

# the EDGE

**Health Care 2020:  
Tomorrow's Clinical  
Enterprise  
Conference Proceedings**  
2008

## **Sg2 Staff**

### **Project Director**

Nathan Cohen

### **Project Associates**

Ahmed Naguib

Linda O Prager

### **Editorial Review**

Barbara M Bennett, RN

Linette Demers, PhD

Natasha Goburdhun

Bill Woodson

Copyright © 2008 Sg2

This analysis was prepared by the staff and consultants of SG-2®, LLC ("Sg2") and is proprietary and confidential information to be used solely by subscribing Members of Sg2's Programs. The projections, trends, forecasts and conclusions provided herein were assembled using the best judgment of Sg2, its staff and consultants, but should not be construed as definitive projections for purposes of financial feasibility or other economic decision-making. Events, conditions or factors, unanticipated at the time of the development of this analysis, may occur which could have a material impact on the conclusions contained within. No assurances are offered, either implicitly or explicitly, that the projections, trends or forecasts will occur.

Sg2's analyses, recommendations and forecasts are based on a thorough and comprehensive review of literature, interviews with Members and discussions with industry participants. Sg2, its principals and editorial staff do not hold any direct investments in commercial enterprises that may be noted in Sg2 publications and reports. Medical device manufacturers, pharmaceutical firms and other commercial vendors (some of whom are Members) are often noted in Sg2 publications to illustrate emerging trends or key clinical developments. Sg2 does not recommend or endorse any specific products or services noted. Sg2's objectivity and analytical rigor are fundamental to the value of our research and insights.

The subscribing Members should apply findings to their own market and business circumstances to determine the applicability of the information contained herein. With respect to clinical matters and patient treatment practices, subscribing Members should consult with their medical staff professionals prior to adopting or applying any such plans or procedures. Sg2 disclaims any liability for the accuracy, completeness or usefulness of any information, apparatus, product or process discussed herein and shall not be liable for damages of any kind, including, without limitation, any special, indirect, incidental or consequential damages arising from omissions or errors in its conclusions, findings, observations or recommendations.

# Health Care 2020: Tomorrow's Clinical Enterprise

Over the next 12 years, the health care industry will redefine the fundamental building blocks of care delivery. In response to a sensible but stark payment landscape, demographic realities and technology advances, providers will recast the clinical enterprise.

Payment is moving from fragmented fee for service into bundled arrangements. Physicians, stretched thin both from soaring volumes and declining reimbursement, are seeking closer alignment with hospitals. Care standardization is allowing midlevel providers to take on expanded patient care roles. Robust information systems are enabling consolidated clinical records that can be shared across venues.

Faced with these converging forces, health care will continue to evolve toward service and clinical integration. Fragmented care of old will give way to seamless care organized around the patient's specific needs. Future success will stem not from maximizing the performance of an individual health care unit but from maximizing the performance of the entire system.

Although the vision is futuristic, the groundwork must be laid today. Health care executives need to suspend their current assumptions. They should dismantle existing hierarchies and ignite long-term planning processes focused on systems of care, not destinations of care.

*Health Care 2020: Tomorrow's Clinical Enterprise Conference Proceedings 2008* outlines these transformational trends. It introduces 4 distinct patient types for whom care models must be built. It then details the services, systems and business models most likely to define the US health system of tomorrow. These conference proceedings summarize content originally presented during an Sg2 Edge® conference held in March 2008.

## The Shifting Health Care Landscape: 2008–2020

- Today's emphasis on technology acquisition and stockpiling to beat the competition will give way to a focus on performance. Outcomes and enhanced productivity will provide a competitive edge.
- Currently, patients are segmented by age, gender and ethnicity. By 2020, genomic/proteomic profiles will facilitate therapy targeted to the individual, a segment of 1.
- Retail care catering to convenience will evolve into contextually aware care that addresses biological, social and cultural differences.
- Preemptive solutions (eg, regenerative medicine, wellness) will play a larger role than palliative solutions (eg, replacement parts, remediation).

## Plan for Patient Types

- The Occasional Patient: Healthy and Engaged
- The Elective Patient: Active, Demanding and Aging
- The Perpetual Patient: Living With Multiple Conditions but Engaged
- The Complex Critical Patient: High Risk for Multiorgan Failure

# Top 10 Takeaways From Health Care 2020

## ■ **Doubling of the 65+ Market Will Reshape Health Care**

Demographics will challenge the nation's health system, as the number of seniors booms. Multiple conditions will complicate clinical presentations of this large group of Americans aged 65 and older.

## ■ **Payment Will Spur Hospital-Physician Alignment**

As Medicare moves to bundled payments for full episodes of care, incentives for disease management and low-cost settings will expand.

## ■ **Organizations Will Reposition to Succeed in 2020**

Dynamic systems of care will emerge to meet patients' needs across the care continuum.

## ■ **Information Technology (IT) Infrastructure Will Define Health Systems**

Virtual connections, not locations, will provide structure. Chief medical information officers (CMIOs) will be key to building data structures that can standardize care.

## ■ **Staffing Shortages Will Require Productivity Gains**

Patient care will be distributed to address soaring volumes. Distribution of providers' care roles will make patient management scalable.

■ **Midlevel Providers Will Offer a Broader Level of Care**

New nursing roles will emerge through broader use of IT and standardized clinical protocols. More granular diagnostics will help spark this care standardization.

■ **Performance Value Will Drive Technology Adoption**

Regulators will require more rigorous cost/benefit analyses. Thus, a technology's impact on the care path will play a larger role in technology choices.

■ **Productivity, Business Model Will Give Competitive Edge**

Competition based on products and services will be de-emphasized in favor of productivity and business models as a way to differentiate organizations. Strategic plans will focus on specific levers within the control of the organization's top executives.

■ **Managing Relationships Will Be Key to Success**

Across industries, successful organizations continuously adapt to change. Senior management will shift priorities to manage a set of relationships.

■ **Adaptable Care Systems Will Serve Varied Patient Types**

Four distinct types of patients will demand tailored care. Integrated systems will link all necessary components to meet patients' needs and expectations.

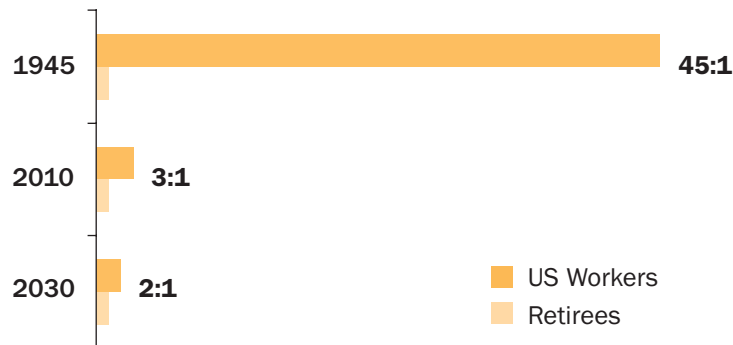
# Doubling of the 65+ Market Will Reshape Health Care

Today's 36 million senior Americans will boom to 72 million by 2030.

## ■ Demographics Will Challenge the Nation's Health System

The sizable population of aging Baby Boomers will combine with the diminishing ratio of workers to retirees to strain Medicare payout potential and health system capacity.

Ratio of US Workers to Retirees



## ■ This Aging Sector Will Behave in Novel Ways

Compared to today, tomorrow's 65+ seniors will be much more likely to continue working, live alone and manage multiple chronic conditions. This dynamic will require a vast support network. In fact, the support ratio, reflecting the number of people needed to support seniors within their communities, will be 11:5 by 2020.

Out of 100 seniors, it is likely that:

- 80 will be overweight or obese
- 84 will have chronic conditions
- 62 will have multiple chronic conditions
- 20 will be depressed
- 35 will live alone
- 50 will need help with activities of daily living
- 25 will have 15 or more health care interactions annually

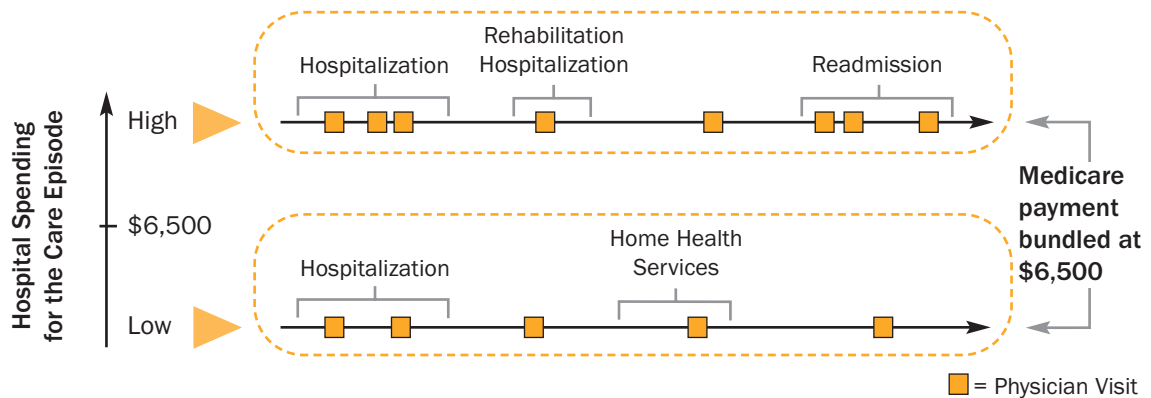
Note: The reference population for these data is the resident population.  
Sources: US Census Bureau, 2001, 2004.

## Payment Will Spur Hospital-Physician Alignment

Budget analysts predict that Medicare reserves will dry up by 2020. Reimbursement will be reduced and radically restructured to address the funding crisis. The onus will be on providers to achieve efficiency across the care continuum. Hospitals closely aligned with physicians will be best positioned to succeed.

### Medicare Will Move to Bundled Payments for Full Episodes of Care

Coordinated care between providers will be rewarded, since the payment will include not just the initial hospitalization but physician visits, post-acute care and readmissions as well. Reimbursement rates may be set based on a hospital-specific payment level or a national average of Medicare spending. Private payers will follow suit.



### New Payment Structure Will Incent Disease Management, Low-Cost Settings

Payers will seek cost savings through refinement of disease management models. They'll also begin to pay for care offered in nontraditional ways (eg, email, virtual consults, retail chronic disease clinics). Payment will be directly tied to performance and outcomes metrics to drive continuous improvement.

#### Payment Approaches by Payer Type

Individuals	Government Payers	Private Payers
<ul style="list-style-type: none"> <li>■ Out-of-pocket payment for retail services: wellness, premium access</li> <li>■ Disease-specific social networking</li> <li>■ Self-directed chronic condition management</li> </ul> <p><b>Payment Goal:</b> Flexibility to buy up for expanded services</p>	<ul style="list-style-type: none"> <li>■ Government-supported preventive, catastrophic care</li> <li>■ Decreased payments for procedures</li> <li>■ Bundled payments for episodes of care</li> <li>■ Monthly fees for condition management</li> <li>■ Increased accountability and collaboration</li> </ul> <p><b>Payment Goal:</b> Improved efficiency, care coordination, outcomes</p>	<ul style="list-style-type: none"> <li>■ Annual health maintenance fees</li> <li>■ Decreased payments for procedures</li> <li>■ Bundled payments for episodes of care</li> <li>■ Monthly condition management fees</li> <li>■ Administration of catastrophic coverage plan</li> </ul> <p><b>Payment Goal:</b> Proven value</p>

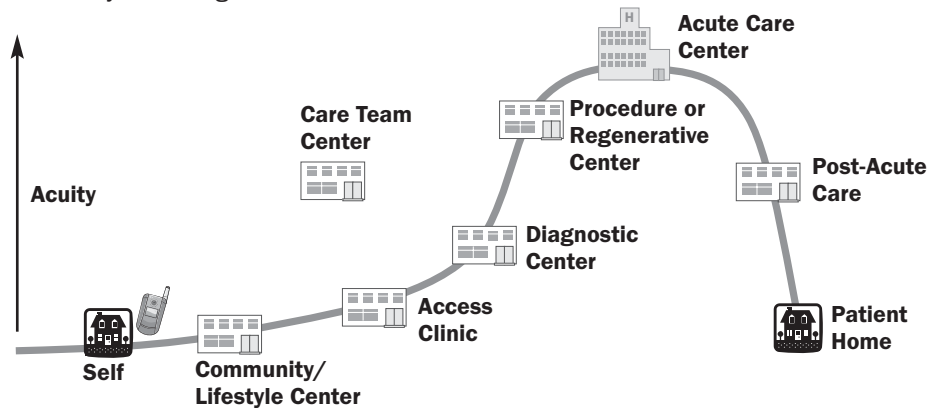
Source: Mutti A and Lisk C. *Moving Toward Bundled Payments Around Hospitalization*. MedPAC: November 8, 2007.

# Organizations Will Reposition to Succeed in 2020

Health care no longer will be organized around discrete, unbundled entities. The dynamic care systems of 2020 will focus on oversight, entry and access. Success will hinge on an organization's ability to leverage intellectual assets across locations.

## Touchpoints Will Meet Patients' Needs Across the Care Continuum

Virtual and team-based care will transform the ways in which patients enter and interact with the health system. Integration of services, information, resources, workforce and facilities will be the glue that holds systems together.



Touchpoint Descriptions

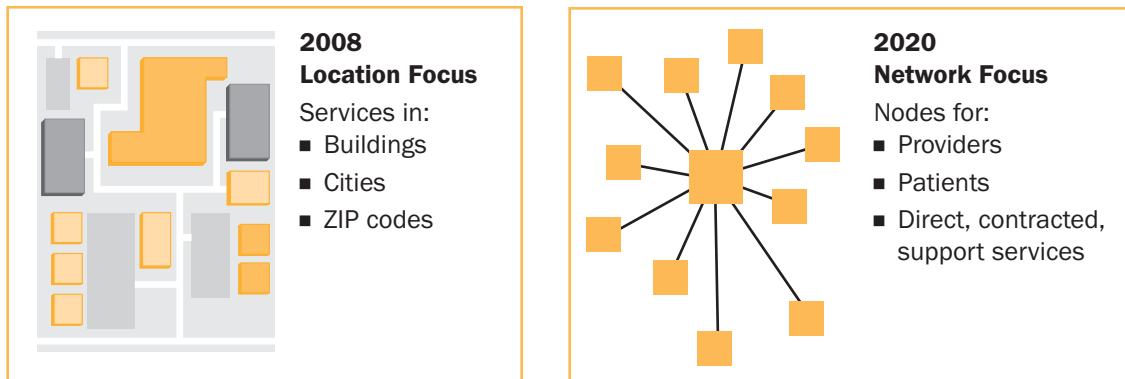
Site of Service	Capabilities	Related Existing Models
<b>Self/Home</b>	Education, prevention, shopping, communication, peer networking, condition monitoring, daily problem solving	Primary care, home care, disease management, assisted living, remote monitoring, email consultations
<b>Community/Lifestyle Center</b>	Education, social networking, problem solving, behavior change	Health clubs, community centers, schools, churches, group visits, online
<b>Access Clinic</b>	Basic treatment, information collection, triage, enrollment	Retail clinics, urgent care, physician offices, emergency departments (EDs)
<b>Diagnostic Center</b>	Advanced diagnostics, remote specialist consultations, specialist referrals, disease monitoring	Imaging centers, outpatient labs, primary care, specialty centers, hospital EDs, freestanding EDs
<b>Care Team Center</b>	Virtual oversight and coordination, care planning, disease management, problem solving, behavior change	Primary care, specialists, disease management
<b>Procedure or Regenerative Center</b>	Standardized, low-acuity procedures; patient coordination and assessments	Ambulatory surgery centers, interventional suites, specialists
<b>Acute Care Center</b>	Critical care, preventing system crashes, handoff coordination, accelerating patient transitions, priority management	Critical care, intensive care units (ICUs), perioperative care, step-down units, telemetry, trauma, emergency care, inpatient nursing units
<b>Post-Acute Care</b>	Recovery, stabilization, rehabilitation, long-term management, handoffs	Post-acute care, long-term care, rehabilitation, skilled nursing, long-term acute care

## IT Infrastructure Will Define Health Systems

IT will support resource distribution, care continuity and caregiver productivity. Ubiquitous access to the health network will provide the backbone for clinical performance and integration.

### Virtual Connections, Not Locations, Will Provide Structure

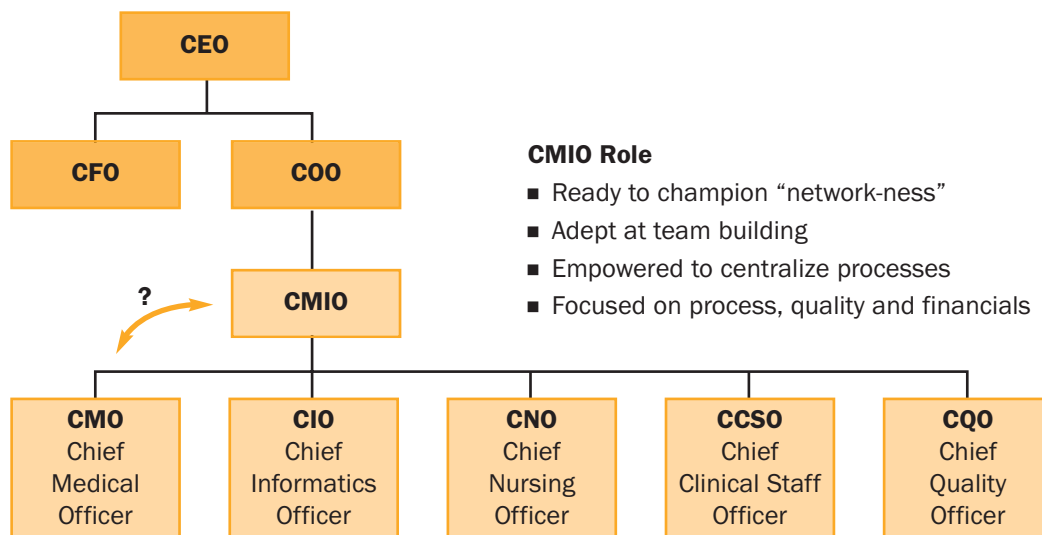
In 2008, the hospital enterprise revolves around the locations of services. By 2020, the enterprise will be more virtual, determined by business models, contracts and support services. Operations and clinical care will be managed via a communications network, and patients will be tied into the system through home-based, wearable monitors.



### Chief Medical Information Officer Will Lead Care Standardization and IT Planning

Differentiation will be based on how organizations leverage data and protocol-driven algorithms to manage care and reduce variability. A clinician with strong IT skills and a systems focus will be needed to help build and promote a data structure that centralizes processes and enhances quality.

#### Skills Required to Manage Systems May Reshape Hierarchies



CEO = chief executive officer; CFO = chief financial officer; COO = chief operating officer.

# Staffing Shortages Will Require Productivity Gains

Learning to do more with less will be critical for success in the health system of 2020. Demand for primary care physicians (PCPs) and nurses will soar, while heightened technology will drive further subspecialization.

## ■ Patient Care Will Be Distributed to Address Soaring Volumes

Fewer physicians will deal with ever-larger patient populations. Heightened use of midlevel providers and sophisticated IT will enable PCPs to double their productivity.


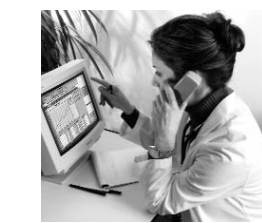


### Physician Panel Growth, 2007–2020



## ■ Defined Provider Roles Will Scale Access to Expertise

Patient self-care, care coordination by midlevel providers with care protocols and streamlined use of clinical experts will combine to make patient management scalable.

### Distribution of Care Roles

 <p>Photodisc/Photodisc Red/Getty Images.</p>	 <p>Printed with permission of Philips Medical Systems.</p>	 <p>Printed with permission of Siemens.</p>	 <p>Digital Vision/Getty Images.</p>
Patient	Medical Home Coordinator (MHC)	MD Oversight	Clinical Expert
<ul style="list-style-type: none"> <li>■ Performs self-testing/monitoring</li> <li>■ Modifies lifestyle</li> <li>■ Undertakes problem solving</li> <li>■ Networks as expert patient tutor</li> </ul>	<ul style="list-style-type: none"> <li>■ Develops patient care plans with oversight</li> <li>■ Receives up-to-date care protocols from experts</li> <li>■ Coordinates care of many patients</li> </ul>	<ul style="list-style-type: none"> <li>■ Consults with MHC</li> <li>■ Consults with experts</li> <li>■ Conducts group visits</li> <li>■ Oversees 8,000 to 10,000 patients</li> <li>■ Troubleshoots difficult cases</li> </ul>	<ul style="list-style-type: none"> <li>■ Develops/revises care protocols</li> <li>■ Communicates care protocols</li> <li>■ Leads education</li> <li>■ Conducts research</li> <li>■ Visits patients virtually</li> </ul>

Source: Commonwealth Fund International Health Policy Survey, 2006.

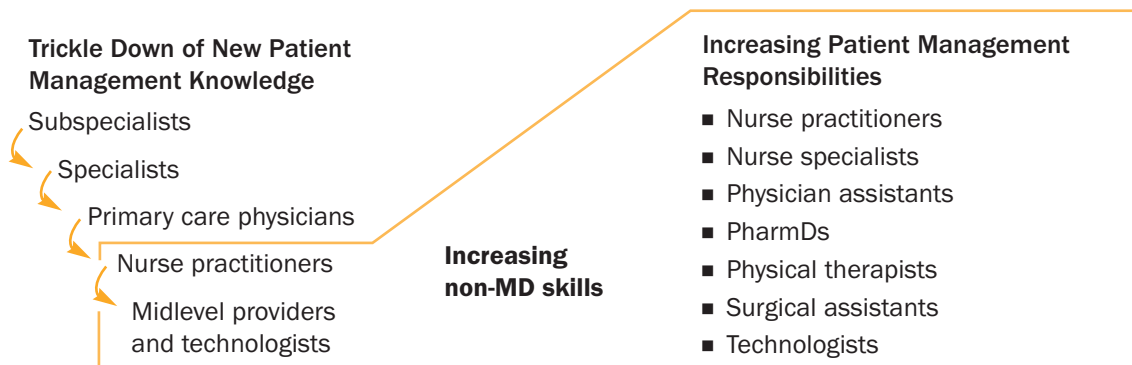
## Midlevel Providers Will Offer a Broader Level of Care

Sophisticated diagnostics, standardized care plans and automation of basic tasks will enable midlevel providers to play a much larger role in patient care. These individuals increasingly will collect essential patient information and provide basic treatments.

### ■ HIT, Standardized Protocols and Financial Pressures Will Drive New Nursing Roles

Clinical experts will be freed from many direct patient care duties to focus on developing evidence-based clinical protocols. These protocols will prove to be essential tools for the midlevel providers who routinely establish care plans and for physicians who provide oversight and patient consults.

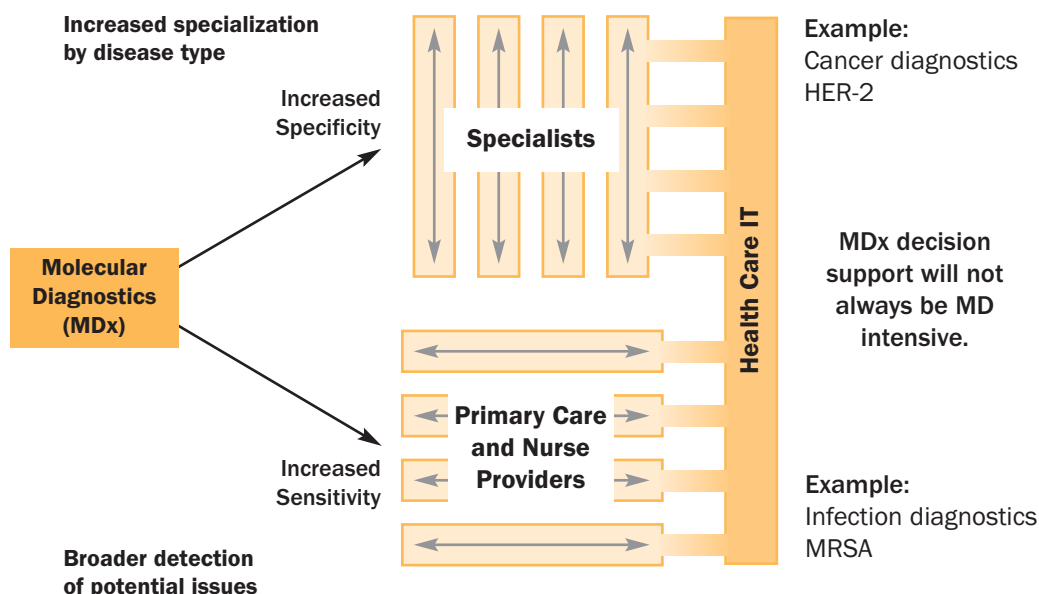
#### Diffusion of Clinical Knowledge



### ■ More Granular Diagnostics Will Underlie Care Standardization

Hundreds of new diagnostic tests will be available to formulate risk profiles, detect and stage disease, predict treatment effects and monitor for disease recurrence or progression.

#### Role of Molecular Diagnostics



MRSA = methicillin-resistant *Staphylococcus aureus*; HIT = health information technology; HER-2 = human epidermal growth factor receptor-2.

# Performance Value Will Drive Technology Adoption

The technology wars are over, and performance is the new battlefield. Spiraling costs, technology recalls and conditional coverage will demand rigorous reviews before any capital expenditure for new technology.

## ■ Regulators Will Require More Rigorous Cost/Benefit Analyses

The Centers for Medicare & Medicaid Services, the US Food and Drug Administration, the Department of Health and Human Services and the National Institutes of Health will cooperate more closely on technology validation, marketing and reimbursement. Comparative effectiveness, not just safety and efficacy, will become the standard benchmark for technology use.

### Policy Concerns

- Inconsistent and variable utilization
- Questionable efficacy and value
- Inappropriate use
- Significant impact on Medicare spending
- Major driver of health care as % of GDP



### Potential Solutions

- Demand evidence of effective care.
- Control variability.
- Control excess cost growth.
- Shift motivations for utilization.

## ■ Technology Choices Will Take Into Account Impact on the Care Path

Technologic advances, according to the Congressional Budget Office, accounted for approximately half the increase in health spending in recent decades. By 2020, consumer demand and a technocentric competitive strategy no longer will be enough to justify technology spending. Organizations instead will have to focus on the extent to which a technology can improve performance.

- Which option is the most cost-effective approach to improving clinical outcomes across the entire health care system?
- Does the technology accelerate the patient's journey along the care pathway?
- Are unnecessary branches in the care path eliminated by better decision making?
- Does the technology make lighter work for fewer hands?

GDP = gross domestic product.

Sources: *Technological Change and the Growth of Health Care Spending*. Congressional Budget Office Pub 2764: January 13, 2008; *Estimates of Medical Device Spending in the United States*. AdvaMed: February 13, 2008.

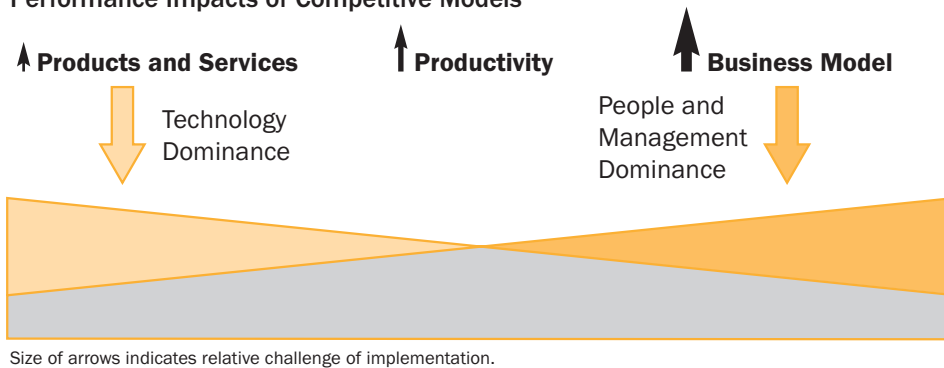
# Productivity, Business Model Will Give Competitive Edge

A talent for reinvention will be a key factor that differentiates successful health care enterprises of the future.

## Three Approaches Exist to Compete, Differentiate in the Health Care Marketplace

- **Products and Services:** Most common today; revolves largely around technology acquisition. Key challenge: Everyone can buy what you have.
- **Productivity:** Focuses on margin management, IT adoption and streamlined patient management. Key challenge: Significant culture change is required to leverage IT.
- **Business Model:** Relies on management strategy and people. Key challenge: Due to the high level of management expertise required, people with the necessary capabilities may have to be recruited from beyond your immediate marketplace.

### Performance Impacts of Competitive Models



## Manipulate Key Levers to Make Progress Toward 2020

The decisions health care executives make today will impact their organizations' future competitiveness. Yesterday's planning tools should be replaced by strategic plans that focus on specific, controllable levers.

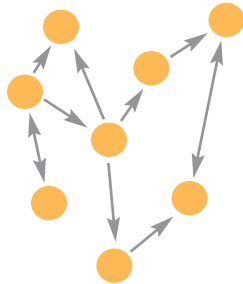
Levers	Description
<b>Operational Footprint</b>	<ul style="list-style-type: none"> <li>■ Sites of service, the service capabilities at those locations and how they link to other sites</li> </ul>
<b>Relationships</b>	<ul style="list-style-type: none"> <li>■ Alignment of physicians and nurses</li> <li>■ Role and training of extenders</li> <li>■ Strategic partnerships in place to fill gaps</li> </ul>
<b>Talent</b>	<ul style="list-style-type: none"> <li>■ New skill sets critical for building care systems</li> <li>■ Processes in place for recruiting, training and retaining individuals with those skill sets</li> </ul>
<b>Experience</b>	<ul style="list-style-type: none"> <li>■ Design of the patient's experience around selecting and receiving care</li> </ul>
<b>Information</b>	<ul style="list-style-type: none"> <li>■ Information flow across sites of care</li> <li>■ Rules and context required to maintain organizational standards</li> </ul>
<b>Resource Utilization</b>	<ul style="list-style-type: none"> <li>■ Resource allocation for sites of care based on their upstream and downstream system benefits</li> </ul>

# Managing Relationships Will Be Key to Success

Complex adaptive systems will be well positioned for 2020. The ability to manage a set of relationships, vs managing a factory, will be the core competency for success.

## ■ Across Industries, Successful Organizations Continuously Adapt to Change

Organizational structure and management style must be easily adaptable to shifting demand. Enterprises locked into rigid structures are doomed to fail.



### Complex

- Nonlinear relationships
- Emergent properties



### Adaptive

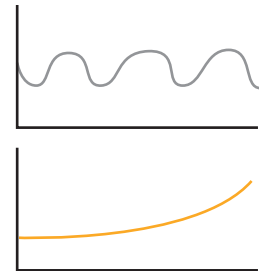
- Coevolves over time
- Survival of the fit



### Social

- Conditional cooperators and altruistic punisher
- Live in language

Ryan McVay/Photodisc/Getty Images.



### System

- Many semi-autonomous agents interacting

## ■ Hands-on Leadership Won't Work in Dispersed Health Networks

Walking the floors must give way to high-level steerage of complex systems. Use of analytics and real-time information will replace senior management intervention at the level where an issue first manifests.

Senior leadership time should be focused on:

- Radically optimizing profit centers
- Supporting the enterprise economically for future growth
- Managing relationships with multiple stakeholders across settings
- Defining a broad, coherent vision for health care in the community
- Challenging traditional hierarchies
- Accelerating information
- Creating a culture that enables independent and collaborative decision making
- Developing the talent of key individuals
- Clarifying accountability

# Adaptable Care Systems Will Serve Varied Patient Types

Future integrated systems will customize care to address specific patient needs.

## ■ Four Distinct Patient Types Will Demand Tailored Care

Patients differ in how they approach, select and pay for care. Organizations must position themselves to offer the right products, services and access points to meet their varied demands.

### Patient Types



@iStockphoto.com/Lisa F Young

**Occasional  
Patient**



Digital Vision/Getty Images.

**Elective  
Patient**



Photodisc/Photodisc Red/Getty Images.

**Perpetual  
Patient**



@iStockphoto.com/Gertjan Hooijer.

**Complex Critical  
Patient**

## ■ Integrated Systems Will Link All Necessary Components

Organizing care delivery based on patients' needs and expectations will increase the system's value. Components of care play varied roles for different patient types. Care systems should reflect these differences.

Systems must be designed to:

- Equip patients to provide some of their own care
- Preempt conditions with early intervention
- Bring patients into the system when necessary
- Manage patient information
- Help patients navigate care
- Devise mechanisms to escalate patients to higher-level care as necessary
- Monitor performance across multiple sites and longer periods of time

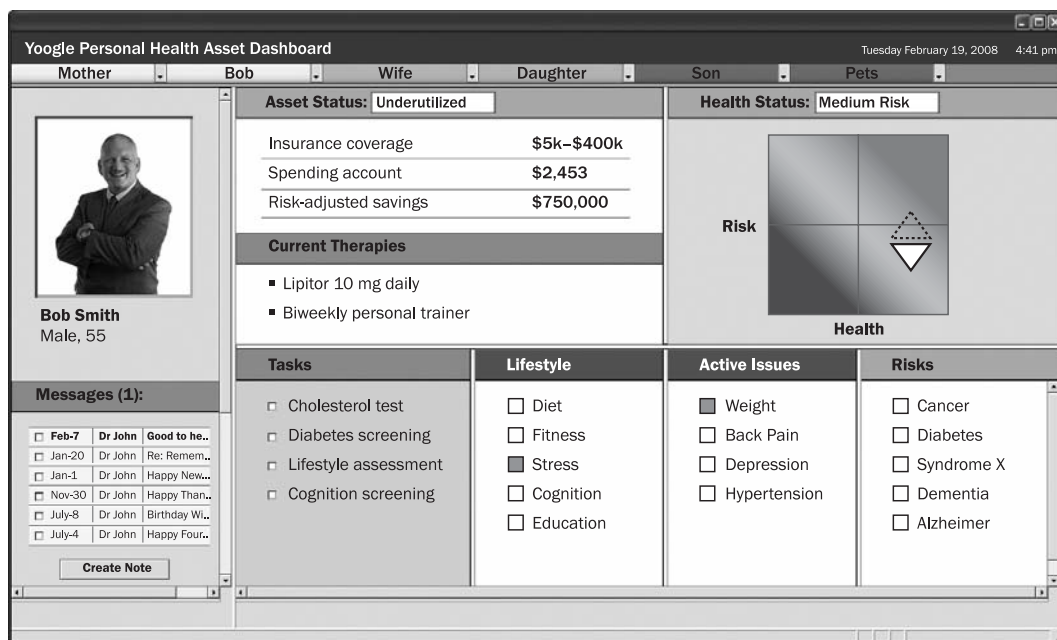
## Meet Bob, the Occasional Patient

### ■ Portrait of the Occasional Patient: Healthy and Engaged

These patients don't seek regular care, but they are engaged in managing minor issues. Their focus is on fitness/wellness, risk assessments, reducing long-term cost and minimizing degeneration. Providers will be challenged to foster relationship models based on unscheduled transactions.

The typical demographic:

- Three to four stable conditions
- Working, families, pediatrics
- Clinical priorities: screening/prevention, infectious disease, orthopedics, new medical management (ie, obesity, cognitive neurology)



©iStockphoto.com/Lisa F Young.

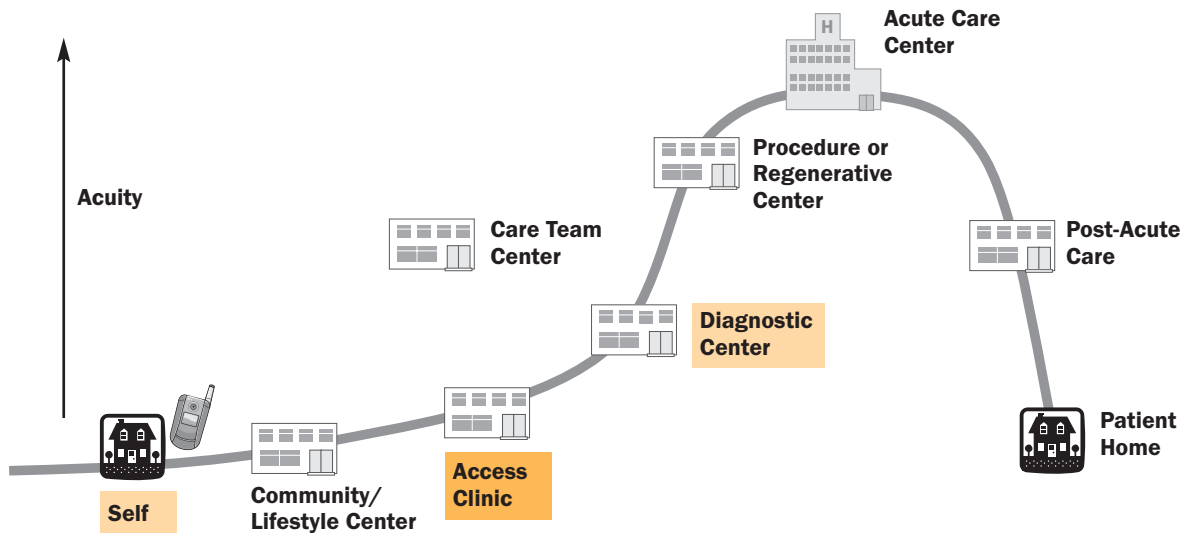
### ■ Competition for the Occasional Patient: Value, Engagement and Convenience

Look beyond traditional health care competitors for new models of competition:

- Access points: Can you compete with Walgreens on speed, real estate and cost?
- Coordination: Do your providers offer on-demand expertise faster than Dell's customer service representatives?
- Value: Do your experts provide better analysis, risk assessments and advice than Morningstar?
- Loyalty: Do you have return business that is as reliable as on-demand movies?

## Occasional Patient

# Multiple Entry Points Funnel, Diagnose and Treat



## Occasional Care Will Link Patients to the Broader Delivery System

**Care Delivery:** Current transactional care will shift toward relationship models for prevention, screening and wellness.

- Access centers will provide basic treatments, advanced information collection and oversight, when necessary, for diagnostics or care teams. Oversight will be a goal at every touchpoint.
- Diagnostic centers will offer advanced imaging and technology with immediate access to a network of diagnosticians and specialists.

**Technology:** Advanced, low-cost diagnostics will flag potential patient risks.

- Clinical guidelines and advanced algorithms will notify on-site providers when to advance patients through the care continuum.
- Online information exchange will be critical to reduce transaction costs and support customized patient interactions.

**Workforce:** The first contact point will not be a physician.

- Midlevel providers will operate clinics with standardized protocols and remote oversight.
- PCPs will remotely manage access clinics or become diagnosticians who receive e-referrals and assess patients remotely.

**Payment:** Access centers will derive revenue through out-of-pocket payments, downstream opportunities and retail sales.

- Payment for fitness and wellness assessments and other nontraditional health services will supplement low-margin basic treatments.
- Out-of-pocket payment will support value shopping strategies, such as discounts for expanded service options.

# Meet Mary, the Elective Patient

## Portrait of the Elective Patient: Active, Demanding and Aging

Fierce competition will exist for these patients. High activity levels coupled with equally high outcomes expectations will generate multiple interventions.

The typical demographic:

- Aged 45 to 64
- Willing to pay out of pocket for increased service, choice and amenities
- Clinical priorities: Preservation of mechanical, cognitive and cardiovascular functions and physical appearance
- Prime candidates for regenerative medicine

**Orthopedics Institute** Wednesday March 12, 2008 13:45 pm

**Patient:** Kim, Mary **Sex:** F **Age:** 45 **Weight:** 54 kg/120 lbs  
**Active Issues:** Osteoarthritis, Knee **Severity:** 2.1

Treatment Options	Medications	Patient Goals
<input type="checkbox"/> Imaging and assessments <input type="checkbox"/> Rehab <input type="checkbox"/> Regeneration <input type="checkbox"/> Replacement	<input type="checkbox"/> Zelinguilgain   20 mg   daily <input type="checkbox"/> Uilgain   10 mg   2x daily <input type="checkbox"/> Uilgainswor   20 mg   weekly	Tennis, competitive   0.4 Running, casual   3.2 Travel, business   4.1

**Staff**

**Physician Information**  
 Medical: Dr Steve  
 Surgical: Dr John

**Care Team**  
 Manager: Moss, RN  
 Primary: Dr Ted

**History**

Pain: [Progress bar]  
 ROM: [Progress bar]  
 Activity: [Progress bar]

**Timeline:** Sept, Nov, Jan, Mar, May, July, Sept, Nov, Jan, Mar

**Assessment:** Stem cell injection, Assessment, rehabilitation, Stem cell injection, Assessment, rehabilitation

**Patient Scoring**  
 Pain: 0.4  
 ROM: 3.2  
 Activity: 4.1

**Care Schedule**

Mar-1	Rehab
Mar-14	Injection
Apr-5	Radiology
Apr-9	Assessment
Apr-14	Rehab

Digital Vision/Getty Images.

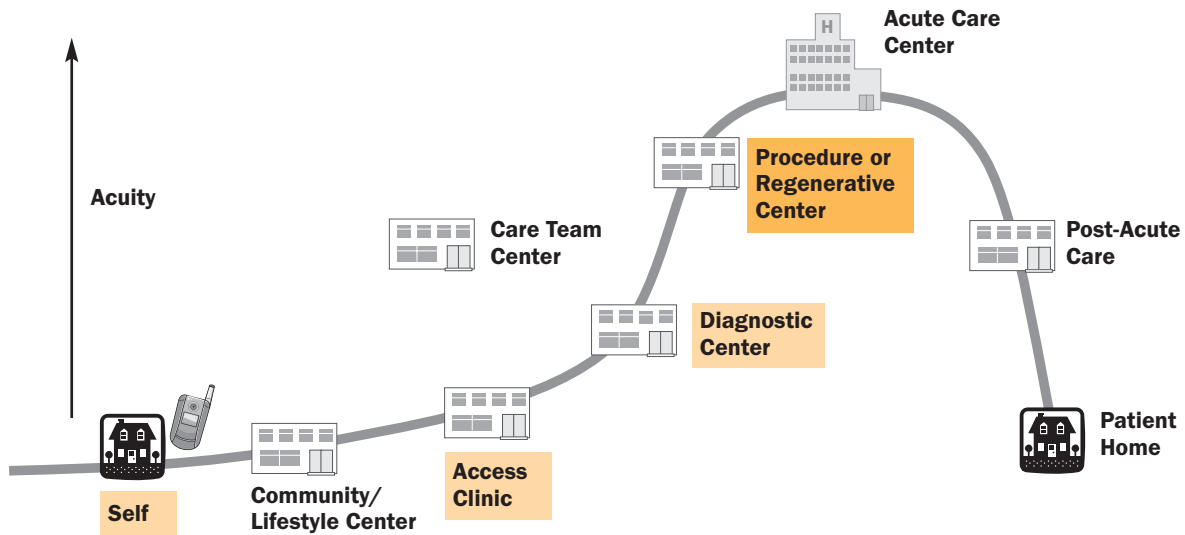
## Competition for the Elective Patient: Differentiation, Value and Outcomes

Look beyond traditional health care competitors for new models of competition:

- Can you build and leverage brand to drive consumer choice like Disney and Oprah?
- Can you move market share like Apple?
- Can you segment patients for levels of service like Citigroup?
- Can you drive voluntary consumer choice as well as National Public Radio?

## Elective Patient

# Less Complex Care Shifts Providers and Sites



## ■ Retail, Relationship Model of Care Will Generate Ongoing Treatment Cycles

**Care Delivery:** Ongoing relationships will spur early intervention to minimize disease progression.

- Care will originate in access and diagnostic centers, with links to centers offering regenerative procedures.
- Lines between intervention and rehabilitation will be blurred.
- Ability to capture the full care continuum will be critical.

**Technology:** Clinical advances and ongoing patient monitoring will expand regenerative options.

- Patient-reported outcomes will supplement medical records to monitor therapies and personalize treatment selection.
- Smart materials, where the complexity is built into the materials, will shift the focus of care from technique to technology (eg, made-to-order tissues, complex stem cell therapies, electrical implants).

**Workforce:** Primary patient contact will change from surgeons to global coordinators.

- Decreased care complexity will push treatment down to lower-level providers, toward proceduralists and away from specialists.
- Nurse liaisons will be critical in moving patients through different access points for each care cycle; this role may ultimately be automated.

**Payment:** Elective patients will remain key revenue sources, but payment will shift from one-time diagnostics and procedures to ongoing therapies and performance monitoring.

- Tighter margins will drive relationship models that rely on patient-defined outcomes for ongoing business.
- Out-of-pocket payments will support premium services for certain patient demographics.

# Meet Juan, the Perpetual Patient

## Profile of the Perpetual Patient: Living With Multiple Conditions but Engaged

At least two-thirds of these high-cost patients will actively participate in their care.

The typical demographic:

- Working or retired
- Any age
- Chronic conditions
- Clinical focus: complications of aging, obesity, diabetes; psychiatric conditions; asthma; chronic infectious disease



Photodisc/Photodisc Red/Getty Images.

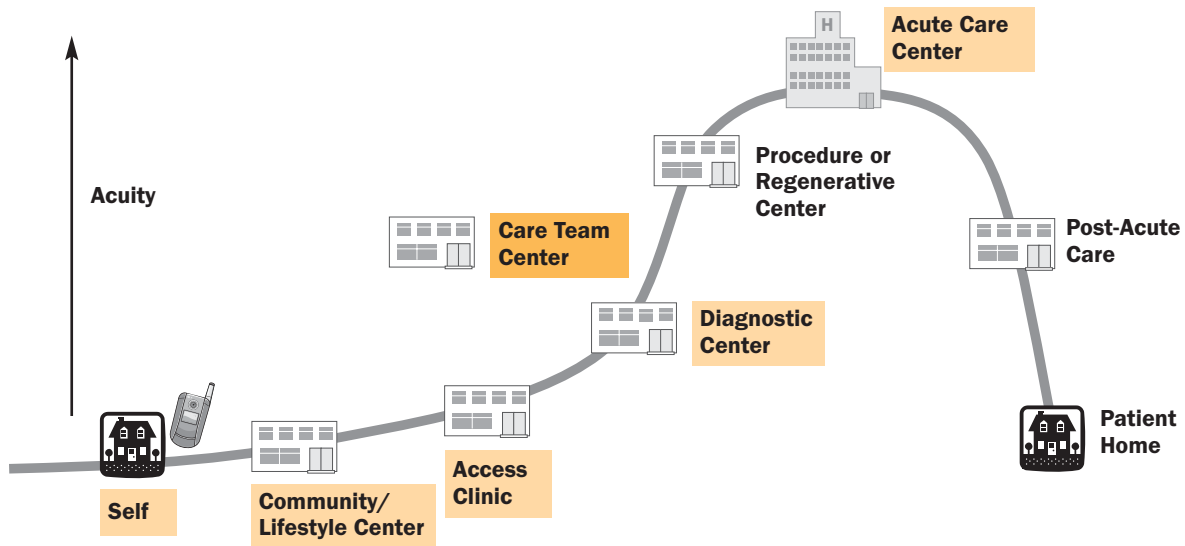
## Competition for the Perpetual Patient: Engagement, Scaling and Outcomes

Look beyond traditional health care competitors for new models of competition:

- Scale: Can you scale patient intimacy like Amazon.com? Can you support high-volume, standards-based customization like IKEA?
- Behavior change: Do your providers motivate healthy behavior and problem solving as well as Alcoholics Anonymous or Weight Watchers?
- Distributed expertise: Do your providers support patient self-direction and engagement as well as The Home Depot? Do your services enable self-directed analysis as well as TurboTax?

## Perpetual Patient

## Interactions Will Be Scaled for Access to Expertise



### Virtual and Scalable Access to Expertise Will Support Large Patient Populations

**Care Delivery:** Frequent touchpoints will be managed through virtual interactions, community support and medical home coordinators.

- Physicians and specialists will be responsible for designing and overseeing care, not providing basic checkups.
- Patients' involvement in the design and delivery of their own care will limit demands on expert resources by leveraging protocols, generic care plans, social support and other patients.

**Technology:** Real-time pervasive data collection will support early interventions.

- Condition monitoring will be automated as data volumes increase exponentially. Physicians and specialists will design and manage algorithms for monitoring and guiding care.
- Electronic communications with patients and between providers will be standard practice.
- Online patient social networks around shared conditions will become central components of education, problem solving and behavior change.

**Workforce:** An emphasis on care coordination will enable a limited number of clinical specialists to treat the booming population of patients with chronic conditions.

- Use of midlevel providers will soar. They'll serve as care coordinators, helping large numbers of patients devise care plans.
- Through group visits and occasional one-on-one conversations, physicians will provide oversight to a panel of patients that could top 10,000. They'll troubleshoot difficult cases.
- Remote clinical experts will provide regularly updated care protocols, focus on outcomes research and interact with each other, rarely seeing patients. Occasionally, they'll provide virtual or in-person visits for a premium.

**Payment:** Chronic condition management will be the largest segment of health care spending.

- Bundled payment for global patient management and specific chronic conditions will enable distributed care models.
- Preventive care and disease management will accelerate as incentives are realigned.

# Meet Calvin, the Complex Critical Patient

## Portrait of the Complex Critical Patient: High Risk for Multiorgan Failure

These patients will be medically complex, with extensive comorbidities and laundry lists of prescriptions to manage.

The typical demographic:

- Elderly
- Long-time chronic disease/cancer
- Hospitalization required for acute episode
- Average diagnoses >8
- Medication list >15



©iStockphoto.com/Gertjan Hooijer.

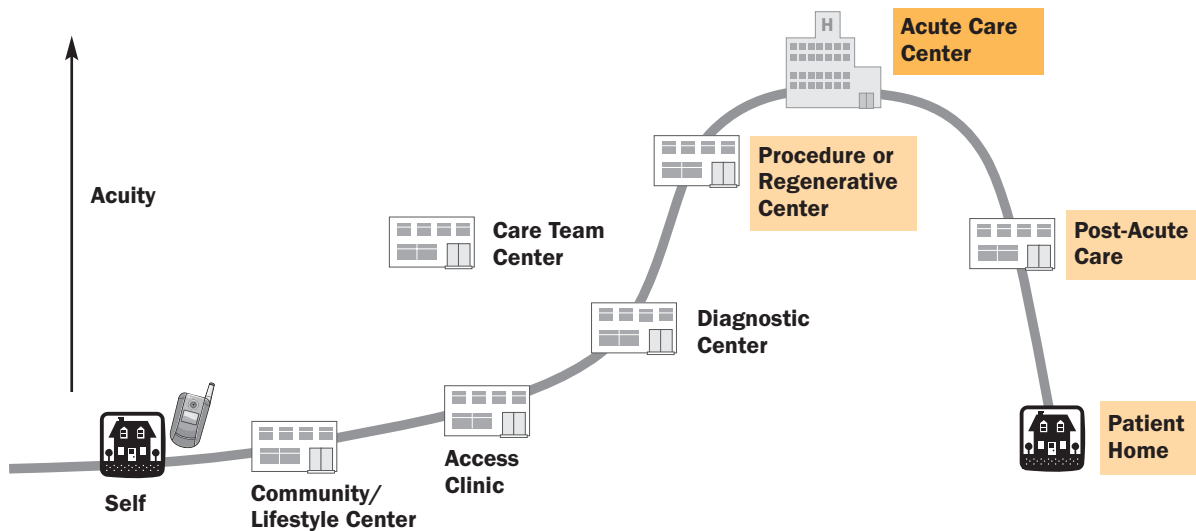
## Competition for the Critical Patient: Handoffs and Managing Care Intensity

Look beyond traditional health care competitors for new models of competition:

- Preemption: Can you preempt “system crashes” like a nuclear power plant?
- Quality: Does your staff take as much pride in meeting and exceeding metrics as the employees at Southwest Airlines?
- Scale: Can your system manage outsourced design and production better than Boeing?

## Complex Critical Patient

# Multiple Patient Locations Will Be Centrally Managed



## ■ New Critical Care Approach Will Reduce Length of Stay in Expensive Settings

**Care Delivery:** Only select hospitals will remain in the critical care business as patient acuity rises and regional tiered settings evolve.

- Individual critical care units will give way to a continuum of care characterized by effective handoffs and remote oversight for care delivery, resource management and patient flow.
- Virtual response teams will replace today's in-house rapid response teams to ensure early intervention.

**Technology:** Pervasive data will support coordinated responses to rapidly changing patient conditions.

- Information systems will catch deteriorating conditions early, while managing caregiver notification based on priorities. Predictive utilization modeling will optimize resource distribution.

**Workforce:** Dynamic care teams will manage priority patients based on standardized procedures.

- Scarce intensivists and other specialists will monitor broad patient populations through remote command centers. On-site care coordinators will provide the link to these remote specialists.
- Nurses and midlevel providers will focus on either procedural or cognitive tasks. Procedural tasks will be on-site and scheduled, while cognitive tasks will be based on priority and cover a larger number of patients.
- Dedicated staff will manage care transitions, clinical resources and performance at an enterprise-wide level.

**Payment:** Universal catastrophic coverage will reduce uncompensated care.

- Bundled payment will extend responsibility beyond the walls of the ICU to prevent readmissions.

## Capitalize on the Opportunities of Distinct Patient Types

By 2020, health systems will deliver value by managing care systems for patients with specific conditions. Building an organization that can succeed with this approach demands innovative thinking about services, productivity and management models.

	Occasional Patient	Elective Patient
<b>Products and Services</b>	<ul style="list-style-type: none"> <li>■ Retail access to high-touch and support options</li> <li>■ Immediate access to lifestyle maintenance, distributed basic care and diagnostic expertise</li> <li>■ State-of-the-art imaging and molecular diagnostics</li> </ul>	<ul style="list-style-type: none"> <li>■ Perpetual rehabilitation services</li> <li>■ Regenerative and quality-of-life therapies</li> <li>■ Preventive and preemptive interventions</li> <li>■ Retail lifestyle management services</li> </ul>
<b>Productivity</b>	<ul style="list-style-type: none"> <li>■ Automated information capture, oversight and decision support</li> <li>■ Expert-supported staffing and physician teleconferencing</li> <li>■ High-throughput retail delivery models</li> <li>■ Scheduling, enrollment, follow-up algorithms</li> </ul>	<ul style="list-style-type: none"> <li>■ Rule-driven algorithms for risk assessment, diagnosis, intervention and follow-up</li> <li>■ Accounting system for bundled payment incentive</li> <li>■ Midlevel providers in liaison and access roles</li> </ul>
<b>Business Model</b>	<ul style="list-style-type: none"> <li>■ Value based on 24/7 access, consistency, information capture and diagnostic integration</li> <li>■ High-touch commodity services with low transaction cost</li> <li>■ Patient-selected, patient-funded, add-on services</li> </ul>	<ul style="list-style-type: none"> <li>■ Market segmentation: Preemptive and post-emptive care for at-risk patients</li> <li>■ Customized services: Patient-type-sensitive combined treatment, rehab model</li> <li>■ Adjunct products: Retail quality-of-life procedures and services</li> <li>■ Integrated solutions: Branded hub-and-spoke regenerative therapy model</li> <li>■ Performance indicators: Patient-driven metrics</li> </ul>

	Perpetual Patient	Complex Critical Patient
	<ul style="list-style-type: none"> <li>■ Superspecialized expert condition care</li> <li>■ High-touch virtual visits</li> <li>■ Retail access options</li> <li>■ Invisible monitoring technologies</li> <li>■ Patient participation/direction</li> </ul>	<ul style="list-style-type: none"> <li>■ Patient escalation, stabilization, transition flow</li> <li>■ End-of-life/quality-of-life care and counseling</li> <li>■ Mobile critical care technologies</li> </ul>
	<ul style="list-style-type: none"> <li>■ Hyper-productivity care teams</li> <li>■ Virtual, algorithm-driven expert deployment</li> <li>■ 24/7 surveillance care delivery models</li> <li>■ Internal incentive model</li> </ul>	<ul style="list-style-type: none"> <li>■ Data-driven, multidisciplinary root cause analyses and leading practice development</li> <li>■ Real-time monitoring and clinical decision analysis for smart prompts to providers</li> <li>■ Analysis of actual to predicted resource utilization to reduce variance</li> <li>■ New skill mix of care teams for planned technical vs cognitive work</li> <li>■ Patient-sensitive, data-sensitive transition algorithms</li> </ul>
	<ul style="list-style-type: none"> <li>■ Coordination, prediction, prevention and preemption</li> <li>■ Lifestyle engagement and patient simplicity</li> <li>■ Lowest possible transaction and interaction costs</li> <li>■ Branded expertise franchise or partnerships—protocols and people</li> </ul>	<ul style="list-style-type: none"> <li>■ Value based on minimizing use of the most expensive health system resources and easing transitions to and from multiple settings</li> <li>■ Deployment and management of care resources and people to minimize disruptions in value chain</li> <li>■ Rapid decision making based on sensitive information technologies and human experts</li> <li>■ Regional resource manager/facilitator of multiple parts of care system</li> </ul>

## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



Sg2 is an international, future-focused health care intelligence company. We provide expert-led resources, tools and education to enhance performance, drive growth and maximize clinical effectiveness.

5250 Old Orchard Road  
Skokie, Illinois 60077

+1 866 681 3343

**[www.sg2.com](http://www.sg2.com)**

Chicago London

0508-EDG-252

