HIT Trends
January 2011





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Surescripts is designated to certify e-prescribing modules for HITECH incentives

Focus on E-prescribing

Surescripts has been selected as ONC-Authorized Testing and Certification Body (ATCB).



It will certify e-prescribing, privacy and security modules as to their capabilities to support meaningful use.

Five other companies have been selected to certify both complete EHRs and separate modules.



SLI Global Solutions, Denver, CO.

InfoGard Laboratories, Inc., San Luis Obispo, CA

CCHIT, Chicago, IL

Drummond Group, Inc., Austin, TX



Editorial: This should help a number of technology suppliers get their apps certified for e-prescribing so as to participate in mash-ups of collaborating modules. It also confirms the neutrality of Surescripts which will likely benefit its new clinical interoperability services in the market.

DrFirst launches a hospital consulting group Focus on E-prescribing

DrFirst, the leading provider for ambulatory eprescribing, enters the hospital consulting market.

It offers services to integrate e-prescribing into hospital workflows to achieve meaningful use incentives.

These are focused on providing MEDITECH customers readiness assessments, best practices training and go-live support.

The company will also alert hospitals when eprescribing use falls below thresholds for incentives.





Editorial: DrFirst is finding additional markets for its services as the e-prescribing market gets folded into the EHR. It has been embedding its Rcopia e-prescribing services into third-party EMRs and billing systems. It has been working with hospitals on medication reconciliation projects. This announcement combines both competencies with a focus on MEDITECH LSS customers. I expect it will get some traction in MEDITECH hospitals.

KLAS names top-ranked EHR vendors for performance Focus on EHR

Epic is top-ranked overall with a score of 87%. Picis (recently acquired by Ingenix) and Philips ranked number 2 and 3.

Epic is best in several segments. Acute care EMR. Ambulatory EMR (>100 physicians). Patient accounting and patient management. Hospital pharmacy. Practice management (> 100 physicians). Radiology.



eClinicalWorks (26-100 physicians). McKesson is best for practice management in this segment.

Greenway Medical (6-25 physicians). Also best in practice management.

E-MDs (2-5 physicians). Also best in practice management.









Editorial: The annual list is based on more than 17,000 interviews conducted with healthcare providers over the past year. The company measures vendors' performance in areas of product quality, implementation and service and support. Epic seems to be in a class by itself. KLAS has previously reported that Epic and Cerner win 70% of the large hospital deals. And in smaller practices, KLAS winners are often recommended by Regional Extension Centers. Other prominent EMRs include: Allscripts, NextGen, athenahealth, McKesson and Sage.

IDC predicts EHR market to reach \$3.8B in 2015

Includes software license and maintenance costs for products that meet meaningful use criteria.



EHR Type	2009	2015
Ambulatory EHR	\$635.5 million	\$1.41 billion
Inpatient EHR	\$1.34 billion	\$2.4 billion
Total EHR	\$1.98 billion	\$3.8 billion

Investment drivers include: Incentive payments, quality improvement initiatives, and cost control efforts.

Editorial: There's likely another adjacent market of near equal size that addresses requirements beyond the EMR to focus more on care collaboration and patient engagement in medical home and emerging Accountable Care Organizations. This is the market pursuing Stage 3 meaningful use criteria. The current EHR solution providers will participate and perhaps lead, and there will likely be new additional competitors from the HIE and care communications segments.

Leapfrog names 65 hospitals as best performers in patient safety and quality

Focus on EHR

Key is the use of HIT to prevent medication errors through computer physician order entry (CPOE) and reduce medical errors through its use in policy adherence.



Kaiser Permanente. CA.

Mayo Clinic. MN, AZ, FL.

Cleveland Clinic. OH, FL.

California Pacific, Mills-Peninsula, Stanford and University of California, Davis. CA.

North Shore University, Rush University. IL.

Sentara. VA

Swedish, Virginia Mason. WA

Vanderbilt University. TN.

University of Maryland. MD

Baystate, Beth Israel Deaconess, Brigham and Women's, Caritas Good Sam, Norwood. MA.

Detroit Receiving, DMC Harper, Huron Valley-Sinai, University of Michigan. MI.

Hackensack University, University at Princeton. NJ.

Roswell Park Cancer Institute. NY.

Christ Hospital, Ohio State Cancer. OH.

Lehigh Valley Hospital. PA

Bon Secours St. Francis. SC.

Editorial: Additional children's and rural hospitals are also on the list. The above are all university or teaching hospitals. 1200 hospitals voluntarily submitted data. Leapfrog is a coalition of private and public employer health purchasers. Kaiser dominates the list with 16 hospitals. The integrated system has been getting great performance results from its Epic EMR and PHR and its integrated structure.

Per physician costs of an EMR are impacted most by lost first year revenues

Focus on EHR

66% of physicians are concerned about the cost of EMR hardware and software.

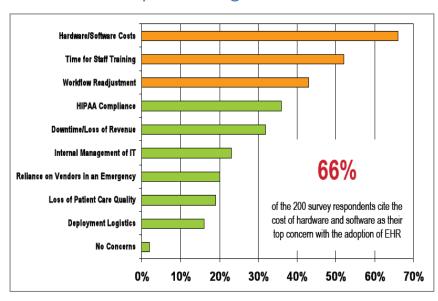
Total first year costs are expected to average \$120,000 with \$30,000 recurring each year.

But the largest cost item is lost physician revenue during the first year estimated at \$101,250 per physician or 10% revenue.

However beginning in the second year physicians will gain 15% or \$151,875 per year in revenue from seeing more patients.

First year hardware, software and services are estimated to be only 12% of total EHR adoption costs (\$9,910-\$14,310 per physician).

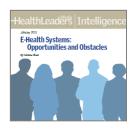
Top concerns of physicians implementing an EMR



Editorial: Practices should focus on physician training to limit the downside risk of lower productivity in the first year. They should focus on reengineering the workflow to encourage the productivity gains expected in later years. CDW is a national hardware distributor.

Healthcare execs believe HIT improves quality, but some research disagrees

Focus on EHR



83% of execs believe EHRs will improve quality and safety industry-wide. And 81% say they will improve care coordination. But only 43% say they will reduce costs. HealthLeaders survey of 242 execs.



Access to an EHR is associated with quality improvement in heart failure, but recent upgrades to advanced systems slowed benefits. The study used HIMSS data to assess HIT. Reported in the American Journal of Medical Care.



University of Edinburgh finds limited evidence of benefits to large EHR projects. Analyzed published results from 53 reviews of EHR systems. E-prescribing systems, however, did get benefits in error reduction and streamlining medication orders.

Editorial: This topic will get a lot of attention over the next months. It's likely we'll confirm quality and safety benefits given stable systems integrated into clinical workflow. In the settling in period it's likely systems will experience problems. And the cost benefit will take much longer to achieve.

NQF suggests how to measure HIT utilization and quality improvement

Focus on EHR

National Quality Forum suggests a three-part model to assess HIT utilization.

Actor. A person or electronic system that performs actions required in a measure of health IT utilization.

Content. The concept on which an action is taken. E.g., alerts, allergy list, care modifications, claims submitted, clinical summary, condition.

Action. Something a measure recommends to a person or a computer programmed by a person. E.g., access, acknowledge, alert, calculate.

The Clinical Decision Support (CDS) Taxonomy has four functional categories.

Trigger. Initiates a CDS rule.

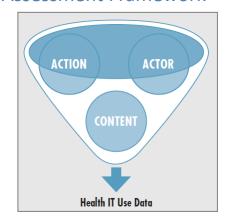
Input Data. Components of the QDS data types.

Interventions. Possible actions the information system can take to deliver information.

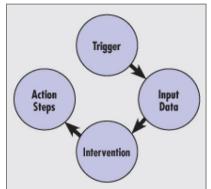
Action Steps. Actions a receiver of the information can perform.

Editorial: These reports provide a practical model for measuring HIT impacts. They contain analysis of the most important use cases for e-prescribing, clinical decision support, order sets and patient clinical summaries.

Health IT Utilization Assessment Framework



Functional Categories of CDS Taxonomy



Analyst segments HIEs into five types Focus on HIE

Туре	Functions	Issues	Federated Vendors	Non-Federated Vendors
1	Docs get patient data from hospital.	No data sharing between providers. Data blobs, not discrete.	Medicity Quest HIE Microsoft HIE Oracle HIE	
2	Share specific data with practices on same EHR. Get data from hospital and labs.	No data sharing across EHR products.	HIEweb Noteworthy	NextGen eClinicalWorks Med. Comm. Sys.
3	Share specific data with a short list of selected EHRs.	Single vendor providing point to point interfaces.	dbMotion Intelichart Noteworthy	NextGen Intelichart Med. Comm. Sys.
4	Exchange CCD data with selected EHRs.	Also MPI, patient portal, discreet data and eprescribing.	Browsersoft Microsoft HIE Oracle HIE	Axolotl (Ingenix) HealthVision
5	Exchange CCD data with different EHRs.	As above	Wellogic	Health Access Excelicare

Editorial: AC Group analysis based on 114 community-based HIE projects. Federated refers to point-to-point networks w/o a central repository; Non-Federated refers to a model based on central storage of patient data.

Senior hospital and health system execs think the feds should fund HIEs which will improve quality

Focus on HIE

65% said the federal government should fund HIEs.



57% said HIEs will improve quality of care.

53% said cost is biggest barrier and 43% said cost/value is most important vendor attribute.

49% are prepared for meaningful use Stage 1; 9% for future stages.



45% focused connectivity efforts internally on owned hospitals and affiliated practices; 30% externally on non-affiliated physicians and competitors.

43% were considering moving to an ACO model.

Editorial: This data is consistent with other market evidence that hospitals are focused on building up internal provider capabilities with owned and close affiliated practices as they explore the ACO roadmap. They are getting in shape for Stage 1 but have lots to do in HIT for future stages. And cost remains the biggest challenge.

Premier and IBM collaborate on a comparative effectiveness service for ACOs

Focus on HIE

Premier's Accountable Care Implementation Collaborative includes 25 health systems, 90 hospitals, 5,000 physicians, 1.4 million patients, 19 states.

Includes Billings, Bon Secours, Fairview, Geisinger, North Shore – LIJ, Presbyterian, Summa Health and Texas Health Resources.

Project will access Premier's clinical, financial and operational database including 40% of US discharges.

Clinical data. How care was delivered and related outcomes.

Supply chain data. Incorporates clinical outcomes with costs.

Operational data. Labor efficiency and operating costs.

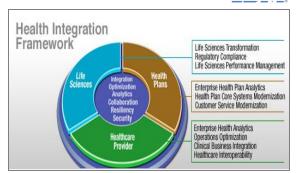
IBM's Health Integration Framework will power the service. Includes IBM tools, such as Initiate MPI, to acquire, transform, validate and populate the jointly developed model.

Editorial: This initiative brings significant scale right away. Premier's prior QUEST project involved 157 hospitals and saved >\$2B. There are also 40 additional health systems in its ACO Readiness Collaborative as follow on.









HHS releases proposed objectives for Stage 2 and 3 of meaningful use

HIT and Government

Percentages required are increased. For example, e-prescribing goes from 40% to 50% in S2 and 80% in S3. Vital signs goes from 50% to 80% in S2. CPOE goes from 30% for Rx orders to 60% and at least 1 Rx and 1 lab/radiology.

Optional measures become core. For example, formulary checking, patient lists, patient reminders, summary of care record.

New requirements. Chart notes (30%), medication administration in hospitals (30%), patient portal in hospitals (36 hours), online patient messaging (in use), patient communication preferences (20%), care team member list (10%), longitudinal care plan (20%).

Other feedback requested. Patient access barriers and integrating patient-reported data. Alternatives for reporting by practice. Alternatives to reporting by outcomes.



Editorial: The criteria reflect the desire to begin to move EHR functions more into care collaboration and patient outreach, two areas required for care process transformation and recognized as the least mature areas of current market products. This is where ARRA HITECH meets up with the accountable care provisions in the Affordable Care Act.

Providers plan to qualify for meaningful use incentives HIT and Government

Government commissioned questions inside of regular annual surveys by the AHA and CDC.

81% of hospitals plan to achieve meaningful use; 65% will enroll during Stage 1 in 2011-2012.

41% of office-based physicians plan to achieve meaningful use; 32.4% will enroll during Stage 1.

14% of physicians won't pursue the incentives.

Previously released survey data show an increase of EHR adoption of basic systems for primary care to 29.6%, a 50% increase over 2008.



Editorial: EMR adoption is picking up pace. The incentives are driving the increase. Meaningful use is more closely tied to utilization of advanced functions, such as e-prescribing CPOE, clinical alerts, and guideline-based interventions, where the use numbers are very low, just surpassing 10%, according to the CDC.

Physicians bullish on HIT but bearish on Healthcare Reform HIT and Government

Thomson Reuters and HCPlexus report on national survey of 2,958 physicians

78% say the impact of health reform is negative for physicians.

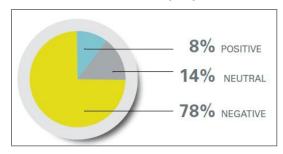
58% say health reform is also negative for patients.

65% say quality of healthcare will deteriorate over the next 5 years.

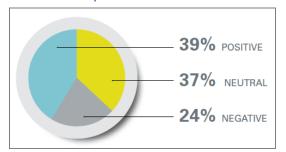
Yet only 24% say that the impact of EMR on patient care will be negative.

Only 12% say they are likely to participate in an Accountable Care Organization. 45% didn't know what an ACO was.

Impact of Health Care Reform Act for physicians



Impact of EMR on quality of patient care



Editorial: The study was fielded late in 2010 and shows us the current climate of physicians in response to ARRA and PPACA. Physicians seem most wary of the reimbursement picture going forward. The report breaks out data by specialty as well.

Headlines from Government Health IT HIT and Government

Regional extension centers

ONC will pay for most of extension center costs. It will pay for 90% of REC costs for 4 years to support provider EHR adoption.



Health data exchange

Health data exchange is hard. Blumenthal says that meaningful use is the 'tip of the spear' for transforming health care, though information exchange remains a challenge and a focus.

Health insurance exchanges

HHS expands funding to create health insurance exchanges. States will use grants to finance the systems implementation, legislative alignment and help ensure program integrity of health insurance exchanges.

Editorial: The implication here is that the heavy lifting is done for meaningful use and adoption, and just beginning around health information exchange. The Affordable Care Act is also placing demands on HHS resources, as evidenced by the work on health insurance exchanges.

Largest telehealth monitoring program launches in China Focus on Care Communications

100,000 patients in Shandong Province in China will use kiosks and wireless monitors in villages and hospitals to communicate with providers

Canadian firm, Ideal Life, partners with Chinese pharma, NovaTech Biological Pharmaceutical.

The platform allows two-way communication between patients and providers or health coaches.

It integrates patient data intro provider EMR systems.

Expansion throughout China is expected after opening an independent monitoring center later this year.







Editorial: The international market has been leading the mobile health segment in many areas. Here's a great project demonstrating scale that could have very direct applications in the US. Ideal Life products have US FDA approval.

Family caregivers want HIT to help provide support

Focus on Care Communications

Personal Health Record. 77% want to track health history, symptoms, medications, and test results, in a PHR.

Caregiving Coordination. 70% want to share an electronic calendar for appointments and other care tasks that allow multiple care givers to sign up for tasks.

Medication Support. 70% want medication reminders, caregiver alerts, and pill dispensing including administration directions.

Patient Monitoring. 70% want to send information such as blood sugar or blood pressure readings to a doctor or care manager.

Interactive Games. 62% want a TV-based device, similar to a Wii Fit, for physical and mental games.

Videophone. 61% want telepresence.

Smartphone. 69% want to try smart phone apps.





e-Connected Family Caregiver Benefits

Save time

Make tasks easier

Safer for patient

Feel more effective

Reduce stress

Editorial: 1000 caregivers in the study, all used the Internet or some other technology for care support. All provided at least 5 hours per week of uncompensated care. Their top wishes represent a great roadmap for a care communications solution.

Strong evidence for ROI for Rx adherence in downstream cost avoidance

Focus on Care Communications

Across all conditions, adherence reduced *total* annual costs.

Congestive Heart Failure. \$7,823 less

Hypertension. \$3,908 less

Diabetes. \$3,756 less.

Dyslipidemia. \$1,258 less.

Despite the increased pharmacy costs.

Congestive Heart Failure. \$1,058 more.

Hypertension. \$429 more.

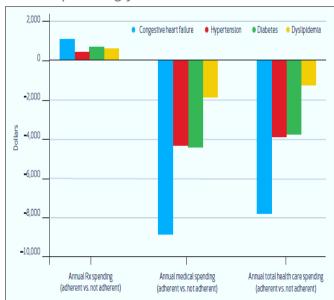
Diabetes. \$656 more.

Dyslipidemia. \$601 more.

This is an ROI for hypertension of over 9:1; CHF at over 7:1; Diabetes at 5.7:1 and Dyslipidemia at 2:1.

Impact of Rx Adherence

Spending for Chronic Vascular Dx



Editorial: The breakthrough here is in the econometric model used in the study that gets to substantiating a causal link between adherence and lower medical costs instead of just one of occurring together, e.g., maybe adherers are more likely to jog and that's the cause. These findings are significant enough to support a wide range of adherence programs.

PwC model maps accountable care stages to meaningful use

Focus on Care Communications

Participating In the ACO

Planning For the ACO

Stage 1: 2011

Capture and share data

Physician entry of medication orders and E-prescribing.

Core clinical documentation.

E-copies of health info to patients.

Quality and immunization reporting.

Drug interactions and formulary checking.

Lab results delivery.

Patient reminders.

Stage 2: 2013

Advanced care processes with decision support

Health summaries for continuity of care.

Registry and public health reporting.

Populate PHRs.

CPOE for all order types.

Evidence-based order sets.

Clinical decision support at the point of care.

All clinical documentation in EHR.

Claims and eligibility checking.

Performing In the ACO

Stage 3: 2015
Improved outcomes

Minimal performance measures.

Clinical decision support for high priority conditions.

Access comprehensive data from all available sources.

Experience of care reporting.

Medical device interoperability.

Dynamic/ad hoc quality reports.

Real-time surveillance.

Patient access to multimedia tools for self management.

Use of epidemiologic data.

Clinical dashboards.

Patient access to ops data.

Increasing level of collaboration required with external parties

Editorial: I agree with this PwC analysis and support its usefulness in understanding the context for current dynamics in HIT. Industry stakeholders are following this type of three phase roadmap to position for emerging forms of care delivery and financing.

Eight functions needed to thrive in an accountable care world Focus on Care Communications

- 1. Tracking patients across multiple orgs. A regional or ACO-based master patient index is important.
- 2. Clinical decision support. Order sets or abnormal results alerts. Reminders to see certain patients at risk.
- 3. **Disease registries.** Brings together the needed date to compare cohorts of patients to assess quality/efficiency and compare providers.
- 4. Care collaboration tools. Provider apps to support discussion of patients, record notes or perform handoffs during care transitions.
- 5. Events messaging. Alerting care team members when patients get care anywhere.
- 6. Personal health records. Patient access to data. Communicate with providers. Enter own data. Education and social networking.
- 7. Health information exchange. Push clinical data to providers at first, then offer clinical data query.
- 8. Business intelligence and analytics. Predictive modeling and managing quality data.

"HITECH is extended by the less-discussed, but profoundly impactful PPACA sections that discuss ACOs and the different ways that Medicare will pay for care.

These changes may be more significant to the industry and to healthcare information technology than the meaningful use regulation itself."

John Glaser CEO, Siemens Healthcare

Editorial: Here's Glaser's insights into functions required for clinical practice transformation.

Moving from personal health records to personal health management

Focus on Care Communications

A Patient-centered model is proposed in a JAMA editorial...

- Collect patient information. Self-reported demographics and risk factors such as health behaviors, symptoms, diagnoses and medications.
- 2. Integrate with provider data. Clinical information links in the EMR or clinical claims repository.
- 3. Patient terminology. Interpret clinical findings into lay language delivered is an easy-to-use interface.
- Personalized recommendations. Provide individualized clinical advice, such as reminders based on specific patient data and evidence-based guidelines.
- 5. Facilitate patient action. Provide vetted education resources, decision tools, risk assessments, personalized messages and directions for follow-up.

"Information technology holds great promise in empowering patients to manage their health but the patient must become the focus of the design if the technology is to be used or fulfill its potential."

Krist, MD and Woolf, MD Virginia Commonwealth University

Editorial: The PHR term, makes us think of records and access. Dr. Michal Solomon, at Point-of-Care Partners, has begun using the term, "Personal Health Management," which resonates with me. This JAMA editorial speaks to that issue through a core set of health management functions.

PwC consumer survey reports about 7% get key health info from an EHR

Focus on Care Communication

Consumer access to an EHR

▶14% report access to an EHR.

About 50% of these have access to:

Lab reports. Prescription orders/history. Immunization records. Upcoming health appointments. Physician visit notes. And they use it mostly for their own information.

About a 33% of these get suggestions for preventative health and use the EHR to share info among physicians.

Consumer-preferred sources for health information

→ 56% favor media and information service companies. For example, Dr. Oz, The Doctors, iVillage, WebMD.

16% favor healthcare orgs or pharma. For example, Mayo Clinic or Johnson & Johnson.

12% favor consumer-driven orgs. For example, Patients Like Me, Daily Strength, Angie's List.

11% say they would use a pharma site for info about treatments or conditions. 54% use online tools generally for this purpose. 75% say they consult a physician. 11% would alert a pharma about a drug reaction.

Editorial: The consumer access data fit with other studies about PHR rates of 7% nationally. The preference for media brands, like Dr. Oz, over more traditional healthcare brands, like Mayo or FDA, is particularly notable. PwC reports that consumers like how these media brands can customize their interactions with them right where they are and not redirect them to other resources.

Pharma iPhone apps

Spotlight on Smartphones



Psoriasis. Developed by Janssen for clinicians and patients to access a severity calculator, impact questionnaire and a dermatology newsfeed.



Pfizer Oncology RCC. Developed by Pfizer to support UK clinicians treating metastatic renal cell carcinoma.



iManage Migraine. Developed by Merck for patients to assess symptoms, treatment options and action plans/



Cancer Trials. Developed by GSK that locates clinical trials in Oncology by geography.



Vax Trak. Developed by Novartis to help busy parents keep track of family vaccinations.



NIHSS. Supported by Boehringer to aid clinicians in evaluating stroke patients with the NIHSS scale.



NovoDose. Developed by Novo Nordisk to help clinicians with dosing information.



AFib Educator. Developed by sanofiaventis to aid clinicians in explaining AFib to patients.

Editorial: InPharm is tracking pharma twitter feeds, blogs, mobile apps and campaigns.

AMA reports on health plans and social media Spotlight on Social Media

Health tips. BCBSA plans tweet advice about sticking to New Year's resolutions. Also diabetes symptoms, sunburn / frostbite.

Political messages / advocacy. Tweets about health system reform or rising premiums. BCBS of NC tweeting @nchealthreform.

Project microsites. Aetna was tweeting the Food Fight Healthy Food challenge promoting better nutrition.

Brand humanizing. WellPoint's Facebook page features Health Footprint calculators showing how our behavior impacts others. Also video profiles of case managers, network physicians and reps.

Listening. Cigna monitors social media and will respond to complaints for the public record.

Little physician and health plan dialogs on social networking sites.

Aetna	@aetnastudent @aetnafoodfight	
Cigna	@CIGNAquestions	
Health Net	@healthnet @hn_bradkieffer @hnfs	
Humana	@HumanaHelp @HumanaOne @HumanaMedicare	
WellPoint	@anthemhealth	
United Health Group	@connectingcare @dogoodlivewell	

Editorial: Health plans are engaging in social media activities but treading lightly. Project microsites seem promising because the conversations can be more focused.

Annual forecast by health economist Jane Sarasohn-Kahn New Year Forecasts

- 1. Bipartisan support for HIT. HITECH will stay largely unchanged.
- 2. Slow and steady toward meaningful use. Still only 10% with fully functional systems according to the CDC.
- 3. Increasing data liquidity. Hospitals integrating devices and more open standards lead the way.
- 4. Mobile apps for everyone. Consumers and clinicians find reasons.
- 5. Home as health hub. Increasing evidence and new reimbursement models.
- 6. Social media for health. 50% of US will engage in blogs and social networks.
- 7. New HIT business models. Companies explore how to offer "free" services and monetize them downstream. CDC and HHS will open up databases.
- 8. Limited resources. HIT skill shortages and state governments in fiscal crisis.
- 9. Health privacy debate. More ambiguity in privacy health policy and continued debate between public and commercial interests.



Jane Sarasohn-Kahn is a health economist who advises organizations at the nexus of health care and technology. She leads Think-Health, a health consultancy, and works with stakeholders throughout the health care industry.

Editorial: Jane is right on target again this year. Additionally we're likely to see ACOs and HIT consolidation be continuing themes.

eHI and GE pick top 11 issues for 2011

New Year Forecasts

- 1. Reimbursements drop. Most significant issue is the downward pressure across all stakeholders who will seek to transform all aspects of care delivery.
- 2. CIOs in the crucible. HIPAA. ICD-10. Meaningful use. Mobile devices. Accountable care.
- 3. Competition shifts to quality and performance. From P4P to the central basis for competition, competing on value.
- 4. Accountable care takes shape. Pilots will help clarify issues in ACOs as will further CMS regs.
- 5. Industrialization gains momentum.

 Focus on predictable reliable processes that reduce variation, improve cycle-time, eliminate waste and defects and improve overall quality.

- 6. **Provider mobile solutions.** Explosion of smartphones and tablets, e.g., iPad.
- 7. Digital patient engagement. Increased national dialog. Meaningful use criteria. Powerful new consumer health tools.
- 8. Leadership demand. Effective recruiting pipelines and leadership development are key.
- 9. Meaningful use timing. October 1, 2011 is last day to apply for 2011 incentives.
- 10. HIEs share images. US will follow other western nations in image exchange.
- 11. Privacy dominates discussion. Focus is on a framework for accountability, access, use and disclosure.

Editorial: There's a lot to do this year with real resource limitations. Technology can be a great enabler, particularly in provider collaboration and patient engagement. ACOs and hospital CIOs seem central to the solutions.

Commentary *Endnote*

One big story this month is the KLAS report on EHR vendor performance. Epic, eClinicalWorks, Greenway and e-MDs lead their categories by physician practice size, from largest to smallest. These companies are leveraging this performance rating into winning deals.

Some interesting cost analysis by CDW, a hardware distributer, shows us that the biggest expense in an EHR project is potential lost physician revenue. Smart projects can do a lot to address this.

We got a first look at the meaningful use rules for Stage 2 (2013) and Stage 3 (2015) and some great analytic models that help us navigate. PwC maps these stages to accountable care stages and John Glaser highlights the critical IT functions to get there. The National Quality Forum released some basic models for reporting quality. And Mark Anderson, an industry analyst, pulled together a straightforward model of five HIE types based on who is connecting with whom for what.

Ideal Life, a Canadian telehealth company, announced the largest industry project to date, a 100,000 citizen wireless monitoring project in China. Citizens will use kiosks in community centers and wireless devices in the home. Industry analysts, in their annual forecasts, all see mobile and smartphones and tablets as a most important trend. Even David Hockney, a renowned contemporary artist in the UK, succumbs with a recent Paris exhibition of different images on 40 smart devices, all created with the iPad app, *Brushes*. It is the year of mobile health and the consumer.



Fresh Flowers, David Hockney, 2010

(1 of a group displayed on
20 iPhones and 20 iPads)

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