

The Chronic Care Model

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Improving Chronic Illness Care

Stratis Health Web Ex
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Three Biggest Worries About Having A Chronic Illness (Age 50 +)

1. Losing Independence
2. Being a Burden to Family or Friends
3. Not Being Able to Afford Needed Medical Care



Number of Chronic Conditions per Medicare Beneficiary

<u>Number of Conditions</u>	<u>Percent of Beneficiaries</u>	<u>Percent of Expenditures</u>
0	18	1
1	19	4
2	21	11
3	18	18
4	12	21
5	7	18
6	3	13
7+	2	14

} 63% } 95%



Planning Productive Interactions for Chronic Conditions

For Example: Diabetic Needs

Additional Diagnoses*	45%
Functional Limits**	50%
> 2 Symptoms***	35%
Not Good Health Habits	30%

* Arthritis (34%), obesity (28%), hypertension (23%), cardiovascular (20%), lung 17%)

** Physical (31%), pain (28%), emotional (16%), daily activities (16%)

*** Eating/weight (39%), joint pain (32%), sleep (25%), dizzy/fatigue (23%), foot (21%), backache (20%)



Differences between acute and chronic conditions (Holman et al, 2000)

	Acute disease	Chronic Illness
Onset	Abrupt	Generally gradual and often insidious
Duration	Limited	Lengthy and indefinite
Cause	Usually single	Usually multiple and changes over time
Diagnosis & prognosis	Usually accurate	Often uncertain
Techno. Intervention	Usually effective	Often indecisive; adverse effects common
Outcome	Cure possible	No cure
Uncertainty	Minimal	Pervasive
Knowledge	Prof.'s - knowledgeable Patients - inexperienced	Prof.'s & patients have complementary knowledge & exp.'s



Chronic care quality

- ◆ **Half of discharged CHF patients are readmitted within 90 days** [Ni et al. Arch Int Med 1998;158:1231]
- ◆ **Less than half of eligible atrial fibrillation patients receive warfarin** [Samsa et al. Arch Int Med 2000;160:967]
- ◆ **Only half of tobacco users are counseled about smoking cessation by their physician** [Perez-Stable, Fuentes-Afflick. West J Med 1998;169:23]



Chronic care quality

◆ **66% of people with hypertension are inadequately treated** [JNC 7, JAMA 2003;289:2560]

◆ **63% of people with diabetes have HbA1c levels greater than 7.0%** [Saydah et al. JAMA 2004;291:335]

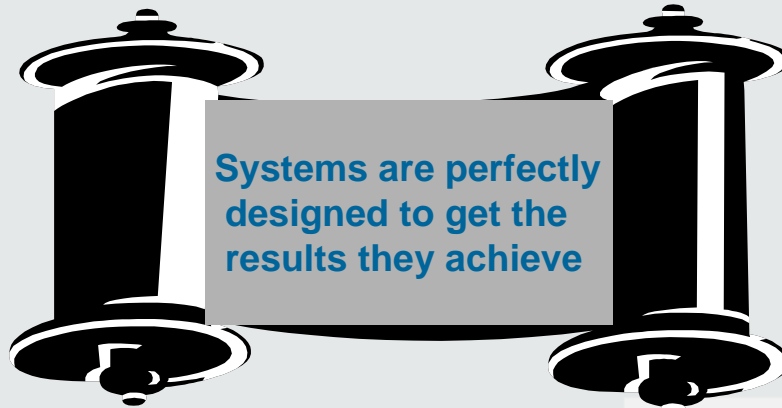


More Results

- Less than 10% of patients with diabetes receive all guideline based care
- 48% of patients with asthma are taking medications properly
- 60% of patients 65 or older with Hx of an MI are on statins
- Less than 50% of patients with clinically significant depression are treated properly



The Watchword



The IOM Quality Report: *Selected Quotes*

- “The current care systems **cannot** do the job.”
- “Trying harder will not work.”
- “Changing care systems will.”



Donald Berwick, Institute for Healthcare Improvement:

"We are carrying the 19th-century clinical office into the 21st-century world. It's time to retire it."



Improving Chronic Illness Care

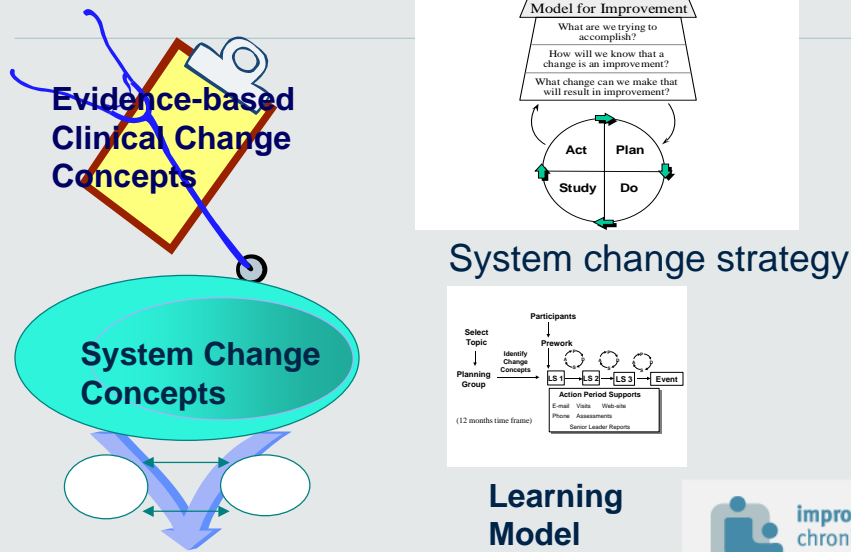
A national program of the Robert Wood Johnson Foundation

- **Mission**

**to improve the health of chronically ill patients
by helping health plans and provider groups,
especially those that serve low income
populations, improve their care of the
chronically ill.**



A Recipe for Improving Outcomes



System Change Concepts Why a Chronic Care Model?

- Emphasis on physician, not system, behavior
- Characteristics of successful interventions weren't being categorized usefully
- Commonalities across chronic conditions unappreciated.



Model Development 1993 --

- Initial experience at GHC
- Literature review
- RWJF Chronic Illness Meeting -- Seattle
- Review and revision by advisory committee of 40 members (32 active participants)
- Interviews with 72 nominated “best practices”, site visits to selected group
- Model applied with diabetes, depression, asthma, CHF, CVD, arthritis, and geriatrics



Essential Element of Good Chronic Illness Care



What characterizes a “prepared” practice team?

Prepared Practice Team

At the time of the visit, they have the patient information, decision support, people, equipment, and time required to deliver evidence-based clinical management and self-management support



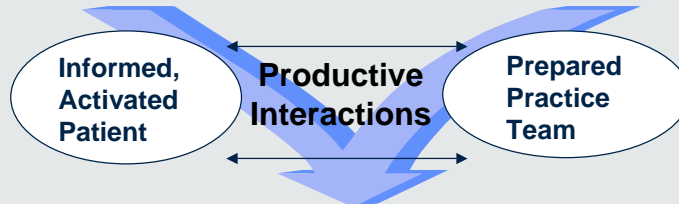
What characterizes a “informed, activated” patient?

Informed, Activated Patient

Patient understands the disease process, and realizes his/her role as the daily self manager. Family and caregivers are engaged in the patient’s self-management. The provider is viewed as a guide on the side, not the sage on the stage!



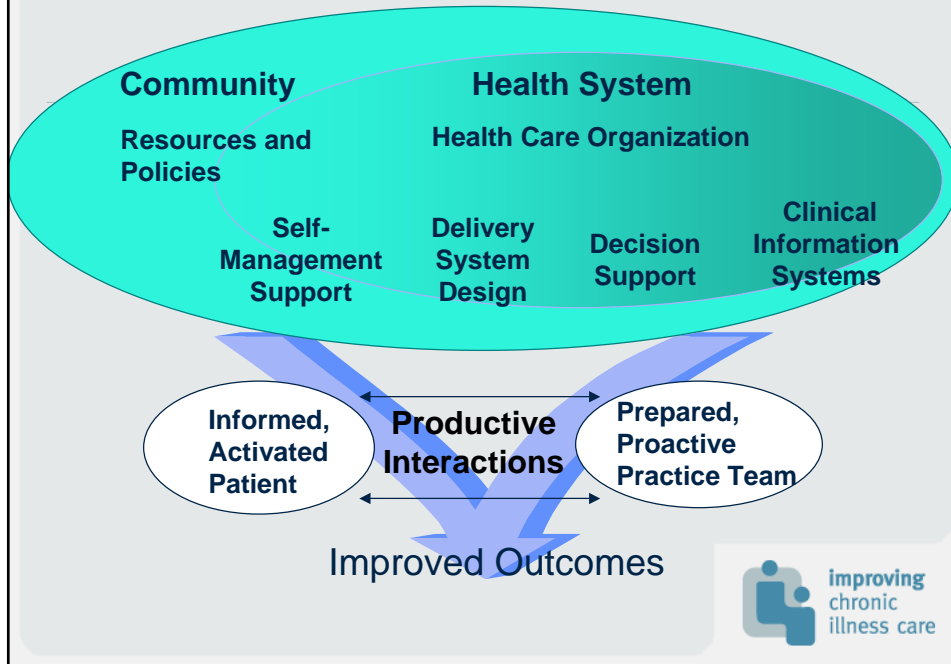
How would I recognize a productive interaction?



- Assessment of self-management skills and confidence as well as clinical status
- Tailoring of clinical management by stepped protocol
- Collaborative goal-setting and problem-solving resulting in a shared care plan
- Active, sustained follow-up



Chronic Care Model



Self-management Support

- **Emphasize the patient's central role.**
- **Use effective self-management support strategies that include assessment, goal-setting, action planning, problem-solving and follow-up.**
- **Organize resources to provide support**



Delivery System Design

- **Define roles and distribute tasks amongst team members.**
- **Use planned interactions to support evidence-based care.**
- **Provide clinical case management services.**
- **Ensure regular follow-up.**
- **Give care that patients understand and that fits their culture**



Features of case management

- Regularly assess disease control, adherence, and self-management status
- Either adjust treatment or communicate need to primary care immediately
- Provide self-management support
- Provide more intense follow-up
- Provide navigation through the health care process



Decision Support

- Embed evidence-based guidelines into daily clinical practice.
- Integrate specialist expertise and primary care.
- Use proven provider education methods.
- Share guidelines and information with patients.



Clinical Information System

- Provide reminders for providers and patients.
- Identify relevant patient subpopulations for proactive care.
- Facilitate individual patient care planning.
- Share information with providers and patients.
- Monitor performance of team and system.



Health Care Organization

- **Visibly support improvement at all levels, starting with senior leaders.**
- **Promote effective improvement strategies aimed at comprehensive system change.**
- **Encourage open and systematic handling of problems.**
- **Provide incentives based on quality of care.**
- **Develop agreements for care coordination.**



Community Resources and Policies

- Encourage patients to participate in effective programs.
- Form partnerships with community organizations to support or develop programs.
- Advocate for policies to improve care.



Research and QI Findings about The Chronic Care Model



RAND Evaluation questions

- Do organizations in a Collaborative change their systems for delivering chronic illness care?
- Does implementing the Chronic Care Model improve processes of care and patient health
- <http://www.rand.org/health/ICICE>



ICICE Participation

- 4 Collaboratives starting May 1999 to Feb 2001
- 37 organizations with 24 control groups fully on board
 - 17 more had partial participation
- 2132 pilot, 1837 control patients in Diabetes, CHF, Asthma answered the phone.
- IRB and consent difficulties delayed recruitment
 - In 3 collaboratives, 1st surveys were at end, but
 - Charts still provide true before and after



Did Organizations Make Changes?

- Yes, a mean of 48 changes over the year per site
 - Organizations implemented changes in 5.8 of the 6 CCM elements, on average
- Depth of change ratings 17% to 76% of the maximum possible (major change in all 23 areas)
 - Average 49%
 - .98 on a scale 0(none) 1(some) 2 (major)
- Information support had the most emphasis
 - Making a registry was a prerequisite



Differences in CHF Care

- **387 pilot site patients, 414 control patients**
- **81% of Pilot patients reported receiving counseling about diet, fluid intake, weighing, etc vs. 62% of controls**
- **No difference in self-efficacy**
- **Pilot patients more likely to have a scale at home and use it more regularly**
- **Pilot patients report significantly better satisfaction with communication**

Baker et al. J Cardiac Failure (in press)



Differences in CHF Care

- **Pilot patients showed greater improvements in processes-especially ACE-inhibitor use and counseling**

Asch et al., Medical Care (in press)

- **Pilot patients had 35% fewer hospital days**



Differences in Diabetes Care

- **Evaluated two different collaboratives, a national BTS in 99-00, and WA state 01-02**
- **300-400 pilot and control patients in each**
- **Process and outcome measures generally improved in all groups, but differences significant mostly in WA collab.**
- **Net 2.4% reduction in CVD risk, 4.1% reduction in highest risk group**

Asch et al. – Under review



The Relationship between Organizational Systems and Diabetes Quality*

- Studied 134 managed Medicare organizations
- Collected Diabetes quality measures (HbA1c, LDL, microalbuminuria and eye exams)
- Assessed 32 care elements based on the CCM (e.g., practitioner reminders, use of guidelines, use of registries, formal self-management)
- Compared top and bottom quartiles on quality (e.g., HbA1c > 9.5% – 20% vs. 50%)
- Top quartile more likely to employ CCM elements, especially:
computerized reminders,
practitioner involvement on QI teams,
guidelines supported by academic detailing,
formal self-management programs,
a registry

*Fleming et al., AJMC 10:934, 2004



Successes of Teams in Collaboratives: The Benefit of Organized Chronic Care

- 1.5 - 2 times as many patients with major depression will be recovered at six months
- Inner city kids with moderate to severe asthma have 13 fewer days per year with symptoms
- Readmission rates of patients hospitalized with CHF will be cut nearly in half



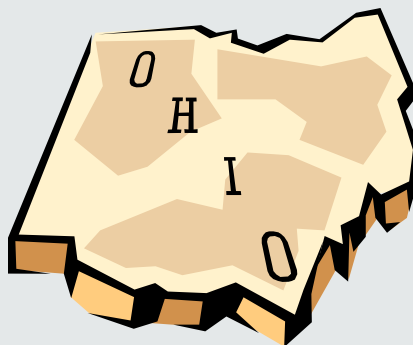
Performance of 26 Delivery Systems in WA Diabetes II Collaborative

Measure	% of Teams Improving	Average Improvement
HbA1c Test	77	11%
HbA1c** <8.0%	77	11%
BP Measured	58	8%
BP** <? 140/90 mmHg	69	11%
LDL Test	73	17%
LDL ** ?? 130 mg/dL	77	14%
Foot Exam	92	23%
Retinal Exam	73	8%
Doc. Self-Mgmt Goal	89	32%



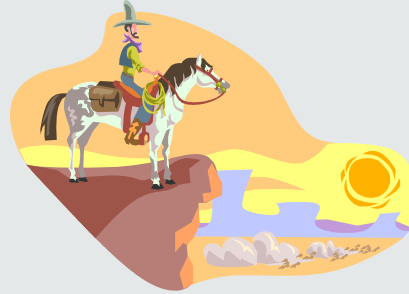
Premier Health Partners

- Dayton, Ohio
- 100 physicians in 36 practices
- Change began in one practice—spread throughout system
- ACE-inhibitors for albuminuria was 38% in 1999 and 80% in 2001
- A1c < 7% was 42% in 1999 and 70% in 2001



High Plains Community Center

- Lamar, Colorado
- Serves 11,000 people
- 29% uninsured
- 14% monolingual in Spanish
- 172 diabetics – A1c fell from 9.5% to 8.4%
- 114 with CVD - % with BP<140/90 rose from 35% to 62%



Bureau of Primary Health Care: Health Disparities Collaboratives

- Numerous collaboratives beginning in 1999
- Diabetes, asthma, CV, HIV, depression
- tens of thousands of patients touched
- All 800 community clinics involved nation-wide
- Early result suggest improved care for the poor that may exceed that in commercial populations



Advantages of a General System Change Model

- Applicable to most preventive and chronic care issues
- Once system changes in place, accommodating new guideline or innovation much easier
- Fits well with other redesign initiatives
- Approach is being used comprehensively in multiple care settings and countries



Contact us:

•www.improvingchroniccare.org

thanks

