

~~DISEASE MANAGEMENT~~

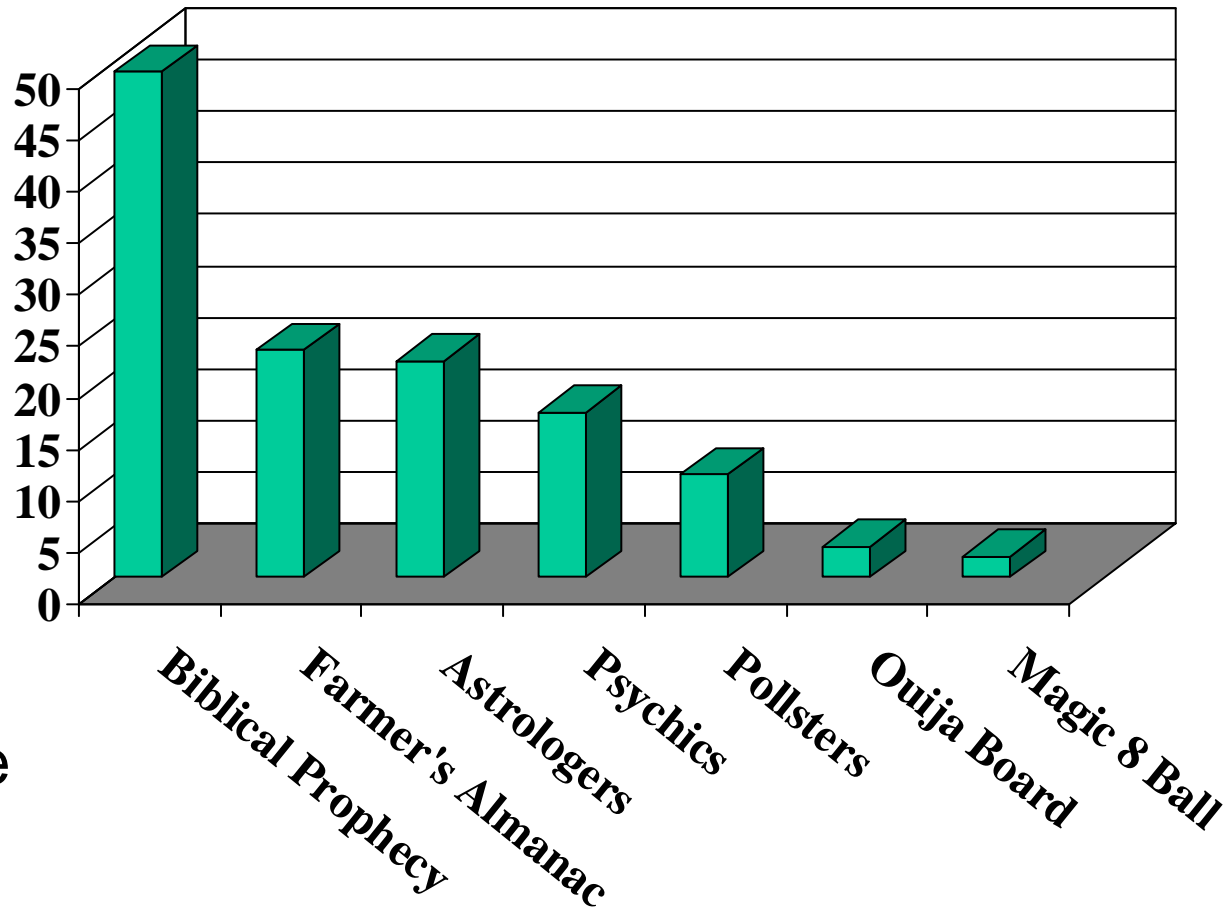
CHRONIC CARE & THE INTERNET

How Health 2.0 may help...or not

MATTHEW HOLT
HEALTH CARE STRATEGIST

Disease Management Colloquium
Philadelphia, PA
May 19, 2008

Who do Americans Believe Can Predict the Future?

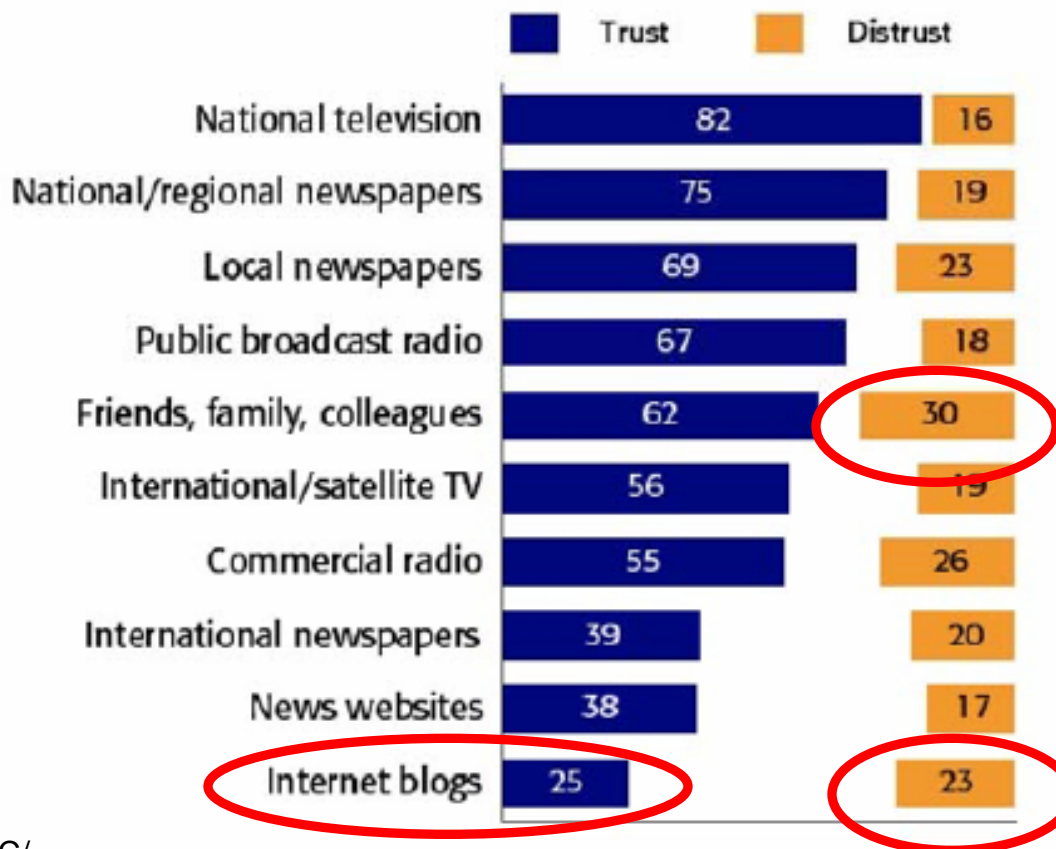


Percentage
who believe

Media sources people trust

Trust in Different Media Channels

Trust vs Distrust, Average of 10 Countries, by News Source



Source:
Globescan/BBC/
Reuters 2006

Today's agenda*

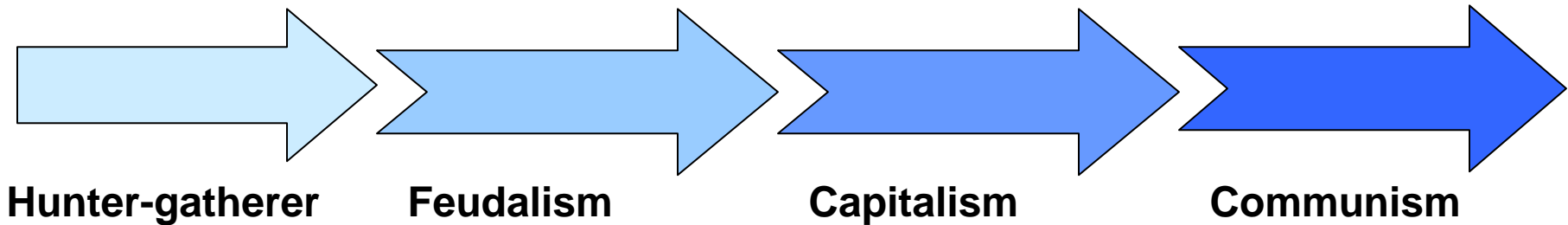
- Lessons from German economists & Mongolian revolutionaries
- What's wrong with American health care?
- What was supposed to fix it?
- Health 2.0 to the rescue, maybe.
- Does any of this matter?

* A good faith effort will be made not to deviate from this agenda for at least the first five minutes of this talk, barring War, acts of God, or the speaker (i.e. me) finding someone in the audience who can help me steal a free T-Mobile WiFi connection

Lessons from German economists



Marx's theory of history



The Tale of the Mongolian Marxists



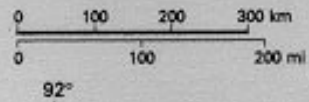
RUSSIAN FEDERATION

CHINA

MONGOLIA

CHINA

- International boundary
- - - Provincial (aymag) boundary
- Road
- Railroad
- National capital
- Provincial capital
- Town
- ✈ Airport



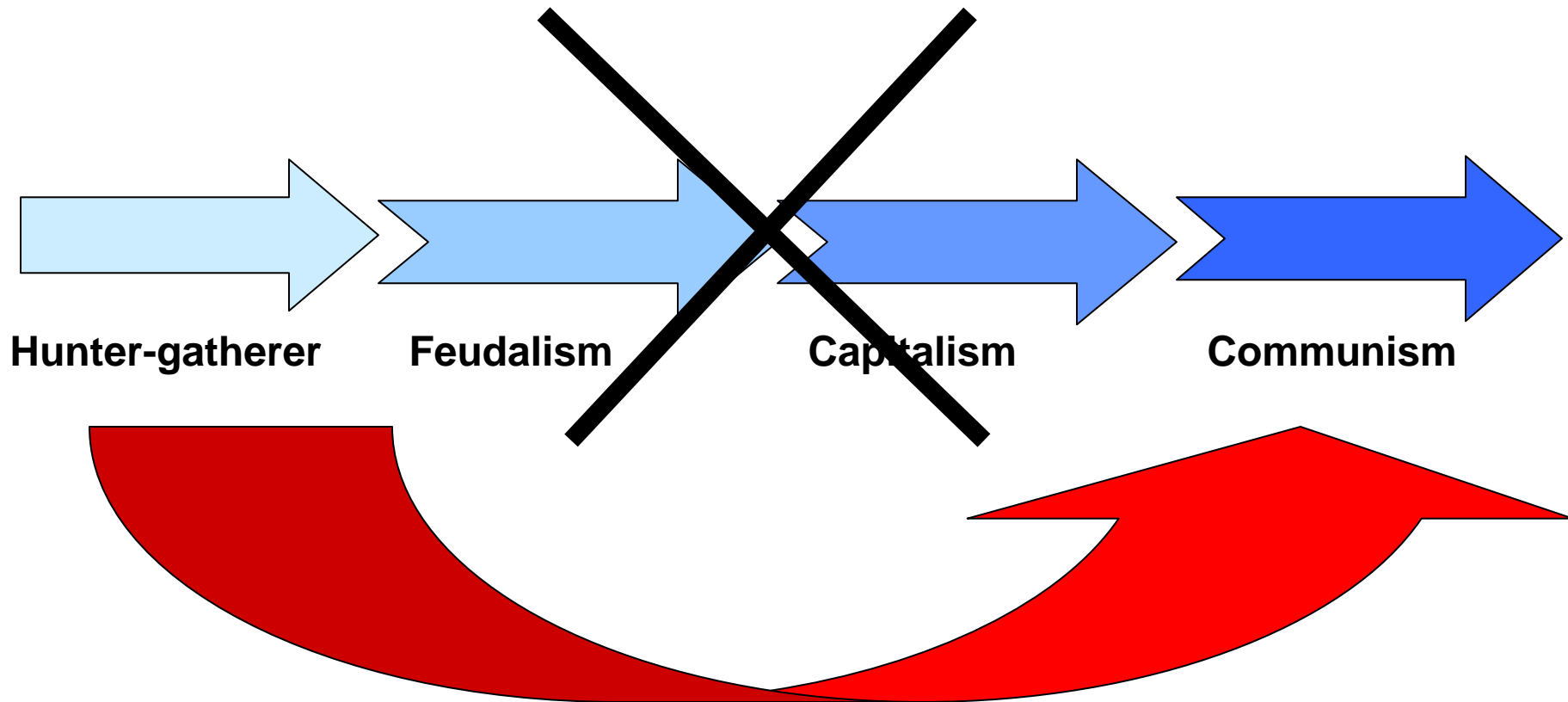
The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

Beijing (Peking)

Huang (Yellow)



Marxism, Mongolian Style



~~What's this got to do with
Disease Management?~~

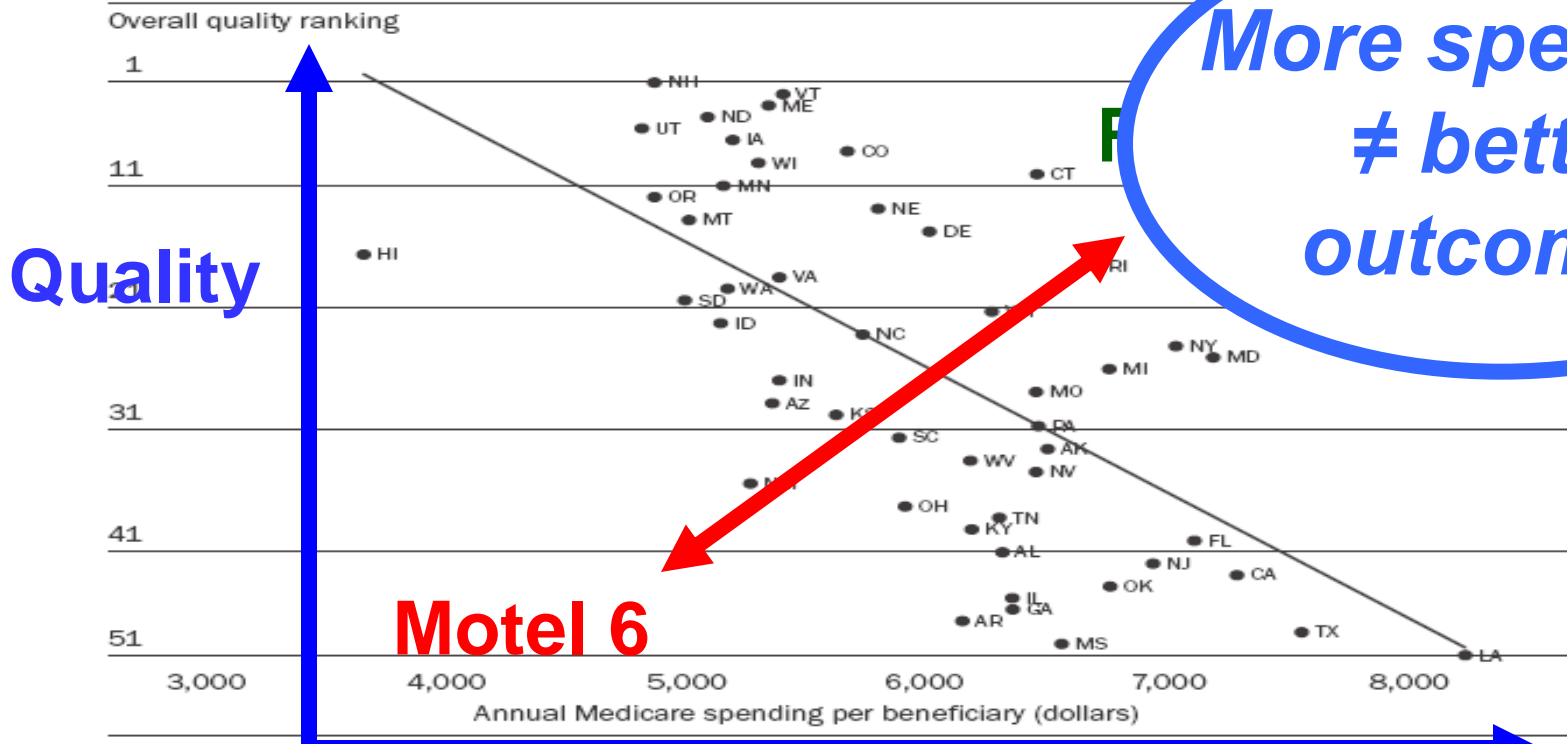
**What's wrong with American
Health Care?**

Cost & Quality in Healthcare

Health Affairs
April 7, 2004

EXHIBIT 1

Relationship Between Quality And Medicare Spending, As Expressed By Overall Quality Ranking, 2000-2001

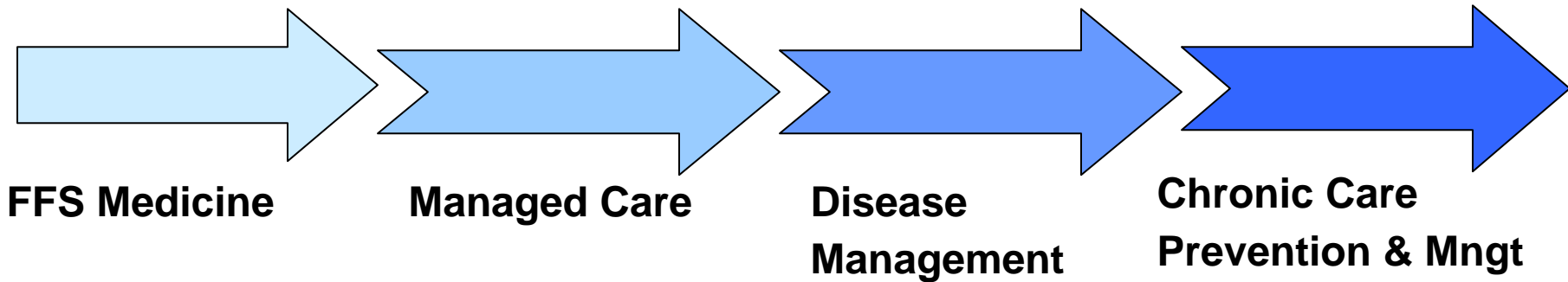


SOURCES: Medicare claims data; and S.F. Jencks et al., "Change in the Quality of Care Delivered to Medicare Beneficiaries, 1998-1999 to 2000-2001," *Journal of the American Medical Association* 289, no. 3 (2003): 305-312.

NOTE: For quality ranking, smaller values equal higher quality.

**So what was supposed
to be the answer?**

The DM progression?



EMR & CPOE

“Does your practice use any of the following management tools?”

Base: Doctors surveyed

CPOE in 4% of hospitals

....planned in 17%

(Leapfrog Group 2004)

	2001	2002	2003	2004	2005	2006
Electronic prescribing						10
Electronic medical records	2001	2002	2003	30	24	24
Remote disease monitoring					9	8
Online communication w/ patients					13	9

Actually made it to ~7%

Latest physician EMR data

9% use it all the time

25% in part (CDC 2006)

Sources: BCG/Harris Interactive

Source: Harris Interactive, BCG 2002

EMR: There, not here

General Practitioners' Use Of Electronic Technology

		Use in Computer Practice	Use PDA in Practice	Use Internet or GP Network	Use Electronic Medical Records	Practice Has a Website
Finland	%	100	4	100	56	63
Netherlands	%	100	31	100	88	47
Sweden	%	98	3	93	90	42
Germany	%	95	10	53	48	26
United Kingdom	%	95	18	87	58	27
France	%	89	11	80	6	11
	%	82	2	64	55	18
	%	72	6	48	28	6
	%	71	17	43	9	6
	%	70	1	62	62	13
	%	68	0	46	30	12
	%	66	0	48	37	6
	%	66	7	51	42	9
	%	52	3	27	17	4
	%	37	3	19	5	2
	%	80	11	61	29	13
	%	94*	17*	79*	17**	39*

EMR Use: The *N* factor

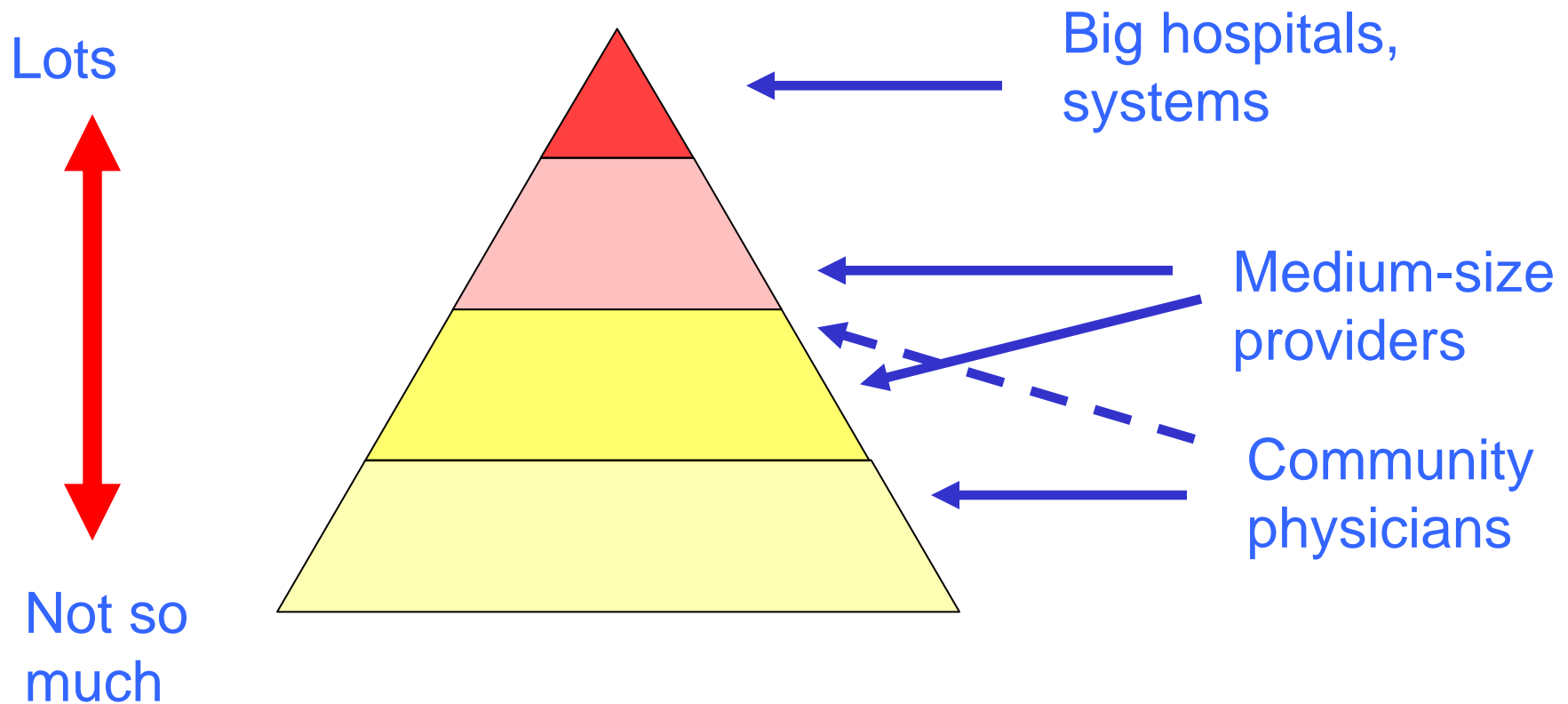
Netherlands 88%

Norway 90%

NZ 80%

5 years ago!

The IT Adoption Problem



Consumerism will solve it all



High Deductible?: Make the Rational Wrong Choice

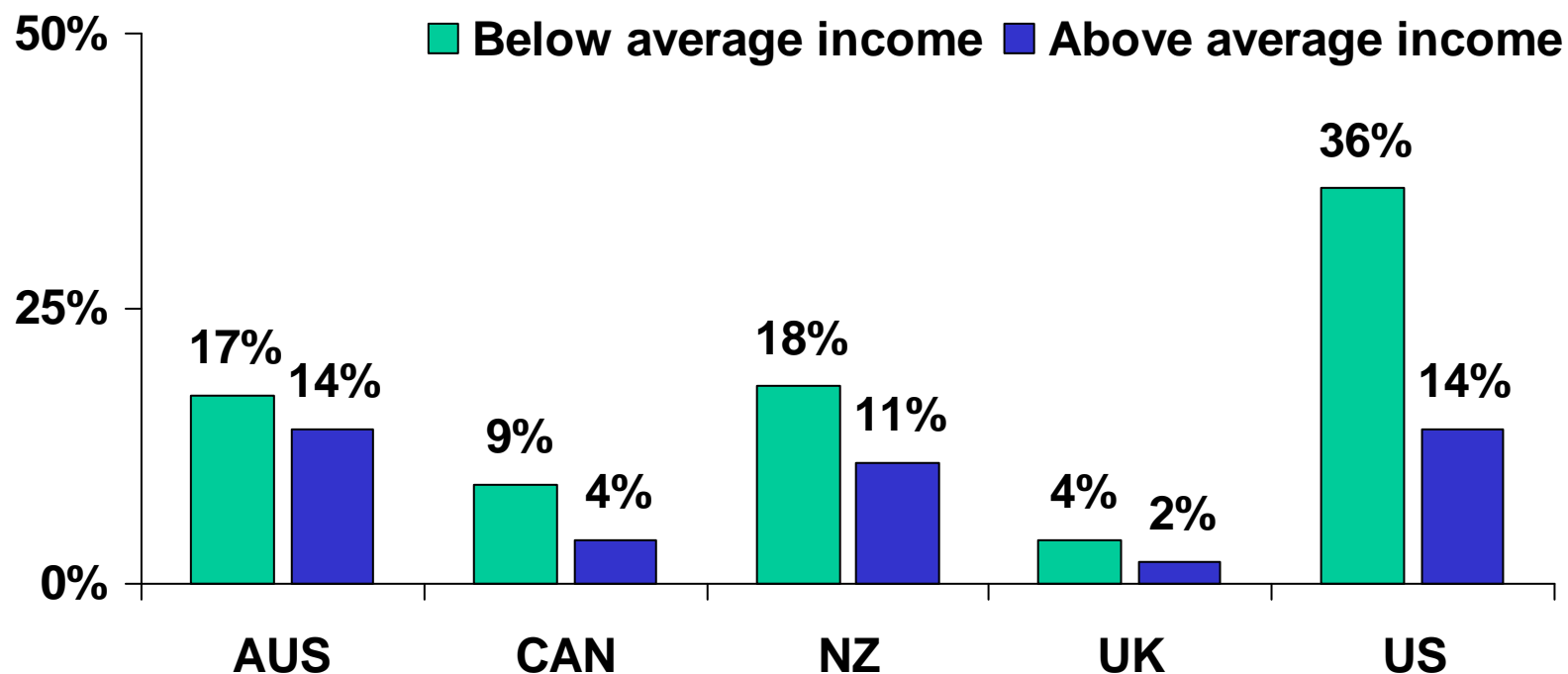
Table 2. Proportion of Members of High-Deductible Health Plans and Other Privately Insured Patients Who Did Not Fill a Prescription Because of Cost.*

Condition for Which Medication Was Prescribed	Patients Enrolled in Non-High-Deductible Plan	Patients Enrolled in High-Deductible Plan
	<i>percent</i>	
All	13	28
Diabetes	15	24
Depression	9	30
	9	16
	9	23
	8	18
	7	23
	9	23
	2	16
	17	25

HDHP members *much* more likely to miss needed care

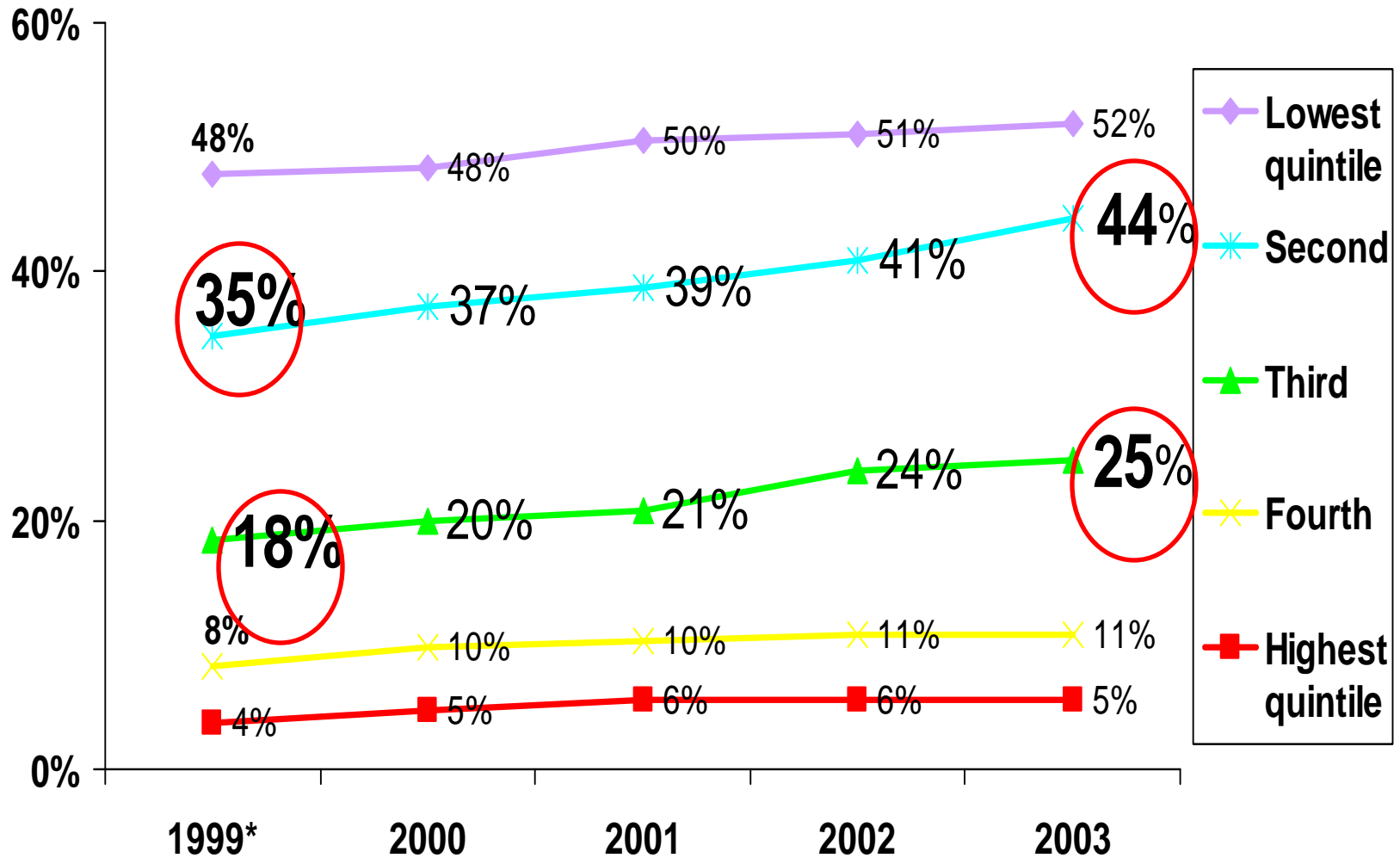
We already have a compliance problem

Patients who did not get a recommended test, treatment or follow-up due to Cost



Rapid Increase in Uninsurance; in the Middle

Working adults who are uninsured for at least 3 months in a 2 year period



Source: Analysis of the March 1988–2004 Current Population Surveys by Danielle Ferry, Columbia University, for The Commonwealth Fund (Working adults who are uninsured for at least 3 months in a 2 year period).

Is this where we're heading?



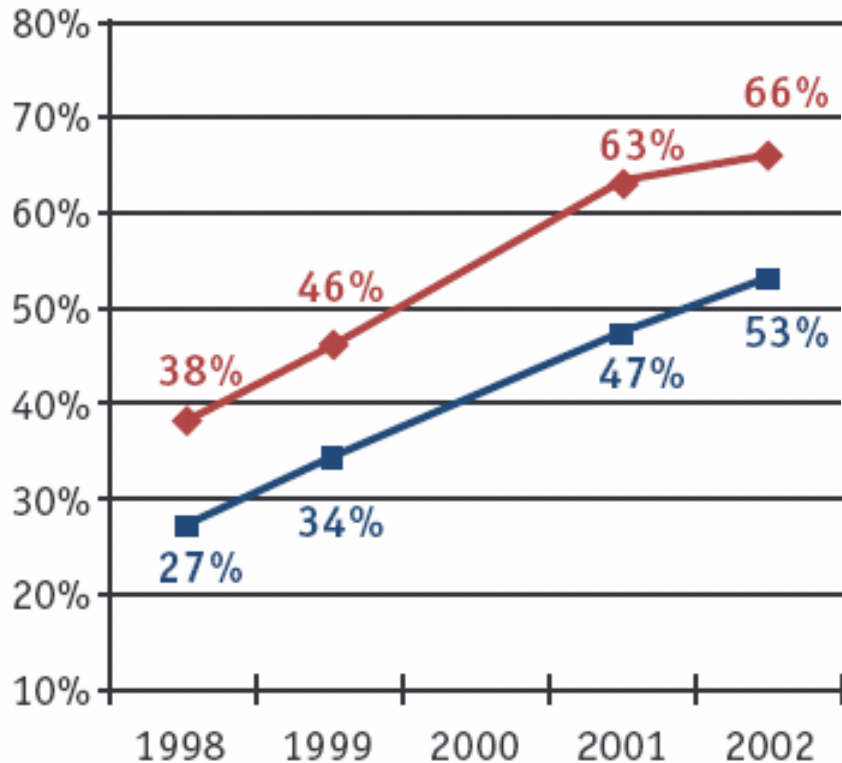
Can we find one of these?



Health 2.0 to the rescuemaybe

The Rise of the Cyberchondriacs

Cyberchondriacs: Trends 1998 - 2002



◆ Percent of All Adults Online
■ Percent of All Adults Who Are Cyberchondriacs

The Harris Poll® #59, August 1, 2006

Number of "Cyberchondriacs" – Adults Who Have Ever Gone Online for Health Information – Increases to an Estimated 136 Million Nationwide

Searching the Internet for health care information has become more widespread in the past year after three years of little growth. Use of the Internet to search for health-related information by online U.S. adults has increased markedly both in terms of percentages (from 72% in 2005 to 80% now) and in numbers. This brings the number of all U.S. adults who have ever searched for health information online (Harris Interactive® estimates) to 136 million, a 16 percent increase from 117 million in 2005.

2007
160 million adults
84% of those online

Source: Harris Interactive

What the hell is Web 2.0?



Focus on Simplicity

Wikis

Folksonomy

Recommendation

Social Software

Blogs

Convergence

Mobility

RSS

OpenAPIs

DataDriven

Standardization

CSS-Design

Web Standards

Microformats

Participation

Economy

Affiliation

The Long Tail

Usability

Joy of Use

AJAX

Web2.0 beta

Design

CSSBEAUTY

ZENGARDEN

ALISTAPART

FIREFOX

MICROFORMATS.ORG

PUBSUB

eThis, That & The other vs. Web 2.0

WWW, born 1994-5

publishing, searching, reading

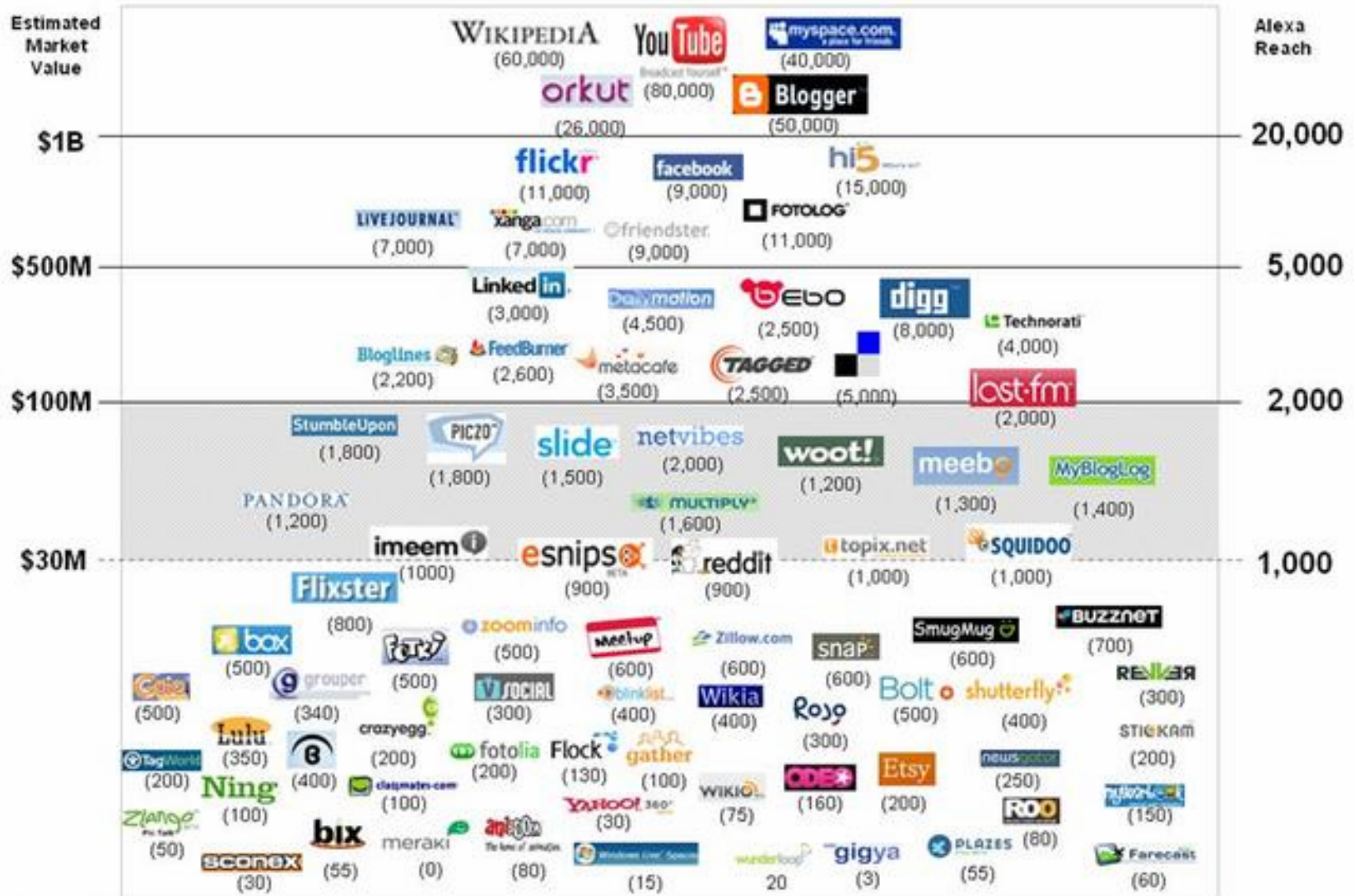
- Content Management
 - Syndicated
 - Subscribed
 - Internally created
 - Integrated from data sources
- “Webmaster” regulated
 - Institutional publishing standards
 - Prescribed branding
- Dominant letters
 - e, later i
 - Dash optional

Web 2.0, nee. 2005-7

uploading, sharing, collaborating, searching

- Social networks
 - Blogs
 - Wikis
 - Forums, Groups, Discussions
 - Video/content sharing
- Sharing Tools
 - Community policing
 - Posting guidelines
- Dominant letters
 - r, z, x, 2.0
 - Periods, but no vowels allowed

Web 2.0 Eco-system



esnips Created by Yael Elish, CEO eSnips

Web 2.0:

O'Reilly's Core Competencies

- Services, not packaged software, with cost-effective scalability
- Control over unique, hard-to-recreate data sources that get richer as more people use them
- Trusting users as co-developers
- Harnessing collective intelligence
- Leveraging the long tail through customer self-service
- Software above the level of a single device
- Lightweight user interfaces, development models, AND business models

What the hell is Health 2.0?

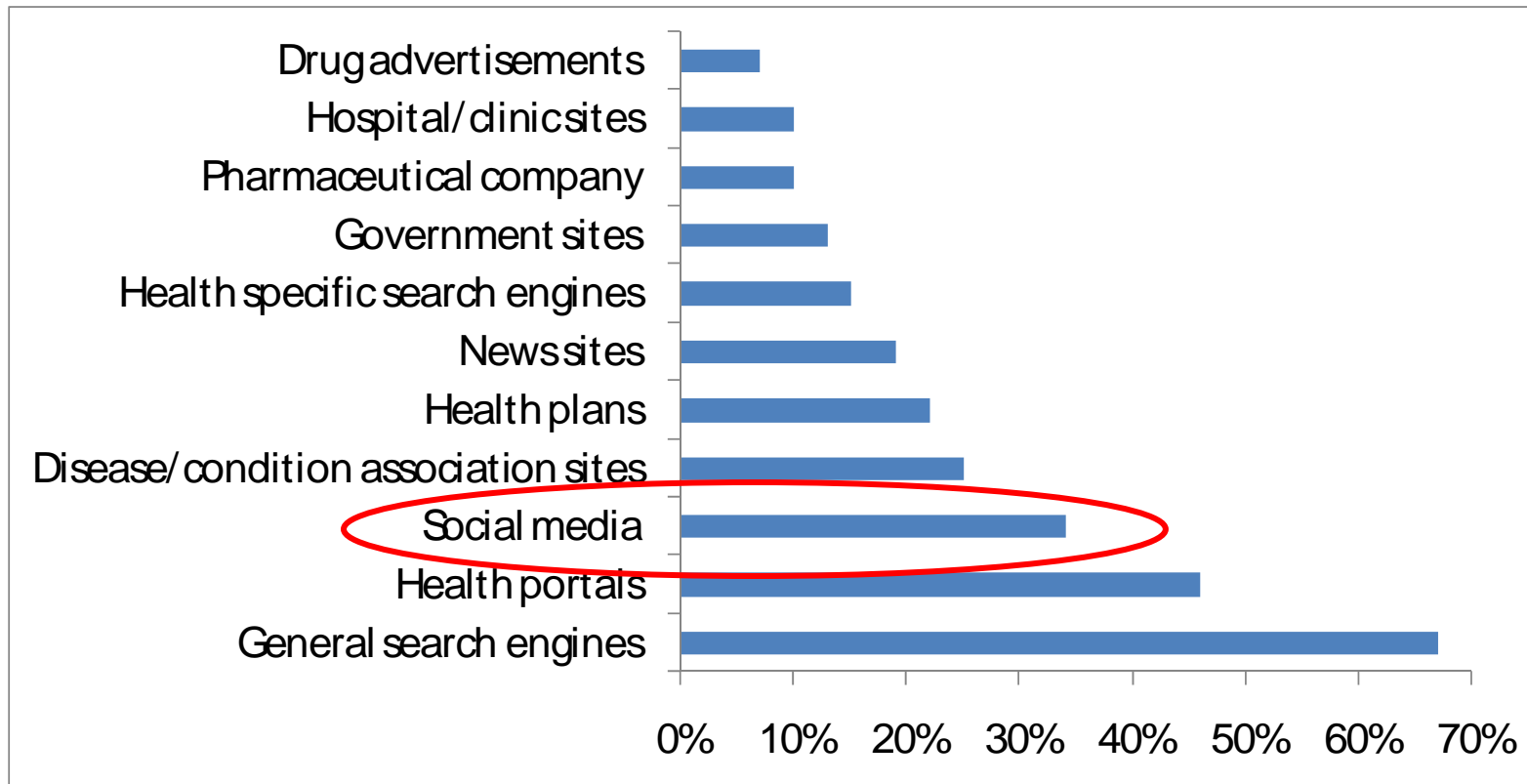
The Influence of the Wisdom of Crowds

Table 2. Reasons Online Health Information Seekers Used the Internet to Connect with Others

	PERCENTAGE OF SEEKERS
To see what other consumers say about a medication or treatment	36%
To research other consumers' knowledge and experiences	31%
To learn skills or get education that helps me manage a condition	27%
To get emotional support	17%
To build awareness around a disease or cause	15%
To share my knowledge of and experiences with a medication or treatment	14%
To share my knowledge of and experience with a health issue	14%
To find consumers' recommendations and opinions about hospitals and other treatment options	13%
To find consumers' recommendations and opinions about hospitals and other treatment centers	13%
To find consumers' recommendations and opinions about doctors	10%
To feel I belong to a group or community	8%
None of the above	22%

Source: JupiterResearch. *Online Health: Assessing the Risks and Opportunity of Social and One-to-One Media*, 2007

Social Media has a big impact



Source: iCrossing. *How America Searches: Health and Wellness*. January 2008.

Health 2.0

Holt's best guess at the constituent parts

- Personalized search that finds the right answer for the long tail
- Better presentation of integrated data
- Communities that capture the accumulated knowledge of patients and caregivers; and clinicians
- Intelligent tools for content delivery

And just maybe....

Patients (really!) in charge of their own care ??

Personalized search

The screenshot shows a Mozilla Firefox browser window with the address bar displaying `http://www.healia.com/healia/search.jsp?query=diabetes&x=0&y=0`. The search engine is Healia, and the search term is "diabetes".

Search Results:

- More general: [endocrine system diseases](#), [pancreatic islet disorder](#)
- More specific: [diabetes insipidus](#), [diabetes mellitus](#), [central diabetes insipidus](#)

Results for diabetes (Showing 1 - 10 of 3,906,365)

Suggested Result for [Diabetes mellitus](#) [Source: Wikipedia]

Diabetes mellitus is a disease characterized by persistent hyperglycemia (high blood sugar levels), resulting either from inadequate secretion of the hormone insulin, an inadequate response of target cells to insulin, or a combination of these factors. [\[more\]](#)

Filters: Professionals, Females, Males, Kids, Teens, Seniors, African Heritage, Hispanic Heritage, Native Peoples, Basic Reading, Advanced Reading, HONcode Sites, URAC Accredited, Privacy Policy, Easy to Scan, Fast Loading, For Text Browsers, Interactive Tools.

Search Results List:

- [American Diabetes Association Home Page](#)**
Get the latest **diabetes** news and **diabetes** research summaries . What is the best tool to use to trim my toenails? Donate today . The scammers use official looking documentation (with...
<http://www.diabetes.org/home.jsp> - More from site - Cached - Email This
Attributes: Treatment, Prevention, Advanced Reading, Privacy Policy
- [National Diabetes Information Clearinghouse](#)**
Newsletter BACK TO... Newly diagnosed or at risk? **Diabetes**-related problems of the heart, kidneys, eyes, feet and skin, nerves, teeth and gums...
<http://diabetes.niddk.nih.gov/> - More from site - Cached - Email This
Attributes: Advanced Reading, Privacy Policy, Fast Loading
- [Diabetes](#)**
Web site for **Diabetes**.
<http://diabetes.diabetesjournals.org/> - More from site - Cached - Email This
Attributes: Advanced Reading, Fast Loading
- [Canadian Diabetes Association](#)**

Sidebar Links:

- [Diabetes Facts & Info](#) (www.walmart.com)
- [American Diabetes Association](#) (www.diabetes.org/ - 48k)
- [Diabetes Information](#) (www.diabetes.org/)
- [Diabetes information](#) (www.diabetes.com/ - 13k)
- [Diabetes](#) (diabetes.diabetesjournals)
- [Diabetes -- Arch](#)

A blue arrow points from the "American Diabetes Association" link in the sidebar to the first search result.

Intelligent Communities

ovarian_cancer : Messages : 4501-4530 of 4530 - Mozilla Firefox

Hi, bluetopaz | [Invite](#) | [Help](#) | [Sign Out](#)

Daily Strength

Home Communities Treatments People Search GO

- Home
- Messages
- Post
- Files
- Photos
- Links
- Database
- Polls
- Members
- Calendar

My Page edit

- My Journal write
- My Friends 1 new
- My Messages 1 new
- My Hugbook 1 new
- My Photos & Videos

Treatments

Most Popular | 0 - 9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Most Popular Treatments

Treatment	Description	Reviewed by	Helps
+ Add Psychotherapy	Psychotherapy is a range of techniques which use only dialog and communication and wh... Read Reviews	6539 Members	87% of the time
+ Add Crying	To weep is to make less the depth of grief. - William Shakespeare, King Henry the Six... Read Reviews	4624 Members	84% of the time
+ Add Prayer	Prayer is an active effort to communicate with a deity or spirit either to offer prai... Read Reviews	3610 Members	93% of the time
+ Add Lexapro	Escitalopram acts as a selective serotonin reuptake inhibitor or SSRI. It is typicall... Read Reviews	3438 Members	63% of the time
+ Add Support from Friends & Family	The support and encouragement of friends and family can have a very powerful effect o... Read Reviews	3270 Members	93% of the time

Send a friend an eHug now

Ads by Google

Weight gain solution.
There is a reason and solution for antidepressant weight gain.
www.theroadback.org

Yahoo! Groups
Did you know...
Hear how Yahoo Groups has char the lives of othe
[Take me there.](#)

Yahoo! 360°
Share your life through photos, blogs, more.

Done

HOLT STRATEGIST

Intelligently presenting content



doublecheckmd
because we care about your health



USER LOGIN

[Home](#) + [My Drugs](#) + [My Symptoms](#)

Your Personal Drug Evaluation

[My Evaluation](#)

[My Drug Combinations](#)

[My Next Steps](#)

[My Information](#)

Your personalized messages:

Next Steps

ASK YOUR PHYSICIAN ABOUT DRUG(S) THAT MAY CAUSE YOUR SYMPTOMS

Your physician should evaluate whether the following drugs could be causing your symptoms

(easy bruising)

- Prozac
- Prozac and aspirin (drug interaction)
- Cardizem and aspirin (drug interaction)

BLOOD TESTS

Ask your physician whether you need the following blood tests (if you've not already had them):

- Prothrombin time or an "INR"
- Bleeding time

FOLLOW UP WITH YOUR PHYSICIAN

Your physician will want to follow you closely to check for:

- Effectiveness of blood pressure-lowering medications

WATCH FOR THESE SIDE EFFECTS

Watch closely for the following side effects and notify your physician immediately should any of these develop:

- Muscle pain
- Muscle weakness
- Muscle tenderness
- Worsening chest pain (angina)

the past 5 years;

Doing it all?

PatientsLikeMe: Patients Helping Patients Live Better Every Day - Mozilla Firefox

http://www.patientslikeme.com/

RoboForm Search Logins (passcards) Matthew Holt Save Generate

patientslikeme™ Patients helping patients live better every day.

Patients Treatments Symptoms Community Search this site Search » ? Help

Learn

Find

Share

Share Your Experience »
See how easy it is...

Find Patients Like You »
Try it out...

Learn From Others »
Discover the power of many...

Join Now (It's free!)

Already a member? [Log in](#)

Click on member photos for more details

Visit Active Communities

- ALS (Lou Gehrig's Disease)
- Multiple Sclerosis
- Parkinson's Disease/PSP

"Thank you for helping 'people like me'"
— A PatientsLikeMe patient [Read more...](#)

Done

Start Health 2.0 - Mozilla Fi... PatientsLikeMe: Pati... Calendar - Microsoft ... Microsoft PowerPoint My Documents >> Consulting gigs >> Health20 >> 0:5 0 matthewseparate@gmail.com 9:14 AM



AlmasDaddy
Male, 46 years
CA, United States

ALS: 3 yrs

Member since: 11/06
 Last updated: 01/08/08

Diagnosis Summary
 Onset: Arms
 First symptom: 02/05
 Diagnosis: 02/05

Forum Activity
 260 posts 360 helpful marks

About Me
 My name is Michael I live in California with my wife and children. I was diagnosed with both upper and lower extremity amyotrophic lateral sclerosis (ALS). I was a Master Mechanic, repairing and maintaining emergency standby generators, heavy fire emergency vehicles as well as medium and light duty cars and trucks. I specialized in electronics and I spent a lot of time snowmobiling, flying with a close friend of mine, camping with my family and friends, and waterskiing, scuba diving and free diving for abalone, going to the movies with my wife and friends, enjoying life. For now I spend the majority of my day on the computer, either reading, writing or researching how others cope with the disease. Life is good.

945 Views | ALS Public Registry

My CareTeam: Anonymous, Anonymous, Anonymous

ALS Condition

FRS: 16
 (latest: 12/12/07)

Progression rate percentile

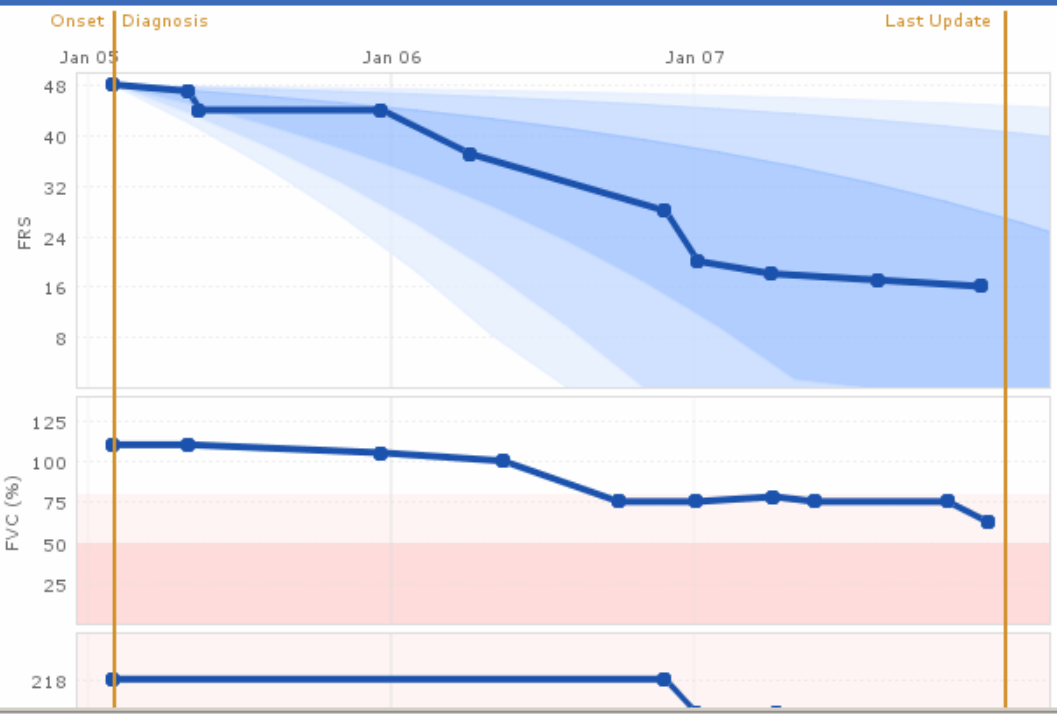
- 5-10th (rapid)
- 10-25th
- 25-75th (average)
- 75-90th
- 90-95th (slow)

FVC: 62%
 (latest: 12/21/07)

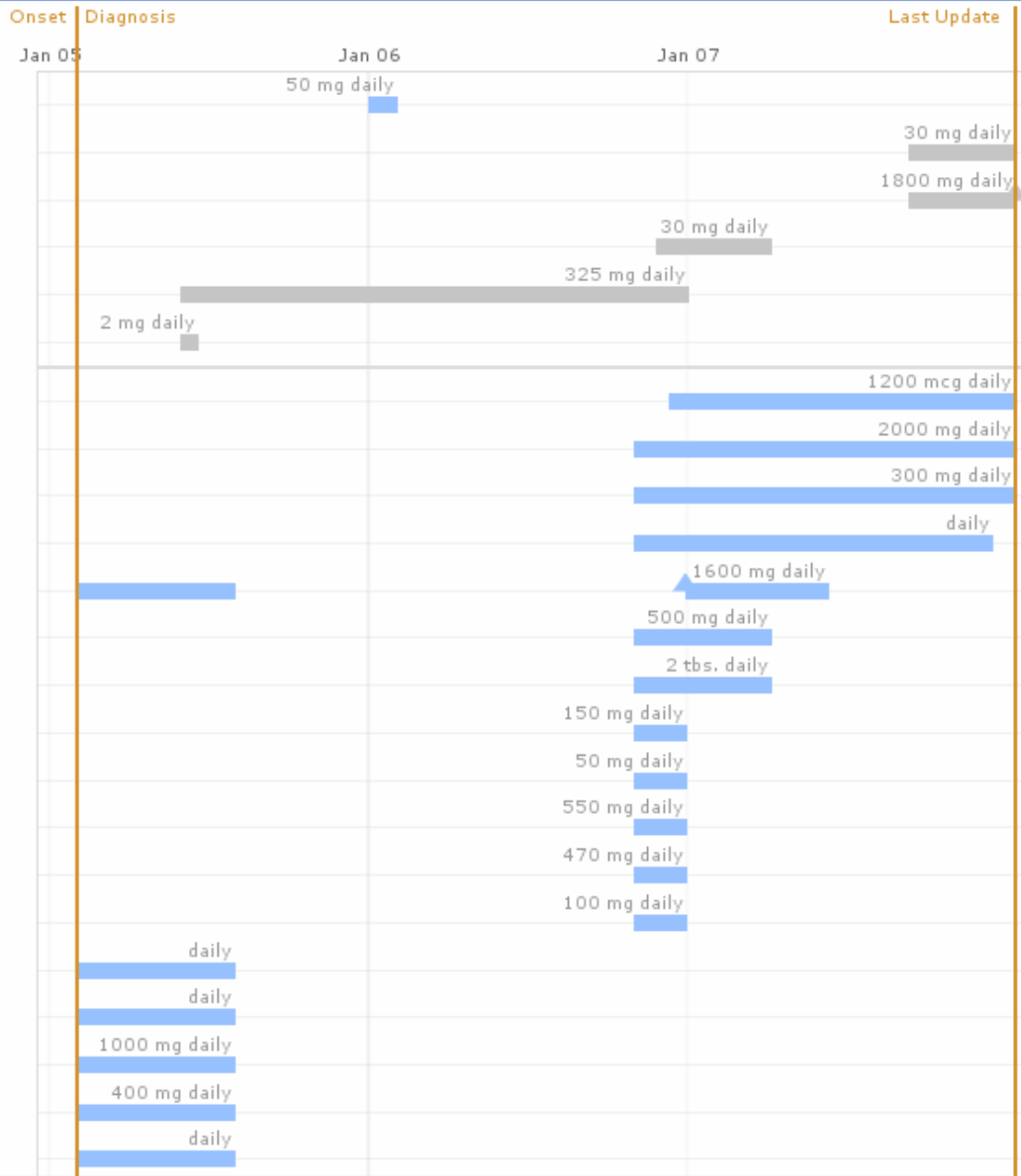
Warning Levels

- warning
- severe

Weight: 185 lb
 (latest: 01/08/08)

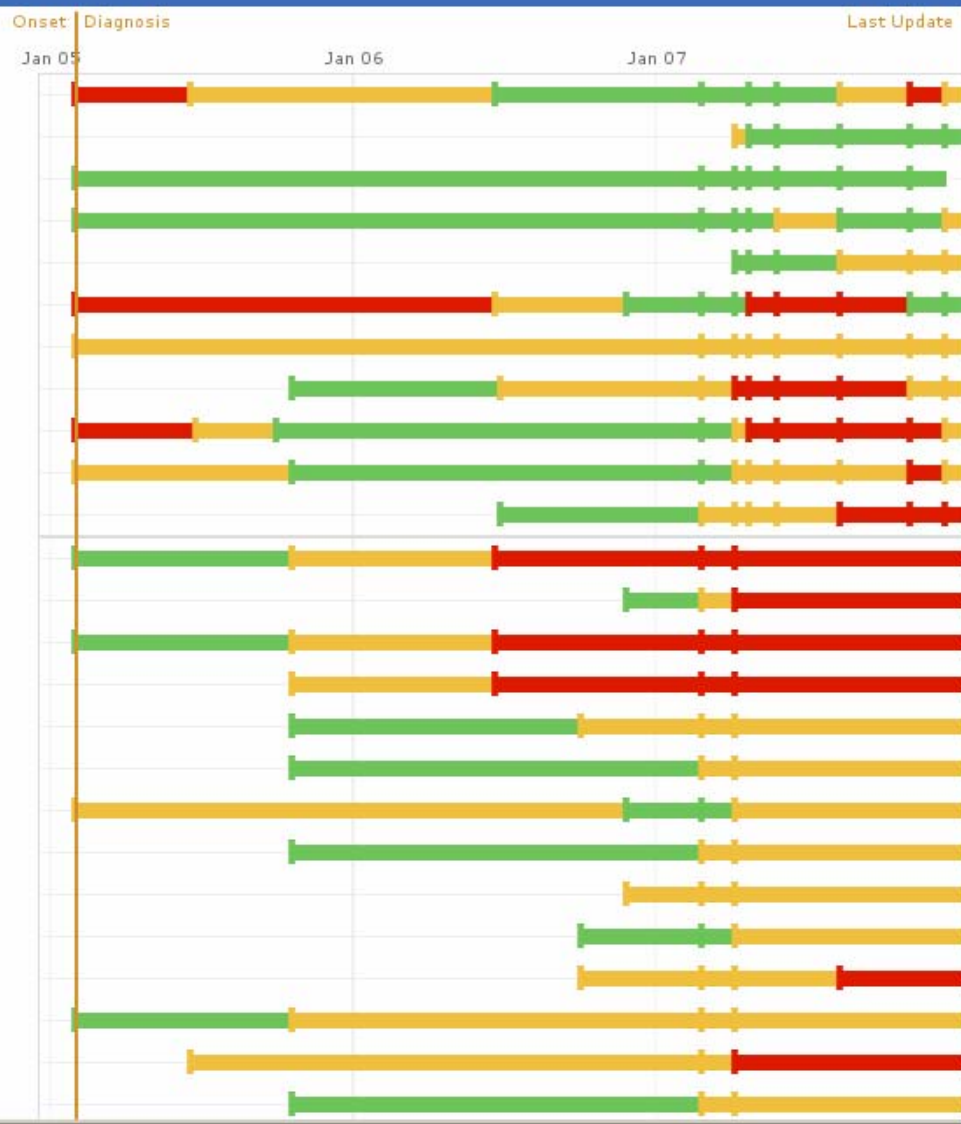


Treatments



- Rilutek (riluzole)
- Baclofen
- Gabapentin
- Amitriptyline
- Quinine Sulfate
- Ceftriaxone
- Vitamin B12
- Vitamin C
- Vitamin B Complex
- Vitamin E
- CoQ10
- Garlic
- Flax Seed Oil
- Milk Thistle
- Zinc
- Ginger root
- Burdock Root
- Grape Seed Extract
- Vitamin C - Powder
- Coral calcium
- Omega 3 fish oil
- Alpha Lipoic Acid
- Vitamin - Multi

Symptoms



Primary Symptoms

Severity of Symptoms

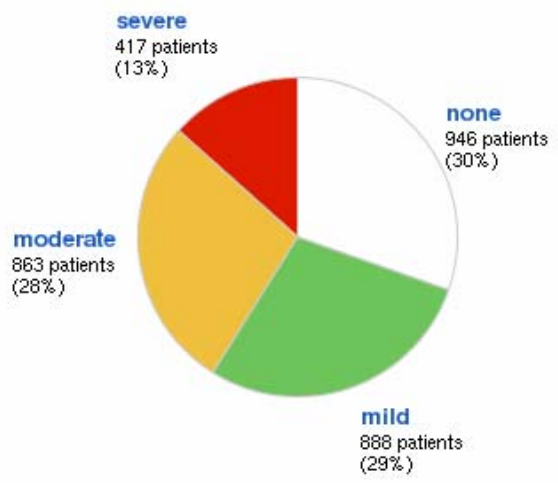
- none
- mild
- moderate
- severe

Secondary Symptoms

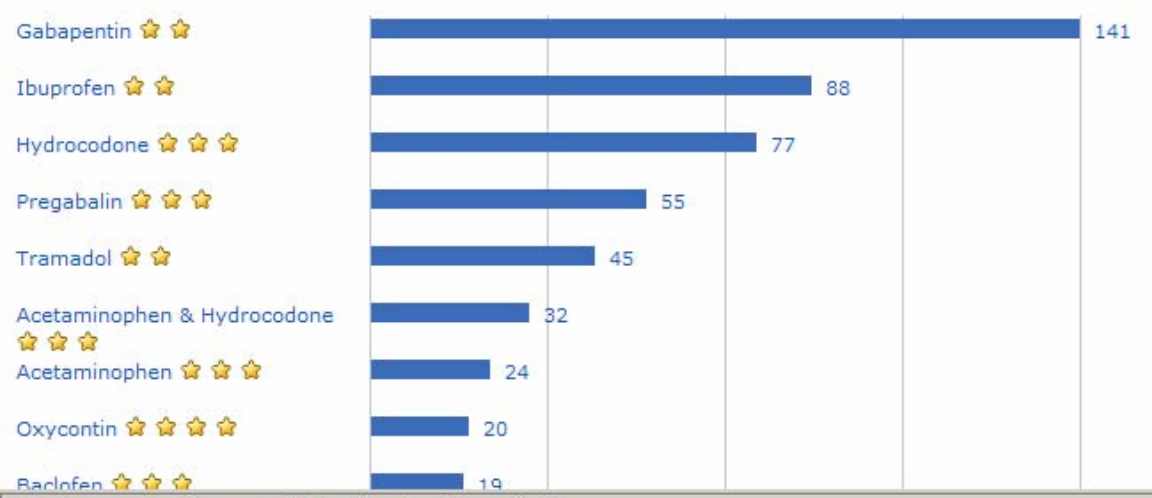
- Anxiety
- Constipation
- Depression
- Emotional lability
- Excess saliva
- Excessive yawning
- Fasciculations
- Fatigue
- Insomnia
- Pain
- Stiffness/spasticity
- Atrophy, hand muscle
- Atrophy, lower body r
- Atrophy, muscle
- Atrophy, upper body r
- Breathing difficulty
- Choking/coughing whi
- Cramps
- Difficulty speaking
- Fingers curl
- Foot drop
- Heavy sensation
- Overly active reflexes
- Ringing in ears (tinnit)
- Slurred speech

What we've learned

Symptom Severities



Treatments Patients Take For Pain



patients

Experiencing Pain

- SueAnne56 mild
- Dawn431965 severe
- NIM mild

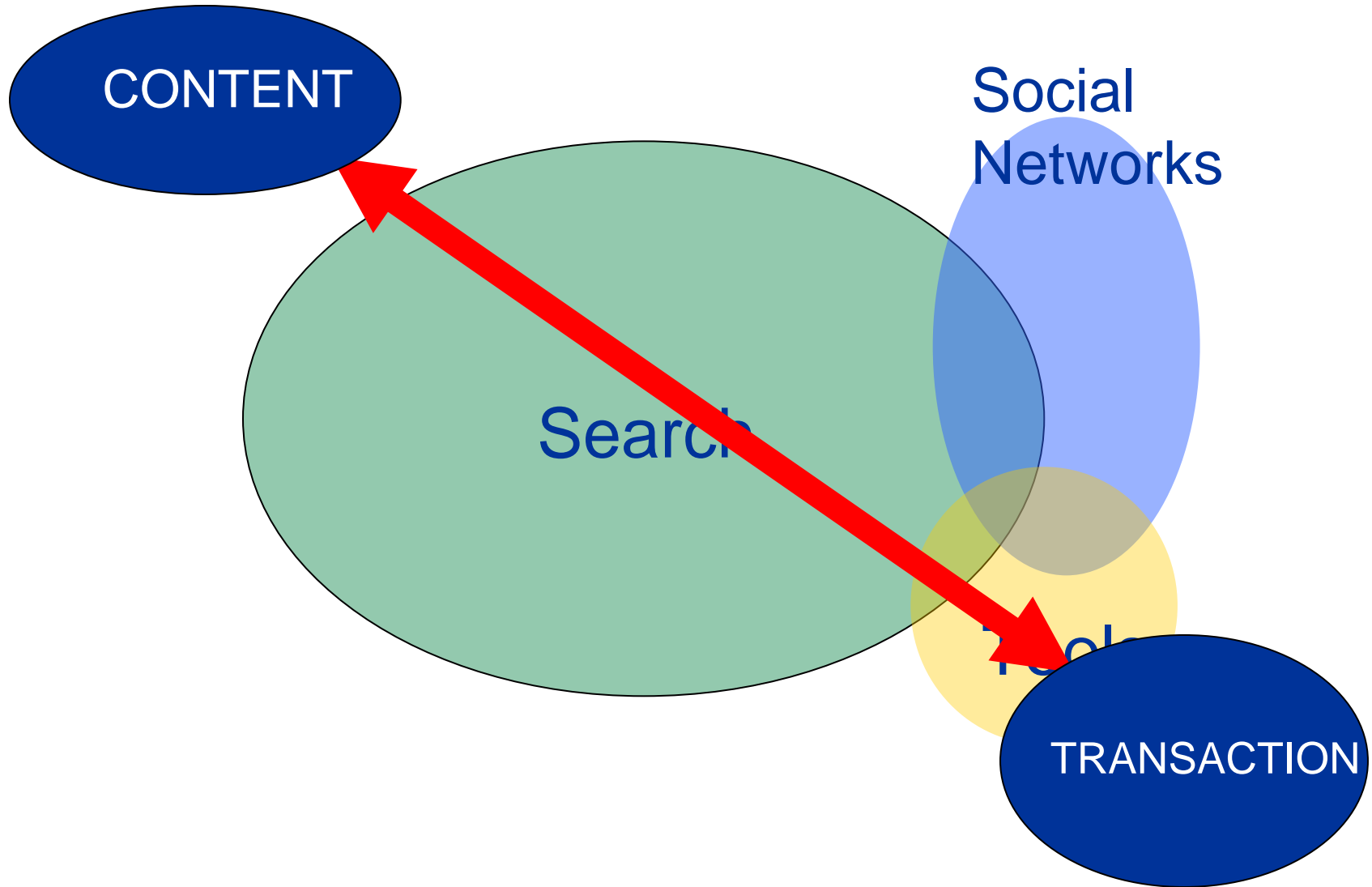
2165 patients currently experience Pain. [See all](#)

forum

What are people saying about Pain?

There are **4141** posts in our forum about Pain. [Join now](#) and see what people are saying.

Health 2.0: User-Generated Healthcare



Health 2.0: Scott Shreeve's Definition

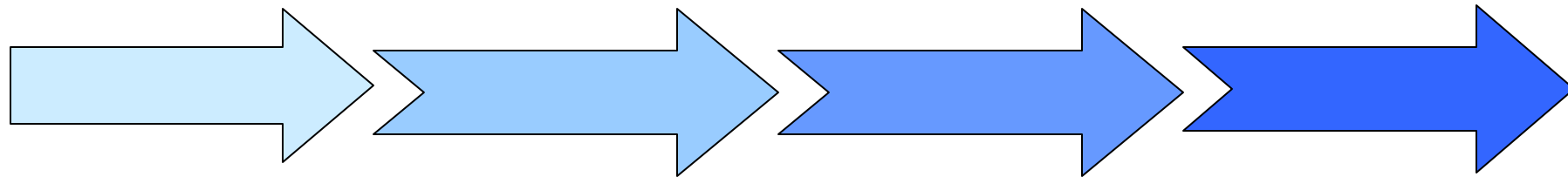


"New concept of healthcare wherein **all constituents** (patients, physicians, providers, and payers) focus on **healthcare value** (outcomes/price) and use **competition at the medical condition level** over the **full cycle of care** as the catalyst for improving the **safety, efficiency, and quality** of health care."

Health 2.0 as a Market



A continuum of Health 2.0?



User-generated health care

Use of Web2.0 technologies for patients and physicians to communicate and investigate **without connecting** to the health care system

Users connect to providers

Tools and communities created as part of Web2.0 in health care, which then becoming connected to the system (i.e. creating appointments, conducting transactions, managing clinical events)

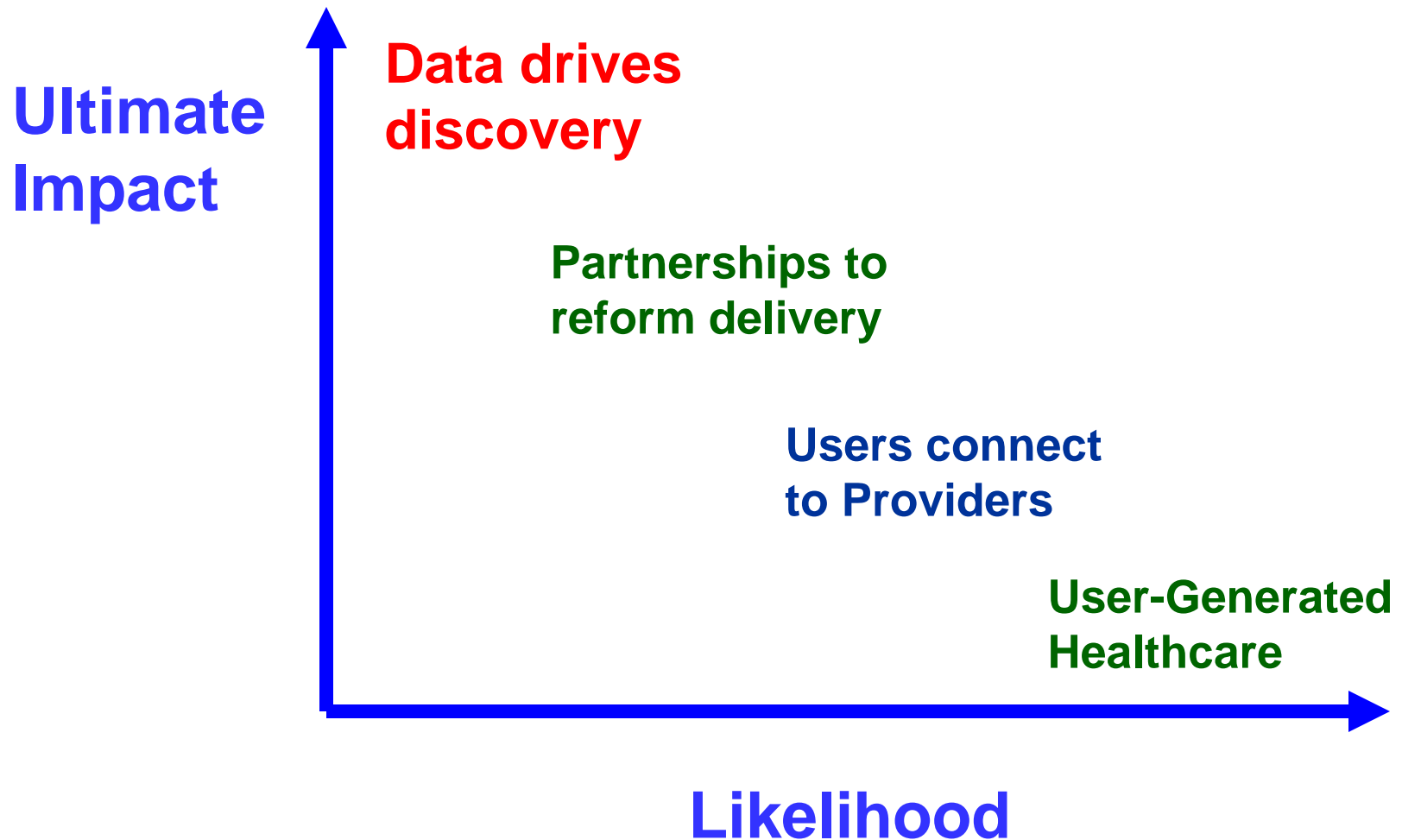
Partnerships to reform delivery

Reforms in payment structures, transparency, and technology produce changes in delivery structure and process around chronic care treatment, excellence centers for particular procedures, etc.

Data drives discovery

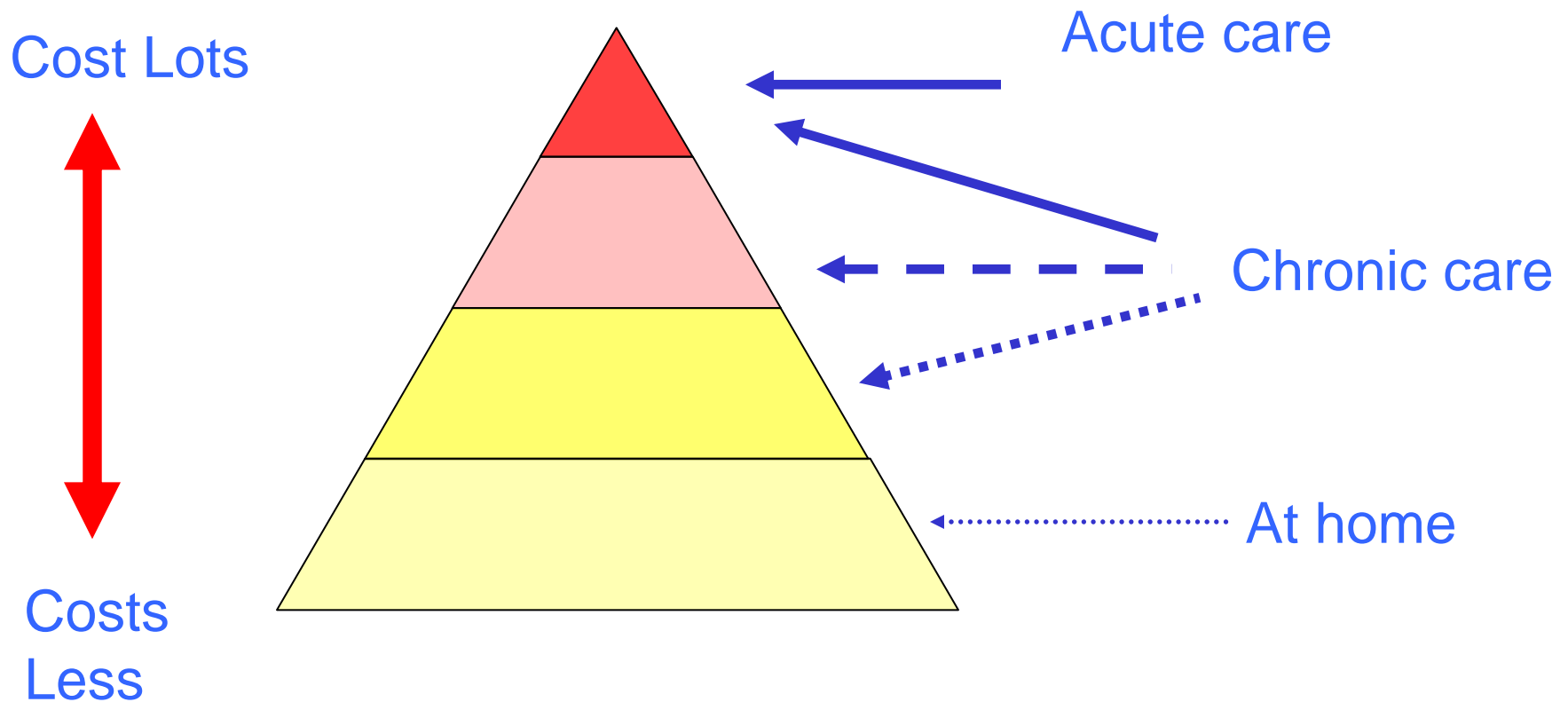
All the data collected in a combination of a, b & c produces leaps ahead in the process of care and eventually in drug and procedure discovery.

The Present and Potential of Health2.0



So why does Health 2.0 matter to DM?

Who Does the Caring?



#1. It may not

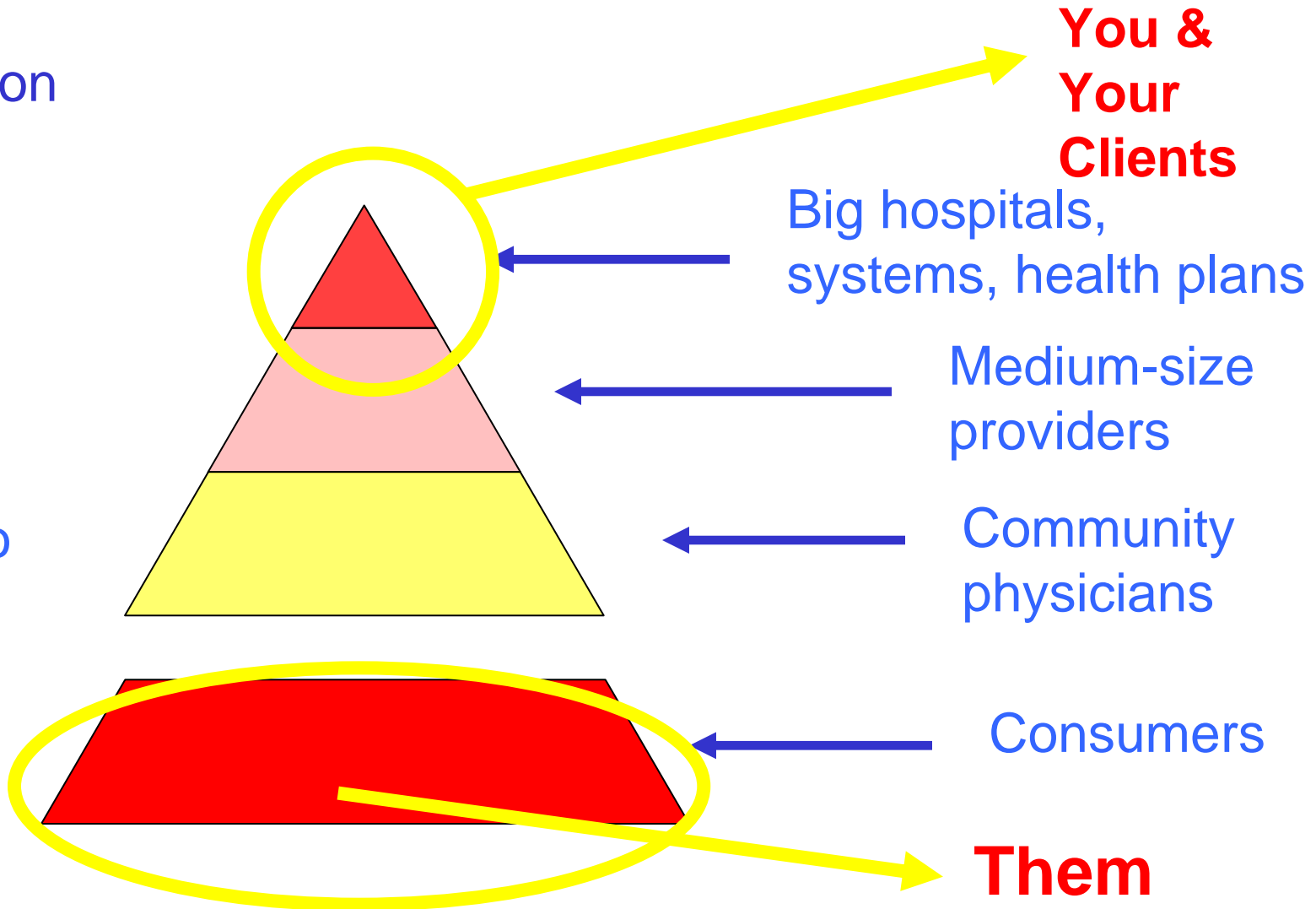
IT adoption

Lots



Not so much

Lots



#2. An underlying technology your customers will be using

"What we heard today was to me something like the mobile phone system; it kind of snuck in quietly. It didn't say it was going to replace the landline phones. It just appeared."

-- Esther Dyson at the first Health 2.0 conference, Sept 2007

#3. An encroachment on the health care establishment



Healthcare

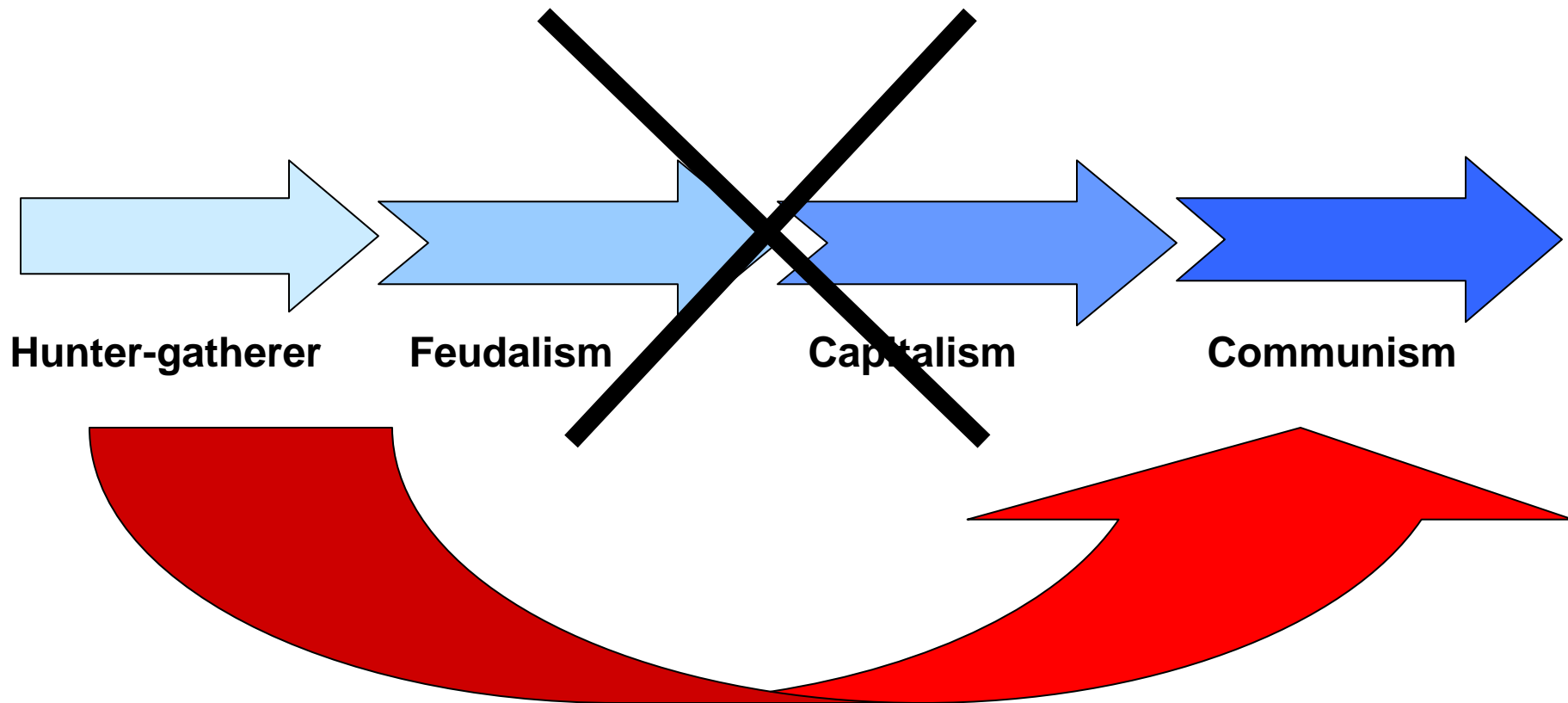


**#4. A set of tools that you
need to provide to your
customers**

But the implications of Health 2.0 may be controversial

- Maybe health care is just too complex?
- Patients and their caregivers may not accept the emerging DM role
- Transparency cuts both ways
- The paying customer may not see an ROI
- The medical establishment doesn't like this type of change

But remember Mongolia



And in health care?

