Convergence of Technologies for Better Healthcare

The Right Tool for 21st-Century Care

Personal health records provide information when and where needed, helping patients take a more active role in their health— and their health care.

Dr.Nipit Piravej, MD

Thai Medical Informatics Association;

Chief Corporate Officer, Bangkok Chain Hospital

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Outline…

Trends

Issues & Challenges

Success Factors

Leading the Actions

The Right Tool for 21st-Century Care

Personal health records provide information when and where needed, helping patients take a more active role in their health— and their health care.

Issues Facing Present Healthcare Systems are

NOT New...

BUT Actions to Resolve Such Issues…

NOT Very Well Taken

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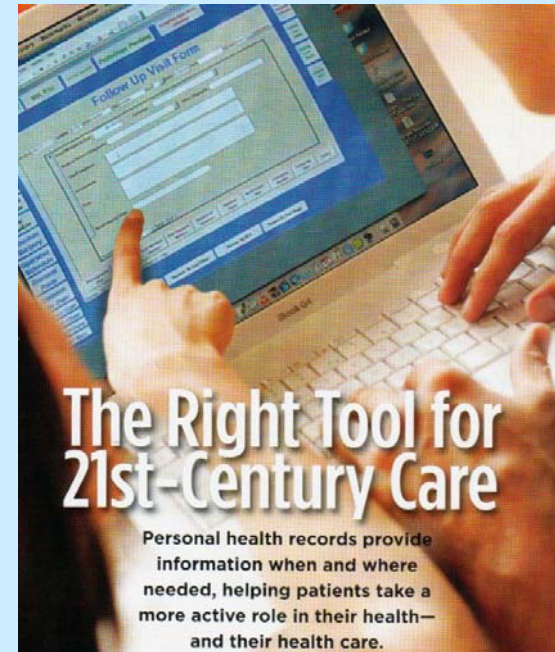
Introduction

Tropical Medicine is a Special Discipline…

Scope Extending from…

Clinical Medicine TO Public Health

With Component in Bio-molecular Science

Health Informatics is Very Relevant to ALL Components…

Dr.Nipit Piravej, MD; CCO-BCH & TMI, E-mail: mdnickp@yahoo.com

The Challenges

Healthcare Demands Explosion…

Demographic Shift…

Life Style & Work Style Shift…

Environmental Shift…

Socio-economic-political Shift…

Epidemiological Shift…
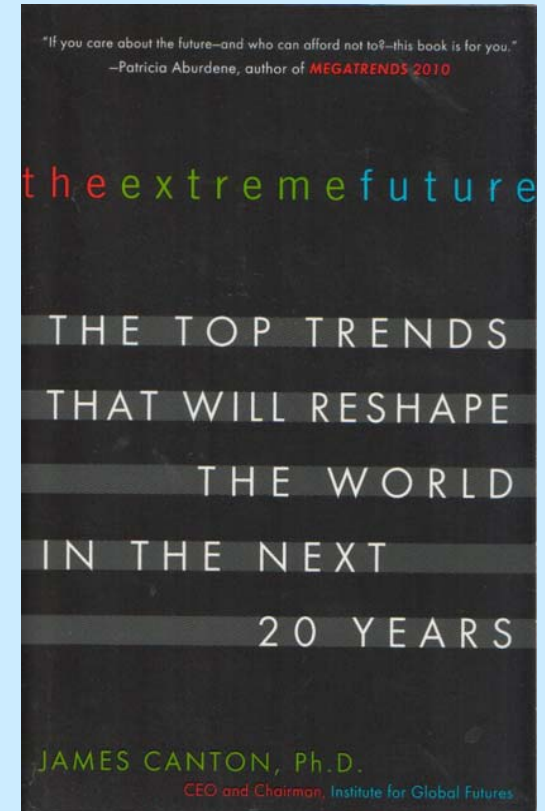
New Healthcare Demands are Increasing in Both Quantity and Complexity…

The Challenge

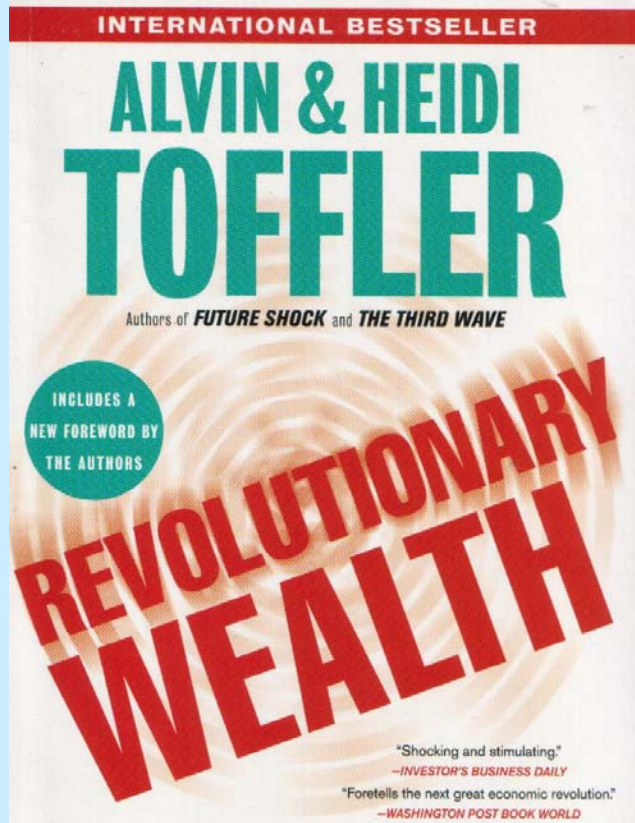## New Healthcare Demands are Increasing in Both Quantity & Complexity

Multi-factors, Multi-dimensions…Physical, Mental, Financial, Social, Occupation, Education, Environment, Cultural…

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The Challenges

Healthcare Demand Explosion…

"No country's healthcare system has been designed for this combination of diseases heavily dependent on behavioral and lifestyle factors plus an aging population…"

Alvin Toffler

Beyond Traditional Medical & Health System Capabilities

Dr.Nipit Piravej, MD; CCO-BCH & TMI, E-mail: mdnickp@yahoo.com

The Challenges

Healthcare Demand Explosion…

New Major Health Threats…

1. Chronic Diseases…

Usually Multiple Conditions Associated with Risks Embedded in Daily Life (Life-Work Styles, Environment)

2. New Communicable Diseases…

Epidemic to Pandemic Associated with Risks Embedded in Socio-economic Structure

3. Disasters…

Natural or Manmade

Beyond Traditional Medical & Health System Capabilities

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The Challenges

Healthcare Disasters…

Beyond Traditional Medical & Health System Capabilities

The Challenges

BUT…Healthcare Resources are Limited…

Man

Money

Machine

Materials

Management

'It looks pretty ugly down the road. Everybody is going to get caught up in this.'

Global race to solve credit crisis

The unintended consequences

A trader reacts on the Indonesia Stock Exchange trading floor in Jakarta Wednesday.

Japan/Nikkei 225	H.K./Hang Seng	India/Sensex	Indonesia/ Jakarta Comp.
Wednesday: 9203.32	Wednesday: 15431.73	Wednesday: 11328.36	Wednesday: 1451.67
Down: 9.4%	Down: 8.2%	Down: 3.1%	Down: 10.4%

Source: Thomson Reuters Datastream

Traditional Medical & Health Models are Highly Resource Intensive…Sustainable ???

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The Challenges

Traditional Medical & Health Models are Resource Intensive…

Characteristics of Traditional Medical Model…

Acute Care, Episode, Crisis Focused

Physician Dictated

Expert Opinion Based

Institutional Based

Consumer Passive

Information Poor…

Highly Dependent Consumers Create Even More Burdens to Highly Constrained Systems

The Challenges

AND…Health Systems are Still Quite Fragmented…

Strong Trend for Continuing Specialization…

Discipline Specific Issues

Discipline Specific Knowledge & Info

Discipline Specific Skills & Expertise

Discipline Specific Innovations & Technologies

High Barrier for Inter-discipline Exchange

Increase Gaps, Low Efficiency, Poor Quality at High Cost

Require a "TOTAL Approach"

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Key Success Factors

Paradigm Shift…Health & Care CONTINUUM Model

Good Health
Affordable Cost

Public Health
Paradigm

Primary Prevention

Bridging the Gap

Medical- Health
Coordination

Health & Care
Continuum

Bridging the Gap

Medical
Paradigm

Acute Curative

Bio-Medical-Health-Behavioral-Social-Econ

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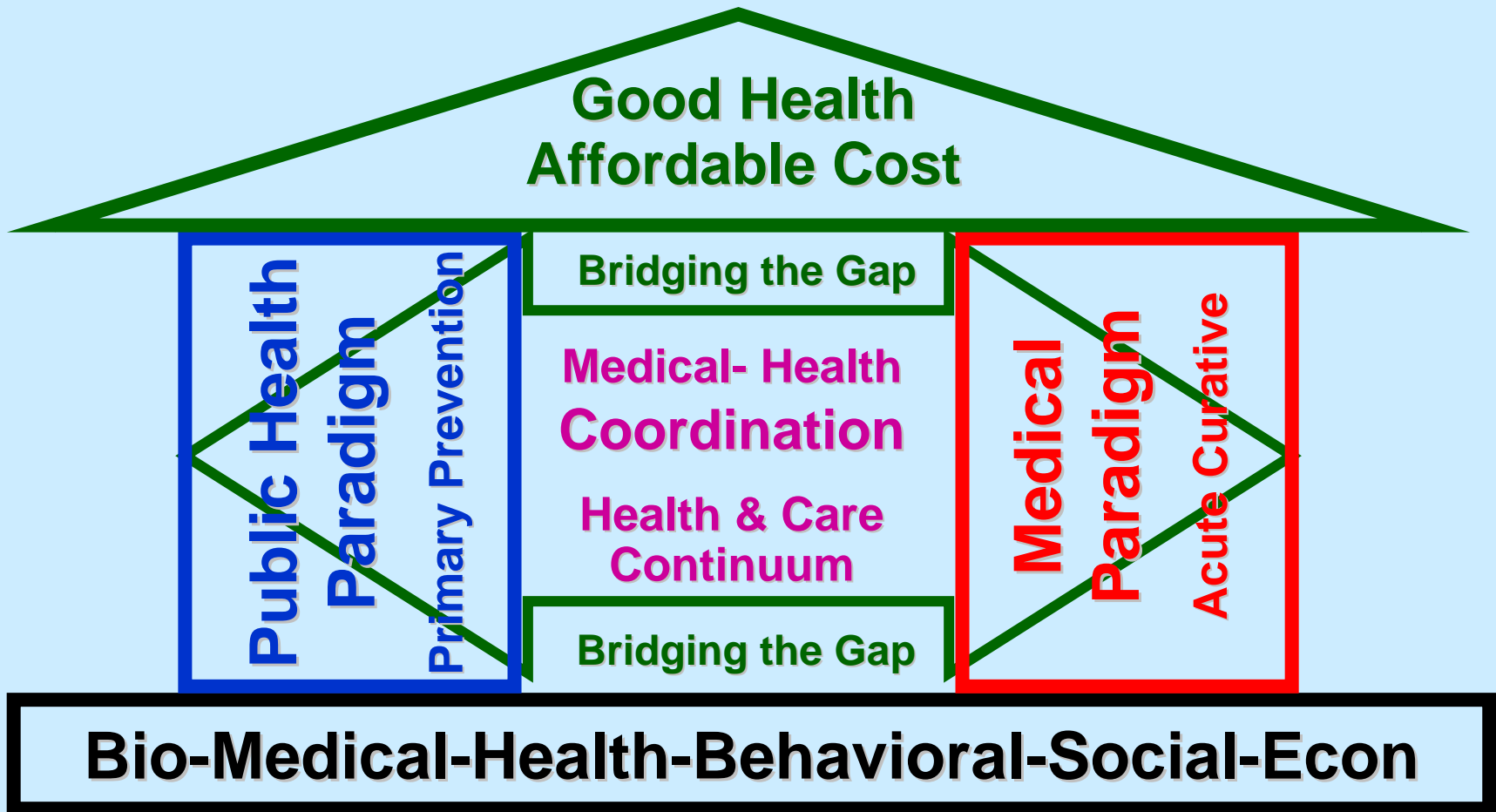
Key Success Factors

Paradigm Shift…CONSUMER CENTRIC Model

3rd Wave Health System: Info Intensive, Consumer Self Mgt Enabled

Community

Health System

| Self Management Support | Delivery System Support | Decision Support | Information Support |

Supports

Activated Community

Informed & Activated Consumers = Prosumers

Productive Interactions

Proactive & Prepared Providers

Activated Community Partners

Medical & Health Outcomes

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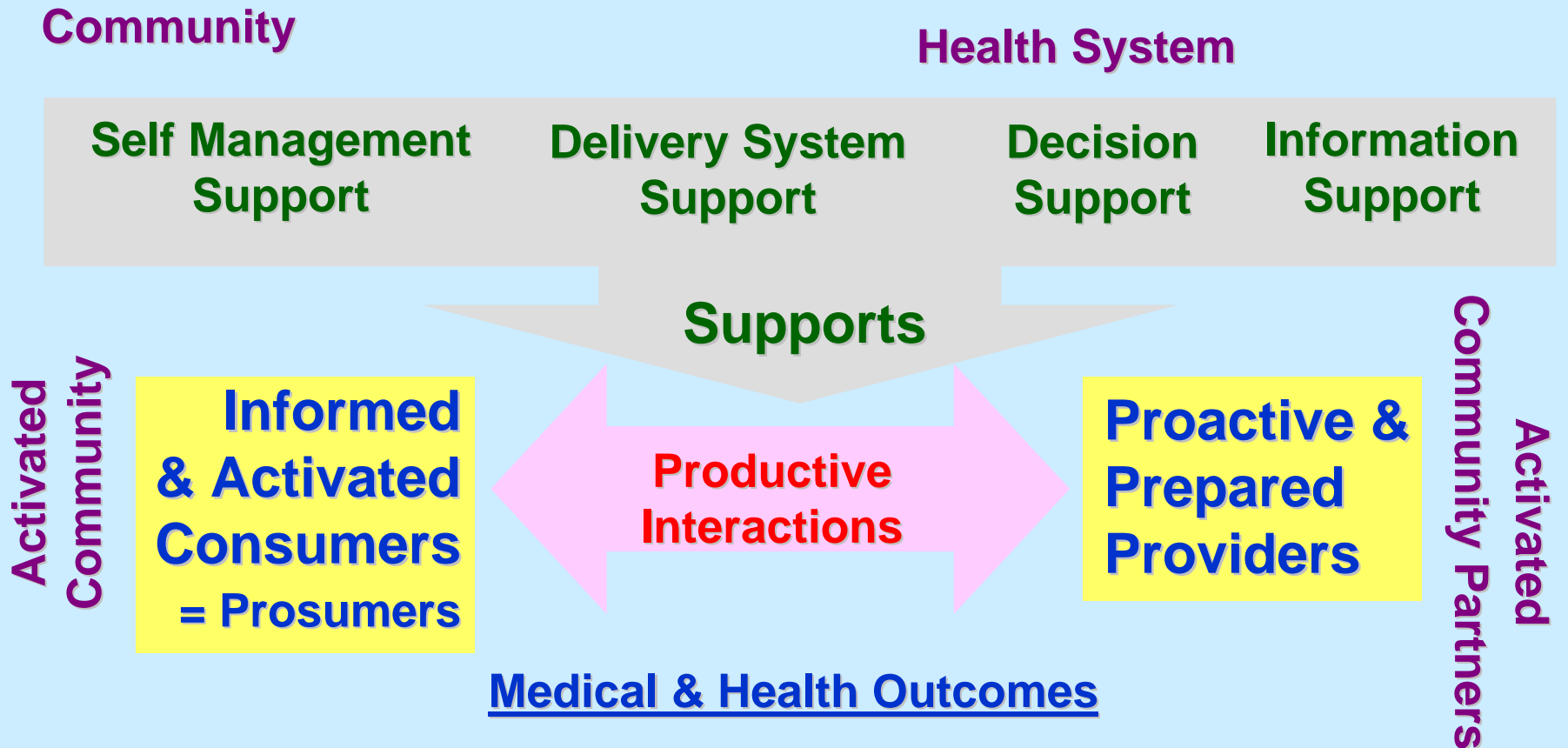
Key Success Factors

Effective Intervention to Promote Better Health…

1. Information Rich

2. Embedded in Life-style & Work-style

3. Foster Self Management

4. Across Health Continuum

As consumers demand **access to information** to make more informed health care decisions and cost choices, we will begin to **see changes** within our health care system.

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Key Success Factors

3rd Wave Health Systems…

Informed…
Policy Makers
Regulators
Administrators
Professionals
Consumers…

To Make/Take...
Right Decisions
Right Actions
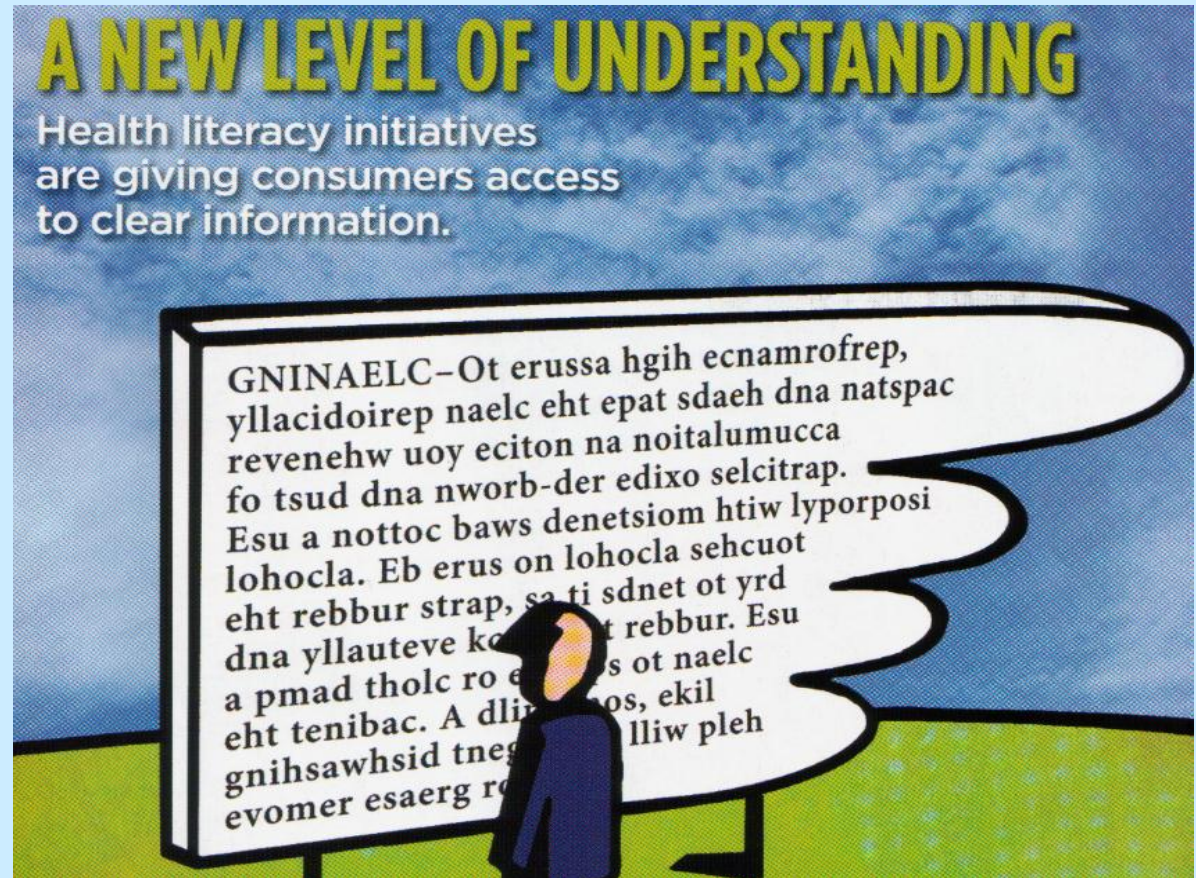
Actions

Converging Technologies for Better Healthcare…

Requires Cross Disciplines, Industries, Sectors

Collaboration & Integration

Share Info

Share Knowledge

Share Expertise

Share Innovation

Share Technologies

INTERNET

Google and Viacom agree on YouTube data protocol

GOOGLE Inc. and Viacom Inc. have agreed to allow Google to anonymize YouTube visitor data before complying with a judge's order to deliver the data to Viacom as part of a broader copyright lawsuit.

Google-owned YouTube agreed to allow it to substitor IDs and Internet-proer unique values to help ryers for both companies tion that stated that "partly as feasible on a specific ubstitution."

—Jessica E. Vascellaro

ER TRAIN (8-09-05)

Phone systems used for tracking

Technology as Solutions & Tools for ALL Disciplines to Connect to Consumers…Activate & Inform

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Actions

Converging Technologies for Better Healthcare…

Successful Innovation Requires…

1. **Inventors to Develop New Innovation**
2. **Adopters to Use the Innovation**
3. **Policy Supports**

Technology Convergence can be…

1. **Driven by Technology Owners (Industries)**
2. **Driven by Technology Adopters (Users)**
3. **Driven by Policy Levels**

More Effective if There are Regular Interactions…

WSJ.com (16-708)

There's a growing need for personal Web sites

DO YOU HAVE a personal Web page? If you don't, you may soon enough, says columnist Jason Fry. As there is no directory for cell-phone numbers, a single point of contact, such as a Facebook or LinkedIn page or a site built out with communications be useful. A Web site can also be your defense against rumor and misinformation, providing an opportunity to balance out other narratives that you can't control.

Need to get additional information? WSJ.com subscribers can read Jason Fry's Real Time column, at WSJ.com/RealTime.

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Actions

Driving Technology Convergence for Better Healthcare
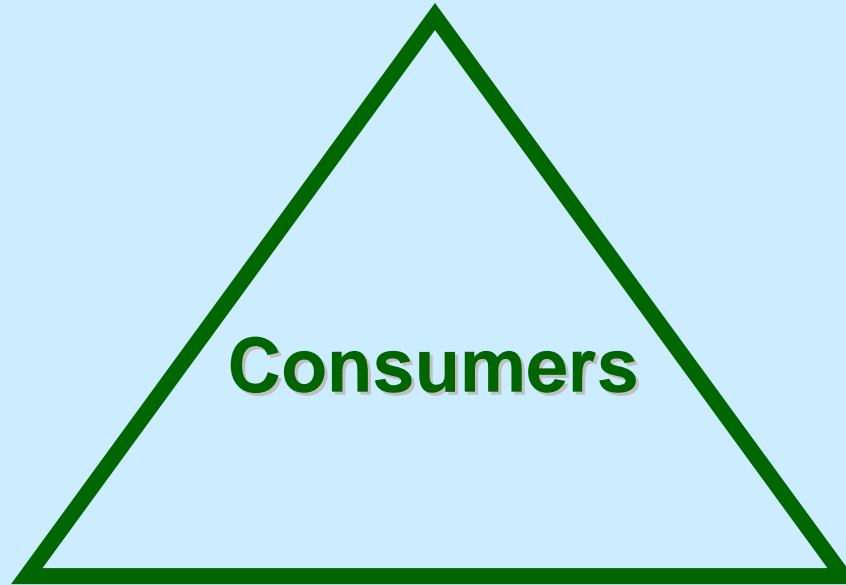
Government
Regulators/Admin

Consumers

Academia
Professionals/Institutes

Industries

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Actions

Converging Technologies for Better Healthcare…

Requires Cross Disciplines, Industries, Sector Integration

Geoinformation Technology *for Better Health*

Proceedings of Second International Conference on Health GIS
14-16, January 2008, Bangkok, Thailand

Editor
Nitin Kumar Tripathi

Geospatial Public Health Studies for Emerging Infectious Diseases - Malaria, Dengue Fever, Chickungunya, Bird Flu and others in Jalgaon District

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Use of Geographical Information System within Web-Based Saudi National Diabetes Registry

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Actions

Converging Technologies Requires Proactive Innovators In & Outside Healthcare Fields

FOURTH ANNUAL HEALTHCARE UNBOUND

A Conference & Exhibition on the Convergence of Consumer & Healthcare Technologies

July 16-17, 2007 • San Francisco, CA

Special Focus on Remote Monitoring & Home Telehealth for Managing Diseases & Promoting Wellness

Supporting Organizations Include:

American Association of Homes and Services for the Aging
Continua Health Alliance
International Disease Management Alliance
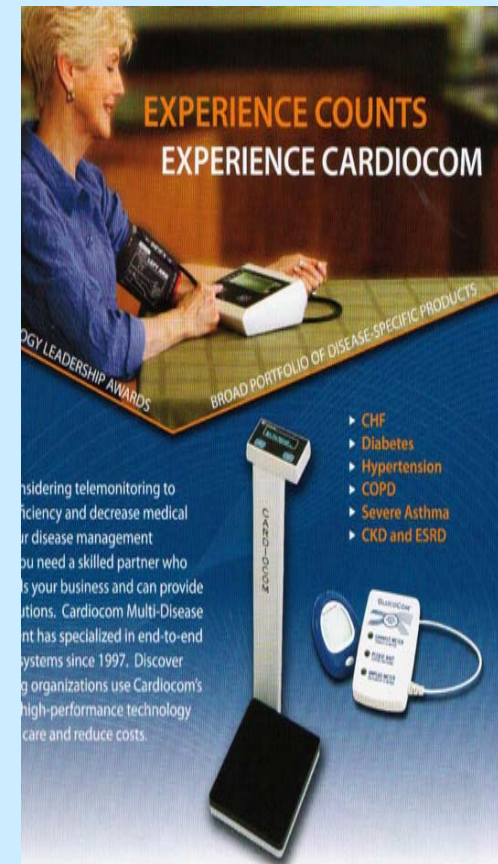Visiting Nurse Associations of America

Center for Aging Services Technologies
Home Care Technology Association of America
National Association for Home Care and Hospice

For additional information, please visit: www.tcbi.org
or contact TCBI: Phone: 310-265-2570   Fax: 310-265-2963   Email: info@tcbi.org

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EXPERIENCE CARDIOCOM

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▶ COPD
▶ Severe Asthma
▶ CKD and ESRD

...sidering telemonitoring to ...iciency and decrease medical ...r disease management ...ou need a skilled partner who ...s your business and can provide ...tions. Cardiocom Multi-Disease ...nt has specialized in end-to-end ...ystems since 1997. Discover ...g organizations use Cardiocom's ...high-performance technology ...care and reduce costs.

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WSJ.com (24-608)

The doctor will see you —on the Webcam now

AMERICAN Well is a company that aims to allow doctors to make virtual house calls via Webcams. A patient can log on and get something approaching a complete doctor visit, often without waiting. The doctor can review the patient's record, make a diagnosis, write a prescription and make a referral, all online. Patients without a Webcam can talk to the doctor on the phone.

WSJ.com subscribers can read more about American Well's business model in the Health blog, at WSJ.com/Health.

Microsoft Corp chairman and chief software architect Bill Gates presents his vision of the future of the Windows operating system Vista, during the opening keynote at the International Consumer Electronics Show in Las Vegas, Nevada on Wednesday.

## Gates shares view of digital lifestyle

DAISUKE WAKABAYASHI (6-01-06)

Las Vegas — Microsoft Corp chairman Bill Gates took the wraps off its next-generation operating system known as Windows Vista on Wednesday, displaying features aimed at positioning the software giant as the entertainment hub for a future of digitally connected homes.

Among the features of the much an-

promises improved security protection.

The five-year gap between the expected launch of Vista and Microsoft's current operating system, Windows XP, is the longest-ever gap between major launches of its core Windows product, the company's cash cow that accounts for more than a quarter of its $40 billion in annual revenue.

New features of Vista highlighted by

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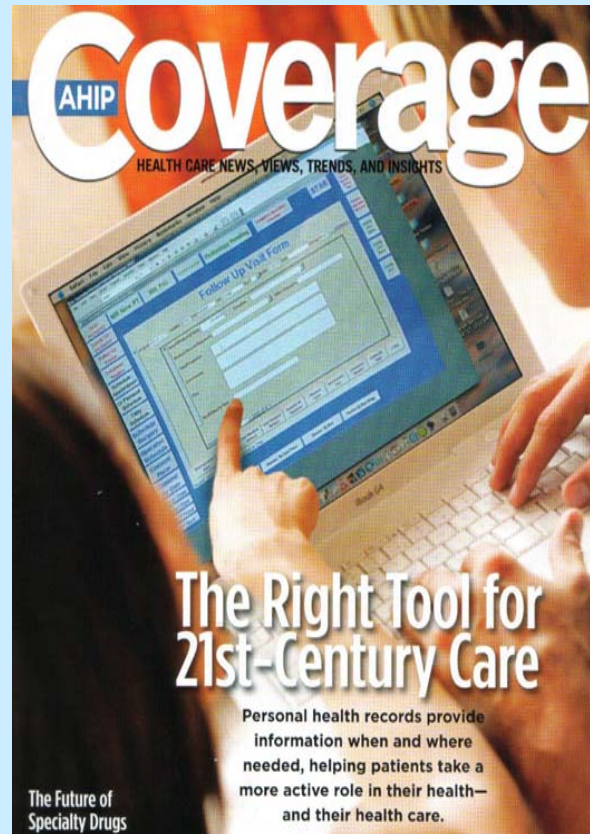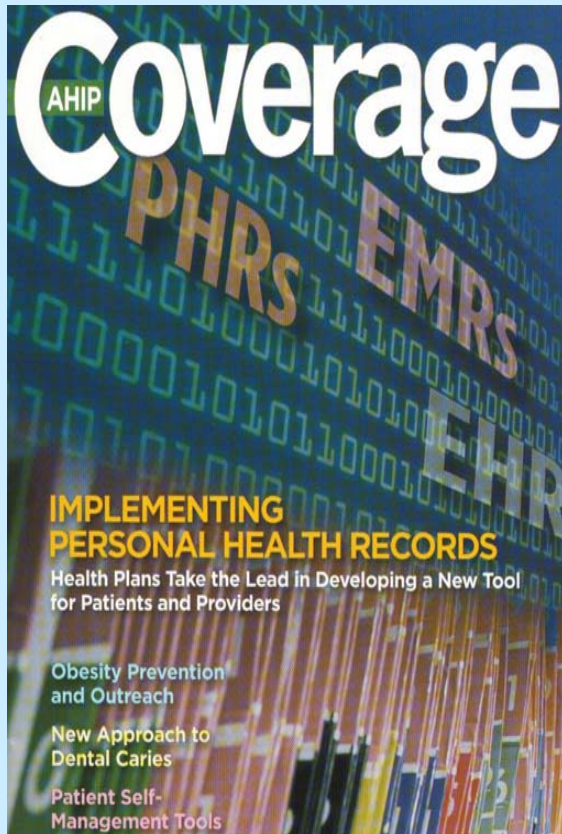
Actions

Converging Technologies Requires Proactive Innovators In & Outside Healthcare Fields

Media companies see power of the social Web

Seeking profit through connecting users

By Brian Stelter (8-1008)

NEW YORK: As the Web becomes a more social place, U.S.-based media companies are trying to make it easier to share links with friends, add comments to tend users' online id

This week, CNN necting "The Foru political expression the second-largest s the United States, e talk about the pres and see what their ing.

"It allows us to ence in the places v gregating their frier sharing their thoug tenson, general CNN.com.

sionally generated content is the future."

Combining content with a social network is a strategy pioneered by MySpace, the most popular social network in the United States, which

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Patient Self-Management Tools

How health plans are helping members help themselves, especially those with chronic conditions

BY GREGORY LEGROW AND DELEYS BRANDMAN, MD

MORE THAN 120 MILLION AMERICANS CURRENTLY have one or m chronic conditions. They consume a disproportionate share of the U.S. he care dollar, accounting for between 70 and 80 percent of all spending.

Patients with chronic disease face a number of challenges. Not only must they learn to live with and manage their conditions, but now, in many instances, they are

Patient self-management

Site lets many add to online photo albums

Shwup.com allows invitees to upload without signing up

BY KATHERINE BOEHRET (11-608)

THE ONCE-FRUSTRATING process of sharing digital photos and videos has been noticeably improved over the past year, thanks to seamless Web-based programs that work like desktop applications. But most of these sites give all the sharing power to whoever created the album, leaving invited guests to simply look at photos or add comments.

Wouldn't it be a relief if, after attending the same event with 10 friends who took

with only a few pitfalls. The concept is simple: Anyone who signs up for a shwup account can create an album filled with digital photos and videos, and this album can be shared with anyone else via email regardless of whether or not they have a shwup account. Recipients of these email invitations can either click on an embedded link to view the album or upload their own content.

Users can also completely skip visiting the site and just upload photos and videos to the album by replying to the email invitation with attached photos and videos. This straightforward step automatically and instantly uploads content to the album.

Muvee Technologies is best known for selling software that automatically creates short movies, or muvees, by blending digital vid-

ture to shwup in August.

I uploaded more than 60 high-resolution digital photos into my first shwup album, noting that the only limitation on files is that no individual file can be larger than 100 megabytes. These images can come from your computer, Flickr, Facebook or any Web site. Out of curiosity, I plugged www.cnn.com into the Web site entry box, and shwup automatically grabbed images from the site that were available for me to use. I checked two of the images, and they were added to my album in seconds.

Shwup automatically made and added three muvees to my album, using my photos put to music with dramatically timed transitions. The short clips looked well-done, and were labeled "sample muvees" to avoid being confused with my content.

Shwup by muvee Technologies offers a common album to share photos and videos.

ter share ed with ductible product urdens, creased hier lifestyles and to better s a result, the demand for llness and disease management of clinical and financial component of gs.

Forrester report, by 2007 rs plan to offer benefits that nent and will look to their ary source for these ser-and, health plans remain nt of clinical and financial These constraints limit the f members that health in-prompting them to search

The Importance of Self-Management To

Effective disease managemen not rely solely on clinicia maintain a patient's healt fact, the research is increa clear that outcomes of indi als with chronic condition less a function of the care p cians provide as it is the lif choices people make. The m ity of care for patients with chronic conditions come from the individuals themselves. They monitor their health status, comply with drug mens, and make good lifestyle choices on a basis. For these reasons engaging members in management and providing tools that support efforts is essential to helping them maintain long-term health and control the cost of care.

Patient self-management tools do not re physician or care manager involvement. On the trary, they are supporting elements of a well-des program that aid patients in adhering to care beyond the walls of their caregiver's office. Pa self-management tools help track individuals' h

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Moving Forwards

Accelerating Technology Convergence for Better Healthcare

From Discipline/Sector Specific Application

Towards Trans-discipline Application

Trans-discipline "Interoperability"

Further Promote Technology Convergence…

Systematic Capacity Building in Health IT…
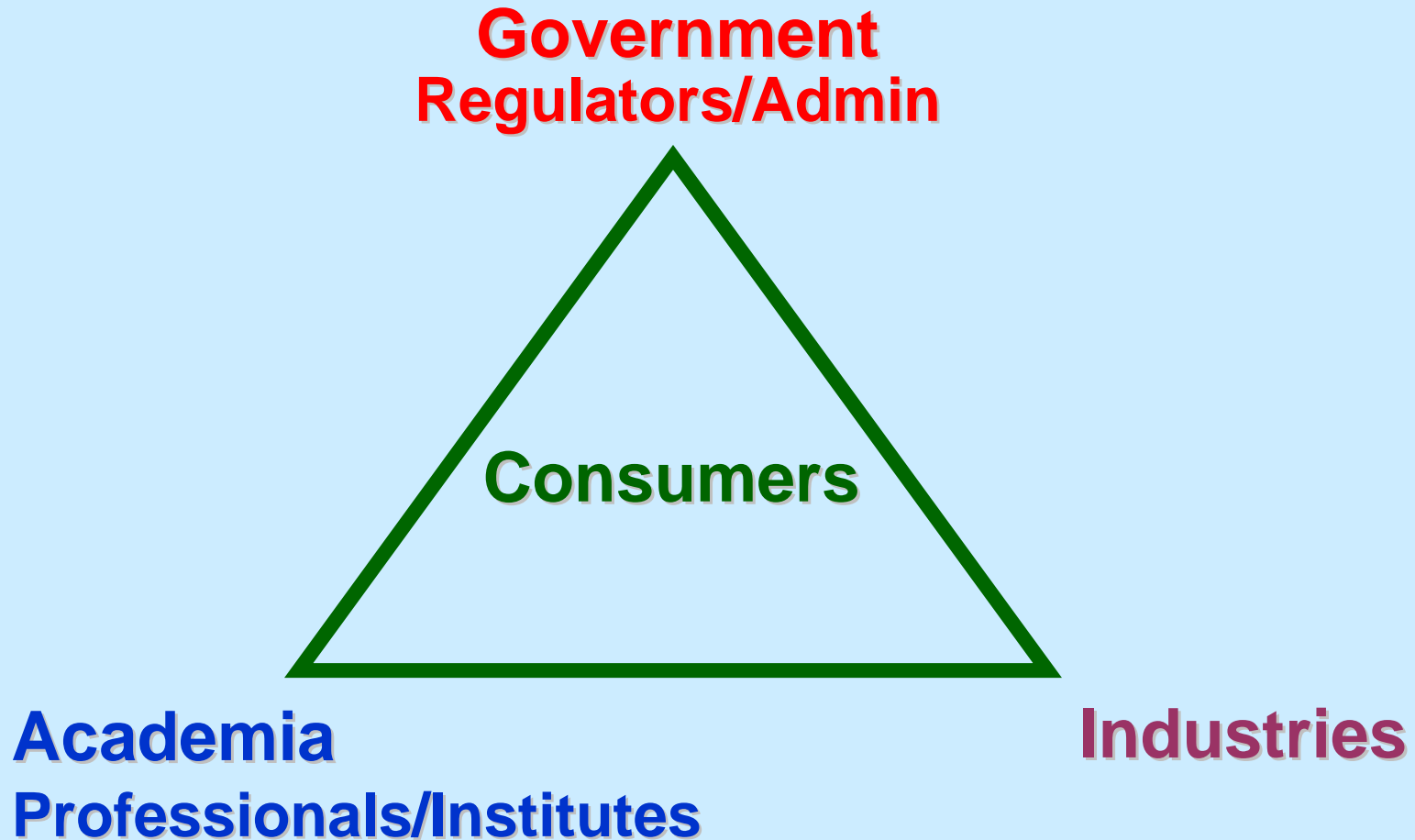
Establish GENERIC Health IT Knowledge for ALL…

Basic & Advanced Training Programs

Trans-disciplinary Exchange (Visions, Knowledge) Forums

Trans-disciplinary Joint Development…

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Moving Forwards

Driving More Converging Technologies for Better Healthcare

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Conclusion & Discussion

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