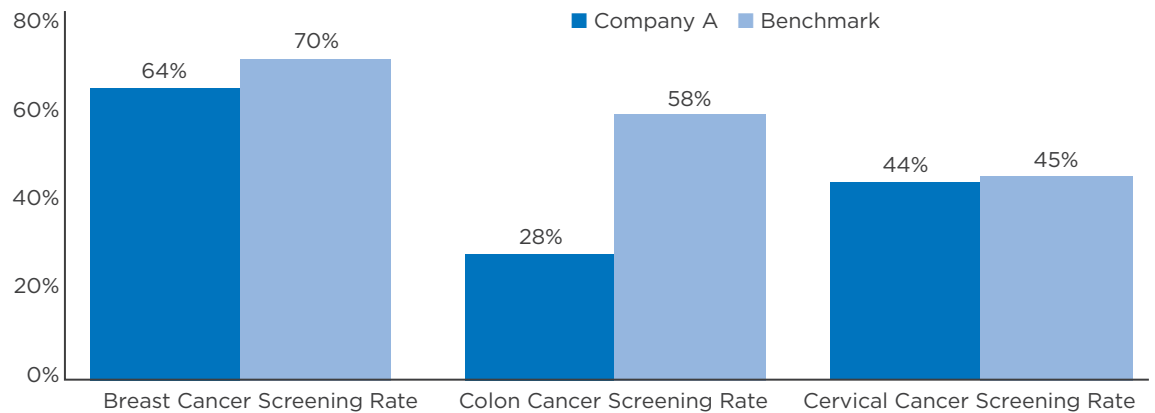
Early assessment of pilot patient-centered medical homes show that they not only improve patient care but also productivity. In this example, absenteeism and presenteeism are compared before and after patient centered medical home implementation.

Preventive Services

Healthcare reform has recognized that spending nearly all our healthcare dollars on treatment of illness may not be the wisest approach. Many studies have demonstrated the return on investment of disease prevention and support the statement “an ounce of prevention is worth a pound of cure.”

Preventive care has three dimensions: primary, secondary, and tertiary. Primary care is aimed at reducing health risks and engaging wellness promotion, e.g., eliminating tobacco use, moderating alcohol use, encouraging physical activity and fitness, providing support for mental health, and engaging in community health programs. Secondary care involves screening and testing to ensure the early detection and diagnosis of conditions. Tertiary care involves intervention to prevent disabilities, mortality, and morbidity caused by disease.

Figure 41: Comparative Screening Rates

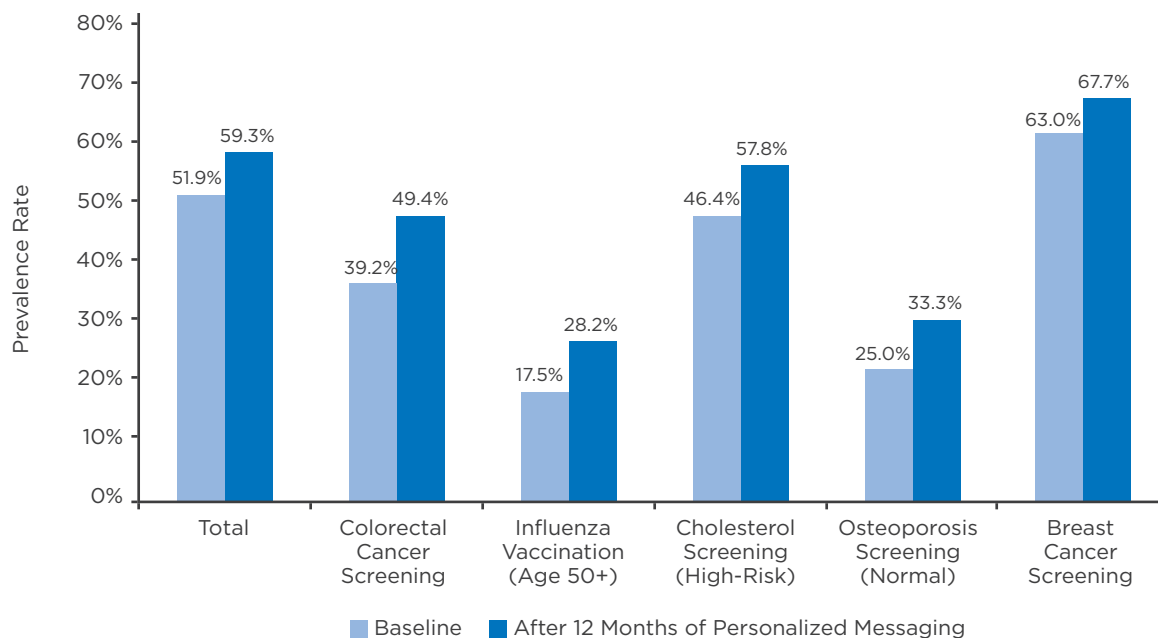


Source: Truven Health MarketScan® Used with permission. “Patient-Centered Medical Home Performance Metrics for Employers.” Patient-Centered Primary Care Collaborative. pcpcc.net/files/metrics_guide_2011.pdf

Organizations can compare their compliance with evidence-based recommended screenings to best practice. In this example, Company A's employees were near benchmark for pap smear testing, but well below for mammography and colonoscopy testing.

The current medical system is not explicitly focused on prevention but rather reactive care to existing conditions. This lack of emphasis on prevention has caused Americans to underutilize high-value preventive services in part due to forgetfulness or the existence of financial barriers, such as copays and other cost-sharing measures. The PPACA attempts to correct this historical underutilization with new provisions to increase their use. New healthcare policies require health insurers to cover a series of evidence-based preventive services without copayment or coinsurance. Personal health records and personalized reminders can also improve the use of preventive services.

Figure 42: Personalized Messaging Improves Preventive Service Compliance



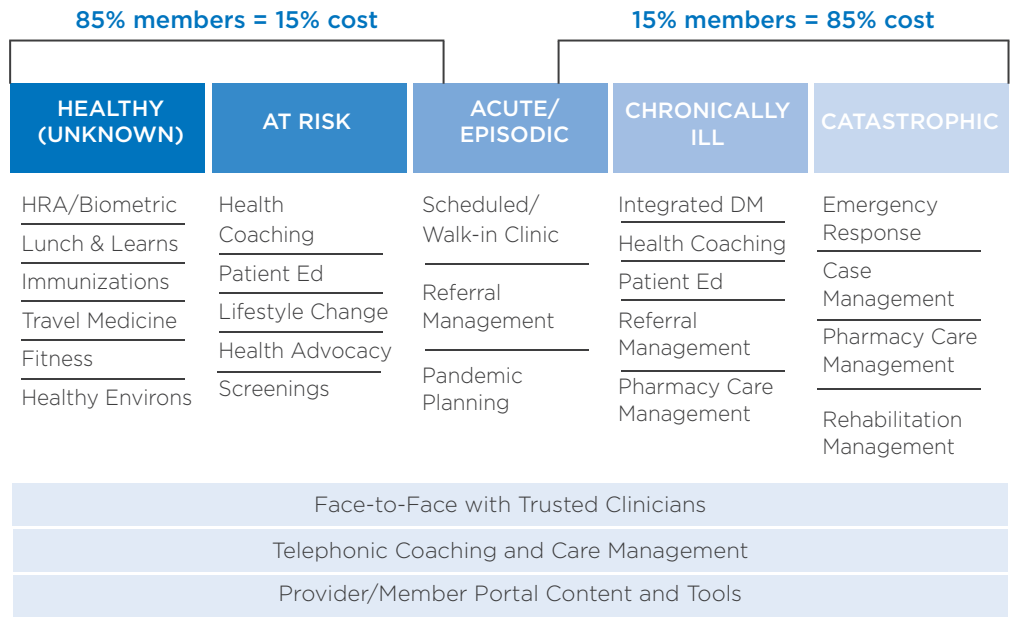
Source: Truven Health Case Study, "Tailored Messages Motivate Employees and Improve Health," 2010

After 12 months of providing tailored reminders to an employee population, adherence to screening and vaccination improved 14 percent across the board.

Population Health

Population health refers broadly to the health status of a population, the health determinants that influence that status, and the policies and interventions that impact the determinants.^{19, 20} Population health treats whole populations as if they were one patient — providing programs that address wellness, risk reduction, acute illness, disease management, and end-of-life care. All efforts are directed to elevating the wellbeing of individuals and the collective vigor of the group. Accordingly, population health is holistic in that it seeks to reveal patterns and connections within and between multiple systems and to develop approaches that respond to the needs of populations. It defines wellness as more than the absence of illness and seeks to improve physical, emotional, and behavioral fitness. Population health tactics include rigorous analysis of outcomes. Understanding population-based patterns are critical antecedents to addressing population needs. That is, data informs the selection of effective population health management strategies to prevent or diminish illness in the future.²¹ Increasingly, these efforts include the integration of face-to-face clinical care, telephonic support through coaching and care management, as well as web-based and mobile solutions, which support greater health literacy and consumerism.

Figure 43: Population Health: Comprehensive Management Approach



Source: Truven Health

To provide a comprehensive population health management approach requires delivering programs and services that address the needs of all members of a population across the care continuum.

Value-Based Insurance Design

Copayments, even of modest size, may force individuals to limit their use of a healthcare service. The idea behind value-based insurance design is that a reduction or even elimination of copayments or coinsurance will encourage the use of high-value healthcare options (such as preventive services).

Value-based insurance design may come in two forms. The first and simpler form involves identifying effective clinical practices and then reducing the financial burden associated with the treatment. This method has been adopted by Pitney Bowes, where it has decreased copayment for drugs prescribed for diabetes, asthma, and hypertension. The second method is far more demanding in terms of planning and resource use. This method involves tailoring copayments dependent on the demographic information of the participant. For instance, there may be a high copayment for a screening colonoscopy for a 30-year-old since it is not recommended for people that young unless there is a strong family history. Such a system would require intensive data collection to ensure that copayment levels promote the appropriate treatment for each participant and have a level of flexibility to adjust to changes in the patient’s condition.

The value-based insurance design concept recognizes that the health benefit structure greatly influences engagement and compliance of health consumers. Even small changes in copayments can markedly alter whether an important screening is completed or whether a chronic medication is refilled. It is for this reason that the PPACA mandates all evidence-based preventive screenings, such as a mammogram or a colonoscopy, be fully covered. Then, there is no financial barrier to obtaining these services that provide a good return for the dollar spent — including saving lives from breast and colon cancer.

Conclusion

Health Reform Is an Evolving Transformation

Healthcare reform continues to unfold as the laws come into effect, having started in 2010 and continuing through 2018.²² The extent of the changes and timed legislative releases create opportunities for all the stakeholders in healthcare. While key components are still evolving, there is broad support to change the unsustainable projected spending in Medicare and Medicaid, while moving to value-based purchasing and shared savings.

The term explanations and metric-based illustrations included in this document are intended to support the healthcare business community's adaptation. Understanding the new vocabulary and the related informatics are foundations for productive change in identifying focal opportunities, setting targets, and showing some benchmark achievements.

Healthcare Reform Goals Are the Guideposts For Business Vision

Healthcare reform goals focus on expanded access for the newly insured, cost reductions, and improved quality and safety. They form the basis for improved care outcomes and payment methodologies. While the priorities among healthcare business community members may differ, the goals described with illustrative informatics further advance the discussion about the scope and magnitude required for a dynamic response. Even though the impact of the 32 million or so newly insured Americans varies by market, the opportunity to advance care delivery is reflected in top-performing healthcare systems whose outcomes clearly demonstrate opportunities for enhanced performance.

Payment and Delivery Reform Invite Adaptive Innovation

The terms defined in this paper suggest not only national changes, but local market impacts that will drive further need for unique solutions. New consumer forecasts and delivery models come from changes in coverage and demand. Future endeavors must focus on cost-effective and quality-enhancing initiatives in care.

Examples worthy of further exploration in the face of healthcare reform include:

- Scoping the current demand forecast from the local shifts in Medicaid and Medicare. These will establish new care management targets for redeployment and stimulate the development of new delivery systems.
- Reducing preventable patient care error rates.
- Understanding how bundled care payment aligns all the providers for improved patient experience in quality, access, and satisfaction.
- Reducing costs through enhanced coordination and the greater use of efficient settings and providers.
- Recognizing incentive drivers in shifting to outcomes-based payment.
- Leveraging decision support information technology.
- Enhancing the recognition of payment fraud and reducing the rates of occurrence.
- Engaging with Health Information Exchanges at the state and regional level.
- Redirecting services used in high-cost settings where alternative settings are available and comparably effective.
- Establishing value-based insurance design with preventive services to encourage consumer self-directed healthcare management.

- Leveraging disease management through population health and a culture of health focus.
- Engaging physicians in the shift from direct patient care to patient-care directed teams.

The increased primary care physician demand of up to 180,000 additional primary care physicians by 2020 underscores the need for new care models to provide sustainable quality care.

Delivery changes invite consideration of value-based business models aided by switching a focus on population health and exploring new concepts, such as accountable care organizations and patient-centered medical homes.

Reform Vocabulary and Opportunity Will Continue to Evolve

The path to providing patient-centered care, using repeatable processes that are focused on provider-driven and payer-enabled outcomes provides business opportunity. Members of the healthcare community will likely continue to debate the impact of the reform components and the paths needed to integrate them into their businesses. After all, there are many approaches that could help set priorities, targets, and initiatives.

New Structures	Goals	Strategies
<ul style="list-style-type: none"> ▪ Accountable Care Organizations ▪ Bundled Payment and Value-Based Purchasing ▪ Patient-Centered Medical Homes 	<ul style="list-style-type: none"> ▪ Physician Integration Structure ▪ Manage and Control Risk ▪ Improve Care ▪ Maximize Payment ▪ Payer Negotiation ▪ Primary Care Network ▪ Coordinate Care 	<ul style="list-style-type: none"> ▪ Population Health ▪ Continuum of Care ▪ Measure Quality, Outcomes and Process ▪ System Interoperability ▪ Aligned Incentives ▪ Bundled Episode Payment ▪ Value-Based Purchasing ▪ Financial Exposure and Risk ▪ Readmits/HAI/30-day Mortality ▪ Physician Strategies ▪ Segmented Psychographic Behavior ▪ Patient Activation

These healthcare reform vocabulary descriptions and illustrations are presented here to identify content and context that will enable critical knowledge to be shared during this transformational time. Perhaps by describing the vocabulary of healthcare reform and showing illustrative informatics, this paper will advance opportunities to consider the common healthcare journey to improve care, enhance access, and reduce costs.

Glossary

Access to Health Services – A person’s or population’s ability to engage in healthcare services and coverage, which are a) geographically proximate, b) physically accessible (for people with limited mobility), c) temporally (timing) appropriate d) socioculturally consistent, and e) without financial barriers.

Bending the Curve – Healthcare cost trends in the United States are two to three times greater than inflation and are therefore unsustainable. This popular phrase describes current efforts to promote health and wellbeing as well as a more effective and efficient healthcare delivery system that will thereby slow the growth in healthcare spending.

Bundled Payments/Episodic Payments – A bundled payment is a single, standardized comprehensive payment that covers all services provided to a patient during an episode of care for a procedure or an acute or chronic condition.

Cadillac Tax – The Cadillac Tax is a 40 percent excise tax on healthcare premiums (employer + employee) that is placed on employers for premiums that exceed \$10,200 for individual coverage and \$27,500 for family coverage. The Cadillac Tax is part of the Patient Protection and Affordable Care Act and is slated to go into effect January 1, 2018.

Care Continuum – The care continuum describes the full range of services that a patient may encounter from prenatal care prior to birth to palliative services at end of life. This term also recognizes that care is provided across the full spectrum of healthcare delivery including outpatient, inpatient, home care, rehabilitation, nursing, virtual, and pre- and post-acute care settings.

Center for Medicare and Medicaid Innovation (CMMI) – The CMMI was established to test new healthcare delivery and payment models. The threefold focus of the CMMI is to help find better ways to care for individuals, better overall health, and reduced costs. The initial focus will be on patient-centered medical homes, advanced primary care practice within community health centers, and comprehensive treatment practices for dual (Medicare and Medicaid) eligibles.

Clinical Decision Support – These are computerized tools that incorporate information-gathering, as well as monitoring and delivery systems, to ensure optimal decision-making on the part of the treating clinician. They assist physicians and other providers at the point of care to follow evidence-based guidelines and improve healthcare outcomes.

Comparative Effectiveness Research – Presently most research compares a treatment or intervention to a placebo or doing nothing. There are few studies that compare multiple approaches to medical concerns. Comparative Effectiveness Research addresses this problem. According to the Department of Health and Human Services, “Comparative effectiveness research is the conduct and synthesis of systematic research comparing different interventions and strategies to prevent, diagnose, treat, and monitor health conditions. The purpose of comparative effectiveness research is to inform patients, providers, and decision-makers, responding to their expressed needs, about which interventions are most effective for which patients under specific circumstances.” Source: <http://www.hhs.gov/recovery/programs/ceer/draftdefinition.html> Accessed 7/28/2010.

Computerized Physician Order Entry – Computerized Physician Order Entry (CPOE) is the electronic entry of medical practitioner instructions for services, tests, and treatments of patients into a computerized system that relays the orders to the appropriate party such as a hospital pharmacist or blood-draw lab. These systems can be used for care orders, prescriptions, lab tests, and radiological orders.

Coverage Limits – A health insurance plan has been able to dictate the maximum number of dollars spent on benefits per individual/family/policy, and these restrictions come in two forms — annual and lifetime.

Culture of Health – This is an ideological transformation of an organization’s culture that passively accepts rising unsustainable healthcare costs to a proactive entity that encourages the holistic wellbeing of each of its employees. Such organizations integrate the health status of their workforce into their mission and vision statements and require all of their employees to be accountable for their health.

Demonstration Projects – These are federally funded efforts to test and evaluate care delivery, cost reduction, health improvement, and payment reform models. The goal of these projects is to develop new, effective methodologies for care and payment, which can be expanded to a broader, perhaps national, scope. The Affordable Care Act has several funded pilots dealing with innovations such as the bundled payment model and programs for chronically ill Medicare beneficiaries using home-based teams. Note that demonstration project opportunities have been ongoing for years and are not solely tied to recent legislation.

Disease Management – Disease management programs address the needs of population cohorts affected by chronic illnesses to reduce their medical costs and the deleterious effects of these conditions. A successful effort involves an effective way to identify worthy patients and engage them to fully participate in evidence-based interventions that produce measurable improvements in care, reduced costs, and perceived value.

Early Retiree Reinsurance Program – The Early Retiree Reinsurance Program (ERRP) is a temporary \$5 billion program established by the Patient Protection and Affordable Care Act. Its purpose is to help businesses and unions cover the healthcare costs of Medicare-ineligible early retirees, their spouses, and other dependents. It provides 80 percent of claims costs for benefits between \$15,000 and \$90,000, starting with the 2010 calendar year.

Electronic Medical Record/Electronic Health Record – Electronic medical records (EMRs) and electronic health records (EHRs) are computerized records maintained centrally by a medical practice or health center to keep track of patient care. EMRs are electronic versions of a patient’s paper medical chart and maintain a patient’s medical history over time, including patient demographics, clinical notes, prescriptions and registries, web applications, and connection to personal health records kept by patients. They are usually constructed so the data can be part of other systems, such as clinical workflow and decision support, and possess the ability to safely exchange health information between entities, such as collaborating providers.

Employer Mandate/Pay or Play – This Patient Protection and Affordable Care Act mandate requires employers to either offer minimal levels of health insurance coverage to their employees or pay a fine, which in turn will subsidize health insurance for those without access. This part of the health reform law will go into effect for plan years beginning on or after January 1, 2014 and for employers with 50 or more full-time employees who choose not to provide group coverage and have at least one employee obtaining federally subsidized coverage through a health insurance exchange.

E-prescribing – According to the Centers for Medicare and Medicaid, e-prescribing is, “a prescriber’s ability to electronically send an accurate, error-free, and understandable prescription directly to a pharmacy from the point-of-care.” Studies have demonstrated that replacing handwritten prescriptions with this electronic transmission greatly reduces medication errors.

Evidence-Based Medicine – Much of the care delivered today has been simply based on expert opinion. Evidence-Based Medicine’s (EBMs) charge is to deliver care that has strong scientific validation. Ideally, this term refers to the synthesis of individual, first-hand clinical experience with evidence garnered by external systematic research to create best practices in care delivery. It involves the interested clinician or organization asking a specific care question and then proceeding to systematically review published research to find practices backed by concrete data.

Expanded Coverage – A significant goal of the Affordable Care Act is near universal coverage. To accomplish this, a mandate requiring most U.S. citizens and legal residents to have health insurance is included. There are individual regulations that support this initiative by:

- Expanding Medicaid coverage
- Removing bans on coverage of individuals with pre-existing conditions
- Setting required groundwork for the formation of state-based health insurance exchanges
- Supplying assistance for individuals to procure insurance
- Expanding coverage of dependents up to age 26

Global Payments (Global Capitation) – Global payments (global capitation) are fixed payments for which providers are given a pre-specified amount per patient (dependent on demographic data and other considerations) for a time period such as a month or a year. This payment schema places the burden of risk on the provider who will be responsible for delivering comprehensive acute, chronic, and preventive care during that time period for that all-inclusive payment.

Health Information Exchange and Interoperability – A Health Information Exchange (HIE) is an initiative focused on the electronic exchange of healthcare data between healthcare stakeholders. The exchange typically includes clinical, administrative, and financial data across a medical care and coverage area. Interoperability refers to the ability to connect to two or more disparate systems, for example, a disease registry and a payer claims database, for the sharing of permissible secure information via standardized protocols and exchanges.

Hospital Value-Based Purchasing/Pay for Performance – These programs are established to reward providers of care for better results. They require the care-providing organizations to have a system of accurate measurements to gauge performance (e.g., a hospital measuring readmission rates). If the organization achieves established goals set by a program sponsor, the organization receives an incentive payment. Organizations can also receive lower remunerations for poor outcomes.

Individual Coverage Market – For people unable to receive health coverage through their employer or the government, the Affordable Care Act legislation will create a competitive marketplace for buying coverage from insurers at the state-specific level.

Integrated Healthcare Delivery System – An integrated delivery system (IDS) is a network of healthcare providers and organizations that provide or arrange to provide a coordinated continuum of services. Services provided by an IDS can include a fully equipped community and/or tertiary hospital, home healthcare and hospice services, primary and specialty outpatient care and surgery, social services, rehabilitation, preventive care, and health education (Washington Hospital Association).

Meaningful Use – The 2009 Health Information Technology for Economic and Clinical Health Act (HITECH Act) is part of the American Recovery and Reinvestment Act (ARRA) which included funding for Medicare and Medicaid incentives for the “Meaningful Use” (MU) of certified electronic health records (EHRs). The intent of the legislation is to promote the use of EHR technology to:

- Improve quality, safety, efficiency, and reduce health disparities
- Engage patients and families in their healthcare
- Enhance care coordination
- Support population and public health

Medical Loss Ratio – This is the fraction of the collected insurance premium revenue dedicated to providing health services and improving the quality of care compared to the total revenue that includes expenditure for business administration, marketing, and profit.

Medicare Drug Coverage Gap/“Donut Hole” – Medicare Part D is a voluntary medication benefit program that started in 2006. Participants with a standard plan have 75 percent of their drug costs covered until they reach a cost of \$2,830. Any expense higher than this is paid out of pocket (“Donut Hole”) until the cost reaches \$4,550. Once costs reach this amount, 95 percent of costs are covered by Medicare.

Patient Registry – To deliver the most appropriate care to specific cohorts within a population, providers are encouraged to keep lists of patients who have common conditions or concerns. These registries can be paper-based or preferably computerized. With these lists, physicians and other providers can institute disease or condition management programs for patients with illness burdens or track others for their completion of appropriate screenings, for example.

Patient Safety – The domain dedicated to preventing and reducing the harm that may be caused during a patient’s interaction with the medical system. This can help improve healthcare outcomes while reducing costs.

Payment Integrity – Payment integrity is the process by which the correct payments for the correct covered lives, and for the correct services are paid to the correct provider(s). This process involves detecting and minimizing fraud, waste, abuse, and misuse of healthcare dollars.

Personal Health Record – A personal health record (PHR) is a patient’s healthcare profile. Unlike an electronic medical record or electronic health record, these data are collected and maintained by the individual. In the future, PHRs will be electronically connected to provider EHRs for secure and private exchange of approved information.

Pre-existing Conditions – Pre-existing conditions are health concerns that exist prior to an individual’s enrollment in a health plan. Historically, illness burden has precluded an individual from qualifying for coverage or finding affordable rates.

Preventive Services – Preventive care services have a threefold purpose. They can reduce health risks by engaging in wellness promotion. They can promote screening or testing to ensure early detection and diagnosis of conditions. And they can provide interventions to prevent disabilities, mortality, and morbidity caused by disease.

Risk Pool – If individuals had to pay for their healthcare costs each year without insurance, some families would become bankrupt when faced with a catastrophic illness and a very large medical bill. The insurance industry was born to help large groups of people share the risk burden each year. Each participant bears only a fraction of the total risks and costs through premium insurance payments by joining the risk pool.

Telehealth – Telehealth is the practice of using electronic information systems with telecommunications technology to support the long-distance delivery of care. The practice of telehealth gives care providers the ability to diagnose, receive, and transfer appropriate health data, address questions, provide information, and oversee treatments and therapies for patients who are difficult to care for face-to-face (i.e., location).

The Accountable Care Organization – An Accountable Care Organization (ACO) is a care-delivery model in which physicians, specialists, and hospitals are aligned in providing efficient and effective care for a patient population. Instead of the present fragmented, fee-for-service delivery of care, this model emphasizes collaboration of providers accountable for the health status and outcomes of care provided to their panel of patients.

The Patient-Centered Medical Home – A Patient-Centered Medical Home (PCMH) is a model of care by which a personal primary care physician, who has an ongoing trusted relationship with a patient, provides comprehensive and continuous care with care coordination to meet the patient’s multiple care needs, including: wellness, risk reduction, preventive services, as well as acute, chronic, and end-of-life care. This model focuses on improving accessibility, comprehensiveness, collaboration, record-keeping, patient safety, and the quality of care for the patients treated within them.

Value-Based Insurance Design – Recent studies demonstrate that health outcomes can be influenced by a patient’s insurance coverage and benefit policy. Therefore it is possible to design insurance packages that improve outcomes and add value. An example of this involves identifying effective clinical practices and reducing the financial barriers associated with those treatments and services, encouraging greater adherence with care protocols.

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