In the name of God

Improving Implementation Of Effectiveness By Using Health Information Technology(HIT)

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This presentation will cover:

- *What is Health Information technology(HIT)*
- *HIT in history*
- *Benefits of HIT for clinical practices*
- *Why HIT is important in clinical practice*
- *Some technologies*
- *Dashboard as an useful technology*

Historical view

John Snow conducted

A study undertaken in response to the 1854 cholera outbreak in London

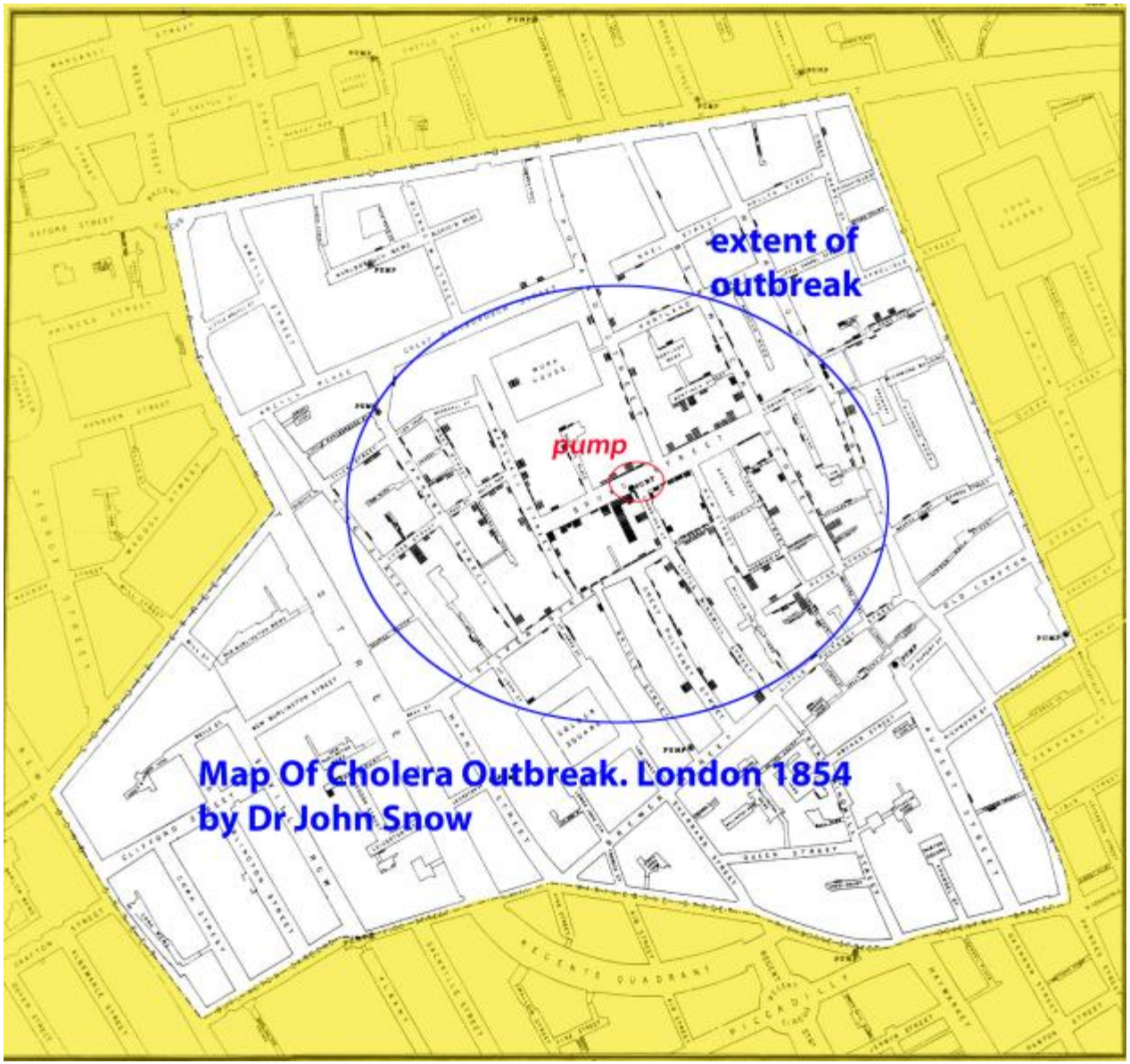
investigated and mapped the locations of the homes of those who had died in the outbreak

one of the first ***geographic information applications (GIS)*** *in public health*

By linking the locations of their homes to a single water pump

established that cholera was a water-borne disease

Of the 89 people who died, only 10 lived closer to another pump

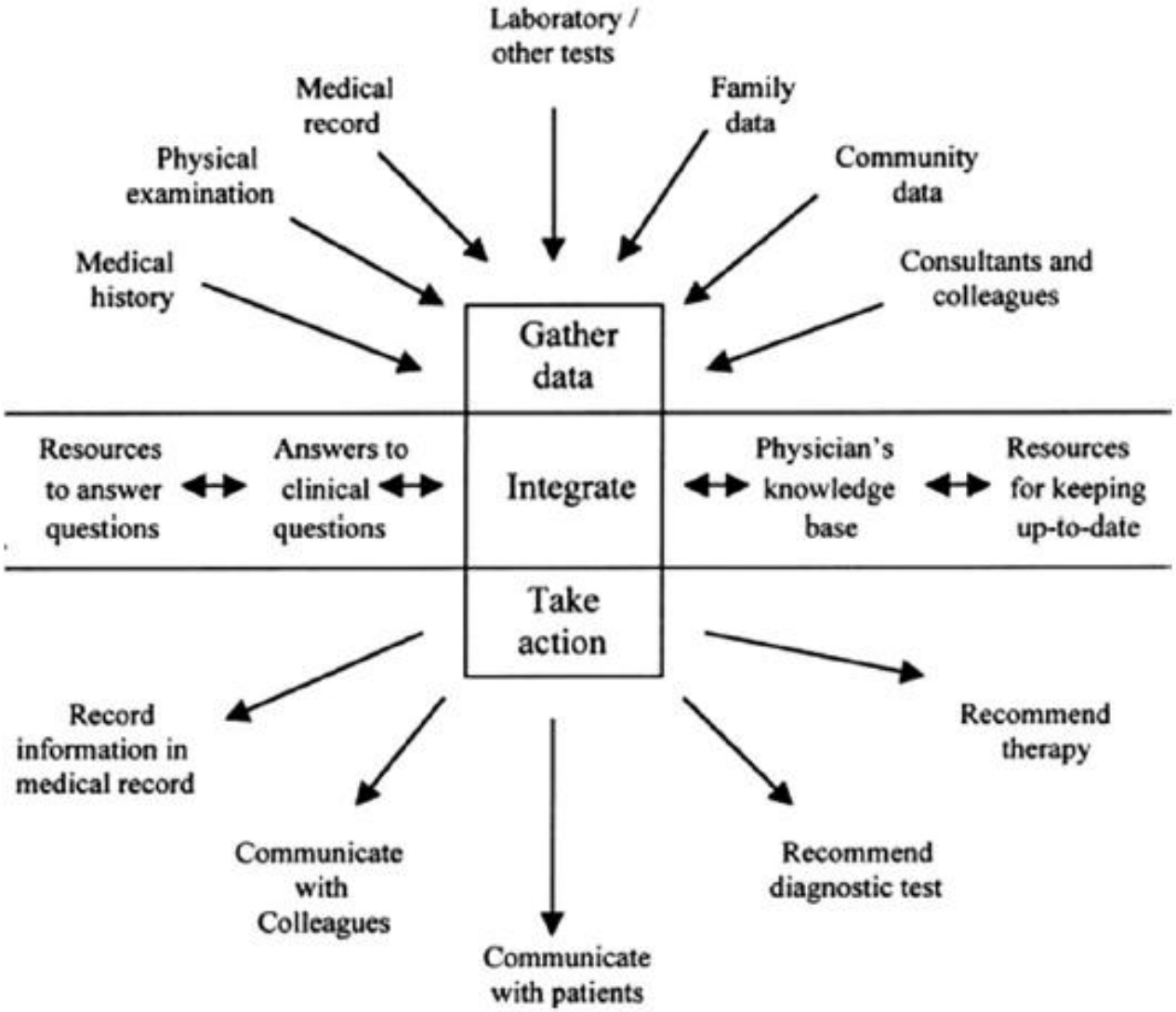

extent of
outbreak
pump
Map Of Cholera Outbreak. London 1854
by Dr John Snow

The Role of Health Information Technology in Quality

The importance of using information technology as an integral component of quality initiatives was identified early in the development of electronic medical records (EMR) in the classic paper by

Clement McDonald, ‘‘Protocol-Based Computer Reminders, the Quality of Care and the Non-Perfectability of Man,’’

That paper, published in 1976, demonstrated the need for computerized reminders in a crossover study in an internal medicine clinic.



Robert L. Hunter (2011)

Bagley and Waldren(2011)

We live in a world

that is so rich with information

that managing, filtering, and organizing the data has become our most important challenge

as we strive to use information technology (IT) to help us deliver reliable, high-quality care to our patients.

What is health information technology (HIT)?

Health information technology (HIT) is the area of IT involving the design, development, creation, use and maintenance of information systems for the healthcare industry.

Health information technology may be useful for:

- Reducing paperwork by eliminating the need for handwritten medical records

- Reducing medical errors by transmitting accurate information electronically and eliminating mistakes due to misreading of your doctor's handwriting

- Reducing health care costs by decreasing the need for repeat medical tests by different doctors and eliminating storage space and staff time to maintain medical records

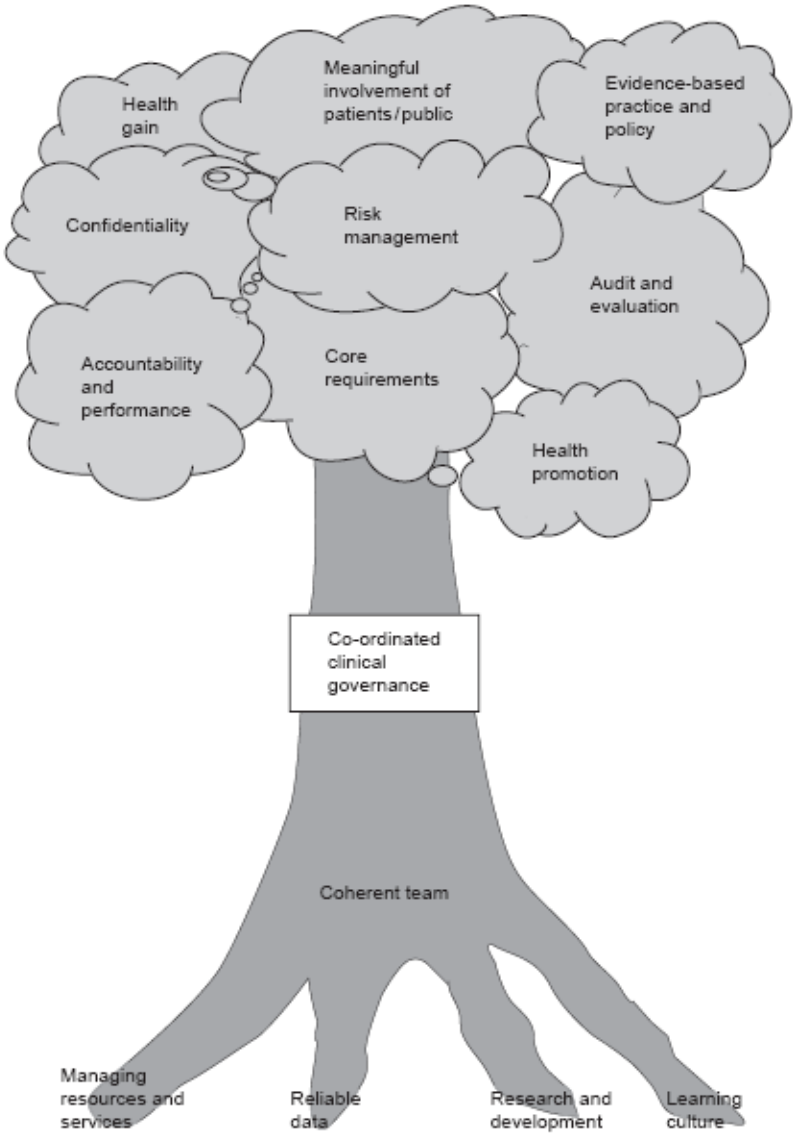
- Improving your quality of care by decreasing medical errors and assuring that all your health care providers have accurate and timely information

Other Roles for HIT

- *provide active clinical decision support through reminders for tasks*
- *extract data for external quality reporting*
- *integrate and share data from multiple sources*
- *Provide continuing professional development*

Gregory J. Esper(2010)

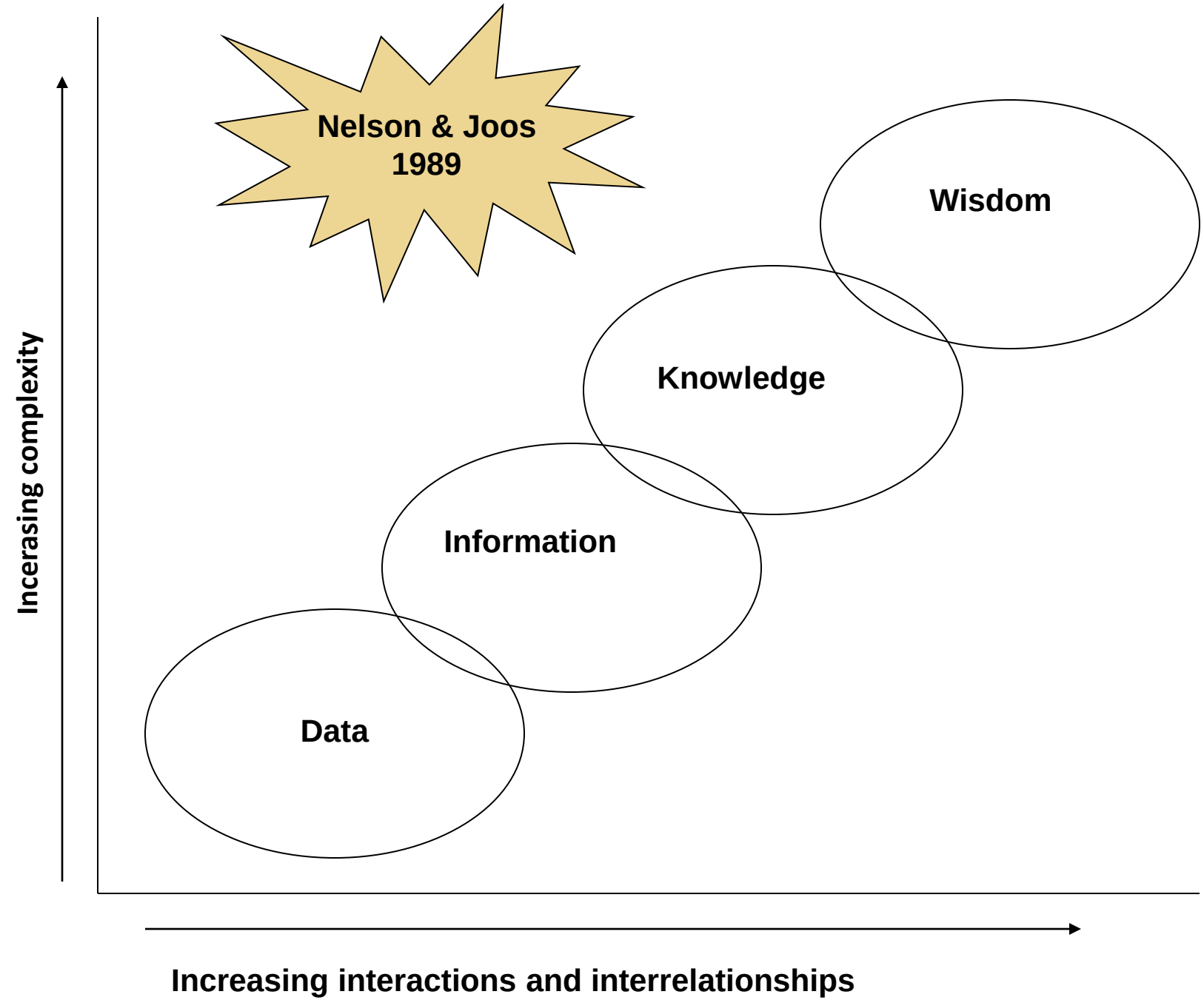
- HIT should allow patients to access clinical information
- HIT should comply with federal and state privacy standards
- HIT must document patient progress and provide clinical summaries
- HIT must provide for exchange of health information between providers
- HIT must implement drug-interaction safeguards
- HIT should send patients reminders about follow-up and preventive care
- HIT should be able to submit immunization and laboratory data to relevant public health registries
- HIT should support electronic prescribing



Chambers Wakley (2000)

The aspects of care that are most highly valued by patients :

- availability and accessibility of care – appointments, reasonable waiting times, good physical access, ready telephone access
- technical competence – health professional's knowledge and skills, effectiveness of professional's treatment
- communication – time to listen and explain, give information and share in decisions
- interpersonal factors such as health professional being humane, caring, supportive and trustworthy
- good organization of care – continuity, coordination, near location of services.


Nelson & Joos
1989
Wisdom
Knowledge
Information
Data
Incerasing complexity
Increasing interactions and interrelationships

Why HIT is important in clinical practice

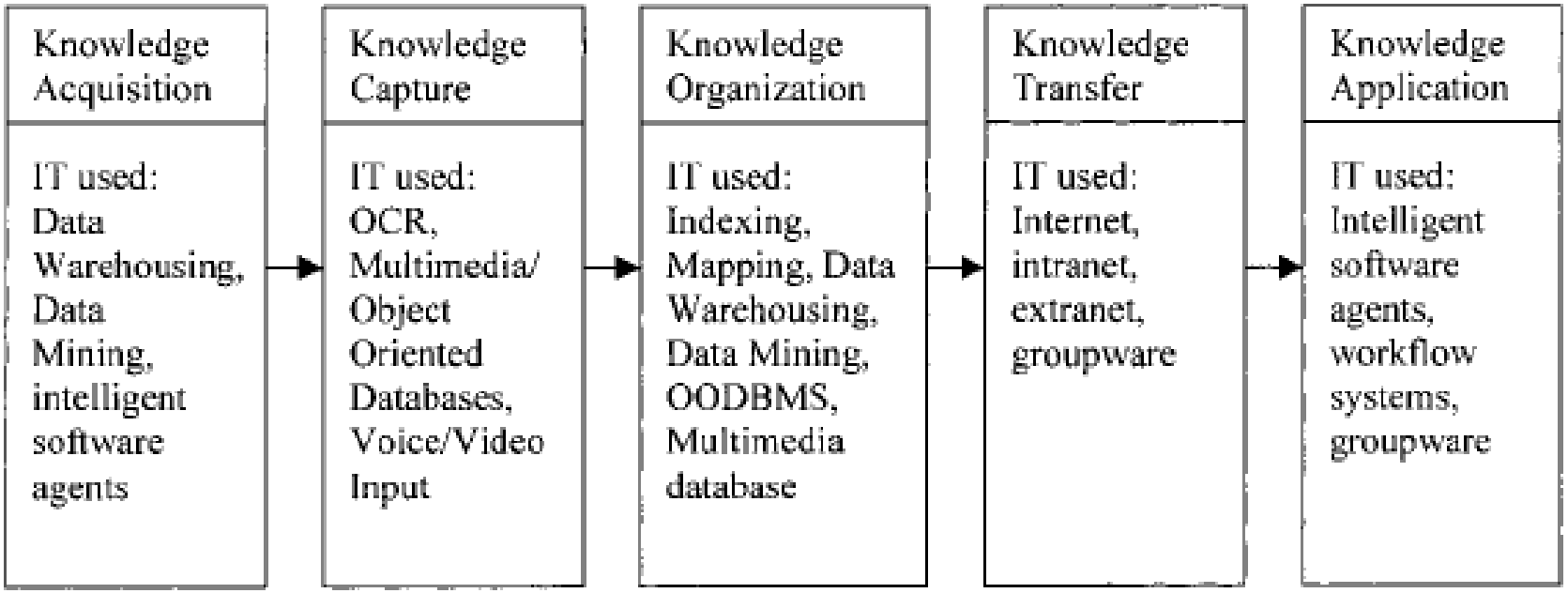
Transforming healthcare data to information

Medical errors costs are very high

Better information improves patient care

Some technologies

Computerized provider order entry (CPOE)
Online Analytic Processing(OLAP)
Knowledge Discovery in Databases (KDD)
Data Mining (DM)
Document imaging devices
Web-based tools and applications for mobile or handheld devices, such as cell phones and personal digital assistants(PDA)
Knowledge-based information systems
Group wares(GW)
…….


Knowledge Acquisition
IT used: Data Warehousing, Data Mining, intelligent software agents
Knowledge Capture
IT used: OCR, Multimedia/ Object Oriented Databases, Voice/Video Input
Knowledge Organization
IT used: Indexing, Mapping, Data Warehousing, Data Mining, OODBMS, Multimedia database
Knowledge Transfer
IT used: Internet, intranet, extranet, groupware
Knowledge Application
IT used: Intelligent software agents, workflow systems, groupware

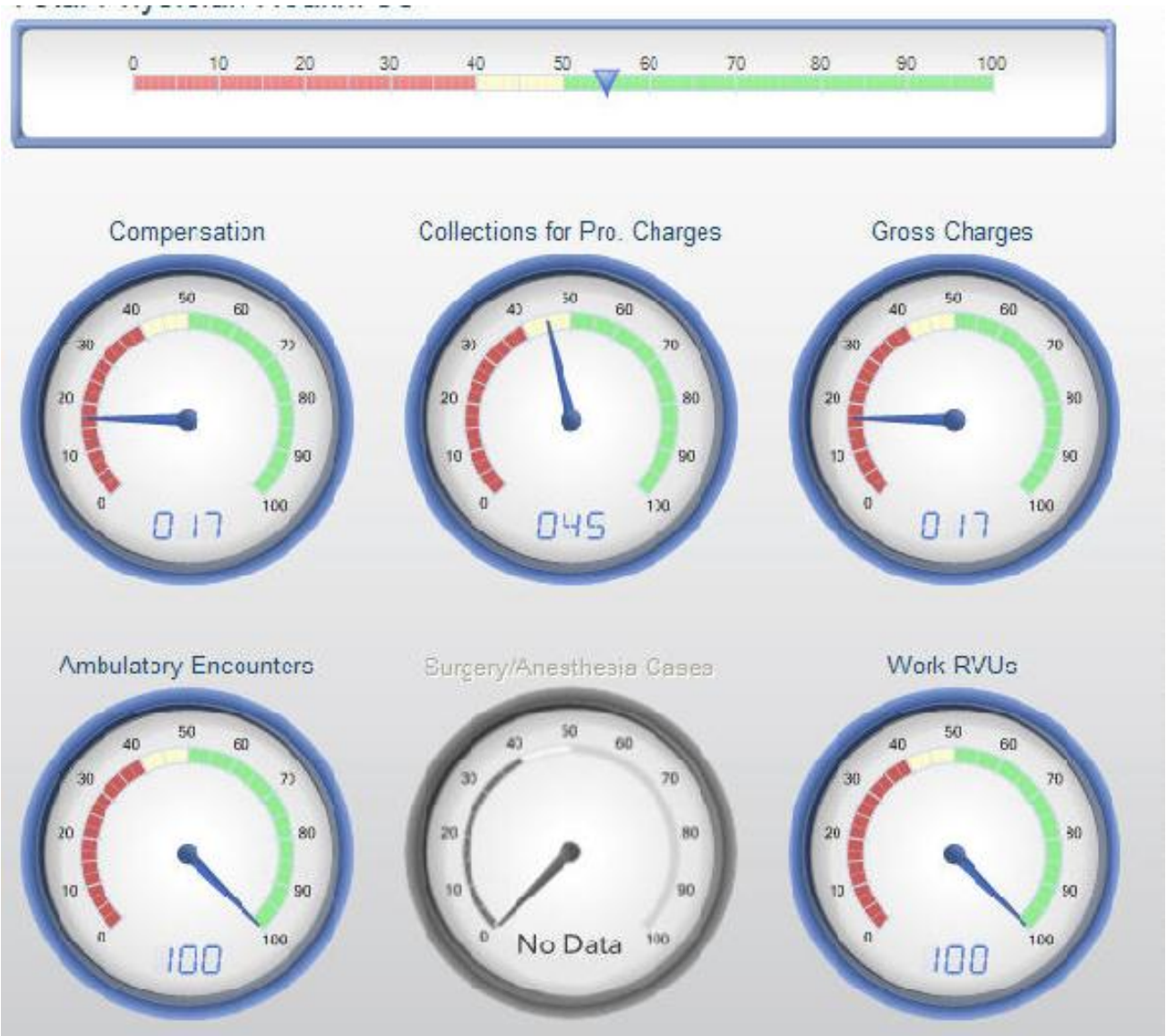
?

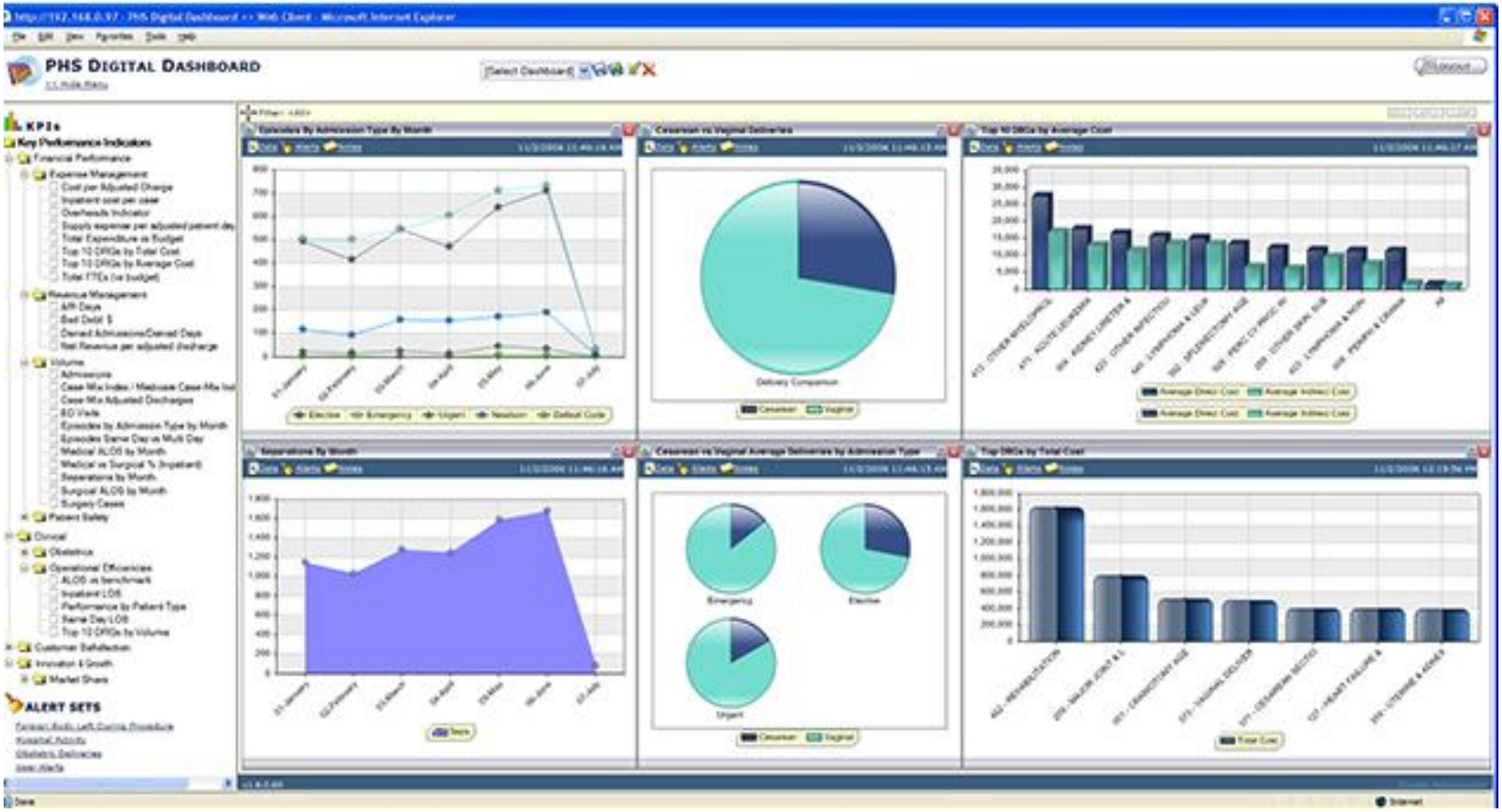
Dashboard

the part of a car that contains some of the controls used for driving and the devices for measuring esp.
Speed and Distance

Dashboard in Healthcare

Dashboards are being utilized to monitor hospital and healthcare quality indicators, and are customized for each organization taking into account their data sources and the goals of the organization


0 10 20 30 40 50 60 70 80 90 100
Compersation
017
Collections for Pro. Charges
045
Gross Charges
017
Ambulatory Encounters
100
Surgery/Anesthesia Cases
No Data
Work RVUs
100


PHS DIGITAL DASHBOARD
KPIs
Key Performance Indicators
Financial Performance
Expense Management
Revenue Management
Volume
Clinical
Customer Satisfaction
Innovation & Growth
Market Share
ALERT SETS

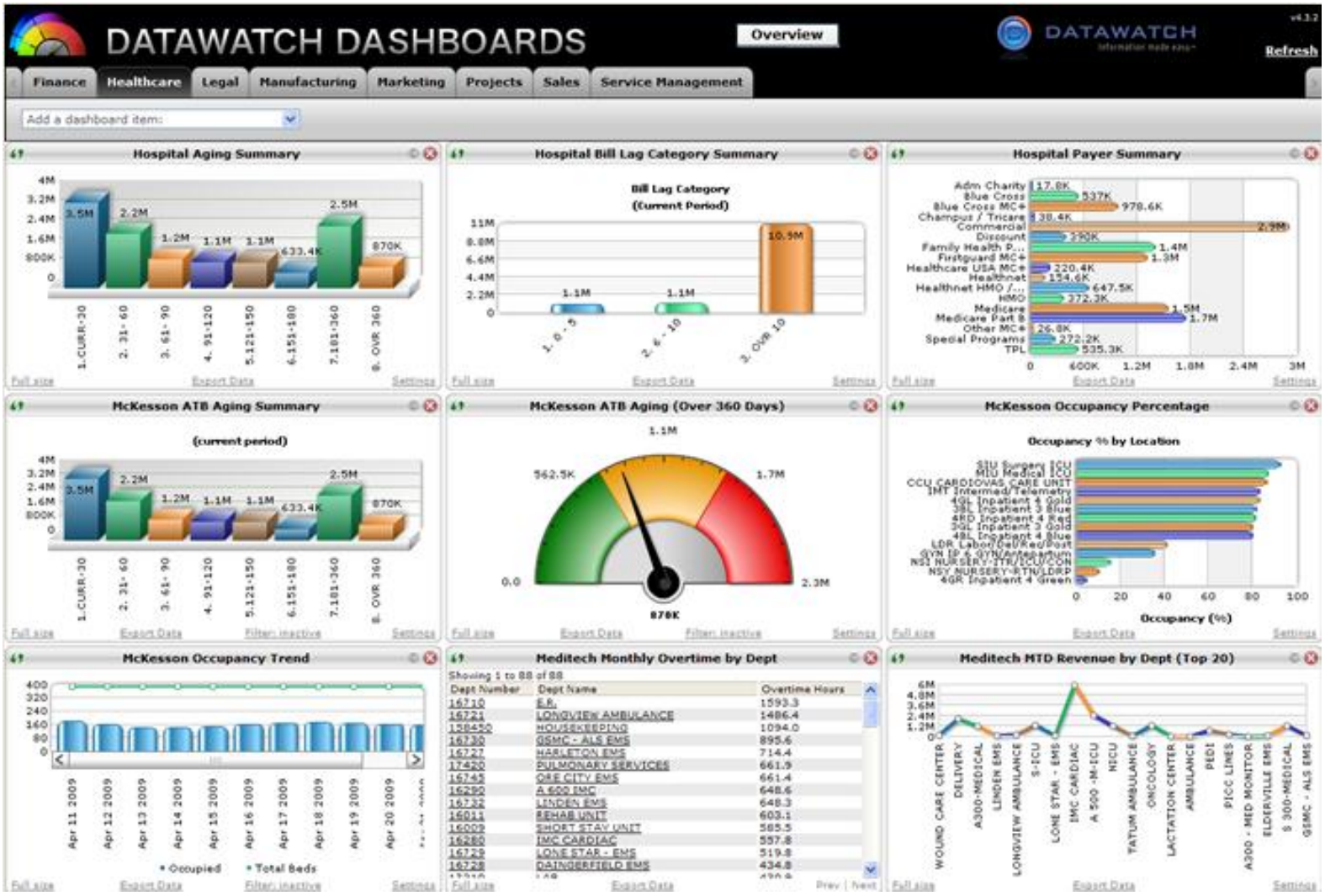
Dashboard technology may be useful for:

improving access to information in the record by making information more readily available and displaying that information in a way that can be understood quickly to support informed decision-making in a time constrained patient-care environment

Dashboard and Electronic Health Record(HER)

Although electronic health records (EHRs) hold great promise for improving clinical care,

they sometimes function more as data repositories than as dynamic patient care tools.


DATAWATCH DASHBOARDS
Overview
DATAWATCH
Refresh
Finance
Healthcare
Legal
Manufacturing
Marketing
Projects
Sales
Service Management
Add a dashboard item:
Hospital Aging Summary
1.CURR-30
2. 31- 60
3. 61- 90
4. 91-120
5.121-150
6.151-180
7.181-360
8. OVR 360
Hospital Bill Lag Category Summary
Bill Lag Category
(Current Period)
1. 0 - 5
2. 6 - 10
3. OVR 10
Hospital Payer Summary
Adm Charity
Blue Cross
Blue Cross MC+
Champus / Tricare
Commercial
Discount
Family Health P...
Firstguard MC+
Healthcare USA MC+
Healthnet
Healthnet HMO /...
HMO
Medicare
Medicare Part B
Other MC+
Special Programs
TPL
McKesson ATB Aging Summary
(current period)
McKesson ATB Aging (Over 360 Days)
McKesson Occupancy Percentage
Occupancy % by Location
Occupancy (%)
McKesson Occupancy Trend
Occupied
Total Beds
Meditech Monthly Overtime by Dept
Showing 1 to 88 of 88
Dept Number
Dept Name
Overtime Hours
16710 E.R. 1593.3
16721 LONGVIEW AMBULANCE 1486.4
158450 HOUSEKEEPING 1094.0
16730 GSMC - ALS EMS 895.6
16727 HARLETON EMS 714.4
17420 PULMONARY SERVICES 661.9
16745 ORE CITY EMS 661.4
16290 A 600 IMC 648.6
16732 LINDEN EMS 648.3
16011 REHAB UNIT 603.1
16009 SHORT STAY UNIT 585.5
16280 IMC CARDIAC 557.8
16729 LONE STAR - EMS 519.8
16728 DAINGERFIELD EMS 434.8
Meditech MTD Revenue by Dept (Top 20)
Full size
Export Data
Settings
Filter: inactive

YTD Sales vs Last Year

Open Deals vs Last Year

Win Ratio vs Last Year

Last Year | Target Growth (40.00%) | Stretched Growth (100%)

Owner

- Andy Grant
- Brandon Armstrong
- Frank Cohen
- George Cohen
- James Bond
- John Smith

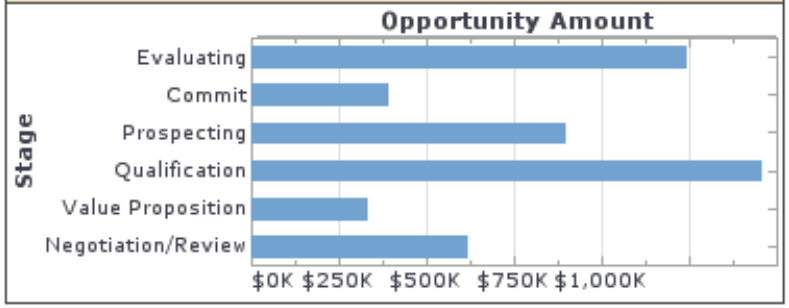
Exceptions

Exception	Count
Leads Inactive For 30 Days	0
Opportunities Past Close Date	56
Opportunities Inactive For 30 Days	59

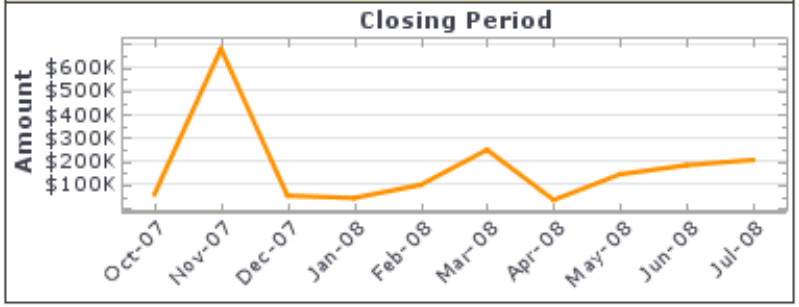
Top Opportunities

ID	Name	Account	Amount
0067000000Dr	Commun Europ	Commun Europe	$250,000.00
0067000000Dr	SpringShield -	SpringShield	$249,480.00
0068000000Lx	GenAsi esign -	GenAsi esign	$207,000.00
0067000000Dr	EquAll rated - I	EquAll rated	$159,000.00
0067000000Dr	Aspied - Gener	Aspied	$150,000.00
0067000000Dr	EquAll rated - I	EquAll rated	$119,326.00
0067000000Dr	Foratas - Gene	Foratas	$110,349.00

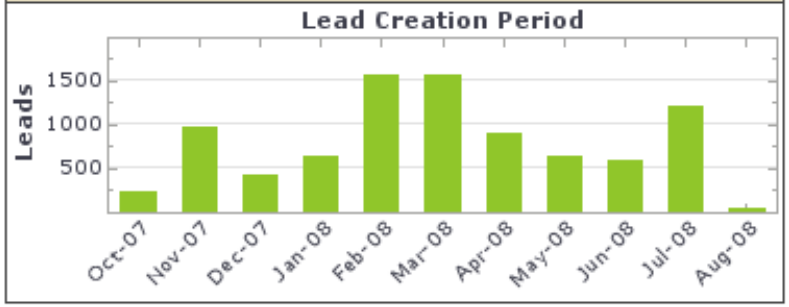
Current Pipeline



Opportunities Won



Leads Created



Adventure Works

Home | Sales | Product | Analysis

Scorecard (2008 YTD)

Revenue	-$41.22K
Reseller Sales Amount	-$41.22K
Internet Sales Amount	$0
Average Sale Amount	-$0.9
Gross Margin	+4.04M

Sales Distribution (2008 YTD)

(All)

Supply & Demand (Pending Orders)

Insufficient Supply | Restock Zone | Meets Demand

Product Name	Status	Sales Amount	Sales Qty	Safety Level	Expected Level	Details
LL Mountain Frame - Silver, 44		$0.00	0	500	0	
LL Mountain Frame - Silver, 48		$0.00	0	500	0	
LL Mountain Frame - Silver, 52		$0.00	0	500	0	
LL Road Pedal		$0.00	0	500	498	
ML Road Pedal		$0.00	0	500	494	
Touring-1000 Yellow, 54		$0.00	0	100	75	
Women's Tights, M		$0.00	0	4	0	
HL Road Frame - Black, 58		$0.00	0	500	0	
HL Road Frame - Red, 58		$0.00	0	500	0	
ML Mountain Frame - Black, 40		$0.00	0	500	0	

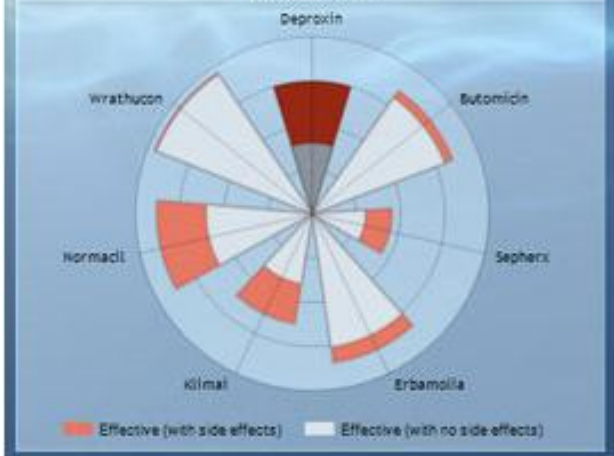

How Long Are ER Wait Times?
Time to see a Doctor
Time to get treatment
Within Target Wait Time
Above Target Wait Time
West General
University
St. Joseph
NorthEast General
0
50
100
150
200
250
300
350
400
450
Expected Stay If Admitted
On Average :
4.58
Days
How long To See A Specialist?
On Average :
11.00
Weeks
1
How Long To Receive My Procedure?
On Average :
9.00
Weeks
0
Previous Period Comparison
NorthEast General
St. Joseph
University
West General
St. Joseph
Mental Illness
Kidney & Urinary
Infection
Musculoskeletal
Less time than expected
More time than expected
Length Of Stay For Each Of Our Hospitals
Total Inpatients
5
4.5
4
3.5
3
2.5
2
Jan '10
Mar '10
May '10
Jul '10
Sep '10
Nov '10
University
NorthEast General
St. Joseph
West General

MST PHARMACEUTICALS

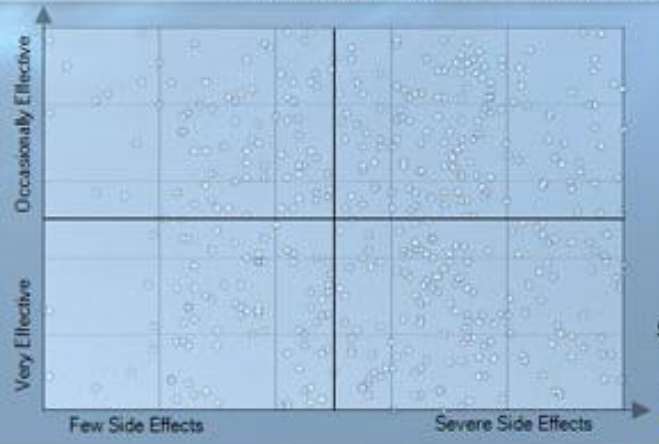
PHASE II CLINICAL TESTING

CLICK HERE TO LEARN HOW TO USE THIS DASHBOARD

Overall Efficacy



Population Distribution - Drag select to drill down



Distribution

Selected Percentage
0%

Sample Size
0

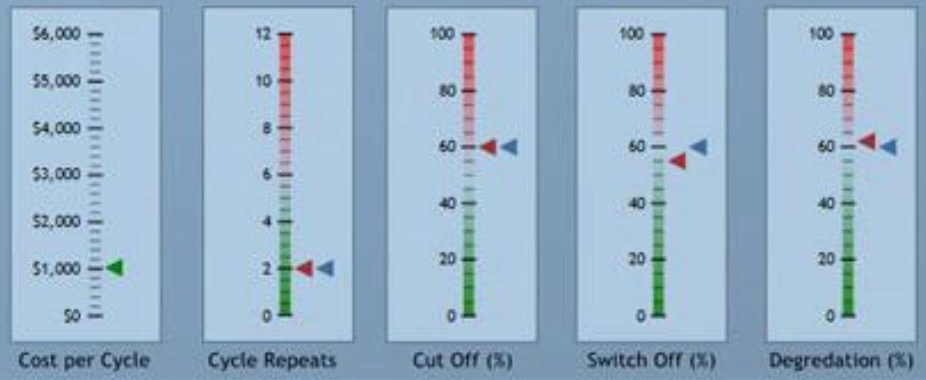
Population Size
518

Male/Female Correlation
0.7311

Correlation	Value Range
Small	0.10 to 0.29
Medium	0.30 to 0.49
Large	0.50 to 1.00

Male Female

Additional Metrics for Deproxin



Phase II Status

Overall Toxicity: 40%

Overall Efficacy: 35%

In summary

HIT has an important role in improving clinical practices

The quality of data is essential for quality in healthcare

Rapid changes and various technologies do not mean that HIT can do everything without human being

Dashboard is a way by which health information can be understood quickly

Thank you for your attention