Patient Centricity and the Changing Landscape of Healthcare

Andrea Cotter
Director Healthcare Marketing
IBM Corporation
Patient Centricity and the Changing Landscape of Healthcare

Andrea Cotter
Director Healthcare Marketing, IBM Corporation
Agenda

• Introduction

• Call to Action

• Important Success Factors

• Top Innovators
Be prepared for **change**.

Rapidly changing environments drive a need for innovation.
Business flexibility and responsiveness enables innovation

*People, process and information are entry points*

- Collaborate inside & outside the organization
- Use information for business insight
- Create innovative business models & processes
Healthcare can be a national asset yet its stakeholders are challenged on many fronts

• Globally the healthcare landscape has changed. Employers, health plans, providers, and pharmaceutical companies are part of a newly defined ecosystem.

• The delivery of patient-centric healthcare and the competitiveness of nations depends on the transformation that is occurring now.

• Successful healthcare systems and organizations are turning to innovation and collaboration.

Will nations and their healthcare systems be ready?
Five drivers currently impacting healthcare systems of the world

- Globalization
- Consumerism
- Aging Population
- Diseases that are More Expensive to Treat
- New Medical Technologies and Treatments
These drivers make it increasingly difficult to sustain healthcare as a national asset

| • High, rapidly rising costs |
| • No link between higher costs and quality or safety |
| • Access issues |

Although choice exists, value is clearly desirable

A Call to Action

Countries that successfully transform their healthcare systems will witness three changes and achieve a Win-Win

We are seeing transformation occur in three segments in the movement towards Patient Centricity.

**Integrated** (Inter-Enterprise Optimized)

**Shared** (Intra-Enterprise Optimized)

**Independent** (Process Optimized)

**Patient-Centric Networks**

**Health & Wellness Management**

**Clinical & Business Process Optimization**

**Point Product Solutions**

**Infrastructure Solutions**

**Business Solutions**

Sources: GMV 2H05, IBM MI Estimates, IBM SCIP Analysis; Totals include Life Sciences Transformation opportunity
Important Success Factors
Important Success Factors

The IBM *Global CEO Study 2006* identified three key themes for outperformers across all industries around the world:

- Innovation of business models is the new reality
- Collaboration across boundaries is desired and necessary
- Leadership from the top orchestrates innovation

*Let’s now explore what these three themes mean to healthcare stakeholders and the sustainability of the industry*

Innovation is important for the impending transformation of the healthcare industry

- Healthcare executives expect significant industry change
- Executives must deliberately consider how they will create and implement innovative programs and strategies

Further integration of business and technology will help enhance efficiencies and increase consumer satisfaction

- CEO’s identified a gap in the desired level of business and technology integration
- IT implementation has to be well thought out and integrated with business drivers to be effective

Wider collaboration and business model innovations are key to realizing the benefits of market changes and new efforts.

Sources of New Ideas and Innovation

- There is an opportunity for more collaboration with deeper integration and with a wider variety of partners.
- Business model innovation can be instrumental in addressing strategic areas and in realizing the untapped potential of the healthcare industry.

A culture of innovation supported by incentives and recognition is desirable to boost organizational capabilities

Outperformers Acknowledge and Reward Individual Innovation More Often

- CEO’s expect that challenges related to people skills will be the most daunting
- Measuring and rewarding contributions are critical to encouraging innovation and retaining talent

IBM’s Top Innovators in Healthcare and Life Sciences
Role of IBM with our Clients and Partners in Patient-Centric Healthcare

• Deliver innovative solutions
  - Leadership in technology and clinical integration
  - Improved access to information and optimized workflows
  - Influential application provider relationships

• Drive adoption
  - Cultivate the global ecosystem
  - Form relationships with a critical mass of collaborators
  - Encourage the development of value nets
  - Lead in open standards

• Set an example as a best practices employer
  - Effectively manage IBM’s Global Health and Wellness programs
  - Lead in motivating the use of EHR and PHR
  - Serve as a Health System advisor
Karolinska Institute established a groundbreaking data facility to unlock the causes of disease

The Challenge

*Challenge*: As we age, how much of disease is due to your genetics, and how much due to your lifestyle? To explore that pivotal question, the Karolinska Institute needed a way to collect thousands of biological samples, lifestyle data and medical histories to create vast databases of research information.

The Solution

• In 2004, Karolinska Institute launched Sweden’s first IT-enabled Biobank.
• Using the IBM Healthcare and Life Sciences Clinical Genomics Solution, researchers in the fields of molecular genetics and epidemiology are now able to examine human tissue samples, along with genetic and environmental data, to uncover the underlying mechanisms of complex diseases.
• With the biobank’s modern database structure, the origin of each sample and the associated information will be easily traceable.

The Benefits

• Captures data that will be of immense value to both today’s research scientists and generations to come
• Gives researchers more sophisticated tools to find causes, develop diagnostic tools and discover cures for diseases
• Facilitates a new level of collaboration which could lead to the development of more targeted, timely cures for complex diseases
Servicio Extremeno de Salud (SES) make major strides in patient care when it integrates all healthcare information management services and systems

The Challenge

- Servicio Extremeno de Salud (SES) is the public healthcare service for the regional Ministry of Health (Consejeria de Salud) in Spain. SES operates all of the region’s hospitals, medical care centers and associated central administration.
- Each hospital in the regional healthcare system had its own IT solutions, and only a few medical care centers received any application support.
- Each facility had its own patient records system, and the data was not accessible regionally.
- **Challenge**: Integrate both patient-related and administrative processes to serve patients better.

The Solution

- SES selected IBM to design and deploy an SAP R/3 based integrated healthcare information management system that supports and manages all business processes at SES, including patient-related records management and administrative processes.
- This Linux-based solution leverages a single integrated data repository that stores medical and administrative data in a central location, making it available region-wide.

The Benefits

- Working with IBM Business Consulting Services, SES has unified the various levels of the healthcare system, making it more flexible, agile and integrated.
  - Improves the ability of doctors, nurses and other healthcare professionals to provide the best service to their patients because up-to-date patient information is available throughout the region to all hospitals, medical care centers and administrative offices.
  - Automates and streamlines business processes, saving huge amounts of paper and other media.
  - Improves administrative efficiency and efficacy, significantly reducing the amount of bureaucracy involved in operating the regional healthcare system.

"We were comfortable that IBM had the technical and consulting resources needed to make our new environment a success, and the IBM technology was also superior.”
-- Dr. Juan Pablo Alejo, CIO for Servicio Extremeno de Salud
University Hospital of Heidelberg at the forefront of the telemedicine revolution

The Challenge

• In a groundbreaking pilot study, the University of Heidelberg wanted to explore the value of telemedicine solutions.
• Challenge: Finding the right combination of easily accessible, secure technologies to make it happen.

The Solution

• The University of Heidelberg worked with IBM to develop a telemedicine solution leveraging leading wireless technology.
• This solution provides children and adolescent dialysis patients with the means to measure their weight and blood pressure at home.
• Bluetooth technology wirelessly transfers data accurately and securely from the patients’ scales and blood pressure cuff to a Web-enabled portal, where medical personnel can evaluate the values and adjust dialysis and drug treatment on a day-to-day basis.

The Benefits

• Increases quality of life for patients
• Allows state-of-the-art treatment for patients regardless of patient or doctor location
• Reduces costs for patients who do not have to travel to doctors’ offices
• Ensures the most reliable, precise care possible, eliminating detrimental long-term side effects that can result from improper dialysis settings or medication amounts

The convergence of medicine and consumer electronics is leading to new telemedicine solutions with the potential to drastically change the lives of chronically ill patients.
The National E-health portal of Denmark is taking Danish healthcare to the Patient-Centric-Era

The Challenge

• A secure e-health network, connecting all hospitals and GP’s, had been implemented in Denmark and the Government wanted to take this to the next level.
• This was also an opportunity to look at information and integration issues in healthcare and plan a portal to deal with these issues.
• Challenge: create a comprehensive and secure portal, which provide information and services to all citizens and healthcare professionals in Denmark.

The Solution

• The Danish E-health portal, sundhed.dk, a clinical portal solution with healthcare specific information to citizens and healthcare professionals.
• Secure infrastructure which enable sharing of sensitive data.
• Integration of local hospital portals and datasources – both at national level and at hospital level.
• Country wide access to booking, e-consultation, medicine information, EHR, disease management and other services.

The Benefits

• Sundhed.dk provide healthcare professionals with updated information which help them reduce errors and improve quality.
• Sundhed.dk enable sharing of EHR and medicine information between all healthcare professionals.
• Sundhed.dk inform and encourage patients to be more involved in own well-being and treatment.
• Sundhed.dk reduce errors, increase quality of care and efficiency of the healthcare system.

Sundhed.dk has received several European and Danish awards. Reports from different studies show, that sundhed.dk has provided substantial savings and benefits to Danish Healthcare.
Molecular Profiling is applying discoveries of the human genome to patient care, accelerating personalized cancer diagnosis and treatment

The Challenge
• The Molecular Profiling Institute (Molecular Profiling) is a specialty reference laboratory that helps cancer patients worldwide by applying the discoveries of the human genome project to personalized medicine.
• Challenge: gain a deeper understanding of how elements of the genome map fit together in order to unravel the mysteries of genomic and molecular mechanisms behind complex diseases, such as cancer.

The Solution
• Molecular Profiling and IBM are collaborating to apply new molecular profiling technologies – a first step toward making possible personalized diagnosis based on genetic data and other research initially inspired by the human genome project.
• The IBM Clinical Decision Intelligence (CDI) solution supports advanced analytics to provide patient information and knowledge-based decision tools that physicians can use to deliver higher quality and more personalized care to patients.

The Benefits
• The Molecular Profiling and IBM alliance has established the new frontier of genomics:
  - Accelerated the application of human genome project findings to improve patient care.
  - Increased cancer survival and outcome potential.
  - Decreased the cost of healthcare by targeting potential treatments that may work more effectively.

“The goal of the Molecular Profiling Institute is to give physicians the tools they need to provide a greater level of personalized medicine in the treatment of their patients. Our alliance with IBM should allow Molecular Profiling to offer physicians a tailored medical strategy for their individual patients.”

-- Dr. Robert J. Penny, President and CEO, Molecular Profiling