Education & Training Curriculum on Multiple Chronic Conditions (MCC)

Strategies & tools to support health professionals caring for people living with MCC.

Module 6 Systems Based Practice

Full citations for this presentation appear in the notes section of the slides.
This is the sixth module of the HHS Education & Training Curriculum on Multiple Chronic Conditions (MCC)—a six-module curriculum designed for academic faculty, educators and trainers to inform healthcare professionals caring for persons living with multiple chronic conditions. Based on the MCC Education and Training Framework (http://www.hhs.gov/ash/initiatives/mcc/education-and-training/index.html), these modules provide knowledge and tools health professionals can use as they improve quality of care of persons living with MCC.

Terminology used throughout this presentation:

- Multiple chronic conditions (MCC) is defined many ways in the literature and in practice. For the purposes of this presentation, MCC is defined as a person with two or more concurrent chronic conditions. Other similar terms used are complex patient, multimorbidity and comorbidity for this population.

- “Persons living with multiple chronic conditions” (PLWMCC) is used instead of “patient” to place greater emphasis on the individual being at the center of care.

Each module has a PowerPoint® slide presentation that can be saved, modified, and used in your presentations with health professionals at any stage of education (undergraduate, graduate or continuing education). The notes in the presentation will help guide your talking points during the presentations.

Visit http://www.hhs.gov/ash/initiatives/mcc/education-and-training/index.html to download this and other modules—and to access helpful tools and resources.

Suggested citation:

Learning objectives for this module

After completing this module, you will be able to:

- Recognize effective Systems Based Practice (SYST) tools and models for PLWMCC
- Synthesize SYST strategies and tools for persons living with multiple chronic conditions (PLWMCC) into current healthcare system.
This module of the MCC curriculum, “Systems Based Practice” provides:

1. An overview of systems based practice as an effective mechanism for healthcare professionals to help people manage their multiple chronic conditions and

2. Strategies, models and tools pertinent to SYST that can be integrated into your healthcare system, wherever appropriate.
Overview of contents in this module

- What makes systems based practice (SYST) necessary for persons living with multiple chronic conditions (PLWMCC)?
- Effective practices and models of SYST
- Incorporating SYST tools into healthcare systems for PLWMCC
This module introduces systems based practice (SYST) as an effective mechanism for healthcare professionals to help people manage their multiple chronic conditions. The first section describes the importance of SYST to people living with multiple chronic conditions. In the second section, strategies and models relevant to SYST are explained. The last section identifies tools to help you integrate SYST into your practice. Links to useful resources that further support or enhance some of the tools, strategies or models are also included.
SECTION 1

What makes systems based practice (SYST) necessary for persons living with multiple chronic conditions (PLWMCC)?
This section defines Systems based practice (SYST), identifies key competencies to care for PLWMCC and the reasons why SYST is necessary for PLWMCC.
Systems Based Practice (SYST)

Definition:

The provision of accessible, continuous, and coordinated person-centered care for persons living with multiple chronic conditions (PLWMCC) through a system that incorporates a team approach, health information technology, and shared decision making.
The definition of Systems Based Practice is the provision of accessible, continuous, and coordinated person-centered care for persons living with multiple chronic conditions (PLWMCC) through a system that incorporates a team approach, health information technology, and shared decision making¹.

¹ Institute of Healthcare Improvement. (2014). In-Person Training Transforming the Primary Care Practice. Retrieved from http://www.ihi.org/education/InPersonTraining/TransformPrimaryCare/Pages/default.aspx
SYST Competencies

1. Provide care that uses evidence-based practices that optimize interactions and demonstrate positive outcomes for PLWMCC.

2. Address fragmented healthcare, barriers and potential harms that may result from lack of population management and coordinated care services for PLWMCC.

3. Provide opportunities for engagement and community involvement at the practice and health system levels for PLWMCC.
Here are seven competencies for Systems Based Practice needed to appropriately provide care for PLWMCC. The underpinning concepts that support these competencies will be discussed in greater detail in this presentation.

The competencies are:

SYST 1. Provide care that uses evidence-based practices that optimize interactions and demonstrate positive outcomes for PLWMCC.

SYST 2. Address fragmented healthcare, barriers and potential harms that may result from lack of population management and coordinated care services for PLWMCC.

SYST 3. Provide opportunities for engagement and community involvement at the practice and health system levels for PLWMCC.
4. Use quality improvement strategies to improve standards of practice for managing MCCs.

5. Use information systems and technology to monitor health outcomes, enhance communication and safety of care provided to PLWMCC.

6. Use cost-effective strategies and resource stewardship to address MCC commonalities and disease-specific goals in caring for PLWMCC.
Slide 7 Speaker Notes

SYST 4. Use quality improvement strategies to improve standards of practice for managing MCCs.

SYST 5. Use information systems and technology to monitor health outcomes, enhance communication and safety of care provided to PLWMCC.

SYST 6. Use cost-effective strategies and resource stewardship to address MCC commonalities and disease-specific goals in caring for PLWMCC.
7 Enhance the level of practice of the interprofessional team through risk stratification and optimizing scopes of practice of all team members.
SYST 7. Enhance the level of practice of the interprofessional team through risk stratification and optimizing scopes of practice of all team members.
Reasons for using SYST with PLWMCC

- PLWMCC care is often fragmented, incomplete, inefficient, and ineffective.
- The US health system has traditionally been organized around single diseases.
- PLWMCC need a healthcare system that concurrently addresses all of their healthcare needs.

Understanding the health needs of a population at the aggregate level enables health systems to appropriately target interventions.
The reasons why SYST is necessary when caring for people living with multiple chronic conditions (PLWMCC).

- PLWMCC care is often fragmented, incomplete, inefficient, and ineffective\textsuperscript{12}.
- The US health system has traditionally been organized around single diseases.
- PLWMCC need a healthcare system that concurrently addresses all of their healthcare needs.

SECTION 2

Effective Practices and Care Models of SYST
This section describes effective practices and care models of Systems Based Practice (SYST).
Where’s the evidence?

Evidence-based Practice for PLWMCC needs:

- Clinical trials that address MCC
- Clinical practice guidelines that address MCC
- Joint decision-making between health professionals and PLWMCC
- Shared communication between the numerous health professionals, including specialists.
Healthcare professionals should provide care based on evidence-based practices. However, when caring for PLWMCC, there is a lack of evidence-based information available to guide them. Currently, clinicians and PLWMCC must utilize clinical practice guidelines for each specific chronic conditions with little cross referencing between guidelines. In addition, there are significant gaps in communication regarding PLWMCC’s care management plans due to failure on the part of numerous care managers and care providers to communicate among themselves and provide feedback. For example, discussing shared or differing treatment priorities is important. PWLMCC’s priorities or views must be sought, otherwise certain conditions may be inappropriate prioritized above others.1

There is a need for:

- clinical trials that address MCC2,
- incorporation of MCC into clinical practice guidelines,
- joint decision-making between health professionals and PLWMCC1 and
- shared communication between the numerous health professionals1, including specialists.

Ultimately, effective care is whole person-centered care1.

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### Population Management Essentials

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
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<tbody>
<tr>
<td>Community-oriented primary care</td>
<td>• Community involvement and engaging PLWMCC in the review of health-related news and information.</td>
</tr>
<tr>
<td>Social determinants of health</td>
<td>• Transportation, economic status, food deserts, housing, occupations, and health literacy.</td>
</tr>
<tr>
<td>Population health assessments</td>
<td>• Epidemiology of chronic conditions, safety assessments, and coordinated care for PLWMCC.</td>
</tr>
</tbody>
</table>
Population management involves monitoring “the health outcomes of a group of individuals, including the distribution of such outcomes within the group” and intervening to improve outcomes. Although more information is needed to understand the impact of clusters of chronic conditions and incorporate this information into clinical management strategies, ongoing population-based management of PLWMCC provides insight into effective management.

**Population Management Essential Tools and Techniques:**

Understanding the health needs of a population at an aggregate level, enables health systems to more appropriately target interventions. Population management involves understanding:

- Community-oriented primary care: Community involvement and engaging PLWMCC in the review of health-related news and information.
- Social determinants of health: Transportation, economic status, food deserts*, occupations, health literacy.
- Population health assessment: Epidemiology of chronic conditions, safety assessments, coordinated care for PLWMCC.

*A food desert is a geographic area where affordable and nutritious food is difficult to obtain, particularly for those without access to an automobile.

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Coordination of health services
- Coordination with the community, the public health system, community-based programs and across the healthcare system.

Principles of a healthcare team practice
- Roles and contributions of community and lay workers such as patient navigators and community health workers.
Population Management Essential Tools and Techniques continued...

- Coordination of health services: Coordination with the community, the public health system, community-based programs and across the healthcare system.

- Principles of healthcare team practice: Roles and contributions of community and lay workers such as patient navigators and community health workers\(^1\).

Redesigned Care Systems

Examples of primary care redesigned systems & initiatives:

- Chronic Care Model
- Patient Centered Medical Home
- Accountable Care Organizations
- Transitions in Care Management Teams
- No Wrong Door system
The Chronic Care Model1 and Patient Centered Medical Home2 among other models, encourage the use of the expertise of all members of the care team, including PLWMCC and their families, and focus on aspects of system-oriented care such as provision of timely and accessible services, quality, and safety.

Examples of system redesign initiatives include:

- **Accountable Care Organizations** - The formation of Accountable Care Organizations (ACOs) is one of the more recent healthcare system redesign models. Medicaid ACOs [a new approach for managing healthcare for the “dual eligible” (i.e., those on Medicare and Medicaid)], Medicare Shared Savings Programs, and other models are managed risk programs that serve as catalysts for practice redesign. Managed risk, incentive changes and bundled payments contribute to practice redesign in the current and changing healthcare environment.

- **Transitions in Care Management Teams (TCM)** that work out of hospitals and are in contact with home care and other community-based agencies to help with post-hospital needs3.

- **The No Wrong Door (NWD) System**4 supports state efforts to streamline access to long-term services and support (LTSS) options for older adults and individuals with disabilities. The NWD system is a collaborative effort between the Aging and Disability Resource Centers, Administration for Community Living, Centers for Medicare and Medicaid Services and the Veterans Health Administration. PLWMCC can benefit from these community based resources offered through the NWD program.

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Redesigned Care Systems (Continued)

Key components of primary care redesigned systems:

- Adopting team-based care strategies
- Addressing needs of PLWMCC
- Incorporating preventive services & self-management support
- Empowering staff to implement improvement changes
- Developing leadership for ongoing change & quality improvement
Key components of primary care redesigned health systems:

- Adopting team-based care strategies
- Addressing needs of PLWMCC
- Incorporating preventive services & self-management support
- Empowering staff to implement improvement changes
- Facilitating communication among the interprofessional care team and across settings
- Developing leadership for ongoing change & quality improvement
SYST supporting PLWMCC

Systems based practice can support the care of PLWMCC:

- Interprofessional teams
- Communication
- Coordinated care
Here are three areas systems based practice can support the care of PLWMCC.

- Communication among the interprofessional care teams and across settings
- Coordinated Care Delivery
- Interprofessional teams
Strengthening Communication

While communication methods are dependent on settings and systems, some examples include:

- Electronic health records
- Traditional email
- Telephone calls
- Faxes
- In-person meetings
- Universal transfer forms
- Digital media applications
- Paper-based charting
- Video teleconferencing
- Telemedicine/telehealth
- Interprofessional meetings/huddles

Communication facilitates care transitions, medication management and PLWMCC education.
Communication facilitates care transitions, medication management and PLWMCC education\(^1\). While communication methods are dependent on settings and systems, ongoing communication and feedback and/or follow-up discussions must occur among the interprofessional care team members and with health providers in other settings. Strong communication processes are critical to ensure that fragmented care is prevented for PLWMCC.

Examples of communication methods include:

- Electronic health records (EHR);
- Traditional email systems;
- Telephone calls;
- Faxes;
- In-person meetings;
- Universal transfer forms;
- Digital media applications;
- Paper-based charting;
- Video teleconferencing;
- Telemedicine/telehealth or;
- Interprofessional meetings/huddles.

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PLWMCC are vulnerable to the adverse consequences of transitions of care including:

- Duplicate testing
- Lack of medication reconciliation
- Failure to address mental and behavioral health & psychosocial needs
- Failure to transfer essential information
PLWMCC must balance multiple clinicians/providers, medications, and behavioral changes. PLWMCC are vulnerable to the adverse consequences of transitions of care such as:

- Duplicate testing;
- Lack of medication reconciliation;
- Failure to address mental and behavioral health, psychosocial needs; and
- Failure to transfer essential information – health literacy and language.

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Improving Coordinated Care

Clinicians can provide better care by:

- Connecting PLWMCC with community-based resources
- Establishing effective communication processes
- Working through an interprofessional team
- Developing individualized care plans
- Using patient navigators and community health workers to facilitate coordinated care delivery services
Clinicians who care for PLWMCC face many challenges, competing demands and difficulties in applying practice guidelines. Care coordination across multiple clinicians/providers and settings is a critical component of care for PLWMCC. Determining which member of the healthcare team (physician, nurse, social worker or community health worker) is the appropriate healthcare provider for PLWMCC can streamline care.

Clinicians can provide better care by:

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Interprofessional Teams

Interprofessional Care Teams:

- Clarify roles and responsibilities
- Work collaboratively with internal team members and external health providers
- Create conflict resolution processes
- Facilitate care plans for PLWMCC
- Connect PLWMCC with community-based resources
Interprofessional teams

• Clarify roles and responsibilities;
• Work collaboratively with internal team members and external health providers;
• Create conflict resolution processes;
• Facilitate care plans for PLWMCC¹; and,
• Connect PLWMCC with community-based resources.

For PLWMCC who are children or have cognitive impairments (i.e., dementia or Alzheimer’s), their designated family member or POA (Power of Attorney) should be highly involved in their care plan. Not all PLWMCC in this group will have the ability to review, understand, provide input and agree to a care plan because of their conditions affecting their cognitive abilities.

Interprofessional care teams can facilitate care plans for PLWMCC that are:

• Comprehensive
• Include PLWMCC and family/caregiver goals
• Elaborates goals, strategies, and processes for optimizing care and health;
• Is accessible to all team members and;
• Is regularly reviewed and revised as goals change and health milestones are met².

It is important that PLWMCC be connected to resources in their community in order to receive services that the clinical healthcare setting may not provide, either for reasons of time or expertise. When interprofessional teams have sustainable relationships with community-based resources, PLWMCC can be provided a full range of available services in their communities. If other members on the team cannot perform this

responsibility, community outreach liaisons could be hired to help PLWMCC connect with useful resources in the community. These liaisons can help foster community engagement in the collaborative process\(^1\).

Sustaining a partnership with community based organizations is an ongoing process that involves the following elements: leadership, effective collaboration, understanding the community, demonstrating program results, strategic funding, staff involvement and integration, and program responsivity\(^2\). However, cultivating strong community partnerships that provide supports and services like self-management assist PLWMCC manage their illnesses and can improve their medical, emotional and social pressures\(^3\).

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SECTION 3

Incorporating SYST Tools into Healthcare Systems for PLWMCC
This section “incorporating SYST tools into healthcare systems for PLWMCC” provides effective mechanism for healthcare professionals to help people manage their multiple chronic conditions.
Applying SYST into Health Systems

Quality Improvement Strategies

- Interprofessional team-based approach
- Information Technology
- Risk Stratification Tools
- Cost Effective Strategies
Systems based practice can be integrated into existing health systems by:

1. Adopting a team based care approach
2. Developing care plans that are responsive to the preferences and priorities of PLWMCC
3. Improving communication at all levels across settings
4. Incorporating quality improvement strategies
5. Using Information technology
6. Integrating cost effective strategies

The first two areas (team based care and communication) were just discussed in the previous section, so let’s take a closer examination of the last four areas.
Quality Improvement Strategies

Examples of quality improvement strategies that health systems use to implement changes and track the results include:

- LEAN Principles
- Plan, Do, Study, ACT (PDSA) Cycle
- IHI Model for Improvement (IHI-QI)
- Six Sigma
There are several proven quality improvement strategies that health systems use to implement changes and track the results.

*Lean Principles* is a management strategy that is applicable to all organizations because it pertains to improving processes. Leaders evaluate processes by accurately specifying the value desired by the user; identify each step in the process (or “Value stream”) and eliminate non-value added steps.

The *PDSA cycle* is a continuous quality improvement tool, useful for testing changes that occur on a small scale in a real world setting. The PDSA cycle is a rapid cycle quality improvement strategy that examines structures and processes.

The *IHI model for improvement* is an algorithm for achieving an aim at any scale. The IHI Model for Improvement is a curriculum for understanding how to set goals, track progress, and implement change.

*Six Sigma* is a disciplined, data-driven approach and methodology for improving product and process quality.

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Information Technology

Health Information Technology (HIT)
- Plays a large role in systems based practice and is any type of electronic health record (EHR) system.

Meaningful Use
- Is certified electronic health record (EHR) technology.

Patient Portals
- Provide PLWMCC access to educational material, personal laboratory tests, schedule appointments and contact their healthcare provider.

Health Information Exchanges (HIEs)
- Integrate multiple EHR systems that are not interoperable.
Health Information Technology (HIT) is an ever evolving and expanding field and plays a large role in systems-based practice. Between 2001 and 2013, office-based physicians using any type of electronic health record (EHR) system, rose from 18 to 78%\(^1\). Health Information Technology (HIT) is any type of electronic health record (EHR) system and has been found to improve shared decision making, coordination of care and after-visit summaries\(^2\).

Adoption of basic EHR systems along with participation in activities such as Meaningful Use is increasing. Meaningful use is certified EHR technology\(^3\).

Patient Portals provide PLWMCC access to educational material, personal laboratory tests, schedule appointments and contact their healthcare provider. They are associated with improved health outcomes\(^4\).

Health Information Exchanges (HIEs) are a mechanism to integrate multiple electronic health record systems that are not interoperable to help the full range healthcare providers access critical PLWMCC information. HIEs help share/access PLWMCCs’ information across multiple providers and systems\(^5\). HIEs reduce redundancies in the healthcare process and will lead to better outcomes for PLWMCC.

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HIT + EHR with Meaningful Use =

- Shared decision making
- Coordination of care
- Clinical outcomes
- Population health outcomes
- Transparency and efficiency
- Research data on health systems
Health Information Technology (HIT) can improve shared decision making, coordination of care and after-visit summaries\(^1\). Adopting EHR systems that participate in Meaningful Use can improve quality, safety, efficiency, reduce health disparities, engage PLWMCC and family, improve care coordination and population and public health, and maintain privacy and security of PLWMCCs’ health information\(^2\). Meaningful use compliance will lead to better clinical outcomes, improved population health outcomes, increased transparency and efficiency, empowered individuals and more robust research data on health systems\(^2\).


Cost Effective Strategies

- CMS’s chronic care management service applies patient cost-sharing and helps avoid the need for more costly face-to-face services in the future by proactively managing PLWMCC’s health, rather than only treating disease and illness.

- The composition of the primary care team should be optimized to deliver care that is cost effective.
Coordination of care for PLWMCC is often lost in a fee for service system\textsuperscript{1}. However, the Centers for Medicare and Medicaid Services (CMS) has a new policy on reimbursement for Chronic Care Management (CCM) which has significant implications for practice redesign in terms of structure and process. It will help individuals with complex care needs access a full range of providers. CMS also requires the use of certified EHR technology to satisfy the CCM scope of service elements\textsuperscript{2}. CMS's chronic care management service (CCM) applies patient cost-sharing and helps avoid the need for more costly face-to-face services in the future by proactively managing PLWMCC's health, rather than only treating disease and illness\textsuperscript{2}.

The composition of the primary care team should be optimized to deliver care that is cost effective.

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Risk Stratification at the Systems Level

- Ensures that PLWMCC obtain optimal levels of care and are treated by the most appropriate members of a care team.

- Addresses needs through appropriate staffing or by building targeted partnerships.
Identifying persons at risk for illness or who may benefit most from intervention is an important part of a well-functioning system. Risk stratification:

- ensures that PLWMCC obtain optimal levels of care and are treated by the most appropriate members of a care team.
- can be used to address PLWMCCC’s needs through appropriate staffing or by building targeted partnerships. Being able to “risk stratify” or estimate the degree of a need can help providers anticipate the possible amount of time and resource a PLWMCC will require.

Enhancing care through risk stratification ensures that people with higher levels of severity of illness receive more directed care.

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Risk Stratification for PLWMCC

Risk Stratification:

- Identifies and organizes PLWMCC for management
- Aids in determining appropriate healthcare services
- Facilitates medical management and practitioner decision making
- Helps to insure optimal quality of life for PLWMCC
Risk Stratification uses practice demographics, medical conditions, care patterns, and resource utilization data to identify PLWCC most in need of medical care.

Risk Stratification:

- Identifies and organizes PLWMCC for management
- Aids in determining appropriate healthcare services
- Facilitates medical management and practitioner decision making
- Helps to insure optimal quality of life for PLWMCC

Reference:

Risk Stratification Tools

Hierarchical Condition Categories (HCC)
- Contains 70 condition categories selected from ICD codes and includes expected health expenditures.

Adjusted Clinical Groups (ACG)
- Uses both inpatient and outpatient diagnoses to classify each patient into one of 93 ACG categories. It is commonly used to predict hospital utilization.
Hierarchical Condition Categories and Adjusted Clinical Groups are the first two risk stratification tools that can be used for PLWMCC.

*Hierarchical Condition Categories (HCCs)* contains 70 condition categories selected from ICD codes and includes expected health expenditures.

*Adjusted Clinical Groups (ACGs)*-uses both inpatient and outpatient diagnoses to classify each patient into one of 93 ACG categories. It is commonly used to predict hospital utilization.

Reference:

Elder Risk Assessment (ERA)

- For adults over 60, uses age, gender, marital status, number of hospital days over the prior two years, and selected comorbid medical illness to assign an index score to each patient.

Chronic Comorbidity Count (CCC)

- Is the total sum of selected comorbid conditions grouped into six categories
Elder Risk Assessment and Chronic Comorbidity Count are two other risk stratification tools that can be used for PLWMCC.

_Elder Risk Assessment (ERA),_ for adults over 60, uses age, gender, marital status, number of hospital days over the prior two years, and selected comorbid medical illness to assign an index score to each patient.

_Chronic Comorbidity Count (CCC)_ is the total sum of selected comorbid conditions grouped into six categories.

**Reference:**

SYST Resources

- Comprehensive Primary Care for Complex Patients Modules

- HHS MCC Education and Training Repository
  [http://www.hhs.gov/ash/initiatives/mcc/educationalresources](http://www.hhs.gov/ash/initiatives/mcc/educationalresources)
Here is a system based resource that may be used to further examine systems based practice:

The Comprehensive Primary Care for Complex Patients Modules provides physicians, practice administrators, and other practice leaders with competencies that facilitate effective physician practice within medical homes.

To find more MCC related education and training resources for health professionals, visit the HHS MCC Education and Training Repository at http://www.hhs.gov/ash/initiatives/mcc/educationalresources.