

HHS EDUCATION & TRAINING CURRICULUM ON MCC

INTRODUCTION

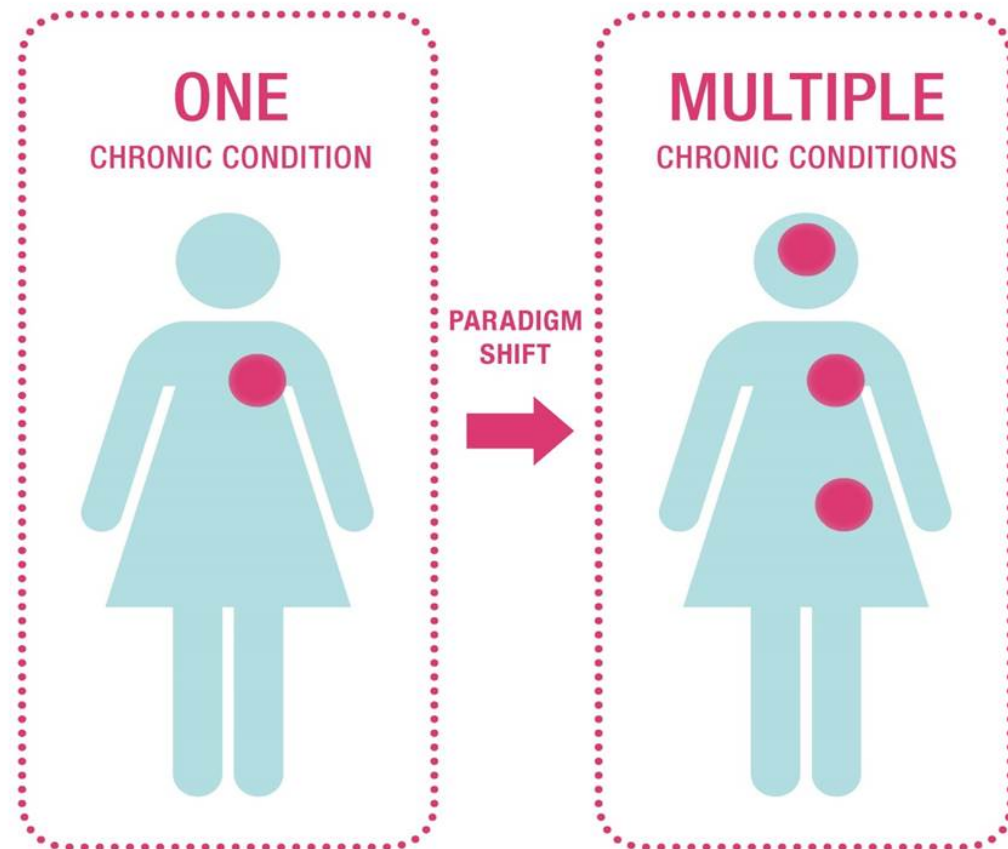


Slide 1 Speaker Notes

Any or all of these introductory slides can be used where appropriate in any of the modules.

The module introduces the shift in paradigm of how chronic illnesses are addressed in the United States - from an approach focused on individual chronic diseases to one that treats the whole person living with multiple chronic conditions/multimorbidities. Typologies relevant to MCC are defined and lastly supportive statistical data on common dyads and triads are introduced. Also included are links to useful resources that further support these data.

“The most common chronic condition experienced by adults is multimorbidity, the coexistence of multiple chronic diseases or conditions.”



Slide 2 Speaker Notes

The most common chronic condition experienced by adults is multimorbidity, the coexistence of multiple chronic diseases or conditions¹.

The picture depicts one person with one chronic condition compared to another person with two or more chronic conditions.

Reference:

¹ Tinetti et al. JAMA, 2012

Clinically Dominant Conditions

3

Comorbid chronic conditions are conditions that are so complex or serious that they overshadow the management of other health problems.

- End-stage disease (e.g., metastatic cancer, end-stage renal disease, severe dementia)
- Severely symptomatic (e.g., Class IV heart failure, severe depression)
- Recently diagnosed (e.g., breast cancer, rheumatoid arthritis)

Slide 3 Speaker Notes

Clinically dominant conditions: Comorbid chronic conditions that are so complex or serious that they eclipse the management of other health problems.

For example: End-stage disease (e.g., metastatic cancer, end-stage renal disease, severe dementia)

Severely symptomatic (e.g., Class IV heart failure, severe depression)

Recently diagnosed (e.g., breast cancer, rheumatoid arthritis)

Reference:

Piette, J. D., & Kerr, E. A. (2006). The impact of comorbid chronic conditions on diabetes care. *Diabetes Care*, 29(3), 725-731.

Concordant vs. Discordant Conditions

4

Concordant conditions

- represent parts of the same overall pathophysiologic risk profile and are more likely to be the focus of the same disease and self management plan.

Discordant conditions

- are not directly related in either their pathogenesis or management.

Slide 4 Speaker Notes

Concordant conditions represent parts of the same overall pathophysiologic risk profile and are more likely to be the focus of the same disease and self-management plan. For example, concordant with Type II Diabetes: hypertension or coronary artery disease

Discordant conditions are not directly related in either their pathogenesis or management. Discordant with Type II Diabetes: irritable bowel syndrome or asthma

References:

Piette, J. D., & Kerr, E. A. (2006). The impact of comorbid chronic conditions on diabetes care. *Diabetes Care*, 29(3), 725-731.

Symptomatic vs. asymptomatic conditions

5

Symptomatic Chronic Conditions

- Treatment focused on improving individuals' symptom profile, functioning and quality of life, and may also delay or prevent poor long-term outcomes.

Asymptomatic Chronic Conditions

- Treatment Focused almost exclusively on preventing downstream adverse events and early mortality.

Slide 5 Speaker Notes

Symptomatic Conditions

- Treatment for symptomatic chronic conditions focuses on improving patients' symptom profile, functioning and quality of life, and may also delay or prevent poor long-term outcomes. For example: Depression, rheumatoid arthritis

Asymptomatic Chronic Conditions

- Treatment for asymptomatic chronic conditions focuses almost exclusively on preventing downstream adverse events and early mortality. For example: Hypertension, hyperlipidemia

Reference:

Piette, J. D., & Kerr, E. A. (2006). The impact of comorbid chronic conditions on diabetes care. *Diabetes Care*, 29(3), 725-731.

Top Five Most Prevalent Dyads of Chronic Condition Combinations among Medicare Beneficiaries

6

- High cholesterol and High blood pressure
- High cholesterol and Ischemic heart disease
- High cholesterol and Diabetes
- High cholesterol and Arthritis
- Ischemic heart disease and High blood pressure

Slide 6 Speaker Notes

Top Five Most Prevalent Dyads of Chronic Condition Combinations among Medicare Beneficiaries with at Least Two Conditions (N=21,437,864):Prevalence and Per Capita Medicare Spending: 2010

Dyads	Prevalence (%)	Per Capita Cost
High cholesterol and High blood pressure	52.9	\$13,825
High cholesterol and Ischemic heart disease	36.2	\$20,529
High cholesterol and Diabetes	32.3	\$18,010
High cholesterol and Arthritis	31.1	\$18,043
Ischemic heart disease and High blood pressure	29.6	\$18,308

Data highlights:

Among beneficiaries with at least two of the chronic conditions, high cholesterol was the most common condition among the most prevalent dyads.

Over 50% had high cholesterol and high blood pressure and one-third had high cholesterol co-occurring with ischemic heart disease or diabetes.

Reference:

Centers for Medicare and Medicaid Services. Chronic Conditions among Medicare Beneficiaries, Chart book: 2012 Edition Baltimore, MD. 2012.

The Five Most Costly Dyads of Chronic Condition Combinations among Medicare Beneficiaries

7

- Stroke and Chronic Kidney disease
- Stroke and COPD
- Stroke and Heart failure
- Stroke and Asthma
- COPD and Chronic kidney disease

Slide 7 Speaker Notes

Top Five Dyad Most Prevalent Chronic Condition Combinations among Medicare Beneficiaries with at Least Two Conditions (N=21,437,864):Prevalence and Per Capita Medicare Spending: 2010

Dyads	Prevalence (%)	Per Capita Cost
Stroke and Chronic Kidney disease	2	\$51,715
Stroke and COPD	1.4	\$49,025
Stroke and Heart failure	2.3	\$47,568
Stroke and Asthma	0.4	\$46,913
COPD and Chronic kidney disease	4.9	\$45,011

Data highlights:

Stroke was the most common co-occurring condition among the costliest dyads. Those with stroke and chronic kidney disease or stroke and COPD had per capita costs that were approximately 5 times higher than the average spending for Medicare FFS beneficiaries.

Reference:

Centers for Medicare and Medicaid Services. Chronic Conditions among Medicare Beneficiaries, Chart book: 2012 Edition Baltimore, MD. 2012.

Top Five Most Prevalent Triads of Chronic Condition Combinations among Medicare Beneficiaries

8

- High cholesterol, High blood pressure and Ischemic heart disease
- High cholesterol, High blood pressure and Diabetes
- High cholesterol, High blood pressure and Arthritis
- High cholesterol, Diabetes and Ischemic heart disease
- High cholesterol, Ischemic heart disease and Arthritis

Slide 8 Speaker Notes

Top Five Dyad Most Prevalent Chronic Condition Combinations among Medicare Beneficiaries with at Least Three Conditions (N=16,481,562): Prevalance and Per Capita Medicare Spending: 2010

Dyads	Prevalence (%)	Per Capita Cost
High cholesterol, High blood pressure and Ischemic heart disease	33.7	\$19,836
High cholesterol, High blood pressure and Diabetes	29.9	\$17,451
High cholesterol, High blood pressure and Arthritis	25.7	\$18,238
High cholesterol, Diabetes and Ischemic heart disease	21.5	\$25,014
High cholesterol, Ischemic heart disease and Arthritis	19.3	\$24,539

Data highlights:

Over 50% had high cholesterol and high blood pressure and one-third had high cholesterol co-occurring with ischemic heart disease or diabetes.

One third had high cholesterol, high blood pressure and ischemic heart disease and over one quarter had high cholesterol and high blood pressure co-occurring with diabetes or arthritis.

Reference:

Centers for Medicare and Medicaid Services. Chronic Conditions among Medicare Beneficiaries, Chart book: 2012 Edition Baltimore, MD. 2012.

The Five Most Costly Triads of Chronic Condition Combinations among Medicare Beneficiaries

9

- Stroke, Chronic Kidney disease and Asthma
- Stroke, Chronic Kidney disease and COPD
- Stroke, Chronic Kidney disease and Depression
- Stroke , Chronic Kidney disease and Heart failure
- Stroke, Heart failure and Asthma

Slide 9 Speaker Notes

Top Five Most Costly Triads of Chronic Condition Combinations among Medicare Beneficiaries with at Least Three Conditions (N=16,481,562): Prevalence and Per Capita Medicare Spending: 2010

Dyads	Prevalence (%)	Per Capita Cost
Stroke and Chronic Kidney disease	2	\$51,715
Stroke and COPD	1.4	\$49,025
Stroke and Heart failure	2.3	\$47,568
Stroke and Asthma	0.4	\$46,913
COPD and Chronic kidney disease	4.9	\$45,011

Data highlights:

The top five costliest triads had per capita costs of over \$60,000. The costliest triads included stroke, chronic kidney disease and asthma or COPD with per capita costs that were 7 times higher than the average spending for Medicare FFS beneficiaries.

Reference:

Centers for Medicare and Medicaid Services. Chronic Conditions among Medicare Beneficiaries, Chart book: 2012 Edition Baltimore, MD. 2012.

Behavioral/Mental Health Considerations

10

For the NIS hospitalized population:

- The dyad of *depression + substance abuse* is the most common combination among both men and women aged 18-44 years.

Slide 10 Speaker Notes

For the NIS hospitalized population:

Dyad of *depression + substance abuse* is the most common combination among both men and women aged 18-44 years.

This emphasizes the importance of behavioral health conditions (depression and substance abuse) and their impact on PLWMCC's physical health. This is further expounded upon in the next slide.

Reference:

Steiner CA, Friedman B. Hospital Utilization, Costs, and Mortality for Adults With Multiple Chronic Conditions, Nationwide Inpatient Sample, 2009. *Prev Chronic Dis* 2013;10:120292. (Table 4. Five Most Prevalent Chronic Condition Dyads for US Adults With 2 or More Chronic Conditions, by Sex and Age, Nationwide Inpatient Sample, 2009)

The Interplay between Behavioral/Mental Health Conditions & Physical Illnesses

11

“Although the clinical course of multimorbidity is not well understood, the relation between mental and physical problems seems to be bidirectional.

- Patients with severe and enduring mental health problems such as chronic depression, dementia, or psychotic disorder are at high risk of developing long term physical conditions, and the risk of mental health problems increases substantially in those with long term physical conditions.
- Rates of mental health problems also increase noticeably as the number of long term physical conditions increases and as socioeconomic deprivation worsens.”

Slide 11 Speaker Notes

“Although the clinical course of multimorbidity is not well understood, the relation between mental and physical problems seems to be bidirectional.

Patients with severe and enduring mental health problems such as chronic depression, dementia, or psychotic disorder are at high risk of developing long term physical conditions, and the risk of mental health problems increases substantially in those with long term physical conditions.

Rates of mental health problems also increase noticeably as the number of long term physical conditions increases and as socioeconomic deprivation worsens.”

Reference:

Mercer SW, Gunn J, Bower P, Wyke S, Guthrie B. Managing patients with mental and physical multimorbidity: changes are needed in policy, research, and practice. *BMJ* 2012;345:e5559

Resources: Data on MCC

The Centers for Medicare and Medicaid (CMS) developed the following data resources which highlight the prevalence of chronic conditions, including MCC, among Medicare beneficiaries:

- Chronic Conditions - http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/CC_Main.htmlCo-Morbidity
- Chronic Conditions Chart Book - <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Chartbook.html>
- Chronic Conditions Dashboard - <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/CCDashboard.html>
- Chronic Conditions Maps and Charts - http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Maps_Charts.html

Slide 12 Speaker Notes

Additional data on MCC can be found here:

- [Chronic Conditions](#) - Prevalence and Medicare utilization and spending are presented for the 17 chronic conditions. The “Reports” allow users to compare geographic areas to national Medicare estimates. The corresponding “Tables” are traditional excel files that can be exported into other programs.
- [Co-Morbidity](#) - Prevalence and Medicare spending are presented for chronic condition co-morbidity. Co-morbidity is illustrated by the combinations of the 17 chronic conditions. Dyads represent the combinations of two chronic conditions among Medicare beneficiaries with at least two of the conditions. Triads represent the combinations of three chronic conditions among Medicare beneficiaries with at least three of the conditions.
- [Chronic Conditions Chart Book](#) – *Chronic Conditions among Medicare Beneficiaries* was prepared by the Centers for Medicare & Medicaid Services (CMS) and created to provide an overview of chronic conditions among Medicare beneficiaries. The chartbook highlights the prevalence of chronic conditions among Medicare beneficiaries and the impact of chronic conditions on Medicare service utilization and spending. The Portable Document File (.PDF) format allows for online viewing and printing of the entire chartbook, the data tables provide spreadsheets with the underlying data, and the presentation includes all the chartbook figures for print or download.
- [Chronic Conditions Dashboard](#) - The Medicare Chronic Conditions Dashboard(s) present statistical views of information on the prevalence, utilization and Medicare spending for Medicare beneficiaries with chronic conditions and multiple chronic conditions. The information is presented for HHS/CMS regions, states, counties, and hospital referral regions and is available in four separate dashboards. The dashboards also allow the user to select information for specific beneficiary sub-groups defined by gender, age group, and Medicare and Medicaid enrollment (dual eligibility status). The dashboards present data for 2012.
- [Chronic Conditions Maps and Charts](#) - A set of charts and maps on selected aspects of the data is available on chronic conditions and multiple chronic conditions.

Resources: Data on MCC (Continued)

13

- Trends and Projection in Hospital Stays for Adults with MCC - http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/CC_Main.htmlCo-Morbidity
- Preventing Chronic Disease Supplement on Multiple Chronic Conditions - http://www.cdc.gov/pcd/collections/pdf/PCD_MCC_Collection_5-17-13.pdf; podcast: <http://www2c.cdc.gov/podcasts/player.asp?f=8628516>

Slide 13 Speaker Notes

Additional data on MCC can be found here:

[Trends & Projections in Hospital Stays for Adults with MCC](#) – This Healthcare Cost and Utilization Project (HCUP) Statistical Brief uses historical inpatient data from 2003 through 2012 along with early 2013 data from nine HCUP States to develop national quarterly projections of nonmaternal hospital inpatient stays and average hospital costs among adult patients with and without MCC through 2014.

Preventing Chronic Disease. PCD Collection: Multiple Chronic Conditions, (Suppl) April 25, 2013; 10. At: http://www.cdc.gov/pcd/collections/pdf/PCD_MCC_Collection_5-17-13.pdf - This set of published articles provides a more complete picture of the U.S. MCC population by way of analyses of national-level data systems maintained by HHS.

Podcast available at: <http://www2c.cdc.gov/podcasts/player.asp?f=8628516>