

ONCOLOGY CARE MODEL

KEY DRIVERS & CHANGES

August 4, 2016

Prepared by:

Centers for Medicare & Medicaid Services
Booz | Allen | Hamilton

TABLE OF CONTENTS

1 Overview and Purpose	1
2 Key Drivers and Changes.....	1
2.1 Purpose and Use of the Key Drivers and Changes.....	1
2.2 Summary of Key Drivers and Changes.....	2
2.2.1 <i>Driver Diagram</i>	2
2.2.2 <i>Secondary Driver Definitions</i>	3
2.2.3 <i>Change Concepts for Each Secondary Driver</i>	4
2.3 Tools and Resources for OCM Secondary Drivers and Changes	7
2.3.1 <i>Secondary Driver: Access and Continuity</i>	7
2.3.2 <i>Secondary Driver: Care Coordination</i>	9
2.3.3 <i>Secondary Driver: Care Planning and Management</i>	13
2.3.4 <i>Secondary Driver: Patient and Caregiver Engagement</i>	15
2.3.5 <i>Secondary Driver: Team-Based Care</i>	18
2.3.6 <i>Secondary Driver: Data-Driven Quality Improvement</i>	19
2.3.7 <i>Secondary Driver: Evidence-Based Medicine</i>	21
3 Appendix A: Additional Evidence by Secondary Driver.....	23
4 Appendix B: Methods for Development of Key Drivers	39

TABLE OF FIGURES

Figure 1: Primary Driver, Secondary Driver, and Changes Definitions	2
Figure 2: Oncology Care Model Driver Diagram	3
Figure 3: Secondary Driver Definitions.....	3
Figure 4: Alignment of Key Drivers & Change Concepts	5
Figure 5: Access and Continuity.....	7
Figure 6: Care Coordination	9
Figure 7: Care Planning and Management	13
Figure 8: Patient and Caregiver Engagement	15
Figure 9: Team-Based Care.....	18
Figure 10: Data-Driven Quality Improvement.....	19
Figure 11: Evidence-Based Medicine	21
Figure 12: Change Package Resource Categories	23
Figure 13: 24/7 Access Resources.....	23
Figure 14: Increased Access to Visits Resources	23
Figure 15: Access to Care Outside of Visits Resources.....	24
Figure 16: Patient Navigation Resources.....	25
Figure 17: Coordinated Medication Management Resources	25
Figure 18: Referral Coordination Resources.....	26
Figure 19: Improve Care Transitions Resources.....	26
Figure 20: Institute of Medicine Care Plan Resources	27
Figure 21: Risk Stratification Resources.....	27
Figure 22: Visit Follow-Up Resources	27
Figure 23: Caregiver Engagement Resources	28
Figure 24: Patient Support Resources	28
Figure 25: Patient Experience Tracking Resources.....	29
Figure 26: Patient Record Review Resources.....	30
Figure 27: Improvement Guidance Resources	30
Figure 28: Organizational Support for Teams Resources	30
Figure 29: Define Roles for Team Members Resources	31
Figure 30: Team Huddles Resources	31
Figure 31: Continuous Quality Improvement Resources.....	31
Figure 32: Utilization of EHR Technology Resources.....	32
Figure 33: Team Meetings for Improvement Cycles Resources	32
Figure 34: Leadership Review of Performance Data Resources	32
Figure 35: Use Nationally Recognized Clinical Guidelines Resources	32
Figure 36: Clinical Decision Support Systems Resources.....	33
Figure 37: Clinical Trial Participation Resources	33
Figure 38: Budgeting and Accounting Processes Resources.....	34
Figure 39: Align Metrics and Strategies with Model Aims Resources	34
Figure 40: Performance-Based Payment Sharing Resources.....	34
Figure 41: Data Grouping Resources	35
Figure 42: Patient Incentives Resources	35
Figure 43: Practice Guidelines and Expectations Resources	36
Figure 44: Incentive Alignment Resources	36
Figure 45: Clinician Engagement Resources	36
Figure 46: Quality Measures Alignment Resources.....	37
Figure 47: Address Administrative Challenges to Implementing Payment Reform Resources	37
Figure 48: Clinician and Payer Partnerships Resources	38
Figure 49: Drug Cost Management Resources.....	38
Figure 50: Provide Data and Feedback to Practices Resources.....	38
Figure 51: Level of Evidence Criteria.....	41

1 Overview and Purpose

The Oncology Care Model (OCM) engages participating practices and payers to improve the quality and experience of oncology care and to lower costs through an episode-based payment model. The two-part payment system includes a Monthly Enhanced Oncology Services (MEOS) payment for the duration of a patient's six-month episode and the potential for a retrospective performance-based payment. The Centers for Medicare & Medicaid Services (CMS) designed the OCM payment model to support the provision of enhanced services representing comprehensive, coordinated cancer care and continuous, data-driven quality improvement. CMS expects that these improvements will result in better care, smarter spending, and healthier people.

Practitioners in OCM will need to make changes in how they organize and deliver care to be successful and achieve the aims of the model, incorporating evidence and best practices in their approach to these changes.

The Key Drivers and Changes provides a framework for change and improvement for OCM and encourages key corridors (or focus areas) of work. It is not intended to be a checklist for what practices or payers must do, but instead is a starting point for participants to assess and begin redesigning their approach to care to achieve the OCM aims.

Importantly, the drivers and changes identified here will evolve over time and will be updated annually. **As OCM participants, your feedback on which drivers and changes are effective will contribute to future iterations of this document. Collectively, we will construct the roadmap for this effort and generate an ever-stronger evidence base for practices inside and outside of OCM.**

To get started, OCM participants are requested to carefully review the elements of the Key Drivers and Changes, consider topics that are most relevant for your practice to focus on, and review the relevant resources for those areas. Throughout the model practices will implement changes in how they organize and deliver care and generously share their experience and results with fellow OCM participants to ensure success.

2 Key Drivers and Changes

2.1 Purpose and Use of the Key Drivers and Changes

The Key Drivers and Changes is intended to:

- Suggest the key drivers of success in OCM. Key drivers are broken into two levels: primary and secondary. Primary drivers identify the major areas of action necessary to achieve the desired aim. Secondary drivers drill down further into the areas of action (or focus areas for improvement) that lead to each primary driver. The primary and secondary drivers are outlined in the driver diagram presented in Figure 2.
- Identify a set of changes rooted in evidence and practice that practices and payers may test and implement within each of the drivers. These changes are thought to be necessary to achieve results within a secondary driver and are articulated in broad, conceptual terms (change concepts) as well as specific tactics (change tactics).
- Identify the change concepts that align with required practice redesign activities. The aim in OCM is clear and measurable, and there are broad concepts and specific tactics that all OCM practices have agreed to as a condition of participation in the model to help achieve that aim. There are likely to be additional tactics that practices will find necessary for success. Similarly,

partnering OCM payers have agreed to certain principles of payment and model design to support the delivery of this care.

- Provide references and links to tools and resources for each change concept.

The Key Drivers and Changes give an overview of how we expect OCM to work and suggest corridors of work for practices and payers. As the model progresses, changes to this document will reflect how practices and payers improve the quality and experience of care and reduce costs in OCM.

2.2 Summary of Key Drivers and Changes

The definitions of important terms in this section are below in Figure 1.

Figure 1: Primary Driver, Secondary Driver, and Changes Definitions

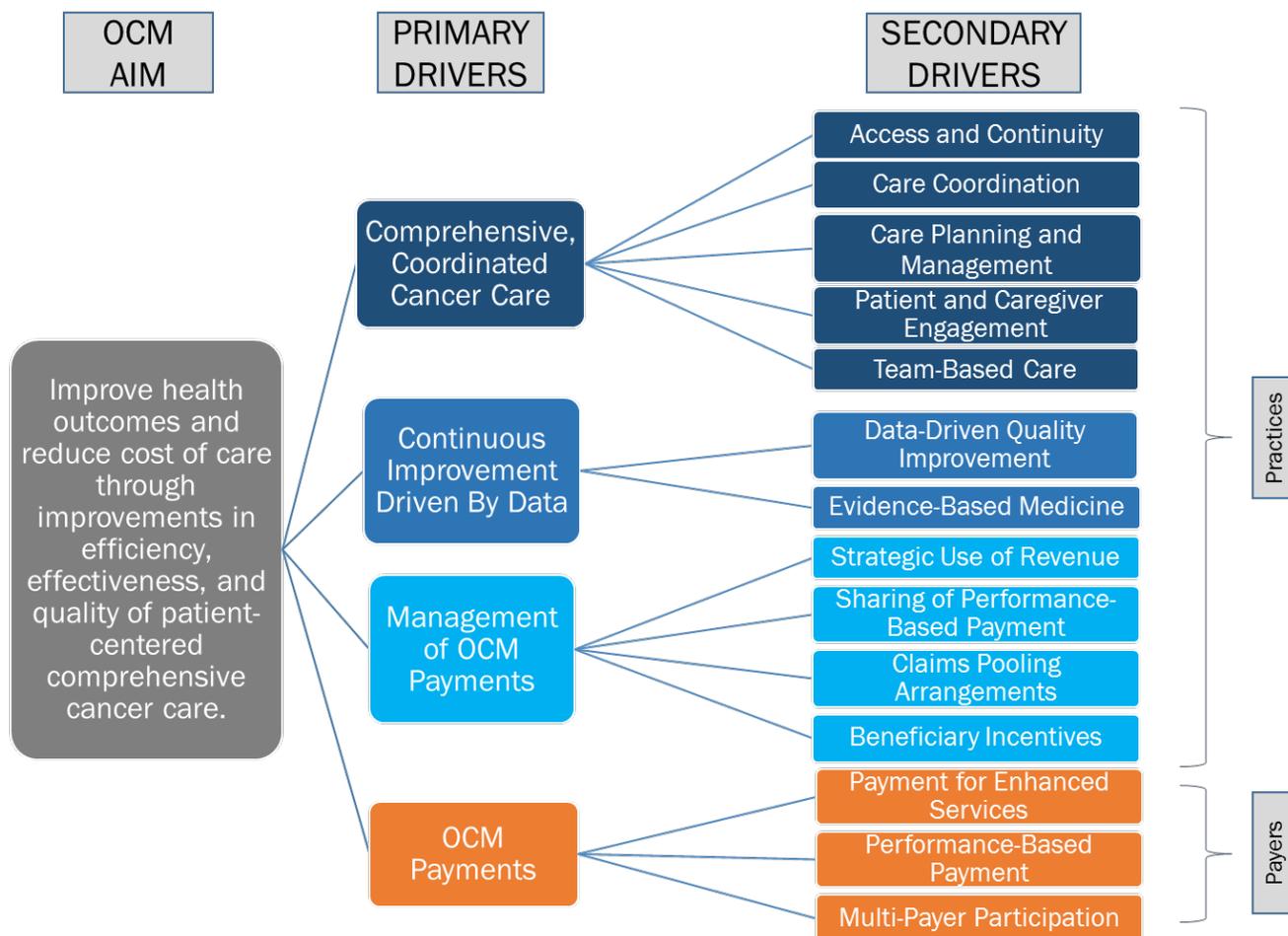
Primary Driver	Secondary Driver	Changes
Primary drivers identify the major areas of action necessary to achieve the desired aim.	Secondary drivers drill down further into the areas of action (or focus areas for improvement) that lead to the primary driver.	The changes thought to be necessary to achieve the results from a secondary driver are expressed in broad, conceptual terms (change concepts) and as specific tactics (change tactics) through which the change concepts are implemented.

This section also includes the OCM driver diagram, a table with definitions of the secondary drivers, and a table of change concepts for each secondary driver.

2.2.1 Driver Diagram

A driver diagram is a common approach to summarizing the essential areas of action in organizational change or improvement. The driver diagram (Figure 2) provides a snapshot of the overall OCM aim and the primary and secondary drivers hypothesized to be necessary to achieve the aim. All subsequent sections of this document tie back to this overarching approach. Note that practice-related drivers are indicated in shades of **blue**, while payer-related drivers are indicated in **orange**.

Figure 2: Oncology Care Model Driver Diagram



2.2.2 Secondary Driver Definitions

Secondary drivers are critical areas of work for participating OCM practices. Figure 3 provides operational definitions for each secondary driver, which are grouped by primary driver. Some definitions come from an external source, while others were developed specific to the purposes of OCM.

Figure 3: Secondary Driver Definitions

Primary Driver	Secondary Driver	Definition
Comprehensive, Coordinated Cancer Care	Access and Continuity	Access is defined by the ability to obtain needed health and health care services in a timely manner in terms of proximity, location, time, and ease of approach. Access is a function of both system and individual characteristics and is influenced by social, cultural, economic, and geographic factors (NOF Glossary). Relationship continuity is defined by an ongoing therapeutic relationship between a patient and one or more clinicians and can be measured in reference to a single clinician or to a care team (CPC Implementation Guide 2016).
	Care Coordination	Care coordination involves deliberately organizing patient care activities and sharing information among all of the participants concerned with a patient's care to achieve safer and more effective care (AHRQ).

Primary Driver	Secondary Driver	Definition
	Care Planning and Management	A coordinated plan of evidence-based, integrated clinical care activities that are patient-specific and are agreed upon by the patient, caregivers, and clinician. The care plan is a tool to facilitate communication and shared decision making. Fundamental to the care plan are the conversations that a patient and clinician have regarding the patient’s care (Delivering High-Quality Cancer Care, IOM 2013).
	Patient and Caregiver Engagement	Empowering patients and caregivers to serve as active partners and collaborate in shared-decision making with clinicians and the health care team along the continuum of cancer care to improve quality and safety. Cancer care teams should ensure that sufficient communication methods are instituted and take into account a patient’s health literacy, information, language, and emotional needs (Delivering High-Quality Cancer Care, IOM 2013).
	Team-Based Care	The provision of comprehensive health services to individuals, families, and/or their communities by health professionals who work collaboratively along with patients, family caregivers, and community service providers on shared goals within and across settings to achieve coordinated, high-quality care (Delivering High-Quality Cancer Care, IOM 2013).
Continuous Improvement Driven by Data	Data-Driven Quality Improvement	The use of a balanced set of measures with a strong evidence base to inform change and practice transformation, identify and understand practice variation, provide clinical decision support, and monitor and sustain successful practices (IHI Science of Improvement).
	Evidence-Based Medicine	The integration of clinical expertise, the patient’s preferences or values, and the best research evidence to decide on the option that best suits the patient (Evid Based Med 2002;7:36-38).
Management of OCM Payments	Strategic Use of Revenue	Development of a strategic plan to use the payments for enhanced services and performance-based payments to maintain the infrastructure and resources to support enhanced care including, but not limited to, additional staff, increased health IT and analytics capabilities, and extended care capabilities.
	Sharing of Performance-Based Payment	Development of a customized payment distribution plan that allows savings to be shared with care partners for their role in contributing to patient care.
	Claims Pooling Arrangements	Pooling of claims across practices. Pooling is mandatory for clinicians who work across multiple Tax Identification Numbers. Practices may also elect to pool claims with other practices.
	Beneficiary Incentives	Strategies, tactics, and tools that remove barriers to effective care planning or management, provide incentives for behavior change, and enable patients to improve their health.
OCM Payments (Payers, including CMS)	Payment for Enhanced Services	Payment (e.g., advance payment or per beneficiary/enrollee/member per month payment) for services that are aligned with those included in the definition of Enhanced Services and provided to the payer’s patient population by the practices. For Medicare, this is the Monthly Enhanced Oncology Services (MEOS) Payment.
	Performance-Based Payment	Payment for performance (e.g., retrospective lump sum or enhanced monthly payment) using a methodology designed to assess the practices’ performance on measures of utilization, cost of care and/or quality of care for an episode of care.
	Multi-Payer Participation	Involving other payers in the model offers the opportunity to transform care on a larger scale by creating broader incentives for care transformation at the physician practice level.

2.2.3 Change Concepts for Each Secondary Driver

For each secondary driver, there is a set of changes thought to be necessary to achieve results in that driver. These changes are expressed in broad, conceptual terms (“change concepts”) and as specific tactics (“change tactics”) through which the change concepts are implemented. This is intended to provide a roadmap for action that allows practices to test and implement the specific tactics that work best for them. To best guide practices at the start of OCM implementation, a literature review was conducted to identify the evidence base in each of the secondary driver and

change concept areas. The methodology for this review is summarized in Appendix B: Methods for Development of Key Drivers.

Figure 4 lists the change concepts aligned to each secondary driver. In some cases, the change concepts are also requirements of OCM participation, and therefore are core elements of model implementation. These are indicated by the bolded “Required Practice Redesign Activity.”

Note that the secondary driver and change concepts identified for payers are indicated in the OCM Payments primary driver.

Figure 4: Alignment of Key Drivers & Change Concepts

Primary Driver	Secondary Driver	Change Concept
Comprehensive, Coordinated Cancer Care	Access and Continuity	<ul style="list-style-type: none"> ○ Required Practice Redesign Activity: Provide 24/7 access to an appropriate clinician who has real-time access to patients’ medical records ○ Increased access to visits ○ Access to care and information outside of visits
	Care Coordination	<ul style="list-style-type: none"> ○ Required Practice Redesign Activity: Provide core functions of patient navigation ○ Conduct coordinated medication management ○ Referral coordination and management (this concept is also one of the core functions of patient navigation) ○ Improve transitions between care settings (this concept is also one of the core functions of patient navigation)
	Care Planning and Management	<ul style="list-style-type: none"> ○ Required Practice Redesign Activity: Document a care plan that contains the 13 components in the Institute of Medicine (IOM) Care Management Plan ○ Risk stratification ○ Monitoring and follow-up from visits
	Patient and Caregiver Engagement	<ul style="list-style-type: none"> ○ Engage patients and caregivers in shared decision making ○ Patient education, coaching, and self-management support ○ Provide patients with modes to track or share experiences ○ Open medical records and documents (e.g., care plans) for patient review and revision ○ Partner with patients and caregivers to guide practice improvements
	Team-Based Care	<ul style="list-style-type: none"> ○ Establishing and providing organizational support for care delivery teams with consistent team members accountable for the patient population/panel ○ Defining roles and distributing tasks among care team members to reflect the skills, abilities and credentials of team members ○ Holding regular team huddles to manage workflow and meet patient needs
Continuous Improvement Driven By Data	Data-Driven Quality Improvement	<ul style="list-style-type: none"> ○ Required Practice Redesign Activity: Use of data for continuous quality improvement ○ Required Practice Redesign Activity: Use Certified Electronic Health Record (EHR) Technology ○ Designating regular team meetings to review data and plan/implement improvement cycles ○ Incorporating routine clinical and administrative leadership review of data as part of management process
	Evidence-Based Medicine	<ul style="list-style-type: none"> ○ Required Practice Redesign Activity: Use therapies consistent with nationally recognized clinical guidelines ○ Use clinical decision support systems ○ Provide patients with appropriate opportunities to participate in clinical trials (this concept is also one of the core functions of patient navigation, see Section 2.3.2)
Management of OCM Payments	Strategic Use of Revenue	<ul style="list-style-type: none"> ○ Use budgeting and accounting processes effectively to transform care processes and build capability to delivery comprehensive, coordinated cancer care ○ Align practice productivity metrics and compensation strategies with comprehensive, coordinated cancer care

OCM Key Drivers and Changes

Primary Driver	Secondary Driver	Change Concept
	Sharing of Performance-Based Payment	<ul style="list-style-type: none"> Engage various care partners in sharing of performance-based payment
	Claims Pooling Arrangements	<ul style="list-style-type: none"> Group data with other practices
	Beneficiary Incentives	<ul style="list-style-type: none"> Provide nonmonetary incentives, tools/technology, or vouchers for health behavior change
OCM Payments (Payers, including CMS)	Payment for Enhanced Services	<ul style="list-style-type: none"> Offer practices suggested clinical guidelines and expectations for coordination of care to meet performance goals Align incentives across clinician teams to meet goals of model Engage clinician across the continuum of care to coordinate and manage care
	Performance-Based Payment	<ul style="list-style-type: none"> Align quality measures used to determine performance-based payment with other quality measure reporting programs Address administrative challenges to implementing episode-based payments, such as claims adjudication
	Multi-Payer Participation	<ul style="list-style-type: none"> Foster partnerships between cancer care clinicians and payers to align incentives to provide high-quality, high-value care Manage cost of oncology drugs Provide data and feedback to practices

2.3 Tools and Resources for OCM Secondary Drivers and Changes

What This Resource Provides: The following tables are organized by secondary driver. For each secondary driver and change concept, potential change tactics and implementation resources are provided. This section of the document focuses on the Comprehensive, Coordinated Cancer Care and Continuous Improvement Driven by Data primary drivers. The other two primary drivers will be further developed in future iterations of the change package as our collective experience with these primary drivers matures.

Supporting literature provide the evidence base for change concepts with references provided in the footnotes, while implementation tools provide the practical guides to put changes in place. These implementation guides and toolkits provide action-oriented guidance to apply changes in your practice. The most salient and useful resources are presented in this section, and Appendix A: Additional Evidence by Secondary Driver contains additional evidence and resources. Appendix B: Methods for Development of Key Drivers describes the methodology for this review.

Participants are asked to review this section in detail, with special attention to the practice redesign activities that are required for participation in OCM. In addition, OCM participants should assess their practice improvement opportunities in the other secondary driver areas. It is expected that the following tools and resources will continue to expand and evolve based on new evidence from participating practices.

2.3.1 Secondary Driver: Access and Continuity

Figure 5: Access and Continuity

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<i>Required Practice Redesign Activity:</i> Provide 24/7 access to an appropriate clinician who has real-time access to patients' medical records	<ul style="list-style-type: none"> ○ Provide access to clinician from the OCM practice with access to medical record.^{1,2} ○ Provide cross-coverage from clinicians outside the OCM practice with access to medical record.^{3,4} 	<ul style="list-style-type: none"> ○ Safety Net Medical Home Initiative. Enhanced Access Implementation Guide. www.safetynetmedicalhome.org/sites/default/files/Implementation-Guide-Enhanced-Access.pdf

¹ CPC Program Year 2016 Implementation and Milestone Reporting Summary Guide. <https://downloads.cms.gov/files/cmml/cpci-implementationguide2016.pdf>

² Institute of Medicine. Transforming Health Care Scheduling and Access: Getting to Now. Washington, DC: The National Academies Press, 2015. doi:10.17226/20220. <http://nap.edu/20220>

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
Increased access to visits	<ul style="list-style-type: none"> ○ Shared medical appointments—or group visits where multiple patients are seen as a group for similar conditions— have improved health-related quality of life in other settings and may address medical and psychosocial needs while enhancing communication in cancer care.³ ○ Extended evening hours, weekend clinics, and same-day appointments have also been successful tactics for increasing access in cancer care.⁴ 	<ul style="list-style-type: none"> ○ Safety Net Medical Home Initiative. Enhanced Access Implementation Guide. http://www.safetynetmedicalhome.org/sites/default/files/Implementation-Guide-Enhanced-Access.pdf
Access to care and information outside of visits	<ul style="list-style-type: none"> ○ Studies have shown remote monitoring has high acceptability and success in improving clinical outcomes such as pain, depression, and fatigue.⁵ ○ Evidence suggests that video consultation is both feasible and effective for use in the clinical care of oncology patients.^{6,7} ○ Secure email, secure text-messaging, call centers, remote monitoring, two-way video visits, and patient portals for access to health information are promising approaches to provide increased access outside of visits. 	<ul style="list-style-type: none"> ○ Safety Net Medical Home Initiative. Enhanced Access Implementation Guide. http://www.safetynetmedicalhome.org/sites/default/files/Implementation-Guide-Enhanced-Access.pdf

³ Reed, S. C., Partridge, A. H., & Nekhlyudov, L. (2014). Shared Medical Appointments in Cancer Survivorship Care: A Review of the Literature. *Journal of Oncology Practice / American Society of Clinical Oncology*, 45–47. Retrieved from <http://jop.ascopubs.org/content/11/1/6.full.pdf+html>

⁴ Sanghavi, D, Patel, K, et al. (2014). *Transforming Cancer Care and the Role of Payment Reform: Lessons from the New Mexico Cancer Center*. Retrieved from the Brookings Institution website: <http://www.brookings.edu/research/papers/2014/08/26-oncology-transforming-cancer-care-payment-reform>

⁵Kofoed, S., Breen, S., Gough, K., Aranda, S., Maccallum, P., & Centre, C. (2012). Benefits of Remote Real-Time Side-Effect Monitoring Systems for Patients Receiving Cancer Treatment, 6. <http://doi.org/10.4081/oncol.2012.e7>

⁶ Kitamura, C., Zurawel-Balaura, L., & Wong, R. K. S. (2010). How Effective Is Video Consultation in Clinical Oncology? A Systematic Review. *Current Oncology*, 17(3), 17–27. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2880899>

⁷ Viers, B. R., Lightner, D. J., Rivera, M. E., Tollefson, M. K., Boorjian, S. A., Karnes, R. J., Gettman, M. T. (2015). Efficiency, Satisfaction, and Costs for Remote Video Visits Following Radical Prostatectomy: A Randomized Controlled Trial. *European Urology*, 68(4), 729–735. <http://doi.org/10.1016/j.eururo.2015.04.002>

2.3.2 Secondary Driver: Care Coordination

Figure 6: Care Coordination

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<p><i>Required Practice Redesign Activity.</i> Provide core functions of patient navigation</p>	<ul style="list-style-type: none"> ○ Patient navigation improves the care experience for patients with newly diagnosed cancer^{8,9} and can reduce problems in care.¹⁰ ○ Patient navigation has been shown to improve timely cancer care, especially for populations with low follow-up rates or with low resources.¹¹ ○ Core functions include (per the National Cancer Institute)¹²: <ul style="list-style-type: none"> ▪ Coordinating appointments with clinicians to ensure timely delivery of diagnostic and treatment services; ▪ Maintaining communication with patients, survivors, families, and health care clinicians to monitor patient satisfaction with the cancer care experience; ▪ Ensuring that appropriate medical records are available at scheduled appointments; ▪ Arranging language translation or interpretation services; ▪ Facilitating connections to follow-up services; ▪ Providing access to clinical trials, and ▪ Building partnerships with local agencies and groups (e.g., referrals to other services and/or cancer survivor support groups). 	<ul style="list-style-type: none"> ○ George Washington Cancer Center. Advancing the Field of Cancer Patient Navigation: A Toolkit for Comprehensive Cancer Control Professionals. https://smhs.gwu.edu/cancercontroltap/sites/cancercontroltap/files/PN%20Toolkit%20FINAL.pdf

⁸ Hendren, S., & Fiscella, K. (2014, January 1). Patient Navigation Improves the Care Experience for Patients with Newly Diagnosed Cancer. *Journal of Clinical Oncology*, 32(1), 3–4. <http://doi.org/10.1200/JCO.2013.53.2960>

⁹ Freund, Karen M., et al. Impact of Patient Navigation on Timely Cancer Care: The Patient Navigation Research Program. *Journal of the National Cancer Institute*, 106.6 (2014): dju115. <http://jnci.oxfordjournals.org/content/106/6/dju115.long#ref-27>

¹⁰ Wagner, E. H., Ludman, E. J., Aiello Bowles, E. J., Penfold, R., Reid, R. J., Rutter, C. M., McCorkle, R. (2014). Nurse Navigators in Early Cancer Care: A Randomized, Controlled Trial. *Journal of Clinical Oncology*, 32(1), 12–18. <http://doi.org/10.1200/JCO.2013.51.7359>

¹¹ Freund, K. M., Battaglia, T. A., Calhoun, E., Darnell, J. S., Dudley, D. J., Fiscella, K., Writing Group of the Patient Navigation Research Program. (2014). Impact of Patient Navigation on Timely Cancer Care: The Patient Navigation Research Program. *Journal of the National Cancer Institute*, 106(6), dju115. <http://doi.org/10.1093/jnci/dju115>

¹² National Cancer Institute Center to Reduce Cancer Health Disparities. Patient Navigator Research Program. Available at: <http://www.cancer.gov/aboutnci/organization/crhd/disparities-research/pnpr>

OCM Key Drivers and Changes

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
Conduct coordinated medication management	<ul style="list-style-type: none"> ○ Medication management and reconciliation can reduce inappropriate prescribing.¹³ ○ Medication management approaches, such as patient education and counseling, combined with improved communication with health care professionals can reduce the risk of adverse drug events and hospital readmissions in some cases, but not all.^{14, 15} 	<ul style="list-style-type: none"> ○ How-to Guide: Prevent Adverse Drug Events by Implementing Medication Reconciliation. Cambridge, MA: Institute for Healthcare Improvement; 2011. http://www.ihl.org/resources/pages/tools/howtoguidepreventadversedrugs.aspx ○ Collaboration for Home Care Advances in Management and Practice. Geriatric Medication Management Toolkit. http://www.champ-program.org/page/101/geriatric-medication-management-toolkit#Evaluation_Screening_Tools

¹³ Patterson SM, Cadogan CA, Kerse N, Cardwell CR, Bradley MC, Ryan C, Hughes C. Interventions to Improve the Appropriate Use of Polypharmacy for Older People. *Cochrane Database of Systematic Reviews* 2014, Issue 10. Art. No.: CD008165. <http://dx.doi.org/10.1002/14651858.CD008165.pub3>

¹⁴ Spinewine, A., Claeys, C., Foulon, V., & Chevalier, P. (2013). Approaches for Improving Continuity of Care in Medication Management: A Systematic Review. *International Journal for Quality in Health Care: Journal of the International Society for Quality in Health Care / ISQua*, 25(4), 403–17. <http://doi.org/10.1093/intqhc/mzt032>

¹⁵ Viswanathan M, Kahwati LC, Golin CE, et al. Medication Therapy Management Interventions in Outpatient Settings [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2014 Nov. (Comparative Effectiveness Reviews, No. 138). Available from: <http://www.ncbi.nlm.nih.gov/books/NBK294489/>

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<p>Referral coordination and management¹⁶</p>	<ul style="list-style-type: none"> ○ Specialist collaboration has been found to lower mortality without increased cost among patients with colon cancer.¹⁷ ○ Care coordination agreements have been perceived to be associated with improved quality and care coordination by practices that implement them.¹⁸ ○ Care coordination programs with a considerable amount of in-person contact improved certain quality-of-life process measures.¹⁹ ○ Systematic criteria for referral improves candidate selection and timing.²⁰ ○ Form written agreements with care partners, referred to as care coordination agreements, care compacts, or referral agreements, to delineate how care responsibilities will be shared and how bidirectional information will flow. ○ Provide patients with information that sets their expectations consistently with the care coordination agreements. ○ Track patients referred to specialists through the entire process. ○ Systematically integrate information from referrals into the plan of care. ○ Participate in health information exchange if available. ○ Use structured referral notes. 	<ul style="list-style-type: none"> ○ American College of Physicians. Care Coordination - High Value Care Coordination (HVCC) Toolkit. https://hvc.acponline.org/physres_care_coordination.html ○ The Commonwealth Fund. Reducing Care Fragmentation: A Toolkit for Coordinating Care. http://www.lpfch.org/sites/default/files/reducing_care_fragmentation_a_toolkit_for_coordinating_care.pdf ○ The American College of Physicians. Referral Tracking Guide. http://www.improvingchroniccare.org/downloads/3_referral_tracking_guide.pdf

¹⁶ This concept is also one of the core functions of patient navigation (see Section 2.3.2).

¹⁷ Hussain, T., Chang, H.-Y., Veenstra, C. M., & Pollack, C. E. (2015). Collaboration Between Surgeons and Medical Oncologists and Outcomes for Patients With Stage III Colon Cancer. *Journal of Oncology Practice*, 11(3), e388–e397. <http://doi.org/10.1200/JOP.2014.003293>

¹⁸ E. Carrier, M. K. Dowling, and H. H. Pham, Care Coordination Agreements: Barriers, Facilitators, and Lessons Learned, *The American Journal of Managed Care*, Nov. 2012 18(11):e398–e404. <http://www.aimc.com/journals/issue/2012/2012-11-vol18-n11/care-coordination-agreements-barriers-facilitators-and-lessons-learned/P-3#sthash.x3BP9yI0.dpuf>

¹⁹ Peikes, D., Chen, A., Schore, J., & Brown, R. (2009). Effects of Care Coordination on Hospitalization, Quality of Care, and Health Care Expenditures among Medicare Beneficiaries: 15 Randomized Trials. *JAMA*, 301(6), 603–18. <http://doi.org/10.1001/jama.2009.126>

²⁰ Hui, D., Meng, Y.-C., Bruera, S., Geng, Y., Hutchins, R., Mori, M., Bruera, E. (2016). Referral Criteria for Outpatient Palliative Cancer Care: A Systematic Review. *The Oncologist*, 1–7. <http://doi.org/10.1634/theoncologist.2016-0006>

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<p>Improve transitions between care settings²¹</p>	<ul style="list-style-type: none"> ○ Interventions to manage care transitions have been implemented in a variety of settings, resulting in reduced readmission rates and hospitalization costs.²² ○ Formalize lines of communication with local settings in which patients receive care to ensure documented flow of information and seamless transitions in care. ○ Partner with community or hospital-based transitional care services. ○ Routine and timely follow-up to hospitalizations, ED visits, and stays in other institutional settings. 	<ul style="list-style-type: none"> ○ Society of Hospital Medicine. Project BOOST (Better Outcomes by Optimizing Safe Transitions) Implementation Toolkit. http://www.hospitalmedicine.org/ResourceRoomR edesign/RR_CareTransitions/CT_Home.cfm ○ Project Re-Engineered Discharge (RED). The Project RED Toolkit. https://www.bu.edu/fammed/projectred/toolkit.html ○ American Association of Family Physicians. Transition of Care Management 30-day Checklist. http://www.aafp.org/dam/AAFP/documents/practice_management/payment/TCM30day.pdf

²¹ This concept is also one of the core functions of patient navigation (see Section 2.3.2).

²² Medicare Payment Advisory Commission (MedPAC). Report to Congress: Medicare and the Health Care Delivery System. June 15, 2012. Available from: http://www.medpac.gov/documents/Jun12_EntireReport.pdf

2.3.3 Secondary Driver: Care Planning and Management

Figure 7: Care Planning and Management

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<p><i>Required Practice Redesign Activity.</i> Document a care plan that contains the 13 components in the Institute of Medicine Care Management Plan</p>	<ul style="list-style-type: none"> ○ Care management programs were the most common function across five pilot oncology medical homes.²³ Care management can improve the quality of care.²⁴ ○ Effective care management programs include identifying patients' needs, using specially trained care managers working within a multidisciplinary team, and in-person contact with patients.²⁵ ○ Early referrals to outpatient palliative care improve patient outcomes.²⁶ 	<ul style="list-style-type: none"> ○ See the <i>Delivering High Quality Cancer Care</i> IOM Report (2013) for an example care plan: Institute of Medicine. <i>Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis</i>. Washington, DC: The National Academies Press, 2013. http://www.nap.edu/catalog/18359/delivering-high-quality-cancer-care-charting-a-new-course-for ○ The Commonwealth Fund. <i>Caring for High-Need, High-Cost Patients: What Makes for a Successful Care Management Program?</i> http://www.commonwealthfund.org/~media/files/publications/issue-brief/2014/aug/1764_hong_caring_for_high_need_high_cost_patients_ccm_ib.pdf

²³ Tirodkar, M. A., Acciavatti, N., Roth, L. M., Stovall, E., Nasso, S. F., Sprandio, J., Scholle, S. H. (2015). Lessons From Early Implementation of a Patient-Centered Care Model in Oncology. *Journal of Oncology Practice / American Society of Clinical Oncology*, 11(Sept.), 456–461. <http://doi.org/10.1200/JOP.2015.006072>

²⁴ Bodenheimer, T. S., and R. Berry-Millett. 2009. Care Management of Patients with Complex Health Care Needs. Princeton, N.J.: The Robert Wood Johnson Foundation. The Synthesis Project. Research Synthesis Report 19. <http://www.rwjf.org/en/library/research/2009/12/care-management-of-patients-with-complex-health-care-needs.html>

²⁵ *Id.*

²⁶ Hui, D., Meng, Y.-C., Bruera, S., Geng, Y., Hutchins, R., Mori, M., Bruera, E. (2016). Referral Criteria for Outpatient Palliative Cancer Care: A Systematic Review. *The Oncologist*, 1–7. <http://doi.org/10.1634/theoncologist.2016-0006>

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<p>Risk stratification</p>	<ul style="list-style-type: none"> ○ Assigning a risk status to each patient (risk stratification) gives a physician practice a more granular view into the needs of its patients and population and gives it the ability to target care management resources more effectively. ○ Use a consistent method to assign and adjust global risk status for all patients to allow risk stratification into actionable risk cohorts. 	<ul style="list-style-type: none"> ○ California Health Care Foundation. Finding a Match: How Successful Complex Care Programs Identify Patients. http://www.chcf.org/publications/2015/03/finding-match-complex-care ○ American Academy of Family Physicians. Risk Stratification Care Management and Coordination Fact Sheet. http://www.pcpcci.org/sites/default/files/resources/Risk-Stratified%20Care%20Management%20and%20Coordination.pdf
<p>Monitoring and follow-up from visits</p>	<ul style="list-style-type: none"> ○ Some studies have shown improved psychological health, satisfaction of clinicians, and process of care measures from interventions to improve follow-up and continuity between visits.²⁷ ○ Using technology in cancer follow-up, such as telephone follow-up calls, has been shown to be acceptable and safe.²⁸ 	<ul style="list-style-type: none"> ○ American College of Physicians. Care Coordination - High Value Care Coordination (HVCC) Toolkit. https://hvc.acponline.org/physres_care_coordination.html ○ The Commonwealth Fund. Reducing Care Fragmentation: A Toolkit for Coordinating Care. http://www.lpfch.org/sites/default/files/reducing_care_fragmentation_a_toolkit_for_coordinating_care.pdf

²⁷ Aubin M, Giguère A, Martin M, Verreault R, Fitch MI., Kazanjian A, Carmichael P-H. (2012). Interventions to Improve Continuity of Care in the Follow-up of Patients with Cancer. *Cochrane Database of Systematic Reviews* 2012, Issue 7. <http://www.ncbi.nlm.nih.gov/pubmed/22786508>

²⁸ Dickinson, R., Hall, S., Sinclair, J. E., Bond, C., & Murchie, P. (2014). Using Technology to Deliver Cancer Follow-up: A Systematic Review. *BMC Cancer*, 14(1), 311. <http://doi.org/10.1186/1471-2407-14-311>

2.3.4 Secondary Driver: Patient and Caregiver Engagement

Figure 8: Patient and Caregiver Engagement

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<p>Engage patients and caregivers in shared decision making</p>	<ul style="list-style-type: none"> ○ Shared decision making improves patient outcomes and mitigates emotional repercussions of a cancer diagnosis.²⁹ ○ Cancer-related decision aids increase knowledge without adverse impact on decisional conflict or anxiety, and help patients make more informed decisions, have accurate risk perceptions, and make choices that best agree with their values.³⁰ ○ Well-integrated, early treatment discussions improve patient satisfaction and decrease health care spending.³¹ ○ Training programs for clinical staff on patient-centered communication and shared decision making have been found to be most effective when they are at least one-day long, learner centered, and focused on practices' skills. The best training strategies include role play, feedback, and small group discussions.³² ○ Communication skills training in cancer care have been found to be effective and improve clinician empathy and use of open-ended questions.³³ 	<ul style="list-style-type: none"> ○ Health IT National Learning Consortium – Shared Decision Making Fact Sheet. https://www.healthit.gov/sites/default/files/nlc_shared_decision_making_fact_sheet.pdf ○ Mayo Clinic Shared Decision Making National Resource Center. http://shareddecisions.mayoclinic.org/ ○ Dartmouth-Hitchcock Shared-Decision Making (Decision Support) Toolkit for Specialty Care. http://med.dartmouth-hitchcock.org/csdm_toolkits/specialty_care_toolkit.html

²⁹ Shay, L. A., & Lafata, J. E. (2015). Where Is the Evidence? A Systematic Review of Shared Decision Making and Patient Outcomes. *Medical Decision Making: An International Journal of the Society for Medical Decision Making*, 35(1), 114–131. <http://doi.org/10.1177/0272989X14551638>

³⁰ Trikalinos TA, Wieland LS, Adam GP, et al. Decision Aids for Cancer Screening and Treatment. Rockville (MD): Agency for Healthcare Research and Quality (US); 2014 Dec. (Comparative Effectiveness Reviews, No. 145). Available from: <http://www.ncbi.nlm.nih.gov/books/NBK269405/>

³¹ Parikh RB, Kirch RA, Smith TJ, et al. (2013). Early Specialty Palliative Care: Translating Data in Oncology into Practice. *New England Journal of Medicine* 369:2347-2351, 2013.

³² Berkhof, M., H. J. van Rijssen, A. J. M. Schellart, J. R. Anema, and A. J. van der Beek (2010). Effective Training Strategies for Teaching Communication Skills to Physicians: An Overview of Systematic Reviews. *Patient Education and Counseling* 84(2):152-162.

³³ Moore, P. M., Rivera Mercado, S., Grez Artigues, M., & Lawrie, T. A. (2013). Communication Skills Training for Healthcare Professionals Working with People Who Have Cancer. In P. M. Moore (Ed.), *Cochrane Database of Systematic Reviews*. Chichester, UK: John Wiley & Sons, Ltd. <http://doi.org/10.1002/14651858.CD003751.pub3>

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<p>Patient education, coaching, and self-management support</p>	<ul style="list-style-type: none"> ○ Web-based self-management support can help cancer patients and survivors manage their symptoms and the side effects of cancer treatments.³⁴ ○ Goal setting with structured follow up, teach back, action planning, and motivational interviewing have been found to be effective teaching and coaching methods. 	<ul style="list-style-type: none"> ○ Patient-Centered Primary Care Collaborative Patient Engagement Resources. https://www.pcpcc.org/resources/1 ○ Robert Wood Johnson Foundation. Aligning Forces for Quality. Patient Engagement Toolkit. http://forces4quality.org/compendium-tools-engaging-patients-your-practice.html ○ Institute for Healthcare Improvement and Robert Wood Johnson Foundation “Partnering in Self-Management Support: A Toolkit for Clinicians.” http://www.improvingchroniccare.org/downloads/selfmanagement_support_toolkit_for_clinicians_2012_update.pdf ○ Community Care of North Carolina. Motivational Interviewing Resource Guide. https://www.communitycarenc.org/media/files/mi-guide.pdf ○ Safety Net Medical Home Initiative. Patient-centered Interactions Implementation Guide. http://www.safetynetmedicalhome.org/sites/default/files/Implementation-Guide-Patient-Centered-Interactions.pdf
<p>Provide patients with modes to track or share experiences</p>	<ul style="list-style-type: none"> ○ Provide patients with journals to track their experience and self-monitor their action plan. ○ Patient emotional disclosure through journals or other resources can significantly lessen pain and increase wellbeing.³⁵ ○ Women with breast cancer who wrote about their thoughts and feelings reported fewer symptoms and had fewer unscheduled visits to their doctors.³⁶ 	<ul style="list-style-type: none"> ○ Cancer Care Healing With Words <ul style="list-style-type: none"> ● Fact Sheet. http://www.cancercare.org/publications/263-healing-with-words-journaling-and-reflecting-throughout-treatment ● A Therapeutic Writing Group. http://www.cancercare.org/support_groups/89-healing-with-words-a-therapeutic-writing-group

³⁴ Kim, A. R., & Park, H. (2015). Web-based Self-management Support Interventions for Cancer Survivors: A Systematic Review and Meta-analyses. *Studies in Health Technology and Informatics*, 216 (January 2000), 142-147. <http://doi.org/10.3233/978-1-61499-564-7-142>

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<p>Open medical records and documents (e.g., care plans) for patient review and revision</p>	<ul style="list-style-type: none"> ○ Patients’ outcomes improved when patients were granted access to their record.³⁷ ○ Electronic personal health records improve patient satisfaction and lessen emotional distress³⁸ 	<ul style="list-style-type: none"> ○ Using Patient Portals in Ambulatory Care Settings Fact Sheet. https://www.healthit.gov/providers-professionals/implementation-resources/using-patient-portals-ambulatory-care-settings-fact-sheet ○ Patient-Centered Primary Care Collaborative Patient Engagement Resources. https://www.pcpcc.org/resources/1
<p>Partner with patients and caregivers to guide practice improvement</p>	<ul style="list-style-type: none"> ○ Engaging patients in clinical improvement projects through patient/caregiver surveys, interviews, and focus groups can enhance their quality and impact.³⁹ ○ Involving patients in the quality improvement design process in quality improvement teams or committees allows them to bring their experience as an input into the vision for improvement.⁴⁰ ○ Conduct surveys or host meetings with a patient and family advisory council. 	<ul style="list-style-type: none"> ○ Patient-Centered Primary Care Collaborative Patient Engagement Resources: <ul style="list-style-type: none"> ● Worksheet to Support Patient and Families in Care Redesign https://www.pcpcc.org/resource/partnering-patients-and-families-primary-care-improvement-and-redesign-worksheet-support ● Patient and Family Partners Roles. https://www.pcpcc.org/sites/default/files/Patient%20%26%20Family%20Partner%20Roles.pdf

³⁵ Cepeda, M. S., Chapman, C. R., Miranda, N., Sanchez, R., Rodriguez, C. H., Restrepo, A. E., Carr, D. B. (2008). Emotional Disclosure Through Patient Narrative May Improve Pain and Well-Being: Results of a Randomized Controlled Trial in Patients with Cancer Pain. *Journal of Pain and Symptom Management*, 35(6), 623–631. <http://doi.org/10.1016/j.jpainsymman.2007.08.011>

³⁶ Milbury, K., Spelman, A., Wood, C., Matin, S. F., Tannir, N., Jonasch, E., Cohen, L. (2014). Randomized Controlled Trial of Expressive Writing for Patients With Renal Cell Carcinoma. *Journal of Clinical Oncology*, 32(7), 663–670. <http://doi.org/10.1200/JCO.2013.50.3532>

³⁷ Goldzweig CL, Towfigh AA, Paige NM, et al. Systematic Review: Secure Messaging Between Providers and Patients, and Patients’ Access to Their Own Medical Record: Evidence on Health Outcomes, Satisfaction, Efficiency and Attitudes [Internet]. Washington (DC): Department of Veterans Affairs (US); 2012 Jul. RESULTS. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK100363/>

³⁸ Irizarry T, DeVito Dabbs A, Curran CR (2015). Patient Portals and Patient Engagement: A State of the Science Review. *Journal of Medical Internet Research* 2015;17(6):e148 DOI: [10.2196/jmir.4255](https://doi.org/10.2196/jmir.4255)

³⁹ Woolf SH, Zimmerman E, Haley A, Krist AH (2016). Authentic Engagement of Patients and Communities Can Transform Research, Practice, and Policy. *Health Affairs* 2016 April 01;35(4):590-594.

⁴⁰ Pomey, Marie-Pascale; Hihat, Hassiba; Khalifa, May; Lebel, Paule; Néron, André; and Dumez, Vincent (2015). Patient Partnership in Quality Improvement of Healthcare Services: Patients’ Inputs and Challenges Faced. *Patient Experience Journal*: Vol. 2: Iss. 1, Article 6. Available at: <http://pxjournal.org/journal/vol2/iss1/6>

2.3.5 Secondary Driver: Team-Based Care

Figure 9: Team-Based Care

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
<p>Establishing and providing organizational support for care delivery teams with consistent team members accountable for the patient population/panel</p>	<ul style="list-style-type: none"> ○ Teams can improve performance on process measures such as follow-up time, appropriate screening use, and physician satisfaction.⁴¹ 	<ul style="list-style-type: none"> ○ Safety Net Medical Home Initiative. Continuous & Team-Based Healing Relationships Implementation Guide. http://www.safetynetmedicalhome.org/change-concepts/continuous-team-based-healing-relationships ○ Agency for Healthcare Research and Quality. TeamSTEPPS for Office-Based Care Version. http://www.ahrq.gov/teamstepps/officebasedcare/index.html
<p>Defining roles and distributing tasks among care team members to reflect the skills, abilities and credentials of team members</p>	<ul style="list-style-type: none"> ○ Nurses and oncologists have differing perceptions of the effectiveness of their collaboration in teams, and common communication tactics and shared understanding of team's roles and responsibilities must be fostered for effective teamwork.⁴² ○ Providing non-physician team members with greater roles has been successful in collaborative oncology practice models, increasing productivity and providing high satisfaction for physicians, non-physicians, and patients.^{43,44} 	<ul style="list-style-type: none"> ○ Safety Net Medical Home Initiative. Continuous & Team-Based Healing Relationships Implementation Guide. http://www.safetynetmedicalhome.org/change-concepts/continuous-team-based-healing-relationships ○ Agency for Healthcare Research and Quality. TeamSTEPPS for Office-Based Care Version. http://www.ahrq.gov/teamstepps/officebasedcare/index.html

⁴¹ Taplin, S. H., Weaver, S., Salas, E., Chollette, V., Edwards, H. M., Bruinooge, S. S., & Kosty, M. P. (2015). Reviewing Cancer Care Team Effectiveness. *Journal of Oncology Practice*, 11(3), 239–246. <http://doi.org/10.1200/JOP.2014.003350>

⁴² Weaver AC, Callaghan M, Cooper AL, et al. (2015). Assessing Interprofessional Teamwork in Inpatient Medical Oncology Units. *Journal of Oncology Practice*, 11:19-22, 2015

⁴³ Towle, E. L., Barr, T. R., Hanley, A., Kosty, M., Williams, S., & Goldstein, M. a. (2011). Results of the ASCO Study of Collaborative Practice Arrangements. *Journal of Oncology Practice*, 7(5), 278–282. <http://doi.org/10.1200/JOP.2011.000385>

⁴⁴ White, C. N., Borchardt, R. a, Mabry, M. L., Smith, K. M., Mulanovich, V. E., & Rolston, K. V. (2010). Multidisciplinary Cancer Care: Development of an Infectious Diseases Physician Assistant Workforce at a Comprehensive Cancer Center. *Journal of Oncology Practice*, 6(6), e31–e34. <http://doi.org/10.1200/JOP.2010.000100>

Change Concept	Change Tactics and Evidence	Toolkits and Implementation Guides
Holding regular team huddles to manage workflow and meet patient needs	<ul style="list-style-type: none"> Briefings or planning sessions at the start of each day and debriefings or post-case discussions can improve teamwork.⁴⁵ Team members find multidisciplinary team meetings helpful.⁴⁶ 	<ul style="list-style-type: none"> Safety Net Medical Home Initiative. Continuous & Team-Based Healing Relationships Implementation Guide. http://www.safetynetmedicalhome.org/change-concepts/continuous-team-based-healing-relationships Agency for Healthcare Research and Quality. TeamSTEPPS for Office-Based Care Version. http://www.ahrq.gov/teamstepps/officebasedcare/index.html

2.3.6 Secondary Driver: Data-Driven Quality Improvement

Figure 10: Data-Driven Quality Improvement

Change Concept	Change Tactics and Evidence	Illustrative Toolkits and Implementation Guides
<i>Required Practice Redesign Activity:</i> Use of data for continuous quality improvement	<ul style="list-style-type: none"> Evidence suggests that building the clinical operations, workflow, and technological infrastructure to deliver relevant, consumable data to clinicians drives quality improvement.⁴⁷ Plan-do-study-act (PDSA) cycles are widely accepted in healthcare improvement and provide a structure for iterative testing of changes.⁴⁸ Track practice performance against selected clinical quality measures. 	<ul style="list-style-type: none"> National Learning Consortium. Continuous Quality Improvement (CQI) Strategies to Optimize your Practice https://www.healthit.gov/sites/default/files/tools/nlc_continuousqualityimprovementprimer.pdf Safety Net Medical Home Initiative. Quality Improvement Strategy Implementation Guide. http://www.safetynetmedicalhome.org/change-concepts/quality-improvement-strategy

⁴⁵ Taplin, S. H., Weaver, S., Salas, E., Chollette, V., Edwards, H. M., Bruinooge, S. S., & Kosty, M. P. (2015). Reviewing Cancer Care Team Effectiveness. *Journal of Oncology Practice*, 11(3), 239–246. <http://doi.org/10.1200/JOP.2014.003350>

⁴⁶ Lamb, B. W., Jalil, R. T., Sevdalis, N., Vincent, C., Green, J. S. A., Kesson, E., Heaford, A. (2014). Strategies to Improve the Efficiency and Utility of Multidisciplinary Team Meetings in Urology Cancer Care: A Survey Study. *BMC Health Services Research*, 14(1), 377. <http://doi.org/10.1186/1472-6963-14-377>

⁴⁷ Sprandio, J. D., Flounders, B. P., Lowry, M., & Tofani, S. (2013). Data-Driven Transformation to an Oncology Patient-Centered Medical Home. *Journal of Oncology Practice*, 9(3), 130–132. <http://doi.org/10.1200/JOP.2013.001019>

⁴⁸ Taylor, M.J. et al., 2013. Systematic Review of the Application of the Plan-Do-Study-Act Method to Improve Quality in Healthcare. *BMJ Quality and Safety*, 0(September), pp.1–9. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/24025320>

Change Concept	Change Tactics and Evidence	Illustrative Toolkits and Implementation Guides
<i>Required Practice Redesign Activity.</i> Use Certified Electronic Health Record (EHR) Technology ⁴⁹	<ul style="list-style-type: none"> ○ Select and report the quality measures that best fit your practice. ○ Manage medication (e.g., formulary checks, allergy checks, or drug interaction checks). ○ Select and disseminate patient education tools. ○ Enable direct exchange of clinical information (e.g., test results, care summaries) across clinicians. 	<ul style="list-style-type: none"> ○ The Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs: Stage 2 Toolkit. https://www.cms.gov/regulations-and-guidance/legislation/ehrincentiveprograms/downloads/stage2_toolkit_ehr_0313.pdf
Designating regular team meetings to review data and plan/implement improvement cycles	<ul style="list-style-type: none"> ○ In other settings, practices that used teams in quality improvement work were more likely to continue quality improvement work.⁵⁰ 	<ul style="list-style-type: none"> ○ Safety Net Medical Home Initiative. Quality Improvement Strategy Implementation Guide. http://www.safetynetmedicalhome.org/change-concepts/quality-improvement-strategy
Incorporating routine clinical and administrative leadership review of data as part of management process	<ul style="list-style-type: none"> ○ Organizational culture, relationships between team members, and leadership involvement are mentioned in some systematic reviews as being important to facilitate quality improvement.^{51, 52, 53} 	<ul style="list-style-type: none"> ○ Safety Net Medical Home Initiative. Engaged Leadership Guide. http://www.safetynetmedicalhome.org/change-concepts/engaged-leadership

⁴⁹ With the passage of the Medicare Access and CHIP Reauthorization Act, meaningful use requirements have been modified and subsumed into the newly-formed Merit-Based Incentive Payment System. This section will be updated as Medicare Access and CHIP Reauthorization Act resources become available.

⁵⁰ Rantz, M. J., Zwygart-Stauffacher, M., Flesner, M., Hicks, L., Mehr, D., Russell, T., & Minner, D. (2013). The Influence of Teams to Sustain Quality Improvement in Nursing Homes that “Need Improvement.” *Journal of the American Medical Directors Association*, 14(1), 48–52. <http://doi.org/10.1016/j.jamda.2012.09.008>

⁵¹ Compas, C., Hopkins, K. A., & Townsley, E. (2008). Best Practices in Implementing and Sustaining Quality of Care. A Review of the Quality Improvement Literature. *Research in Gerontological Nursing*, 1(3), 209–216. <http://doi.org/10.3928/00220124-20091301-07>.

⁵² Kaplan, H. C., Brady, P. W., Dritz, M. C., Hooper, D. K., Linam, W. M., Froehle, C. M., & Margolis, P. (2010). The influence of Context on Quality Improvement Success in Health Care: A Systematic Review of the Literature. *The Milbank Quarterly*, 88(4), 500–559. <http://doi.org/10.1111/j.1468-0009.2010.00611.x>

⁵³ Nadeem, E., Olin, S. S., Hill, L. C., Hoagwood, K. E., & Horwitz, S. M. (2013). Understanding the Components of Quality Improvement Collaboratives: A Systematic Literature Review. *Milbank Quarterly*, 91(2), 354–394. <http://doi.org/10.1111/milq.12016>

2.3.7 Secondary Driver: Evidence-Based Medicine

Figure 11: Evidence-Based Medicine

Change Concept	Change Tactics and Evidence	Illustrative Toolkits and Implementation Guides
<i>Required Practice Redesign Activity:</i> Use therapies consistent with nationally recognized clinical guidelines	<ul style="list-style-type: none"> The most effective clinical guideline implementation strategies include multifaceted interventions, interactive education, and clinical reminder systems.⁵⁴ 	<ul style="list-style-type: none"> National Comprehensive Cancer Network. Clinical Practice Guidelines in Oncology. Tools and Resources. https://www.nccn.org/professionals/physician_gls/f_guidelines.asp American Society of Clinical Oncology. Guidelines, Tools, & Resources. https://www.asco.org/practice-guidelines/quality-guidelines/guidelines
Use clinical decision support systems	<ul style="list-style-type: none"> Clinical decision support systems have been shown to be effective at improving health care process measures across diverse settings.⁵⁵ Providing clinical decision support advice to patients in addition to clinicians resulted in increased adherence to clinical decision support recommendations.⁵⁶ Success factors for use of clinical decision support include integration with charting or order entry system and automatic provision of recommendations at time of decision making, among others.⁵⁷ 	<ul style="list-style-type: none"> Health IT.gov. Clinical Decision Support Implementation Guide. https://www.healthit.gov/policy-researchers-implementers/cds-implementation Agency for Healthcare Research and Quality. Clinical Decision Support Resources. https://healthit.ahrq.gov/ahrq-funded-projects/clinical-decision-support-cds

⁵⁴ Prior, M., Guerin, M., & Grimmer-Somers, K. (2008). The Effectiveness of Clinical Guideline Implementation Strategies – A Synthesis of Systematic Review Findings. *Journal of Evaluation in Clinical Practice*, 14(5), 888–897. <http://doi.org/10.1111/j.1365-2753.2008.01014.x>

⁵⁵ Bright, T. J., Wong, A., Dhurjati, R., Bristow, E., Bastian, L., Coeytaux, R. R., Lobach, D. (2012). Effect of Clinical Decision-Support Systems: A Systematic Review. *Annals of Internal Medicine*, 157(1), 29–43. <http://doi.org/10.7326/0003-4819-157-1-201207030-00450>

⁵⁶ Murphy, E. V. (2014). Clinical Decision Support: Effectiveness in Improving Quality Processes and Clinical Outcomes and Factors that May Influence Success. *Yale Journal of Biology and Medicine*, 87(2), 187–197. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4031792/>

⁵⁷ Bright, T. J., Wong, A., Dhurjati, R., Bristow, E., Bastian, L., Coeytaux, R. R., ... Lobach, D. (2012). Effect of clinical decision-support systems: a systematic review. *Annals of Internal Medicine*, 157(1), 29–43. <http://doi.org/10.7326/0003-4819-157-1-201207030-00450>

OCM Key Drivers and Changes

Change Concept	Change Tactics and Evidence	Illustrative Toolkits and Implementation Guides
<p>Provide patients with appropriate opportunities to participate in clinical trials⁵⁸</p>	<ul style="list-style-type: none"> ○ Most patients are unaware of opportunities to participate in clinical trials, and most hear about opportunities from their physicians.⁵⁹ ○ Increasing patients' knowledge and perceived understanding may improve participation rates in clinical trials.⁶⁰ ○ Many factors influence a patient's decision to enter a clinical trial, including perception of doctor's preferences, trial design, and impact on treatment efficacy.^{61,62} 	<ul style="list-style-type: none"> ○ American Cancer Society. Clinical Trials. http://www.cancer.org/treatment/treatmentsandsideeffects/clinicaltrials/clinical-trials-landing ○ Education Network to Advance Cancer Clinical Trials. Five Steps to Enhance Patient Participation in Cancer Clinical Trials Guide and Workbook. http://www.swedish.org/~media/Images/Swedish/e/ENACCT5StepsGuide.pdf

⁵⁸ This concept is also one of the core functions of patient navigation (see Section 2.3.2).

⁵⁹ Fenton, L., Rigney, M., & Herbst, R. S. (2009). Clinical Trial Awareness, Attitudes, and Participation Among Patients with Cancer and Oncologists. *Community Oncology*, 6(5), 207–228. [http://doi.org/10.1016/S1548-5315\(11\)70546-0](http://doi.org/10.1016/S1548-5315(11)70546-0)

⁶⁰ Brandberg, Y., Johansson, H., & Bergenmar, M. (2016). Patients' Knowledge and Perceived Understanding – Associations with Consenting to Participate in Cancer Clinical Trials. *Contemporary Clinical Trials Communications*, 2, 6–11. <http://doi.org/10.1016/j.conctc.2015.12.001>

⁶¹ Jenkins, V., Farewell, V., Farewell, D., Darmanin, J., Wagstaff, J., Langridge, C., & Fallowfield, L. (2013). Drivers and Barriers to Patient Participation in RCTs. *British Journal of Cancer*, 108(7), 1402–1407. <http://doi.org/10.1038/bjc.2013.113>

⁶² Kanarek, N. F., Kanarek, M. S., Olatoye, D., & Carducci, M. A. (2012). Removing Barriers to Participation in Clinical Trials, A Conceptual Framework and Retrospective Chart Review Study. *Trials*, 13, 237. <http://doi.org/10.1186/1745-6215-13-237>

3 Appendix A: Additional Evidence by Secondary Driver

These tables in the appendix provide further resources for your practice to explore. Both supporting literature and implementation tools were collected. Literature was graded against the criteria described below, while implementation tools are denoted by “T.” For more information on the level of evidence criteria, see Appendix B: Methods for Development of Key Drivers.

Figure 12: Change Package Resource Categories

Category	Description
I	Experimental
II	Quasi-experimental
III	Non-experimental case-control or cohort study
IV	Qualitative study or expert opinion
T	Toolkit or Implementation Guide

3.1 Access and Continuity Change Concepts & Resources

Figure 13: 24/7 Access Resources

Required Practice Redesign Activity: Provide 24/7 access to an appropriate clinician who has real-time access to patients’ medical records

Level of Evidence	Illustrative Resources
I	Institute of Medicine. Transforming Health Care Scheduling and Access: Getting to Now. Washington, DC: The National Academies Press, 2015. doi:10.17226/20220. http://nap.edu/20220
IV	COME HOME Model https://am.asco.org/come-home-project-center-cancer-and-blood-disorders-experience
IV	Brookings Oncology TEP Environmental Scan http://www2.mitre.org/public/payment_models/Brookings_Oncology_TEP_Environ_Scan.pdf
IV	Sanghavi, D, Patel, K, et al. (2014). <i>Transforming Cancer Care and the Role of Payment Reform: Lessons from the New Mexico Cancer Center</i> . Retrieved from the Brookings Institution website: http://www.brookings.edu/research/papers/2014/08/26-oncology-transforming-cancer-care-payment-reform

Figure 14: Increased Access to Visits Resources

Change Concept: Increased access to visits

Level of Evidence	Illustrative Resources
I	Offman, J., Wilson, M., Lamont, M., Birke, H., Kutt, E., Marriage, S., ... Duffy, S. W. (2013). A randomised trial of weekend and evening breast screening appointments. <i>British Journal of Cancer</i> , 109(3), 597–602. http://doi.org/10.1038/bjc.2013.377
I	Osborn, J., & Thompson, M. (2014). Management of same-day appointments in primary care. <i>The Lancet</i> . http://doi.org/10.1016/S0140-6736(14)61173-9
I	Reed, S. C., Partridge, A. H., & Nekhlyudov, L. (2014). Shared Medical Appointments in Cancer Survivorship Care: A Review of the Literature. <i>Journal Of Oncology Practice / American Society Of Clinical Oncology</i> , 45–47. Retrieved from http://jop.ascopubs.org/content/11/1/6.full.pdf+html
III	Jerant, A., Bertakis, K. D., Fenton, J. J., & Franks, P. (2012). Extended Office Hours and Health Care Expenditures: A National Study, 388–395. http://doi.org/10.1370/afm.1382.INTRODUCTION
IV	Garth, B., Temple-Smith, M., Clark, M., Hutton, C., Deveny, E., Biezen, R., & Pirotta, M. (2013). Managing same day appointments A qualitative study in Australian general practice. <i>Australian Family Physician</i> , 42(4), 238–243. Retrieved from http://www.racgp.org.au/afp/2013/april/managing-same-day-appointments/

OCM Key Drivers and Changes

Level of Evidence	Illustrative Resources
T	Massachusetts General Hospital. A Practical Overview to Preparation, Implementation, and Maintenance of Group Visits at Massachusetts General Hospital. http://www.massgeneral.org/stoecklecenter/assets/pdf/group_visit_guide.pdf
T	Safety Net Medical Home Initiative. Enhanced Access Implementation Guide. http://www.safetynetmedicalhome.org/sites/default/files/Implementation-Guide-Enhanced-Access.pdf

Figure 15: Access to Care Outside of Visits Resources

Change Concept: Access to care and information outside of visits

Level of Evidence	Illustrative Resources
I	Atherton H, Sawmynaden P, Sheikh A, Majeed A, Car J. Email for clinical communication between patients/caregivers and healthcare professionals. Cochrane Database of Systematic Reviews 2012, Issue 11. Art. No.: CD007978. http://dx.doi.org/10.1002/14651858.CD007978.pub2
I	Goldzweig CL, Tow gh AA, Paige NM, Orshansky G, Haggstrom DA, Beroes JM, Miake-Lye IM, Shekelle PG. Systematic Review: Secure Messaging between Providers and Patients, and Patients' Access to Their Own Medical Record. Evidence on Health Outcomes, Satisfaction, Efficiency and Attitudes. VA-ESP Project #05-226, 2012. http://www.ncbi.nlm.nih.gov/books/NBK100363/
I	Irizarry T, DeVito Dabbs A, Curran CR. Patient Portals and Patient Engagement: A State of the Science Review. J Med Internet Res 2015;17(6):e148. DOI: 10.2196/jmir.4255. http://www.jmir.org/2015/6/e148
I	Kofoed, S., Breen, S., Gough, K., Aranda, S., Maccallum, P., & Centre, C. (2012). Benefits of remote real-time side-effect monitoring systems for patients receiving cancer treatment, 6. http://doi.org/10.4081/oncol.2012.e7
I	U.S. Department of Health and Human Services. Health Resources and Services Administration. Using Health Text Messages to Improve Consumer Health Knowledge, Behaviors, and Outcomes: An Environmental Scan. Rockville, Maryland: U.S. Department of Health and Human Services, 2014. http://www.hrsa.gov/healthit/txt4tots/environmentalscan.pdf
I	Viers, B. R., Lightner, D. J., Rivera, M. E., Tollefson, M. K., Boorjian, S. A., Karnes, R. J., ... Gettman, M. T. (2015). Efficiency, satisfaction, and costs for remote video visits following radical prostatectomy: A randomized controlled trial. European Urology, 68(4), 729–735. http://doi.org/10.1016/j.eururo.2015.04.002
I	Wade, V. A., Karnon, J., Elshaug, A. G., & Hiller, J. E. (2010). A systematic review of economic analyses of telehealth services using real time video communication. BMC Health Services Research, 10(1), 233. http://doi.org/10.1186/1472-6963-10-233
II	Kitamura, C., Zurawel-Balaura, L., & Wong, R. K. S. (2010). How effective is video consultation in clinical oncology? A systematic review. Current Oncology, 17(3), 17–27. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2880899
IV	Bradbury A, Patrick-Miller L, Harris D, Stevens E, Egleston B, Smith K, Mueller R, Brandt A, Stopfer J, Rauch S, Forman A, Kim R, Fetzer D, Fleisher L, Daly M, Domchek S. Utilizing Remote Real-Time Videoconferencing to Expand Access to Cancer Genetic Services in Community Practices: A Multicenter Feasibility Study. J Med Internet Res 2016;18(2):e23. http://www.jmir.org/2016/2/e23
IV	Hess, R., Fischer, G. S., Sullivan, S. M., Dong, X., Weimer, M., Zeith, C., ... Roberts, M. S. (2014). Patterns of Response to Patient-Centered Decision Support Through a Personal Health Record. Telemedicine and E-Health, 20(11), 984–989. http://doi.org/10.1089/tmi.2013.0332
IV	Torrey B. Getting the Most From Your Phone System. http://www.aafp.org/fpm/2001/0200/p21.html
T	Safety Net Medical Home Initiative. Enhanced Access Implementation Guide. http://www.safetynetmedicalhome.org/sites/default/files/Implementation-Guide-Enhanced-Access.pdf

3.2 Care Coordination Change Concepts & Resources

Figure 16: Patient Navigation Resources

Required Practice Redesign Activity: Provide core functions of patient navigation

Level of Evidence	Illustrative Resources
I	Hendren, S., Griggs, J. J., Epstein, R., Humiston, S., Jean-Pierre, P., Winters, P., ... Fiscella, K. (2012). Randomized controlled trial of patient navigation for newly diagnosed cancer patients: Effects on quality of life. <i>Cancer Epidemiology, Biomarkers & Prevention</i> , 21(10), 1682–1690. http://doi.org/10.1158/1055-9965.EPI-12-0537
I	Fiscella, K., Whitley, E., Hendren, S., Raich, P., Humiston, S., Winters, P., ... Epstein, R. (2012). Patient Navigation for Breast and Colorectal Cancer Treatment: A Randomized Trial. <i>Cancer Epidemiology Biomarkers & Prevention</i> , 21(10), 1673–1681. http://doi.org/10.1158/1055-9965.EPI-12-0506
III	Freund, Karen M., et al. "Impact of patient navigation on timely cancer care: the Patient Navigation Research Program." <i>Journal of the National Cancer Institute</i> 106.6 (2014): dju115. http://jnci.oxfordjournals.org/content/106/6/dju115.long#ref-27
IV	Bensink ME, Ramsey SD, Battaglia T, Fiscella K, Hurd TC, McKoy JM, Patierno SR, Raich PC, Seiber EE, Warren-Mears V, Whitley E, Paskett ED, Mandelblatt S; Patient Navigation Research Program. Costs and outcomes evaluation of patient navigation after abnormal cancer screening: evidence from the Patient Navigation Research Program. <i>Cancer</i> . 2014 Feb 15;120(4):570-8. http://www.ncbi.nlm.nih.gov/pubmed/24166217
IV	Jean-Pierre P, Fiscella K, Winters PC, Paskett E, Wells K, Battaglia T; Patient Navigation Research Program Group. Cross-cultural validation of a Patient Satisfaction with Interpersonal Relationship with Navigator measure: a multi-site patient navigation research study. <i>Psychooncology</i> . 2012 Dec;21(12):1309-15 http://www.ncbi.nlm.nih.gov/pubmed/21726018
IV	Fiscella K, Ransom S, Jean-Pierre P, Cella D, Stein K, Bauer JE, Crane-Okada R, Gentry S, Canosa R, Smith T, Sellers J, Jankowski E, Walsh K. Patient-reported outcome measures suitable to assessment of patient navigation. <i>Cancer</i> . 2011 Aug;117(15 Suppl):3603-17. http://www.ncbi.nlm.nih.gov/pubmed/21780095
IV	Wells KJ, Battaglia TA, Dudley DJ, Garcia R, Greene A, Calhoun E, Mandelblatt JS, Paskett ED, Raich PC; Patient Navigation Research Program. Patient navigation: state of the art or is it science? <i>Cancer</i> . 2008 Oct 15;113(8):1999-2010. http://www.ncbi.nlm.nih.gov/pubmed/18780320
IV	Hopkins, J., & Mumber, M. P. (2009). Patient Navigation Through the Cancer Care Continuum: An Overview. <i>Journal of Oncology Practice</i> , 5(4), 150–152. http://doi.org/10.1200/JOP.0943501
T	National Institutes of Health. National Cancer Institute. Patient Navigation Research Program. http://www.cancer.gov/about-nci/organization/crhd/disparities-research/pnpr

Figure 17: Coordinated Medication Management Resources

Change Concept: Conduct coordinated medication management

Level of Evidence	Illustrative Resources
I	Patterson SM, Cadogan CA, Kerse N, Cardwell CR, Bradley MC, Ryan C, Hughes C. Interventions to improve the appropriate use of polypharmacy for older people. <i>Cochrane Database of Systematic Reviews</i> 2014, Issue 10. Art. No.: CD008165. http://dx.doi.org/10.1002/14651858.CD008165.pub3
I	Spinewine, A., Claeys, C., Foulon, V., & Chevalier, P. (2013). Approaches for improving continuity of care in medication management: a systematic review. <i>International Journal for Quality in Health Care : Journal of the International Society for Quality in Health Care / ISQua</i> , 25(4), 403–17. http://doi.org/10.1093/intqhc/mzt032
I	Lehnbom, E. C., Stewart, M. J., Manias, E., & Westbrook, J. I. (2014). Impact of Medication Reconciliation and Review on Clinical Outcomes. <i>Annals of Pharmacotherapy</i> , 48(10), 1298–1312. http://doi.org/10.1177/1060028014543485
I	Viswanathan M, Kahwati LC, Golin CE, Blalock S, Coker-Schwimmer E, Posey R, Lohr KN. Medication Therapy Management Interventions in Outpatient Settings. Comparative Effectiveness Review No. 138. (Prepared by the RTI International–University of North Carolina at Chapel Hill Evidence-based Practice Center under Contract No. 290-2012- 00008-I.) AHRQ Publication No. 14(15)-EHC037-EF. Rockville, MD: Agency for Healthcare Research and Quality; November 2014. www.effectivehealthcare.ahrq.gov/reports/final.cfm

OCM Key Drivers and Changes

Level of Evidence	Illustrative Resources
IV	Naples, J. G., Hanlon, J. T., Schmader, K. E., & Semla, T. P. (2016). Recent Literature on Medication Errors and Adverse Drug Events in Older Adults. <i>Journal of the American Geriatrics Society</i> , 64(2), 401–408. http://doi.org/10.1111/jgs.13922
IV	Johnson, A., Guirguis, E., & Grace, Y. (2015). Preventing medication errors in transitions of care: A patient case approach. <i>Journal of the American Pharmacists Association</i> , 55(2), e264–e276. http://doi.org/10.1331/JAPhA.2015.15509
T	How-to Guide: Prevent Adverse Drug Events by Implementing Medication Reconciliation. Cambridge, MA: Institute for Healthcare Improvement; 2011. http://www.ihl.org/resources/pages/tools/howtoguidepreventadversedrugevents.aspx

Figure 18: Referral Coordination Resources

Change Concept: Referral coordination and management

Level of Evidence	Illustrative Resources
IV	Carrier, E., Dowling, M. K., & Pham, H. H. (2012). Care coordination agreements: Barriers, facilitators, and lessons learned. <i>American Journal of Managed Care</i> , 18(11), 398–404. http://doi.org/10.4103/2141
IV	Taplin, S. H., & Rodgers, A. B. (2010). Toward Improving the Quality of Cancer Care: Addressing the Interfaces of Primary and Oncology-Related Subspecialty Care. <i>JNCI Monographs</i> , 2010(40), 3–10. http://doi.org/10.1093/jncimonographs/1gq006
IV	Wilson, K., Lydon, A., & Amir, Z. (2013). Follow-up care in cancer: Adjusting for referral targets and extending choice. <i>Health Expectations</i> , 16(1), 56–68. http://doi.org/10.1111/j.1369-7625.2011.00691.x
T	The American College of Physicians. Referral Tracking Guide. http://www.improvingchroniccare.org/downloads/3_referral_tracking_guide.pdf

Figure 19: Improve Care Transitions Resources

Change Concept: Improve transitions between care settings

Level of Evidence	Illustrative Resources
I	Allen, J., Hutchinson, A. M., Brown, R., & Livingston, P. M. (2014). Quality care outcomes following transitional care interventions for older people from hospital to home: A systematic review. <i>BMC Health Services Research</i> , 14(1), 346. http://doi.org/10.1186/1472-6963-14-346
I	Brown, R., Peikes, D., Chen, A., & Schore, J. (2008). 15-site randomized trial of coordinated care in Medicare FFS. <i>Health Care Financing Review</i> , 30(1), 5–25. http://www.ncbi.nlm.nih.gov/pubmed/19040171
I	Coleman EA, Smith JD, Frank JC, Min S, Parry C, Kramer AM. Preparing Patients and Caregivers to Participate in Care Delivered Across Settings: The Care Transitions Intervention. <i>Journal of the American Geriatrics Society</i> . 2004;52(11):1817-1825. http://www.ncbi.nlm.nih.gov/pubmed/15507057
I	Jack BW et al. A reengineered hospital discharge program to decrease rehospitalization: a randomized trial. <i>Ann Intern Med</i> . 2009 Feb 3;150(3):178-87. http://www.ncbi.nlm.nih.gov/pubmed/19189907
IV	Sanghavi, D, Patel, K, et al. (2014). <i>Transforming Cancer Care and the Role of Payment Reform: Lessons from the New Mexico Cancer Center</i> . Retrieved from the Brookings Institution website: http://www.brookings.edu/research/papers/2014/08/26-oncology-transforming-cancer-care-payment-reform
T	Society of Hospital Medicine. Project BOOST (Better Outcomes by Optimizing Safe Transitions) Implementation Toolkit. http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/CT_Home.cfm
T	Project Re-Engineered Discharge (RED). The Project RED Toolkit. https://www.bu.edu/fammed/projectred/toolkit.html
T	American College of Physicians. Care Coordination - High Value Care Coordination (HVCC) Toolkit. https://hvc.acponline.org/physres_care_coordination.html
T	The Commonwealth Fund. Reducing Care Fragmentation: A Toolkit for Coordinating Care. http://www.lpfch.org/sites/default/files/reducing_care_fragmentation_a_toolkit_for_coordinating_care.pdf
T	American Association of Family Physicians. Transition of Care Management 30-day checklist. http://www.aafp.org/dam/AAFP/documents/practice_management/payment/TCM30day.pdf

3.3 Care Planning and Management Change Concepts & Resources

Figure 20: Institute of Medicine Care Plan Resources

Required Practice Redesign Activity: Document a care plan that contains the 13 components in the Institute of Medicine (IOM) Care Management Plan

Level of Evidence	Illustrative Resources
I	Coulter A, Entwistle VA, Eccles A, Ryan S, Shepperd S, Perera R. Personalised care planning for adults with chronic or long-term health conditions. <i>Cochrane Database of Systematic Reviews</i> 2015, Issue 3. Art. No.: CD010523. DOI: 10.1002/14651858.CD010523.pub2
I	Greer, J. A., Jackson, V. A., Meier, D. E., & Temel, J. S. (2013). Early integration of palliative care services with standard oncology care for patients with advanced cancer. <i>CA: A Cancer Journal for Clinicians</i> , 63(5), 349–363. http://doi.org/10.3322/caac.21192
I	Howell, D., Hack, T. F., Oliver, T. K., Chulak, T., Mayo, S., Aubin, M., ... Sinclair, S. (2012, December 10). Models of care for post-treatment follow-up of adult cancer survivors: A systematic review and quality appraisal of the evidence. <i>Journal of Cancer Survivorship</i> . Springer US. http://doi.org/10.1007/s11764-012-0232-z
I	Hui, D., Kim, Y. J., Park, J. C., Zhang, Y., Strasser, F., Cherny, N., ... Bruera, E. (2015). Integration of Oncology and Palliative Care: A Systematic Review. <i>The Oncologist</i> , 20(1), 77–83. http://doi.org/10.1634/theoncologist.2014-0312
I	Institute of Medicine. <i>Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis</i> . Washington, DC: The National Academies Press, 2013. http://www.nap.edu/catalog/18359/delivering-high-quality-cancer-care-charting-a-new-course-for
II	Bodenheimer, T. S., and R. Berry-Millett. 2009. Care Management of Patients with Complex Health Care Needs. Princeton, N.J.: The Robert Wood Johnson Foundation. The synthesis project. Research synthesis report 19. http://www.rwjf.org/en/library/research/2009/12/care-management-of-patients-with-complex-health-care-needs.html
II	Hong S, Siegel AL, et al. (2014). Caring for High-Need, High-Cost Patients: What Makes for a Successful Care Management Program? The Commonwealth Fund. http://www.commonwealthfund.org/~media/files/publications/issue-brief/2014/aug/1764_hong_caring_for_high_need_high_cost_patients_ccm_ib.pdf .

Figure 21: Risk Stratification Resources

Change Concept: Risk stratification

Level of Evidence	Illustrative Resources
III	Haas, L. R., Takahashi, P. Y., Shah, N. D., Stroebel, R. J., Bernard, M. E., Finnie, D. M., & Naessens, J. M. (2013). Risk-stratification methods for identifying patients for care coordination. <i>The American Journal of Managed Care</i> , 19(9), 725–32. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/24304255
III	Watson, E. K., Rose, P. W., Neal, R. D., Hulbert-Williams, N., Donnelly, P., Hubbard, G., ... Wilkinson, C. (2012). Personalised cancer follow-up: risk stratification, needs assessment or both? [Editorial]. <i>British Journal of Cancer</i> , 106(1), 1–5. http://doi.org/10.1038/bjc.2011.535

Figure 22: Visit Follow-Up Resources

Change Concept: Monitoring and follow-up from visits

Level of Evidence	Illustrative Resources
I	Dickinson, R., Hall, S., Sinclair, J. E., Bond, C., & Murchie, P. (2014). Using technology to deliver cancer follow-up: a systematic review. <i>BMC Cancer</i> , 14(1), 311. http://doi.org/10.1186/1471-2407-14-311
II	Cusack, M., & Taylor, C. (2010). A literature review of the potential of telephone follow-up in colorectal cancer. <i>Journal of Clinical Nursing</i> , 19(17-18), 2394–405. http://doi.org/10.1111/j.1365-2702.2010.03253.x

Level of Evidence	Illustrative Resources
IV	Wilson, K., Lydon, A., & Amir, Z. (2013). Follow-up care in cancer: Adjusting for referral targets and extending choice. <i>Health Expectations</i> , 16(1), 56–68. http://doi.org/10.1111/j.1369-7625.2011.00691.x

3.4 Patient and Caregiver Engagement Change Concepts & Resources

Figure 23: Caregiver Engagement Resources

Change Concept: Engage patients and care givers in shared decision making

Level of Evidence	Illustrative Resources
I	O'Brien, M. A., Whelan, T. J., Villasis-Keever, M., Gafni, A., Charles, C., Roberts, R., ... Cai, W. (2009). Are Cancer-Related Decision Aids Effective? A Systematic Review and Meta-Analysis. <i>Journal of Clinical Oncology</i> , 27(6), 974–985. http://doi.org/10.1200/JCO.2007.16.0101
I	Stacey D, Légaré F, Col NF, Bennett CL, Barry MJ, Eden KB, Holmes-Rovner M, Llewellyn-Thomas H, Lyddiatt A, Thomson R, Trevena L, Wu JHC. Decision aids for people facing health treatment or screening decisions. <i>Cochrane Database of Systematic Reviews</i> 2014, Issue 1. Art. No.: CD001431. http://doi.org/10.1002/14651858.CD001431.pub4
I	Yun, Y. H., Lee, M. K., Park, S., Lee, J. L., Park, J., Choi, Y. S., ... Hong, Y. S. (2011). Use of a Decision Aid to Help Caregivers Discuss Terminal Disease Status With a Family Member With Cancer: A Randomized Controlled Trial. <i>Journal of Clinical Oncology</i> , 29(36), 4811–4819. http://doi.org/10.1200/JCO.2011.35.3870
I	Austin, C. A., Mohottige, D., Sudore, R. L., Smith, A. K., & Hanson, L. C. (2015). Tools to Promote Shared Decision Making in Serious Illness: A Systematic Review. <i>JAMA Intern Med</i> , 175(7), 1213–1221. http://doi.org/10.1001/jamainternmed.2015.1679
I	Berkhof, M., van Rijssen, H. J., Schellart, A. J. M., Anema, J. R., & van der Beek, A. J. (2011). Effective training strategies for teaching communication skills to physicians: an overview of systematic reviews. <i>Patient Education and Counseling</i> , 84(2), 152–62. http://doi.org/10.1016/j.pec.2010.06.010
I	Legare, F, Dawn, S. Interventions for improving the adoption of shared decision making by healthcare professionals. <i>Cochrane Effective Practice and Organisation of Care Group</i> (Sept 2014). http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006732.pub3/abstract
I	Dwamena F, Holmes-Rovner M, Gauden CM, Jorgenson S, Sadigh G, Sikorskii A, Lewin S, Smith RC, Coffey J, Olomu A, Beasley M. Interventions for providers to promote a patient-centered approach in clinical consultations. <i>Cochrane Database of Systematic Reviews</i> 2012, Issue 12. Art. No.: CD003267. http://doi.org/10.1002/14651858.CD003267.pub2
IV	De Snoo-Trimp JC, Brom L et al. <i>Oncologist</i> . 2015 Oct;20(10):1182-8. Perspectives of Medical Specialists on Sharing Decisions in Cancer Care: A Qualitative Study Concerning Chemotherapy Decisions With Patients With Recurrent Glioblastoma. http://www.ncbi.nlm.nih.gov/pubmed/26245676
IV	Elmore, J. G., Ganschow, P. S., & Geller, B. M. (2010). Communication Between Patients and Providers and Informed Decision Making. <i>JNCI Monographs</i> , 2010(41), 204–209. http://doi.org/10.1093/ncimonographs/lgq038
T	Mayo Clinic Shared Decision Making National Resource Center. http://shareddecisions.mayoclinic.org/
T	Patient-Centered Primary Care Collaborative. Patient Engagement Resources. https://www.pccpc.org/resources/169
T	Health IT National Learning Consortium. https://www.healthit.gov/sites/default/files/nlc_shared_decision_making_fact_sheet.pdf

Figure 24: Patient Support Resources

Change Concept: Patient education, coaching, and self-management support

Level of Evidence	Illustrative Resources
I	Friedman, A. J., Cosby, R., Boyko, S., Hatton-Bauer, J., & Turnbull, G. (2011). Effective Teaching Strategies and Methods of Delivery for Patient Education: A Systematic Review and Practice Guideline Recommendations. <i>Journal of Cancer Education</i> , 26(1), 12–21. http://doi.org/10.1007/s13187-010-0183-x

Level of Evidence	Illustrative Resources
I	Gao, W. J., & Yuan, C. R. (2011). Self-management programme for cancer patients: A literature review. <i>International Nursing Review</i> , 58(3), 288–295. http://doi.org/10.1111/j.1466-7657.2011.00907.x
I	Boger, E., Ellis, J., Latter, S., Foster, C., Kennedy, A., Jones, F., ... Demain, S. (2015). Self-management and self-management support outcomes: A systematic review and mixed research synthesis of stakeholder views. <i>PLoS ONE</i> , 10(7), 1–25. http://doi.org/10.1371/journal.pone.0130990
I	McCorkle, R., Ecolano, E., Lazenby, M., Schulman-Green, D., Schilling, L. S., Lorig, K., & Wagner, E. H. (2011). Self-management: Enabling and empowering patients living with cancer as a chronic illness. <i>CA: A Cancer Journal for Clinicians</i> , 61(1), 50–62. http://doi.org/10.3322/caac.20093
I	Smith-Turchyn, J., Morgan, A., Richardson, J., Schmitz, K. H., Courneya, K. S., Matthews, C., ... Kokia, E. (2016). The Effectiveness of Group-based Self-management Programmes to Improve Physical and Psychological Outcomes in Patients with Cancer: a Systematic Review and Meta-analysis of Randomised Controlled Trials. <i>Clinical Oncology</i> , 28(5), 292–305. http://doi.org/10.1016/j.clon.2015.10.003
I	Risendal, B. C., Dwyer, A., Seidel, R. W., Lorig, K., Coombs, L., & Ory, M. G. (2014). Meeting the challenge of cancer survivorship in public health: results from the evaluation of the chronic disease self-management program for cancer survivors. <i>Frontiers in Public Health</i> , 2(April), 214. http://doi.org/10.3389/fpubh.2014.00214
I	Penelope Schofield & Suzanne Chambers (2015) Effective, clinically feasible and sustainable: Key design features of psycho-educational and supportive care interventions to promote individualised self-management in cancer care, <i>Acta Oncologica</i> , 54:5, 805-812, http://dx.doi.org/10.3109/0284186X.2015.1010016
I	Kim, A. R., & Park, H. (2015). Web-based Self-management Support Interventions for Cancer Survivors: A Systematic Review and Meta-analyses. <i>Studies in Health Technology and Informatics</i> , 216(January 2000), 142–7. http://doi.org/10.3233/978-1-61499-564-7-142
II	Loh, S. Y., Packer, T., Chinna, K., & Quek, K. F. (2013). Effectiveness of a patient self-management programme for breast cancer as a chronic illness: a non-randomised controlled clinical trial. <i>Journal of Cancer Survivorship</i> , 7(3), 331–342. http://doi.org/10.1007/s11764-013-0274-x
IV	Risendal, B., Dwyer, A., Seidel, R., Lorig, K., Katzenmeyer, C., Coombs, L., ... Ory, M. (2014, December). Adaptation of the Chronic Disease Self-Management Program for Cancer Survivors: Feasibility, Acceptability, and Lessons for Implementation. <i>Journal of Cancer Education</i> , pp. 762–71. http://doi.org/10.1007/s13187-014-0652-8
IV	Harley, C., Pini, S., Bartlett, Y. K., & Velikova, G. (2015). Defining chronic cancer: patient experiences and self-management needs. <i>BMJ Supportive & Palliative Care</i> , 5(4), 343–350. http://doi.org/10.1136/bmjspcare-2012-000200rep

Figure 25: Patient Experience Tracking Resources

Change Concept: Provide patients with modes to track or share experiences

Level of Evidence	Illustrative Resources
I	Cepeda, M. Soledad et al. Emotional Disclosure Through Patient Narrative May Improve Pain and Well-Being: Results of a Randomized Controlled Trial in Patients with Cancer Pain. <i>Journal of Pain and Symptom Management</i> , Volume 35, Issue 6, 623 – 631. http://dx.doi.org/10.1016/j.jpainsymman.2007.08.011
I	Irizarry T, DeVito Dabbs A, Curran CR. Patient Portals and Patient Engagement: A State of the Science Review. <i>J Med Internet Res</i> 2015;17(6):e148. DOI: 10.2196/jmir.4255. http://www.jmir.org/2015/6/e148
T	CancerCare Healing with Words: Journaling and Reflecting Throughout Treatment. http://www.cancer.org/publications/263-healing-with-words-journaling-and-reflecting-throughout-treatment
T	MD Anderson Cancer. Journaling Your Way through Cancer. https://www.mdanderson.org/publications/cancerwise/2013/04/practicing-self-care-through-journaling.html

Figure 26: Patient Record Review Resources

Change Concept: Open medical records and documents (e.g. care plans) for patient review and revision

Level of Evidence	Illustrative Resources
I	Goldzweig CL, Tow gh AA, Paige NM, Orshansky G, Haggstrom DA, Beroes JM, Miake-Lye IM, Shekelle PG. Systematic Review: Secure Messaging between Providers and Patients, and Patients' Access to Their Own Medical Record. Evidence on Health Outcomes, Satisfaction, Efficiency and Attitudes. VA-ESP Project #05-226, 2012. http://www.ncbi.nlm.nih.gov/books/NBK100363/
I	Ross, S. E., & Lin, C. T. (2003). The effects of promoting patient access to medical records: A review. Journal of the American Medical Informatics Association, 10(2), 129–138. http://doi.org/10.1197/jamia.M1147
IV	Martin, D. B. (2015). "Write It Down Like You Told Me": Transparent Records and My Oncology Practice. Journal of Oncology Practice, 11(4), 285–286. http://doi.org/10.1200/JOP.2014.003095
IV	deBronkart, D., & Walker, J. (2015). Open Visit Notes: A Patient's Perspective and Expanding National Experience. Journal of Oncology Practice, 11(4), 287–288. http://doi.org/10.1200/JOP.2015.004366

Figure 27: Improvement Guidance Resources

Change Concept: Partner with patients and caregivers to guide improvement in the system of care

Level of Evidence	Illustrative Resources
IV	Woolf SH, Zimmerman E, Haley A, Krist AH. Authentic Engagement Of Patients And Communities Can Transform Research, Practice, And Policy . Health Affairs 2016 April 01;35(4):590-594
IV	Pomey, Marie-Pascale; Hihat, Hassiba; Khalifa, May; Lebel, Paule; Néron, André; and Dumez, Vincent (2015) "Patient partnership in quality improvement of healthcare services: Patients' inputs and challenges faced," Patient Experience Journal: Vol. 2: Iss. 1, Article 6. Available at: http://pxjournal.org/journal/vol2/iss1/6

3.5 Team-Based Care Change Concepts & Resources

Figure 28: Organizational Support for Teams Resources

Change Concept: Establishing and providing organizational support for care delivery teams with consistent team members accountable for the patient population/panel

Level of Evidence	Illustrative Resources
IV	Taplin S, Weaver S, Salas E, et al. Teams and Teamwork During a Cancer Diagnosis: Interdependency Within and Between Teams. <i>Journal Of Oncology Practice</i> [serial online]. May 2015;11(3):231-238. http://iop.ascopubs.org/content/11/3/231.full
T	Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) for Primary Care, Agency for Healthcare Research and Quality. February 2015. http://www.ahrq.gov/professionals/education/curriculum-tools/teamsteps/primarycare/index.html

Figure 29: Define Roles for Team Members Resources

Change Concept: Defining roles and distribute tasks among care team members to reflect the skills, abilities and credentials of team members, providing team members with consistent roles and workflows

Level of Evidence	Illustrative Resources
II	McComb S, Hebdon M. Enhancing Patient Outcomes in Healthcare Systems Through Multidisciplinary Teamwork. (2013) <i>Clinical Journal Of Oncology Nursing</i> . 17(6):669-672. http://europepmc.org/abstract/MED/24305490
IV	Hollis G, McMenamin E. J Integrating Nurse Practitioners Into Radiation Oncology: One Institution's Experience, <i>Journal of the Advanced Practitioner in Oncology</i> . 2014/01/01 00:00; 5(1)42-46 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4093461
IV	Taplin S, Weaver S, Salas E, et al. Teams and Teamwork During a Cancer Diagnosis: Interdependency Within and Between Teams. <i>Journal Of Oncology Practice</i> [serial online]. May 2015;11(3):231-238. http://jop.ascopubs.org/content/11/3/231.full

Figure 30: Team Huddles Resources

Change Concept: Holding regular team huddles or gathering to manage workflow and meet patient needs

Level of Evidence	Illustrative Resources
II	McComb S, Hebdon M. Enhancing Patient Outcomes in Healthcare Systems Through Multidisciplinary Teamwork. (2013) <i>Clinical Journal Of Oncology Nursing</i> . 17(6):669-672. http://europepmc.org/abstract/MED/24305490
IV	Taplin S, Weaver S, Salas E, et al. Teams and Teamwork During a Cancer Diagnosis: Interdependency Within and Between Teams. <i>Journal Of Oncology Practice</i> [serial online]. May 2015;11(3):231-238. http://jop.ascopubs.org/content/11/3/231.full

3.6 Data-Driven Quality Improvement Change Concepts & Resources

Figure 31: Continuous Quality Improvement Resources

Required Practice Design Activity: Use of data for continuous quality improvement

Level of Evidence	Illustrative Resources
IV	Lavelle, J., Schast, A., & Keren, R. (2015). Standardizing Care Processes and Improving Quality Using Pathways and Continuous Quality Improvement. <i>Current Treatment Options in Pediatrics</i> , 1(4), 347–358. http://doi.org/10.1007/s40746-015-0026-4
IV	McNiff, K. K., & Jacobson, J. O. (2014). Aiming for Ideal Care: A Proposed Framework for Cancer Quality Improvement. <i>Journal of Oncology Practice</i> , 10(6), 339–345. http://jop.ascopubs.org/content/10/6/339.full
IV	Sprandio, J. D., Flounders, B. P., Lowry, M., & Tofani, S. (2013). Data-Driven Transformation to an Oncology Patient-Centered Medical Home. <i>Journal of Oncology Practice</i> , 9(3), 130–132. http://doi.org/10.1200/JOP.2013.001019
T	AHRQ Quality Improvement Tools & Resources. http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/index.html
T	Health IT National Learning Consortium. Continuous Quality Improvement (CQI) Strategies to Optimize your Practice. https://www.healthit.gov/sites/default/files/tools/nlc_continuousqualityimprovementprimer.pdf
T	Institute for Healthcare Improvement. Change Achievement Success Indicator. http://www.ihl.org/resources/Pages/Tools/ChangeAchievementSuccessIndicatorCASI.aspx
T	Langely GJ, Moen RD, Nolan KM, Nolan TW, Norma CL, Provost LP. <i>The Improvement Guide: A Practical Approach to Enhancing Organizational Performance</i> , 2nd Edition. Jossey-Bass, A Wiley Imprint, San Francisco 2011.
T	The Institute of Healthcare Improvement. “The Science of Improvement: Testing Changes.” PDSA Planning Form PDSA Worksheet

Figure 32: Utilization of EHR Technology Resources

Required Practice Redesign Activity: Use of Certified Electronic Health Record (EHR) Technology

Level of Evidence	Illustrative Resources
IV	Shen, X., Dicker, A. P., Doyle, L., Showalter, T. N., Harrison, A. S., & DesHarnais, S. I. (2012). Pilot study of meaningful use of electronic health records in radiation oncology. <i>Journal of Oncology practice/American Society of Clinical Oncology</i> , 8(4), 219–223. http://doi.org/http://dx.doi.org/10.1200/JOP.2011.000382
T	Health Resources and Services Administration (HRSA) Health IT Implementation Toolbox. http://www.hrsa.gov/healthit/toolbox/healthitimplementation/index.html
T	HealthIT.gov Meaningful Use Success Stories and Case Studies. https://www.healthit.gov/providers-professionals/meaningful-use-case-studies

Figure 33: Team Meetings for Improvement Cycles Resources

Change Concept: Designating regular team meetings to review data and plan improvement cycles

Level of Evidence	Illustrative Resources
II	McComb S, Hebdon M. Enhancing Patient Outcomes in Healthcare Systems Through Multidisciplinary Teamwork. (2013) <i>Clinical Journal Of Oncology Nursing</i> . 17(6):669-672. http://europepmc.org/abstract/MED/24305490
IV	Taplin S, Weaver S, Salas E, et al. Teams and Teamwork During a Cancer Diagnosis: Interdependency Within and Between Teams. <i>Journal Of Oncology Practice</i> [serial online]. May 2015;11(3):231-238. http://jop.ascopubs.org/content/11/3/231.full

Figure 34: Leadership Review of Performance Data Resources

Change Concept: Incorporating routine clinical and administrative leadership review data as part of management process

Level of Evidence	Illustrative Resources
IV	Sprandio, J. D., Flounders, B. P., Lowry, M., & Tofani, S. (2013). Data-Driven Transformation to an Oncology Patient-Centered Medical Home. <i>Journal of Oncology Practice</i> , 9(3), 130–132. http://doi.org/10.1200/JOP.2013.001019
T	Langely GJ, Moen RD, Nolan KM, Nolan TW, Norma CL, Provost LP. <i>The Improvement Guide: A Practical Approach to Enhancing Organizational Performance</i> , 2nd Edition. Jossey-Bass, A Wiley Imprint, San Francisco 2011.
T	Health IT National Learning Consortium. Continuous Quality Improvement (CQI) Strategies to Optimize your Practice. https://www.healthit.gov/sites/default/files/tools/nlc_continuousqualityimprovementprimer.pdf

3.7 Evidence-Based Medicine Change Concepts & Resources

Figure 35: Use Nationally Recognized Clinical Guidelines Resources

Required Practice Redesign Activity: Use therapies consistent with nationally recognized clinical guidelines

Level of Evidence	Illustrative Resources
I	Rotter, T., Kinsman, L., James, E., Machotta, A., Gothe, H., Willis, J., ... Kugler, J. (2010). Clinical pathways: effects on professional practice, patient outcomes, length of stay and hospital costs. <i>The Cochrane Database of Systematic Reviews</i> , (3), CD006632. http://doi.org/10.1002/14651858.CD006632.pub2
II	Prior, M., Guerin, M., & Grimmer-Somers, K. (2008). The effectiveness of clinical guideline implementation strategies - a synthesis of systematic review findings. <i>Journal of Evaluation in Clinical Practice</i> , 14(5), 888–897. http://doi.org/10.1111/j.1365-2753.2008.01014.x
III	Hoverman JR, Cartwright TH, Patt DA, et al: Pathways, outcomes and costs in colon cancer: Retrospective evaluations in two distinct databases. <i>J Oncol Pract</i> 7: 52s-59s, 2011 (suppl 3)116. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3092465/

Level of Evidence	Illustrative Resources
IV	Kredo, T., Bernhardsson, S., Machingaidze, S., Young, T., Louw, Q., Ochodo, E., & Grimmer, K. (2016). Guide to Clinical Practice Guidelines: The Current State of Play. <i>International Journal for Quality in Health Care</i> , 28(January), mzv115. http://doi.org/10.1093/intqhc/mzv115
IV	Neubauer MA, Hoverman JR, Kolodziej M, et al: Cost effectiveness of evidence based treatment guidelines for the treatment of non-small-cell lung cancer in the community setting. <i>J Oncol Pract</i> 6:12-18, 2010. http://jop.ascopubs.org/content/6/1/12.long
IV	Schippits, M. G., & Schippits, K. M. (2013). Clinical pathways leading healthcare reform: transformational strategies for oncology and beyond. <i>Journal of Medicine and the Person</i> , 11(2), 62–68. http://doi.org/10.1007/s12682-013-0151-4

Figure 36: Clinical Decision Support Systems Resources

Change Concept: Use clinical decision support systems

Level of Evidence	Illustrative Resources
I	Bright, T. J., Wong, A., Dhurjati, R., Bristow, E., Bastian, L., Coeytaux, R. R., ... Lobach, D. (2012). Effect of clinical decision-support systems: a systematic review. <i>Annals of Internal Medicine</i> , 157(1), 29–43. http://doi.org/10.7326/0003-4819-157-1-201207030-00450
I	Lobach D, Sanders GD, Bright TJ, Wong A, Dhurjati R, Bristow E, et al. Enabling Health Care Decision-making Through Clinical Decision Support and Knowledge Management. <i>Evid Rep Technol Assess (Full Rep)</i> . 2012;(203):1-784. http://www.ncbi.nlm.nih.gov/books/NBK97318
I	Murphy, E. V. (2014). Clinical decision support: Effectiveness in improving quality processes and clinical outcomes and factors that may influence success. <i>Yale Journal of Biology and Medicine</i> , 87(2), 187–197. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4031792/

Figure 37: Clinical Trial Participation Resources

Change Concept: Provide patients with appropriate opportunities to participate in clinical trials

Level of Evidence	Illustrative Resources
IV	Kanarek, N. F., Kanarek, M. S., Olatoye, D., & Carducci, M. A. (2012). Removing barriers to participation in clinical trials, a conceptual framework and retrospective chart review study. <i>Trials</i> , 13, 1–9. Retrieved from http://dx.doi.org/10.1186/1745-6215-13-237
IV	Jenkins, V., Farewell, V., Farewell, D., Darmanin, J., Wagstaff, J., Langridge, C., & Fallowfield, L. (2013). Drivers and barriers to patient participation in RCTs. <i>British Journal of Cancer</i> , 108(7), 1402–7. http://doi.org/10.1038/bjc.2013.113
IV	Fenton, L., Rigney, M., & Herbst, R. S. (2009). Clinical trial awareness, attitudes, and participation among patients with cancer and oncologists. <i>Community Oncology</i> , 6(5), 207–228. http://doi.org/10.1016/S1548-5315(11)70546-0
IV	Brandberg, Y., Johansson, H., & Bergenmar, M. (2016). Patients' knowledge and perceived understanding – Associations with consenting to participate in cancer clinical trials. <i>Contemporary Clinical Trials Communications</i> , 2, 6–11. http://doi.org/10.1016/j.conctc.2015.12.001
T	American Cancer Society. Clinical Trials. http://www.cancer.org/treatment/treatmentsandsideeffects/clinicaltrials/clinical-trials-landing
T	Education Network to Advance Cancer Clinical Trials. Five Steps to Enhance Patient Participation in Cancer Clinical Trials Guide and Workbook. http://www.swedish.org/~-/media/Images/Swedish/e/ENACCT5StepsGuide.pdf

3.8 Strategic Use of Revenue Change Concepts & Resources

Figure 38: Budgeting and Accounting Processes Resources

Change Concept: Use budgeting and accounting processes effectively to transform care processes and build capability to deliver comprehensive, coordinated cancer care

Level of Evidence	Illustrative Resources
IV	American College of Physicians. Financial Management Tools. https://www.acponline.org/practice-resources/business-resources/office-management/financial-management/financial-management-tools
IV	Massachusetts General Hospital (2011). "Budgeting Basics 101: The Nuts and Bolts of Budget Planning." http://www2.massgeneral.org/facultydevelopment/cfd/pdf/20111006budgetingbasics.pdf

Figure 39: Align Metrics and Strategies with Model Aims Resources

Change Concept: Align practice productivity metrics and compensation strategies with comprehensive, coordinated cancer care

Level of Evidence	Illustrative Resources
IV	Stewart, F. M., Wasserman, R. L., Bloomfield, C. D., Petersdorf, S., Witherspoon, R. P., Appelbaum, F. R., ... Waldinger, M. (2007). Benchmarks in Clinical Productivity: A National Comprehensive Cancer Network Survey. <i>Journal of Oncology Practice</i> , 3(1), 2–8. http://doi.org/10.1200/JOP.0712001
IV	Malin, J. L., Weeks, J. C., Potosky, A. L., Hornbrook, M. C., & Keating, N. L. (2013). Medical Oncologists' Perceptions of Financial Incentives in Cancer Care. <i>Journal of Clinical Oncology</i> , 31(5), 530–535. http://doi.org/10.1200/JCO.2012.43.6063
IV	Pickard, T. (2014). Calculating Your Worth: Understanding Productivity and Value. <i>Journal of the Advanced Practitioner in Oncology</i> , 5(2), 128–133. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4093517/

3.9 Sharing of Performance-Based Payment Change Concepts & Resources

Figure 40: Performance-Based Payment Sharing Resources

Change Concept: Engage various care partners in sharing of performance-based payment

Level of Evidence	Illustrative Resources
IV	Distribution Based on Contribution– A Merit-based Shared Savings Distribution Model: Toward Accountable Care Consortium http://www.tac-consortium.org/wp-content/uploads/2013/09/Shared-Savings-Guide_091013_revised_reduced-file.pdf
IV	Evaluation of the Medicare Physician Hospital Collaboration Demonstration, RTI International, September 2014: https://downloads.cms.gov/files/cmml/PHC_FINAL-RPT_September2014.pdf
IV	Toward Accountable Care Consortium. The Bundled Payment Guide for Physicians. http://www.accc-cancer.org/ossn_network/NC/pdf/TAC-Bundled-Payment-Guide.pdf
IV	Bailit, M., & Hughes, C. (2011). Key design elements of shared-savings payment arrangements. New York: Commonwealth Fund. http://www.commonwealthfund.org/~media/Files/Publications/Issue%20Brief/2011/Aug/1539_Bailit_key_design_elements_sharesavings_ib_v2.pdf
IV	United Health Care Value Based Incentive Programs Frequently Asked Questions for self-funded customers: http://www.uhc.com/content/dam/uhcdotcom/en/Employers/PDF/reform-aco-external-faq-ASO-value-based-incentive-programs.pdf
IV	Lazero, R. (2012). Designing effective gainsharing models. The Advisory Board Company. https://www.advisory.com/research/health-care-advisory-board/blogs/toward-accountable-payment/2012/05/designing-effective-gainsharing-models
IV	Lowering medical costs through the sharing of savings by physicians and patients: inclusive shared savings. Schmidt, Harald; Emanuel, Ezekiel J (2014) <i>JAMA internal medicine</i> vol. 174 (12) p. 2009-13 http://www.ncbi.nlm.nih.gov/pubmed/25330283

Level of Evidence	Illustrative Resources
IV	Effects of Health Care Payment Models on Physician Practices in the United States. Rand Corporation. American Medical Association. (2015) http://www.rand.org/content/dam/rand/pubs/research_reports/RR800/RR869/RAND_RR869.pdf
IV	Bernstein, C., Goodroe, J., & Mathias, W. (2014). Structuring Gainsharing Arrangements and Bundled Payments: Latest Developments. http://media.straffordpub.com/products/structuring-gainsharing-arrangements-and-bundled-payments-latest-developments-2014-04-30/presentation.pdf

3.10 Claims Pooling Change Concepts & Resources

Figure 41: Data Grouping Resources

Change Concept: Group data with other practices

Level of Evidence	Illustrative Resources
IV	Leong, S. New Help for Managing High Cost Drug Claims - An Important Step http://www.telushealth.com/BCDrugConf2013/files/05_Update%20on%20EP3_CDIPC_Shirley_Leong.pdf
IV	High-cost prescription drug claims double. Benefits Canada Magazine October 2, 2014. http://www.benefitscanada.com/benefits/health-benefits/high-cost-prescription-drug-claims-double-57525
III	Understanding Health Care Financial Management. Louis C. Gapenski, PhD Chapter 20 Capitation, Rate Setting, and Risk Sharing. http://www.ache.org/pubs/hap_companion/gapenski_finance/online%20chapter%2020.pdf
IV	Eijkenaar F. Key issues in the design of pay for performance programs. <i>The European Journal of Health Economics</i> . 2013;14(1):117-131. doi:10.1007/s10198-011-0347-6. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3535413/

3.11 Beneficiary Incentives Change Concepts & Resources

Figure 42: Patient Incentives Resources

Change Concept: Provide nonmonetary incentives, tools/technology, or vouchers for health behavior change

Level of Evidence	Illustrative Resources
III	Meredith SE, Jarvis BP, Raiff BR, et al. The ABCs of incentive-based treatment in health care: a behavior analytic framework to inform research and practice. <i>Psychology Research and Behavior Management</i> . 2014;7:103-114. doi:10.2147/PRBM.S59792. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3964160/
II	Lutge EE, Wiysonge CS, Knight SE, Sinclair D, Volmink J. Incentives and enablers to improve adherence in tuberculosis. <i>Cochrane Database of Systematic Reviews</i> 2015, Issue 9. Art. No.: CD007952. DOI: 10.1002/14651858.CD007952.pub3. http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0033629/
III	Garg, A., Jack, B., & Zuckerman, B. (2013). Addressing the Social Determinants of Health Within the Patient-Centered Medical Home. <i>JAMA</i> , 309(19), 2001. http://doi.org/10.1001/jama.2013.1471
IV	American Cancer Society. Health Insurance and Financial Assistance for the Cancer Patient. http://www.cancer.org/treatment/findingandpayingfortreatment/understandinghealthinsurance/healthinsuranceandfinancialassistanceforthecancerpatient/health-insurance-and-financial-assistance-outside-sources .
IV	American Society of Clinical Oncology. Cancer. Net Mobile App. http://www.asco.org/press-center/asco-launches-cancernet-mobile-new-app-iphone-ipad-and-ipod-touch-puts-cancer-care

3.12 Payment for Enhanced Services Change Concepts & Resources (Payers, including CMS)

Figure 43: Practice Guidelines and Expectations Resources

Change Concept: Offer practices suggested clinical guidelines and expectations for coordination of care to meet performance goals

Level of Evidence	Illustrative Resources
I	Rotter, T., Kinsman, L., James, E., Machotta, A., Gothe, H., Willis, J., ... Kugler, J. (2010). Clinical pathways: effects on professional practice, patient outcomes, length of stay and hospital costs. <i>The Cochrane Database of Systematic Reviews</i> , (3), CD006632. http://doi.org/10.1002/14651858.CD006632.pub2
IV	Kredo, T., Bernhardsson, S., Machingaidze, S., Young, T., Louw, Q., Ochodo, E., & Grimmer, K. (2016). Guide to Clinical Practice Guidelines: The Current State of Play. <i>International Journal for Quality in Health Care</i> , 28(January), mzv115. http://doi.org/10.1093/intqhc/mzv115
IV	Steele, J. R., Jones, a. K., Ninan, E. P., Clarke, R. K., Odisio, B. C., Avritscher, R., Mahvash, a. (2015). Why Bundled Payments Could Drive Innovation: An Example From Interventional Oncology. <i>Journal of Oncology Practice</i> , 11(2), e199–e205. http://doi.org/10.1200/JOP.2014.001523
IV	Ellis PG. Development and implementation of oncology care pathways in an integrated care network: the Via Oncology pathways experience. <i>J Oncol Pract</i> . 2013;9(3):171-173. doi:10.1200/JOP.2013.001020.
IV	Feinberg, B. a, Lang, J., Grzegorzcyk, J., Stark, D., Rybarczyk, T., Leyden, T. Scott, J. a. (2012). Implementation of cancer clinical care pathways. <i>The American Journal of Managed Care</i> , 18(4 Spec No.), SP159–65. http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3348604&tool=pmcentrez&rendertype=abstract
IV	Feinberg, B. A., Lang, J., Grzegorzcyk, J., Stark, D., Rybarczyk, T., Leyden, T., ... Scott, J. A. (2012). Implementation of cancer clinical care pathways: a successful model of collaboration between payers and providers. <i>The American Journal of Managed Care</i> , 18(5), e194–9. http://doi.org/10.1200/JOP.2012.000564

Figure 44: Incentive Alignment Resources

Change Concept: Align incentives across clinician teams to meet goals of model

Level of Evidence	Illustrative Resources
III	Newcomer, L. N., Gould, B., Page, R. D., Donelan, S. a, & Perkins, M. (2014). Changing Physician Incentives for Affordable, Quality Cancer Care: Results of an Episode Payment Model. <i>Journal of Oncology Practice / American Society of Clinical Oncology</i> , 1–5. http://doi.org/10.1200/JOP.2014.001488

Figure 45: Clinician Engagement Resources

Change Concept: Engage clinicians across the continuum of care to coordinate and manage care

Level of Evidence	Illustrative Resources
III	Sanghavi, D., Samuels, K., George, M., Patel, K., Bleiberg, S., McStay, F. McClellan, M. (2015). Case study: Transforming cancer care at a community oncology practice. <i>Healthcare (Amsterdam, Netherlands)</i> , 3(3), 160–8. http://doi.org/10.1016/j.hidsi.2014.07.005
IV	Greenapple, R. (2012). Emerging trends in cancer care: health plans' and pharmacy benefit managers' perspectives on changing care models. <i>American Health & Drug Benefits</i> , 5(4), 242–53. Retrieved from http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=4046474&tool=pmcentrez&rendertype=abstract
IV	Doyle, C. (2015). Value-Based Healthcare Delivery: The Agenda for Oncology. <i>American Health & Drug Benefits</i> , 8(Spec Issue), 1–27. Retrieved from http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=4570069&tool=pmcentrez&rendertype=abstract

3.13 Performance-Based Payment Change Concepts & Resources (Payers, including CMS)

Figure 46: Quality Measures Alignment Resources

Change Concept: Align quality measures used to determine performance-based payment with other quality measure reporting programs

Level of Evidence	Illustrative Resources
IV	Altman, S. H. (2012). The lessons of Medicare’s prospective payment system show that the bundled payment program faces challenges. <i>Health Affairs (Project Hope)</i> , 31(9), 1923–30. http://doi.org/10.1377/hlthaff.2012.0323
IV	Chambers, J. D., Weiner, D. E., Bliss, S. K., & Neumann, P. J. (2013). What can we learn from the U.S. expanded end-stage renal disease bundle? <i>Health Policy (Amsterdam, Netherlands)</i> , 110(2-3), 164–71. http://doi.org/10.1016/j.healthpol.2013.01.011
IV	Cutler, D. M., & Ghosh, K. (2012). The Potential for Cost Savings through Bundled Episode Payments. <i>New England Journal of Medicine</i> , 366(12), 1075–1077. http://doi.org/10.1056/NEJMp1113361
IV	de Bakker, D. H., Struijs, J. N., Baan, C. B., Raams, J., de Wildt, J. E., Vrijhoef, H. J. M., & Schut, F. T. (2012). Early results from Adoption of bundled payment for diabetes care in the Netherlands show improvement in care coordination. <i>Health Affairs</i> , 31(2), 426–433. http://doi.org/10.1377/hlthaff.2011.0912
IV	Delisle, D. R. (2013). Big things come in bundled packages: implications of bundled payment systems in health care reimbursement reform. <i>American Journal of Medical Quality: The Official Journal of the American College of Medical Quality</i> , 28(4), 339–44. http://doi.org/10.1177/1062860612462740
IV	Hirsch, J. A., Leslie-Mazwi, T. M., Barr, R. M., McGinty, G., Nicola, G. N., Silva, E., & Manchikanti, L. (2015). The Bundled Payments for Care Improvement Initiative. <i>Journal of Neurointerventional Surgery</i> . http://doi.org/10.1136/neurintsurg-2015-011746
IV	Hussey, P. S., Ridgely, M. S., & Rosenthal, M. B. (2011). The PROMETHEUS bundled payment experiment: Slow start shows problems in implementing new payment models. <i>Health Affairs</i> , 30(11), 2116–2124. http://doi.org/10.1377/hlthaff.2011.0784
IV	Iorio, R. (2015). Strategies and Tactics for Successful Implementation of Bundled Payments: Bundled Payment for Care Improvement at a Large, Urban, Academic Medical Center. <i>The Journal of Arthroplasty</i> , 30(3), 349–350. http://doi.org/10.1016/j.arth.2014.12.031

Figure 47: Address Administrative Challenges to Implementing Payment Reform Resources

Change Concept: Address administrative challenges to implementing bundled payment and implementation, such as claims adjudication

Level of Evidence	Illustrative Resources
IV	Mechanic, R. E. (2011). Opportunities and challenges for episode-based payment. <i>The New England Journal of Medicine</i> , 365(9), 777–9. http://doi.org/10.1056/NEJMp1105963
IV	Ridgely, M. S., de Vries, D., Bozic, K. J., & Hussey, P. S. (2014). Bundled payment fails to gain a foothold in California: The experience of the IHA bundled payment demonstration. <i>Health Affairs</i> , 33, 1345–1352. http://doi.org/10.1377/hlthaff.2014.0114
IV	Mechanic, R., & Tompkins, C. (2012). Lessons Learned Preparing for Medicare Bundled Payments. <i>New England Journal of Medicine</i> , 367(20), 1873–1875. http://doi.org/10.1056/NEJMp1210823
IV	Clough, JD, Kamal, A (2015). Oncology Care Model: Short- and Long-Term Considerations in the Context of Broader Payment Reform. <i>Journal of Oncology Practice</i> , 11(4), 319–322. http://iop.ascopubs.org/content/early/2015/06/09/JOP.2015.005777.full
IV	Eijkenaar, F., Emmert, M., Scheppach, M., & Schöffski, O. (2013). Effects of pay for performance in health care: a systematic review of systematic reviews. <i>Health Policy (Amsterdam, Netherlands)</i> , 110(2-3), 115–30. http://doi.org/10.1016/j.healthpol.2013.01.008

3.14 Multi-Payer Participation Change Concepts & Resources (Payers, including CMS)

Figure 48: Clinician and Payer Partnerships Resources

Change Concept: Foster partnerships between cancer care clinicians and payers to align incentives to provide high-quality, high-value care

Level of Evidence	Illustrative Resources
IV	Shulman, Lawrence N., et al. "Partnership between a cancer center and payer: Opportunities for improved quality of care and cost reduction." <i>Journal of Oncology Practice</i> 9.3 (2013): 133-134. http://iop.ascopubs.org/content/9/3/133.full
IV	Greenapple, R. (2013). Rapid expansion of new oncology care delivery payment models: results from a payer survey. <i>American Health & Drug Benefits</i> , 6(5), 249-56. Retrieved from http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=4031716&tool=pmcentrez&rendertype=abstract

Figure 49: Drug Cost Management Resources

Change Concept: Manage cost of oncology drugs

Level of Evidence	Illustrative Resources
IV	Episode Payments for Cancer Therapy, Lee Newcomer, MD and Anthem's Cancer Care Quality Program, Jennifer Malin, MD, PhD: Presentation LAN Learnings July 2015 https://publish.mitre.org/hcplan/wp-content/uploads/sites/4/2015/08/HCLAN-July-21-Webinar_finalcompliant.pdf
IV	Kenney, J. T. (2014). Payers' management of oncology drugs: opportunities and challenges. <i>American Health & Drug Benefits</i> , 7(3), 123-4. Retrieved from http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=4070630&tool=pmcentrez&rendertype=abstract

Figure 50: Provide Data and Feedback to Practices Resources

Change Concept: Provide data and feedback to practices

Level of Evidence	Illustrative Resources
IV	Chambers, J. D., Weiner, D. E., Bliss, S. K., & Neumann, P. J. (2013). What can we learn from the U.S. expanded end-stage renal disease bundle? <i>Health Policy (Amsterdam, Netherlands)</i> , 110(2-3), 164-71. http://doi.org/10.1016/j.healthpol.2013.01.011
IV	Mechanic, R. E. (2011). Opportunities and challenges for episode-based payment. <i>The New England Journal of Medicine</i> , 365(9), 777-9. http://doi.org/10.1056/NEJMp1105963
IV	Klein, I., & Kolodziej, M. (2014). Private payers and cancer care: land of opportunity. <i>Journal of Oncology Practice / American Society of Clinical Oncology</i> , 10(1), 15-9. http://doi.org/10.1200/JOP.2013.000897

4 Appendix B: Methods for Development of Key Drivers

Materials in this change package were developed through a combination of technical discussions and an environmental scan that built upon the technical and programmatic foundation of the Oncology Care Model.

Methods for Development of the Driver Diagram

The Driver Diagram framework was initially developed by the CMMI OCM leadership team and technical experts, was disseminated as part of the OCM Request for Applications in Spring 2015, and has been further revised since then by the OCM Learning Community contractor in consultation with CMMI OCM leadership. Definitions and aligned change concepts were developed for each secondary driver and reviewed with CMMI. OCM participation requirements were also mapped to each of the secondary drivers and change concepts.

Given the innovative nature of the model, it is likely that the evidence base will continue to evolve during the life of the model, which will likely result in adjustments to the driver diagram.

Methods for the Environmental Scan

A Change Package provides the evidence base and actionable tools to assist participants with planning for and implementing improvements. Using the driver diagram as a guide, the OCM Learning Community contractor conducted the environmental scan through the following process, with the goal of identifying and categorizing the resources that align to the OCM drivers and requirements.

Planning the Environmental Scan

1. Reviewed recent Environmental Scan products and Change Packages prepared for CMS and CMMI programs to inform the format and process for the OCM Learning Community scan.
2. Reviewed OCM Driver diagram provided by CMMI.
3. Defined each Secondary Driver
4. Aligned Change Concepts to each Secondary Driver
5. Developed key search terms aligned to the Primary Drivers, Secondary Drivers, and Change Concepts, which were informed by the definitions.
6. Identified key sites, sources, and organizations for research.
7. Employed common reference manager Mendeley to track citations and sources, save sources, categorize themes, and ensure common citation format (<https://www.mendeley.com/features/reference-manager/>).
8. Developed Level of Evidence criteria for categorizing resources identified via the Environmental Scan.
9. Prepared and maintained a structured documentation tool and process to capture research and citations for each Secondary Driver and Change Concept.
10. Established an online documentation site to house the research content and maintain integrity of document versions.
11. Developed a report outline and approach for the Change Package to be developed as a result of the Environmental Scan.
12. Gathered formative information and input from CMMI and OCM Learning Community Team subject matter experts. Prepared various iterations of briefing materials to gain input.

Execution of the Environmental Scan

The Environmental Scan was planned for and conducted in late September to early November 2015. The scan included peer-reviewed and grey literature as well as relevant tools and interventions from prominent organizations in relevant fields. In total, more than 200 resources were reviewed and evaluated. The following steps were implemented to carry out the OCM Key Driver Environmental Scan after the planning phase:

- I. The team scanned the medical and social science peer-reviewed literature—including both qualitative and quantitative studies—using PubMed, PsycInfo, Google Scholar, EBSCOhost, and the Cochrane databases.
 - a. Search databases using identified keyword search terms.
 - b. Review abstract to determine whether the article is relevant.
 - c. Retrieve full text for those articles identified as relevant.
 - d. Review article in its entirety for specific information according to the abstraction form.
 - e. Conduct an Internet scan or contact authors for any missing information or tools/training materials used.
 - f. Review citation list for relevant articles.
 - g. Apply Level of Evidence criteria.
 - h. Aligned the citation to the appropriate Secondary Driver(s) and Change Concept(s) (note that some apply across several such categories)
 - i. Document citation along with relevant information in tracking tool.
- II. Steps to scan the grey literature included:
 - a. Collect recommendations, documents, and other information from project team members and subject matter experts.
 - b. Search Web sites of organizations identified by CMMI and partners for relevant research, resources, and tools.
 - c. Search databases that target trade publications—such as Health Business (for hospital administrators) and PAIS (social sciences)—using keyword search terms.
 - d. Apply Level of Evidence criteria.
 - e. Aligned the citation to the appropriate Secondary Driver(s) and Change Concept(s) (note that some apply across several such categories)
 - f. Document citation along with relevant information in tracking tool.
- III. Other Sources: In addition, the team conducted a more targeted search of 50+ Web sites for non-peer-reviewed literature and potential tools, such as sites for relevant government agencies, professional associations, and advocacy groups.
- IV. In all areas:
 - a. Held multiple team internal reviews and discussions.
 - b. Applied updates to searches per changes and improvements in the Key Drivers, Secondary Drivers, and definitions.

The Level of Evidence Criteria (see Figure 51) adapted for this purpose is based on a schema applied by Melnyk and Overholt,⁶³ and used by the AHRQ National Guidelines Clearinghouse, Johns Hopkins Nursing Evidence-based Practice, and the Oxford Centre for Evidence-based Medicine. The purpose is to rate the strength of the evidence base for each resource and/or tool. Given the intent to collect case studies throughout the OCM program implementation and the experimental nature of the OCM, participants are encouraged consider resources of all levels of evidence in planning for improvement.

Figure 51: Level of Evidence Criteria

Category	Description
I	Level 1 and 2 Studies (experimental)
II	Level 3 Studies (quasi-experimental)
III	Level 4 Studies (non-experimental study)
IV	Level 5, 6 and 7 Studies (qualitative study or expert opinion)

Level 1: Systematic review of relevant randomized control trials

Level 2: At least one well-designed randomized control trial

Level 3: Well-designed control trials without randomization (quasi-experimental)

Level 4: Evidence from well-designed case-control and cohort studies

Level 5: Evidence from systematic reviews of descriptive and qualitative studies

Level 6: Evidence from descriptive or qualitative studies or quality improvement projects

Level 7: Evidence from the opinion of authorities or reports of expert committees

⁶³ Melnyk, B. M., & Fineout-Overholt, E. (Eds.). (2011). Evidence-based practice in nursing & healthcare: A guide to best practice. Lippincott Williams & Wilkins. <http://www.worldcat.org/title/evidence-based-practice-in-nursing-healthcare-a-guide-to-best-practice/oclc/539086897>