Stepping up to the challenge: Changing the way we deliver care

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Goals of Presentation

- To Identify:
  - The key challenges in delivering evidence-based & cost-effective care management
  - The key components/practices from successful care management programs
- To Define:
  - The target population for care management programs
- To Describe:
  - Evidence based care management models
  - The future focus for care management

Demographic Landscape

- The demographic landscape of America is changing at an accelerated pace
  - Americans are living longer, and as a result the number of people living with chronic disease is increasing in almost geometric proportions
  - Chronic diseases are the leading cause of death in the US
  - Chronic diseases are the leading cause of hospitalizations and are driving health care spending

Image source: National Center for Health Statistics, 2011
Americans are Living Longer

In 2010, 13% were 65 years of age and older (1 in 8 individuals)

In 3 decades (2040), 20% will be 65+ years and older

Persons reaching age 65 have an average life expectancy of an additional 19 years

The number over 85 years of age is projected to increase by 300% in the next 40 years

In 3 decades (2040), 20% will be 65+ years and older

Persons reaching age 65 have an average life expectancy of an additional 19 years


31% of community dwelling adults 65 years and older live alone

50% of women 75 years and older live alone

10% of adults 65 years and older are living below the federal poverty level

Almost half (45%) of Americans have one or more chronic diseases

- 22% have 1 chronic disease
- 28% have multiple chronic diseases

In the next 2 decades (2030) the number of Americans with chronic diseases will increase by 37%

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Prevalence of chronic diseases increase with age:

- 91% of adults 65 years and older have a chronic disease
- Almost 3 in 4 (73%) have multiple chronic diseases

Prevalence of Chronic Disease
Increasing Rapidly

<table>
<thead>
<tr>
<th>Condition</th>
<th>18-64 Years Old</th>
<th>65 Years and Older</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>30%</td>
<td>60%</td>
</tr>
<tr>
<td>Cholesterol Disorders</td>
<td>20%</td>
<td>41%</td>
</tr>
<tr>
<td>Obesity</td>
<td>30%</td>
<td>40%</td>
</tr>
<tr>
<td>Arthritis</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Heart Disease</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Eye Disorders</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>Respiratory Diseases</td>
<td>19%</td>
<td>22%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>12%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Chronic Diseases are Associated with Activity Limitations

20% of individuals with a chronic disease also have ADL or IADL Limitations

Limitations Increase by Number of Chronic Diseases

<table>
<thead>
<tr>
<th></th>
<th>4% with NO Disease have limitations</th>
<th>15% with 1 Disease have limitations</th>
<th>28% with 2 Diseases have limitations</th>
<th>43% with 3 Diseases have limitations</th>
<th>52% with 4 Diseases have limitations</th>
<th>67% with 5 Diseases have limitations</th>
</tr>
</thead>
</table>

Chronic Diseases are Associated with Activity Limitations

Depression, coupled with chronic disease, dramatically increases activity limitations
Chronic Diseases are the Leading Cause of Death in the US

Chronic Diseases account for 5 of the top 7 causes of death*

- Heart Disease
- Cancer
- Chronic Lower Respiratory Diseases (COPD/Bronchitis/Emphysema)
- Cerebrovascular Diseases (Stroke/Hypertension)
- Accidents (Unintentional Injury)
- Alzheimer’s disease
- Diabetes Mellitus

*2011 age-adjusted rates, National Vital Statistics

Chronic Diseases are the Leading Cause of Hospitalizations

Individuals with multiple chronic diseases are at increased risk of being hospitalized in a 12 month period

Chronic Diseases are the Leading Cause of Hospitalizations

Re-hospitalization rates among Medicare beneficiaries are high.

- 1 in 5 (20%) are re-hospitalized within 30 days
- 1 in 3 (34%) are re-hospitalized within 90 days
- 2 out of 3 (67%) discharged with medical conditions
- 1 in 2 (52%) discharged with surgical procedures
  - Re-hospitalized or died within 12 months of discharge

Chronic Diseases Drive Health Care Spending

60% of health care spending is concentrated on individuals with multiple chronic diseases.

- 12% is for the 4% with 4 chronic diseases
- 16% is for the 7% with 3 chronic diseases
- 17% is for the 12% with 2 chronic diseases
- 21% is for the 5% with 5 chronic diseases
- 16% is for the almost 50% with no chronic diseases
- 18% is for the 22% with 1 chronic disease

Chronic Diseases Drive Health Care Spending

- 96% of Medicare expenditures are for beneficiaries with multiple chronic diseases
  - 7% - 2 chronic diseases
  - 10% - 3 chronic diseases
  - 13% - 4 chronic diseases
  - 66% - 5+ chronic diseases

Chronic Diseases Drive Health Care Spending

- Average per capita health care spending increases with the number of chronic diseases
  - Compared to individuals with NO chronic diseases, spending is:
    - 3 times greater with 1 chronic disease
    - 5 times greater with 2 chronic diseases
    - 7 times greater with 3 chronic diseases
    - 10 times greater with 4 chronic diseases
    - 14 times greater with 5 chronic diseases
Dual Eligible Beneficiaries

- Account for 31% of total Medicare expenditures
- The costliest 20% of dual eligible beneficiaries account for 65% of total Medicare spending, and 61% of total spending on all dual eligible beneficiaries
- Average per capita Medicare spending for dual eligible beneficiaries is 2.1 times that for non-dual eligible beneficiaries.

<table>
<thead>
<tr>
<th></th>
<th>Dual Eligible</th>
<th>Non-Dual Eligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>63%</td>
<td>54%</td>
</tr>
<tr>
<td>Minority Race/Ethnicity</td>
<td>42%</td>
<td>19%</td>
</tr>
<tr>
<td>Lack High School Diploma</td>
<td>53%</td>
<td>22%</td>
</tr>
<tr>
<td>Have Greater ADL Limitations</td>
<td>54%</td>
<td>28%</td>
</tr>
<tr>
<td>Live in an institution, alone or with persons other than a spouse</td>
<td>77%</td>
<td>41%</td>
</tr>
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</table>

The costliest 20% of dual Medicare beneficiaries

18% of the Medicare population

41% are under age 65 and disabled compared to 12% of non-dual eligible beneficiaries

48% live below poverty level;

91% live 200% below

More likely to report poor health status compared to non-dual beneficiaries (19% vs 8%)
Dual Eligible Beneficiaries

Compared to non-dual eligible beneficiaries, dual eligible beneficiaries are more likely to have:

- Cognitive impairment/Alzheimer’s disease
- Serious Mental Illness(es)
- Diabetes
- Pulmonary Disease
- Stroke

Dual Eligible Beneficiaries

30-day readmission rates for Medicaid beneficiaries with disabilities is 16%, rising to 53% within 12 months

50% of Medicaid beneficiaries readmitted within 30 days did not have a follow-up physician visit after initial discharge

Dual eligible beneficiaries are more likely to be hospitalized in a 12 month period (29% vs 18%)

STEPPING UP TO THE CHALLENGE: CHANGING THE WAY WE DELIVER CARE

THE PROBLEM
The Problem

Most healthcare dollars are spent on a small percentage of beneficiaries who have complex chronic conditions.

Causes of high utilization and costs:
- Deviations from evidence-based care
- Poor communication among primary providers, specialists, health and community providers, patients and families
- Failure to catch problems early
- Failure to address psychosocial issues
- Lack of coordinated, longitudinal management
- Ineffective transitional management (hospital - home, hospital - nursing home, nursing home - hospital, nursing home - home)
- Lack of ongoing support related to self-management
- Uncoordinated plans of care from multiple care providers

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Stepping up to the challenge: Changing the way we deliver care

The opportunity
Intervention with rigorous evidence that it:

- Improves beneficiary outcomes
- Reduces total health care expenditures for participating beneficiaries
  • Improved satisfaction or clinical indicators not sufficient
  • Net savings require reduced hospitalizations

What is Effective Comprehensive Care Coordination/Management?

**Comprehensive Care Coordination/Management Definition:**

- Individual/family/caregiver team based approach which integrates care and social supports.
- Based on a comprehensive multi-disciplinary assessment that identifies and prioritizes goals, strengths, problems/risks and barriers to care.
- Utilizes a Comprehensive, collaborative plan of care (see next slide)
- Transitions in care are managed with timely follow-up, facilitation of communication between providers, and individual/family/caregiver with adjustments to the plan of care.

**Comprehensive Care Plan**

- A collaborative comprehensive plan of care is:
  - developed and implemented,
  - proactively monitored and evaluated,
  - governed by evidence based guidelines and standards of care which promote:
    - self-management of health conditions,
    - medication management,
    - health promotion activities, and
    - assures that identified providers, services and supports are meeting the needs of the individual/family/caregiver.
Promising Interventions

- Transitional care interventions
  - Coleman et al. 2006
  - Naylor et al. 2004
- Comprehensive care management
  - Dorr et al. 2008
  - Counsell et al. 2007
  - Medicare Coordinated Care Demonstration: Best Practice Sites, Brown et al. 2009-2012
  - Massachusetts General Hospital Care Management 2006-2012

Transitional Care Intervention: Coleman et al. (2006)

- Patient-centered intervention designed to improve quality and contain costs for patients with complex care needs as they transition across care settings

- Lower re-hospitalization rates at 90 days:
  - For any reason (17% vs. 23%)
  - For initial condition (5% vs. 10%)
- Lowered hospital costs 19% over 180 days ($2,058 vs. $2,546)

Staffing
- APN or RN or social worker or occupational therapist
- Caseload: 1 care coordinator (CC) per 40 patients
- Duration: 30 days following hospitalization

Focus: Four Pillars
- Medication management
- Patient-centered record
- Primary care and specialist follow-up
- Knowledge of red flags
Transitional Care Intervention: Mary Naylor et al. (2004)

**Care Transitions: Naylor**
- Patient-centered intervention designed to improve quality of life, patient satisfaction, and reduce hospital readmissions and cost for elderly patients hospitalized with CHF

**Evidence: Intervention patients had:**
- 34% fewer re-hospitalizations per patient after 12 months (1.18 vs. 1.79)
- 10.5% decrease in re-hospitalization rate (44.9% vs. 55.4%)
- 39% lower mean total costs ($7,636 vs. $12,481)

Transitional Care Intervention: Mary Naylor et al. (2004)

**Staffing**
- Advanced Practice Nurses (3)
- Caseload: 1 care coordinator (CC) per 39 patients
- Duration: 3 months following index hospitalization

**Focus**
- Continuity of care at hospital discharge to optimize patient’s health status and arrange for needed home care services
- After patients discharged home, prevention of medication and other medical errors
- Help patients/caregivers with early symptom recognition, management of chronic conditions, and recommendations for future care.

At the end of the patient’s participation, the CC assures continuity of care and ongoing commitment to the patient’s self-management goals through communication with the primary care provider that will continue to follow the patient.

The CC provides a summary to patients and primary care providers that includes:
- The patient’s goals
- Progress toward meeting those goals
- Ongoing or unresolved issues with the plan of care
Comprehensive Care Coordination/Care Management: Geriatric Resources for Assessment and Care of Elders (GRACE)

**Staffing**
- An advanced practice nurse and social worker in collaboration with primary care physician and a geriatric interdisciplinary team led by a geriatrician
- Caseload: 1 care coordinator (CC)/social worker (SW) per 100-125 patients

**Focus**
- In-home assessment and care management by a team (advanced practice nurse/social worker)
- Extensive use of specific care protocols for evaluation and management of common geriatric conditions
- Utilizations of an electronic medical record and web-based care management tracking tool
- Integration with affiliated pharmacy, mental health, home health and community-based and inpatient geriatric services

Evidence:
- Ed visits per 1000 lower in intervention group but not hospital admission rates per 1000
- In predesigned subgroup at high risk of hospitalization (112 T; 114 usual care) Ed visits and hospital admission rates lower in second year

Comprehensive Care Coordination/Care Management: Care Management Plus (CMP: Dorr)

**Focus**
- Patient-centered intervention designed to reduce mortality and hospital admissions for elderly patients of primary care physicians

Evidence:
- Hospitalizations were significantly lower for subgroup with diabetes
- Mortality was significantly lower in subgroup with diabetes
Care Management Plus (CMP)
Dorr et al. (2008)

**Staffing**
- All care managers are RNs, generalists, located in primary care clinics
- Caseload: 1 care coordinator (CC)/350-500 patients
- Duration: 24 months

**Focus**
- Continuity of care through specialized information technology system
- Education for specific diseases and problem-solving skills
- Emphasis on evidence-based treatment plans and protocols
- Flexibility of care planning and treatment plans

Comprehensive Care Coordination/Care Management: MCCD Best Practice Sites

**MCCD: Best Practice Sites**
- National Best Practice sites in a Medicare coordinated care demonstration designed to cost-effectively manage chronically ill Medicare beneficiaries
- For high risk subset of cases – those with CAD, CHF, or COPD +1 hospitalizations in prior year, or 2+ hospitalizations... admissions from 2002-2007
- Significantly reduced Medicare expenditures by $107 PMPM in 2004 dollars (CI=[-202, -12])
- Flexibility of care planning and treatment plans

**Evidence: Intervention patients had:**
- Significantly fewer (-15%) hospital admissions from 2002-2007
- Significantly reduced Medicare expenditures by $107 PMPM in 2004 dollars (CI=[-202, -12])

Comprehensive Care Coordination -Management: MCCD Best Practice Sites

**Staffing**
- Registered nurses trained in comprehensive care coordination
- Washington University and Health Quality Partners had staff primarily located in community offices (not hospital clinic, home health), Mercy Medical Center staff located in hospital and primary care clinics and Hospice of Valley staff located in Hospice Agency

**Case-load**
- Wash U: 1 CC per 85-95 patients
- HQP: 1 CC per 75-80 patients
- Mercy: 1 CC per 80 patients
- Hospice: 1 CC per 45 patients

**Focus**
- Improved self-care
- Improved symptom recognition and management
- Improved medication management
- Implementation of evidence-based practices
- Improved transitional care
Comprehensive Care Coordination/Care Management:
Massachusetts General Hospital Care Management Program

Mass General CMP:
• 1 of 6 national sites for CMS demonstration Care Management for high cost beneficiaries

Evidence:
- Intervention patients had:
  • Lower adjusted mortality rates (28% vs. 30%)
  • 20% lower hospitalization rates
  • 13% lower ED visits
  • 7% of annual net savings (after accounting for care management fees)

For every dollar spent on care management, the program saved Medicare $2.65 in health care costs

staffing
- RN care managers
  • Visited patients hospitalized at MGH, contacted patients who had ED visits, called patients scheduled for office visits each week, followed up on patients who missed office visits, performed weekly monitoring calls
  • Case load = 180-230 patients. During first 16 months of demo, averaged 8 contacts/patient, primarily by phone
  • Patients with mental health needs referred to SW for assessment and support
  • Pharmacist reviewed medications; delivery of medications for homebound patients

focus
- Patient assessment, self-management education, and transitional care
- Coordination with resources to address medical and social needs to prevent acute exacerbations of disease and hospital admissions and ED visits
- The program includes components to address mental health issues, evaluate polypharmacy issues, and end-of-life issues

STEPPING UP TO THE CHALLENGE: CHANGING THE WAY WE DELIVER CARE

TARGETING THE POPULATION
Importance of Targeting:

- For every successful program, effects are concentrated in high-risk subsets of population served.
- Enhances opportunities for identifying best practices.
- Maximizes net savings potential.
- Reduces likelihood that evaluation will miss effective interventions.
- Focuses provider attention on best opportunities for gains in quality and savings.

Targeting Subgroups with Impacts:

- Hospital Inpatients (transitional care models)
- Diabetics (Care Management Plus)
- Patients at high risk of hospitalization (GRACE)
- Patients with high risk conditions (CAD, CHF, COPD) and recent hospitalization or any chronic condition (AMI, Alzheimer’s disease/dementia, arthritis, atrial fibrillation, cancer, chronic renal disease, diabetes, osteoporosis, SMI, and stroke (MCCD and Mass. General Hospital)

STEPPING UP TO THE CHALLENGE: CHANGING THE WAY WE DELIVER CARE

KEY COMPONENTS AND PRACTICES
STEPPING UP TO THE CHALLENGE: CHANGING THE WAY WE DELIVER CARE

THE FUTURE

How Can We Increase Likelihood of Success?

Whether FFS, shared savings, or managed care solutions, programs should:

- Focus on high risk patients
- Implement key features (components, practices) of successful past programs
- Build in studies of implementation issues and care manager/physician adherence to program protocols
- Feed back information to programs, physicians, and care managers
- Establish risk adjusted PPhM

What Do We Still Need to Do and Know?

- Assess new evidence critically
- Replicate cost-effective models in different settings (rural, urban, frontier) and environments (clinics, hospitals, and community agencies)
- Develop program protocols and manuals to make replication easier
- Identify "dose" for core components of the intervention(s)
- Determine the most appropriate duration of the intervention(s)
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Sources