
Marrying Technology to the Chronic Care Model

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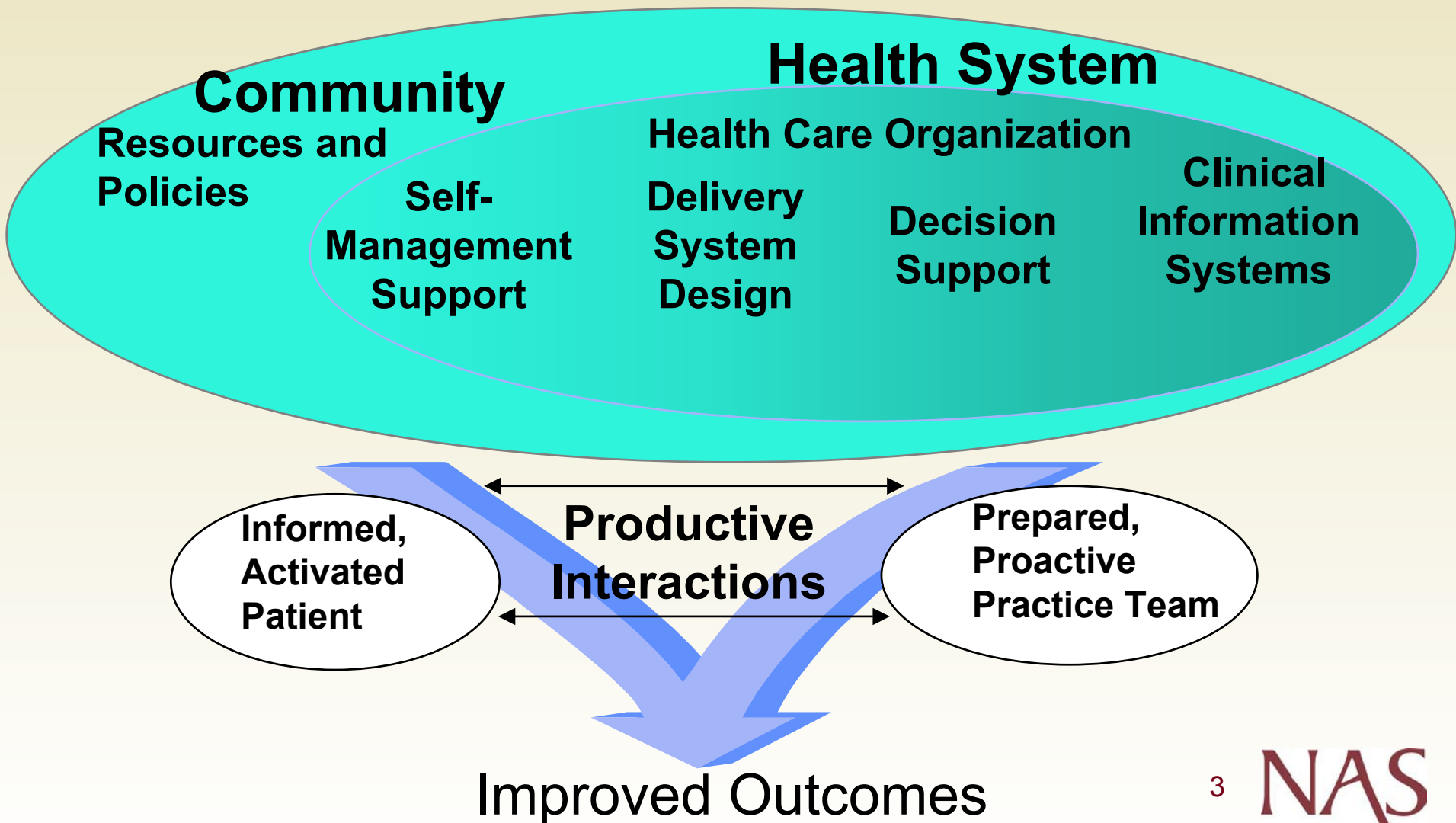
Faculty Director, Breakthroughs in Chronic Care Program

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The Quality Chasm



What Do We Do With the CCM?



Using Data to Promote Great Care

- Data Repositories
- Registries
- Electronic Health Records
- Personal Health Records

Data Repositories

- Link disparate databases
- Create patient level profiles
- Aggregate up to level of physician, practice, medical center
- Profile outcomes across providers and groups
- Utilize for patients care and system management



What is a Clinical Data Repository?

Single, shared database to support quality and business improvements

e.g. CAPG Clinical Data Repository

- ◆ Data aggregation - acquire, clean, and match
- ◆ Regularly scheduled reports
 - Clinical quality, Resource utilization
- ◆ Ad hoc web-based reporting and viewing tool
 - Remotely run analyses on subsets of data
 - Physicians and patients can access their own data
- ◆ MD level feedback
 - Patient intervention opportunities
 - Support for point of care reminders

Why a common CDR?

- **Better ~ access to technology and tools**
 - ◆ Software for risk-adjustment, registries, etc.
 - ◆ Web-based platform
 - ◆ Comparison benchmarking
- **Richer ~ simplifies data collection**
- **Faster ~ shorter build time than separate efforts**
- **Cheaper ~ economies of scale**
 - ◆ Technology and development far more expensive for medical groups to build/buy individually



Clinical Data Repository Inputs



Medical group

Physician claims/encounter data



Hospital

Claims data



Health plan/PBM

Pharmacy data



CAPG

Clinical Data Repository



Laboratory

Claims and results data



Health Plan

Eligibility and paid claims data
(facility, POS, mental health and vision claims)

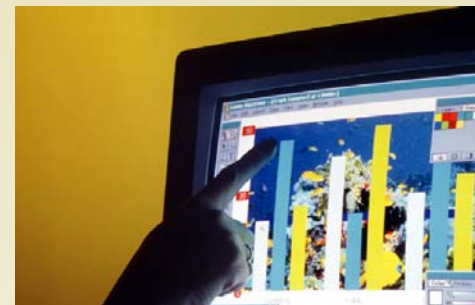
Clinical Data Repository Outputs



Personal Health Records



Data extracts



Benchmark reports



CAPG
Clinical Data Repository



Patient action lists



Web based ad hoc reports



Disease registries

How Will the Data Be Used?

- Care management/disease management
 - ◆ Population reports and comparison statistics
 - ◆ “Exception” lists to physician offices
 - ◆ Point-of-care reminders
 - ◆ Care management opportunities and coordination
- Utilization management
 - ◆ Prescribing and referral patterns
 - ◆ Physician feedback
- Ultimately a Personal Health Record
 - ◆ Patient self-management
 - ◆ Sharing information with physician for remote care

Incurred YTD

All Employee Status

All Plans

All Business Units

All Coverage Types

All Hourly Salary

All Union NonUnion

All Regions

All Account IDs

Save View

Reset Slicers

Chronic Conditions	Patients Med	Net Pay Med	Per Patient Med	Per 1000 Acute	LOS Admit Acute	Per 1000 Office Med	Per 1000 ER
Asthma	2,048	\$577,945	\$282.20	.63	3.61	50.38	2.94
Chronic Obstruc Pulm Dis(COPD)	632	\$500,294	\$791.60	.60	7.10	14.16	.29
Coronary Artery Disease	1,763	\$6,016,310	\$3,412.54	3.35	4.79	47.44	.70
Diabetes	2,551	\$1,241,760	\$486.77	.98	7.33	96.69	1.18
HIV Infection	70	\$196,783	\$2,811.19	.07	12.20	3.34	
Hypertension, Essential	6,192	\$1,048,083	\$169.26	.31	3.32	159.92	.76
Mental Hlth - Anxiety Disorder	863	\$236,342	\$273.86	.03	2.50	40.68	.43
Mental Hlth - Bipolar Disorder	316	\$438,865	\$1,388.81	.56	6.90	27.86	.01
Mental Hlth - Depression	2,866	\$2,007,080	\$700.31	1.40	6.97	254.13	.37
Osteoarthritis	2,135	\$2,032,455	\$951.97	1.21	4.86	59.59	.21
Rheumatoid Arthritis	283	\$212,287	\$750.13	.06	4.25	13.06	.03

Explor

Summary	Net Pay Med	Admits Per 1000 Acute	Days LOS Admit Acute	Visits Per 1000 Office Med	Visits Per 1000 ER
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Recorder Panel

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Registries

- Identify, stratify and track populations
- Find patients “falling through the cracks”
- Provide point-of-care support
- Generate comparison reports
- Interconnect members of the care team



Types of Products

- Public domain, Access-based
- Commercial
 - ◆ Locally installed
 - ◆ Web based
- Home grown

Challenges

- Automating the data feeds
- Algorithms to ID and stratify patients
- Integrating into patient care

Electronic Health Records

- Acquire and assemble data – lab, radiology, etc.
- Connect to colleagues – consults, team care
- Introduce decision support in dx and rx
 - ◆ Identify patients overdue for routine care – prompts
 - ◆ Drug-drug; drug-dx; drug-lab; dose checking
 - ◆ Tagged literature to support decision-making
- Support clearer and fuller documentation



Benefits for Chronic Care

- Supports every encounter for any condition
- Clinical nuance beyond registries
- May be able to interconnect with other systems—pharmacy, lab ordering, etc.
- When used efficiently adds time to day

Challenges for Chronic Care

- Few products have good population views
- Can distract from the few key care issues
- If no decision support, does not guide care decisions
- Can automate office dysfunction

Personal Health Records

- Same data as EHR, different format
- Great for motivating and providing self-management support for some patients
- Can dramatically improve office efficiency





My Medstat Personal Health Record

Last Updated 7/10/04

Member Information

Member ID: 9082346678-01
 Member Name: Richard Montgomery
 Current Plan: Health Plus
 Primary Physician: Alice Trice
 Months Enrolled: 33

Dependents

[Cherie Jones-Montgomery](#)
[Elena Montgomery](#)

[Financial Summary](#)

[Physician Link](#)

Preventive Care

[Prostate Specific Antigen Test 3/2/04](#)
[Office Visit Established Patient 3/2/04](#)
[Dental Visit 1/15/03](#)

Clinical Conditions

[Coronary Artery Disease](#)
[Asthma](#)
[COPD](#)

[Gaps in Care](#)

[Medical Detail](#)

Drug Summary

Drug	Purpose	Ordering Physician	Dose	Scripts	Last Filled
Lipitor	Cholesterol Lowering	Dr. Alice Trice	10 mg	18	6/12/04
Prilosec	Stomach Acid Red.	Dr. Alice Trice	20 mg	34	6/12/04
Vanceril	Treats Asthma	Dr. Alice Trice	.042 mg	9	6/12/04
Cardizem CD	High Blood Pressure	Dr. Susan Giltrist	180 mg	6	9/15/03

[Drug Detail](#)

[Personal Data](#)



My Medstat Personal Health Record

Last Updated 7/10/04

Member ID: 9082346678-01 Male
Member Name: Richard Montgomery 51 Years of Age

Financial
Summary

Primary Preventive Services: Staying Well

Service	Frequency	Last Service	Status
<input checked="" type="checkbox"/> Prostate Specific Antigen Test	Once per year	3/2/04	Up-to-date
<input type="checkbox"/> Cholesterol Screening	Once per year	~	Missing
<input type="checkbox"/> Colon Cancer Screening	Once per year	~	Missing
<input checked="" type="checkbox"/> Primary Care Visit	Once per year	3/2/04	Up-to-date
<input type="checkbox"/> Dental Visit	Once per year	1/15/03	Overdue

Physician
Link

Gaps
in Care

Medical
Detail

Managing Your Disease

Condition	Service	Frequency	Last Service	Status
<input checked="" type="checkbox"/> Asthma	Rx-Inhaled Steroid	Ongoing	6/12/04	Up-to-date
<input type="checkbox"/> Asthma	Spirometry	Every 1 – 2 yrs	~	Missing
<input checked="" type="checkbox"/> Heart Disease	Lipid Test	Once per year	4/9/03	Overdue
<input checked="" type="checkbox"/> Heart Disease	Rx-Beta Blocker	Ongoing	6/12/04	Up-to-date

Drug
Detail

Personal
Data