



BCBSM Physician Group Incentive Program 2012 Program Year

**The Michigan Urological Surgery Improvement
Collaborative (MUSIC)**

Initiative Plan



I. Initiative Overview

The Blue Cross Blue Shield of Michigan (BCBSM) MUSIC Initiative is one of many initiatives of the Physician Group Incentive Program (PGIP). Since its inception in 2005, PGIP has supported and facilitated practice transformation using a wide variety of initiatives to reward physician organizations (POs) for improved performance in health care delivery. As of September 2011, PGIP includes 40 POs from across the state of Michigan, representing nearly 15,000 primary care and specialty physicians who are members of the BCBSM TRUST PPO and/or Traditional Networks. These physicians provide care to nearly two million BCBSM members.

BCBSM's Physician Group Incentive Program encourages all payer collaboration, catalyzing all payer system development, rather than payer-specific system development. Through PGIP, BCBSM is helping to improve the quality of care for all Michigan residents. Patients throughout the state, regardless of payer, benefit from the improved care processes developed through the PGIP provider community. Developing systems of care which are used for all patients helps assure that providers don't have to alter care processes based on whether patients have insurance, or which insurance they have. This is an important factor in ensuring that the best practices and care processes are reliably provided to all patients, all of the time. This all-payer approach to practice transformation is good for patients with coverage from BCBSM and BCN and helps further BCBSM's social mission of cultivating a healthier future for all Michigan residents.

In an effort to improve the quality of care provided to men with prostate cancer, BCBSM has created the Michigan Urological Surgery Improvement Collaborative (MUSIC). This professional Collaborative Quality Initiative (CQI) is built upon the principles of the successful multi-state Urological Surgery Quality Collaborative (USQC) pilot that was launched in 2009, led by Drs. David Miller and James Montie (co-physician directors of MUSIC) and involved multiple urology practices from Michigan, Indiana and Ohio. This expansion of the USQC pilot will create a Michigan clinical registry that will collect data on patient demographics, cancer severity (including pathological details from needle biopsies), utilization and outcomes for radiographic staging studies, and patterns of care for both local therapies (e.g., radical prostatectomy, radiation therapy) and systemic androgen deprivation therapy.

Data will be analyzed to determine the performance of each participating Michigan urology practice in comparison to peers. The MUSIC Coordinating Center will also undertake analyses designed to identify specific care components associated with better patient outcomes. Based on these analyses, MUSIC leadership will then develop strategies for both dissemination of this information to participating providers and the broader Michigan healthcare community, as well as implementation of best practices in local communities. Initial efforts will focus on:

- Improving patterns of care in the radiographic staging of men with newly-diagnosed prostate cancer
- Reducing variation in the discretionary use of androgen deprivation therapy (ADT)
- Improving patient-centered decision making among men considering local therapy for early-stage prostate cancer

Goals and Objectives

1. **To improve patterns of care in the radiographic staging of men with newly-diagnosed prostate cancer.** The methods and lessons from Drs. Miller and Montie's

prior work with the USQC will be leveraged to achieve similar improvements in the evidence-based utilization of staging bone scans and CT scans among patients treated by urologists throughout the state of Michigan. In particular, the initiative will use strategies built around comparative performance feedback and guideline dissemination to both reduce unnecessary testing in men at low-risk for metastatic disease and to optimize the use of appropriate radiographic staging evaluations among men with higher-risk cancers. The collaborative will also pursue opportunities to communicate its findings and methods with physicians outside the collaborative (i.e., both urologists and primary care physicians) in order to improve the utilization of staging evaluations prior to referral.

2. **To reduce variation in the discretionary use of androgen deprivation therapy.** By employing collaborative data collection, performance feedback, and clinical guideline review, the collaborative will seek to reduce inappropriate utilization of ADT among men with clinically-localized disease, as well as to better understand current practice patterns (and potential opportunities for improvement) in the timing of ADT among men with metastatic prostate cancer or recurrent cancer after primary therapy.
3. **To improve patient-centered decision making among men considering local therapy for early-stage prostate cancer.** An additional priority will be to use available patient decision aids (including the plain-language aid developed by the Michigan Cancer Consortium, www.prostatecancerdecision.org) to improve patient knowledge and participation in the treatment decision-making process for early-stage prostate cancer. An important outcome metric for this aim will be the distribution of treatments for patients in each practice according to the risk strata defined by the National Comprehensive Cancer Network (NCCN) Prostate Cancer Guidelines. In particular, the collaborative will seek to optimize utilization of active surveillance among men in the very-low and low recurrence risk categories, in accordance with the NCCN guidelines.

The achievement of these aims will significantly improve the quality and cost efficiency of prostate cancer care in the state of Michigan, with the benefits of this approach shared by urologists, Blue Cross Blue Shield of Michigan, and – most importantly – our patients with prostate cancer.

II. Background

Health Problem and Significance

Cancer care in the United States accounts for over \$250 billion in expenditures annually, representing a significant portion of all health care spending.¹ Moreover, cancer-related expenditures have risen approximately 75% from 1995 to 2004, and are expected to continue to outpace the growth of the overall economy due in part to an anticipated increasing incidence with the aging population.^{2,3} Because of its high incidence (nearly 200,000 new cases per year), propensity for expensive therapies, and prolonged clinical course, prostate cancer expenditures approach \$7 billion annually and are on par with those for other major cancers, including breast, colon and lung.^{4,5} In the past decade, spending growth for prostate cancer has averaged about 11% a year and has outpaced rates for other common conditions including cardiovascular and pulmonary diseases.⁴

In considering the substantial expenditures associated with prostate cancer, it is useful to consider three distinct phases of care: 1) *Initial* (i.e., the first 12 months following diagnosis); 2) *Continuing Care* (i.e., the interval between Initial and End-of-Life care); and 3) *End-of-Life* (i.e., the last 12 months of life).^{6,7} In recent analyses based on linked data from the Surveillance, Epidemiology and End Results (SEER) registries and Medicare claims for 1992 through 2005, 90% of total prostate cancer expenditures occur during the initial (59%, approximately \$988 million) and continuing care (31%, approximately \$532 million) phases. Among the Medicare population, the corresponding annual per capita expenditures were \$8,799 and \$1,464 for the initial and continuing care phases, respectively.⁷

Much of the inexorable growth in spending for the initial phase of prostate cancer care is attributable to medical innovation and the implementation of new technology.^{8,9} For prostate cancer treatment, physicians have rapidly adopted new technologies aimed at reducing treatment related morbidity, including robotic-assisted radical prostatectomy and intensity-modulated radiation therapy (IMRT).^{8,10,11,12} However, these technologies are more expensive than existing standard therapies and often have unclear benefits in terms of important clinical outcomes.^{13,14} For instance, it is estimated that using IMRT as opposed to standard 3-D conformal radiation therapy (3D-CRT) for treating men with prostate cancer translates into an added cost of \$1.4 billion per year.¹⁵ Likewise, the operating costs associated with robotic assisted radical prostatectomy—now performed in nearly 90% of men treated with prostatectomy—are nearly three-fold higher than for the open procedure.¹⁶ Notably, these increased costs have been incurred largely in the absence of data supporting the benefits of these new technologies with respect to the most important cancer control and functional outcomes after localized prostate cancer therapy.^{13,14}

In contrast to the “big-ticket” items (e.g., surgery, radiation therapy) that drive expenditures during the initial phase of care, costs associated with the continuing care of men with prostate cancer reflect the extended natural history of this disease. During the continuing care phase, for instance, many people live with the sequelae of treatment, which are often non-trivial.¹⁷ Various consequences of treatment that may drive clinical care (and consequent expenditures) during this phase of survivorship include: impotence and incontinence after definitive local therapy;^{18,19} psychosocial effects of treatment and surveillance;²⁰ and/or symptom-related interventions.²¹ Because sequelae of treatment for prostate cancer are common, up to one-third of patients undergo a procedural or surgical intervention during the continuing care phase.²²

One particularly expensive component of continuing care expenditures is reimbursement for androgen deprivation therapy, including costs associated with potential treatment-related adverse cognitive, cardiac and bone health events.^{5,7,23,24} In 2010, Medicare data revealed that outlays for ADT comprised 63% of total physician-related payments during the continuing care phase.⁷ Moreover, there is significant variation in ADT-related expenditures: among Medicare beneficiaries, for instance, average annual per capita expenditures for ADT among men in the continuing care phase ranged from \$36/year to \$4,724/year for the lowest to highest expenditure groups, respectively. This variation appears to also be largely independent of prostate cancer risk; that is, differences in spending *within* a prostate cancer risk stratum are substantively greater than those *between* risk strata.⁷ These data underscore both the pervasive uncertainty surrounding optimal utilization of ADT, as well as an immediate opportunity to eliminate potentially unnecessary health services and thereby improve the quality and cost-efficiency of prostate cancer care.

The quality of prostate cancer care is highly variable. Collectively, the data presented above confirm that the burden of medical care provided to men with prostate cancer is immense in

both human and financial terms. Despite this massive investment, however, documented variations in patterns of care and treatment outcomes suggest important and pervasive differences in the quality of care for men with prostate cancer.^{17,25, 26,27} In fact, there are at least three lines of argument that the quality of care for men with prostate cancer can be improved substantially, particularly during the initial and continuing phases of care.

First, data from studies evaluating compliance with the RAND prostate cancer quality indicators suggest ample opportunities for improvement in specific processes of prostate cancer care.^{26, 27, 28,29} In partnership with the Commission on Cancer of the American College of Surgeons (ACS), a subset of the RAND prostate cancer quality indicators were used to perform the first nationwide assessment of the quality of localized prostate cancer care. As described in detail in manuscripts published in the *Journal of Clinical Oncology*, *Medical Care*, and *Cancer*, some of the greatest opportunities for improvement in the delivery of prostate cancer care involve specific aspects of the physician-patient interaction.^{26,27,28} As an example, there were relatively low rates of compliance with indicators assessing the quality of pre-therapy functional evaluations among men with newly-diagnosed prostate cancer, including assessment of pretreatment sexual, urinary, and bowel function. From a quality of care perspective, this relatively infrequent documentation of pretreatment pelvic functions is concerning to the extent that baseline urinary, bowel, and sexual health influence not only initial treatment decisions, but also the health-related quality of life experienced by those treated for localized prostate cancer.^{26, 27}

This study also highlighted previously unrecognized geographic, provider- and facility-level variations in the quality of multiple facets of early-stage prostate cancer care.^{26, 27} For instance, adherence to process of care quality indicators was appreciably higher for patients treated with radiotherapy (versus surgery), including documentation of clinical stage, pre-therapy assessment of urinary and sexual function, and discussion of treatment options.²⁷ This treatment-specific disparity has potentially important implications for risk assessment, prognostic counseling and therapeutic decision-making among men with early-stage prostate cancer. Likewise, the lower levels of quality indicator compliance among patients treated with radical prostatectomy (versus radiation therapy) highlight the need for efforts aimed at improving the quality of prostate cancer care delivered by urologists and urology practices.

The second line of evidence for a quality gap in prostate cancer relates to a body of literature demonstrating urologists' frequent lack of adherence to guideline-based care for men with prostate cancer.^{29, 30} Emblematic of this concern are prior findings regarding utilization of prostate cancer staging tests among a national sample of men with newly diagnosed prostate cancer.³⁰ In this study, nearly-half of patients with low-risk prostate cancer underwent potentially unnecessary radiographic staging evaluations (e.g., radionuclide bone scan, computed tomography). At the same time, however, a substantial fraction of patients with high-risk tumors received potentially insufficient radiographic evaluation of their disease burden.³⁰ These data – which indicate that evidence-based utilization of advanced radiographic staging evaluations is surprisingly uncommon are corroborated by findings from several other studies.^{31,32} Accordingly, efforts to reduce overuse and underuse in this area represent a logical priority for population-based quality improvement initiatives.

In addition to advanced imaging, there are multiple studies describing overuse and misuse of ADT at several points in the prostate cancer care continuum.^{33,34} Potential explanations for these practice patterns are multiple, and include a lack of clarity regarding the benefits of ADT as a primary therapy and/or among patients with a rising prostate-specific antigen (PSA) after local therapy, as well as historical financial incentives that may have fueled more intense

utilization of hormonal therapy.^{33,34} Even after the enactment of new reimbursement policies intended to reduce overutilization of ADT, however, recent data suggest that tens of thousands of men with localized, low-risk prostate cancer continue to receive this expensive and potentially toxic therapy which has not proven effective in treating this population in clinical trials.³³ Given the financial and clinical implications surrounding use of ADT, there is an urgent need for efforts aimed at better understanding (and reducing) the discretionary use of ADT in clinical settings where its benefits are unproven. Because they are the dominant prescribers of ADT, urology practices again represent the highest-yield setting for this type of quality improvement intervention.

The third line of evidence suggesting immediate opportunities for improvement in the quality of care involves documented variations in treatment outcomes among men with prostate cancer.^{17,18,25} For instance, many men report low levels of satisfaction—and even regret—with their prostate cancer treatment decisions, highlighting the ongoing need for efforts aimed at improving patient-centered, shared decision-making among men with newly-diagnosed prostate cancer.³⁵ Moreover, after surgery or radiation, the frequency of urinary, bowel and sexual dysfunction consistently differs among individual providers and institutions.²⁵ While this variation may be explained, at least partially, by confounding patient and disease characteristics, these disparate outcomes may also reflect differences in the quality of care (e.g., appropriateness and/or skill) provided.

Existing empirical data therefore highlight unambiguously that prostate cancer is common and expensive, and that delivery of prostate cancer care is often highly variable and less than optimal in terms of its quality and cost-efficiency. In order to address these concerns, it is crucial to also understand where and from whom men with prostate cancer receive medical care.

Among Medicare enrollees, urologists provide the majority of prostate cancer care, both overall and for the initial and continuing care phases specifically.³⁶ During the initial phase of care, prostate cancer care is primarily provided by urologists and radiation oncologists, with other specialties playing only a minor role. During both the initial and continuing care phases, urologists provided the highest proportion of office visits and ordered the greatest number of imaging and laboratory studies. During all three phases of care, moreover, urologists were responsible for a majority of claims for androgen deprivation therapy.³⁶ Taken together, these data demonstrate convincingly that the breadth and volume of prostate cancer related care delivered by urologists far exceeds that for all other specialties. This is true at the time of initial diagnosis and therapeutic decision-making, as well as throughout the continuing care phase of cancer survivorship. In light of these data, urology practices represent a logical starting point for endeavors aimed at optimizing the quality of care provided to men with prostate cancer.

Possible Solutions

There have been several initiatives nationally that have worked to improve the quality of prostate cancer care through population outreach and clinical interventions. South Carolina's Palmetto Health's Office of Community Services developed a community cancer education and prevention program. This program provides free screening (prostate specific antigen and digital rectal examination) to the uninsured and underrepresented. Palmetto also offers case management through their nurse navigator program.³⁷

In June of 2011, the H.R. 2159: PROSTATE Act was introduced into the House of Representatives. This bill aims to reduce disparities and improve access to effective and cost efficient diagnosis and treatment of prostate cancer through advances in testing, research, and education.³⁸

There are a number of vendors that have developed Prostate Cancer Registry software. Ingenix, UnitedHealth Group's health information, technology and consulting company, worked in collaboration with UnitedHealthcare and the National Comprehensive Cancer Network to produce their national adult cancer care registry which collects clinical data on a number of cancers, including prostate, and is used to report on and develop quality improvement opportunities for physicians surrounding these diseases.³⁹ RemedyMD's prostate cancer registry tracks the survival, recurrence, side effects, longitudinal quality of life, and cost of various management strategies for localized prostate cancer including active surveillance, radical prostatectomy (conventional, robotic, and laparoscopic), and radiotherapy (conformal, brachytherapy, proton-beam, and intensity-modulated radiotherapy). The prostate cancer registry includes applications, data infrastructure, and tools to gather, synthesize and analyze both phenotypic and genotypic data simultaneously.⁴⁰

BCBSM Experience

In 2009, Drs. David Miller and James Montie (along with colleagues from Ohio and Indiana) launched the Urological Surgery Quality Collaborative (USQC) pilot, a precursor to the MUSIC consortium. Established in January 2009, and supported in part by funding from Blue Cross Blue Shield of Michigan Foundation, the USQC initially comprised more than 60 surgeons from three distinct urology practices in Toledo, Ohio (10 urologists), Indianapolis, Indiana (33 urologists), and Ann Arbor, Michigan (27 urologists). Using a practice-based collaborative model, the first USQC project evaluated urologists' utilization of radionuclide bone scan and CT imaging among men with newly-diagnosed prostate cancer. After collaborative feedback of baseline utilization and review of clinical guidelines, urologists in USQC practices dramatically reduced variations in practice patterns and improved adherence with recommended staging practices.

From May 2009 through September 2010, data was collected from 858 men with newly-diagnosed prostate cancer seen at one of three USQC practices. This group included 375, 262, and 221 cases from data collection phases 1, 2, and 3, respectively. Based on the D'Amico classification system, 44%, 39%, and 17% had low-, intermediate-, and high-risk cancers, respectively. The distribution of patients by risk strata varied across USQC practices, with surgeons in practices 2 and 3 seeing a greater proportion of men with high- and intermediate-risk tumors, respectively ($p < 0.01$). Overall, 25% and 22% of patients underwent staging with a bone scan or CT scan ordered by a USQC urologist. Across all practices and phases of data collection, use of staging studies increased in synchrony with risk strata: bone scans or CT scans were ordered by USQC urologists in 5.9% and 8.1%, 22.2% and 18.3%, and 86.3% and 73.0% of patients with low-, intermediate- and high-risk tumors, respectively ($p < 0.01$).

USQC practices differed significantly in their baseline use of bone and CT scans among men with low- and intermediate-risk cancers (p -values < 0.01), but not among men with high-risk tumors. Compared with baseline practice patterns (31% bone scans, 28% CT scan), urologists in USQC practices ordered significantly fewer bone and CT scans in the post-quality improvement intervention second (23%, 21%) and third phases (16%, 13%) of data collection (p -values < 0.01). Driving this trend was a significant reduction in use of these studies among patients with low- and intermediate-risk cancers (p -values < 0.05) particularly by surgeons in

practice. Utilization of bone and CT scans was more common for patients with high-risk cancers, and was generally similar across practices and phases of data collections

In general, positive staging studies were rare with only 8.0% of all bone scans and 8.5% of all CT scans revealing clinically-apparent metastases. Among patients with low-risk cancers, only one bone scan (2.4%) and two CT scans (3.6%) were positive for clinically-apparent metastases. For patients with intermediate-risk cancer, 3.5% and 1.8% of bone scans and CT scans were positive, respectively. The MUSIC initiative is modeled after this successful pilot.

In 2011, prostate cancer was added as one of the eight defined treatment pathways to PGIP's Michigan Clinical Treatment Pathways Program. The program targets all members with a diagnosis of prostate cancer utilizing IV chemotherapy, oral chemotherapy and supportive care drugs and aims to 1) define the optimal quality care and treatments that have the least toxicity while being the most cost effective for the patient, provider and payer without compromising the integrity or delivery of treatment, 2) decrease variability in treatment regimens between providers through utilization of consistent treatment regimens based on a balance between outcomes, toxicity, and cost, 3) increase the use of generic drugs for chemotherapy and supportive care and 4) decrease the overall costs of cancer care for BCBSM members that fall within the categories included in the initiative.

In 2011, BCBSM's Wellness and Care Management department implemented the Oncology Management program which targets prostate cancer patients and aims to decrease costs and improve outcomes through avoiding potentially preventable hospital admissions and emergency department visits. The program is delivered through a partner program and provides telephonic calls and onsite visits. Nurse case managers work with each member to complete a clinical assessment, establish member goals, and check for adherence to a written cancer action plan, and prescribed medications. The program aims to provide participating patients with coordinated care and treatment plans to decrease or eliminate side effects of treatment, and improvement in pain control; education and information about their condition, its prognosis and treatment option; and direction so that they can adhere to their medication regime and recognize the signs and symptoms which indicate that their condition is worsening and develop a plan of action.

The BCBSM Foundation has also partnered with the Michigan Department of Community Health (MDCH) to seek and fund projects intended to encourage dissemination, acceptance, and implementation of clinical guidelines for men treated for prostate cancer by primary care providers. The BCBSM Foundation provided \$52,000 in 2009 and \$40,318 in 2010 to the MDCH to supplement the Prostate Cancer Research Fund. In 2010, the Prostate Cancer Research Fund awarded funding to two programs. Spectrum Health received funding to determining the most effective means of addressing the gap of knowledge between primary care physicians and specialists in managing symptoms after prostate cancer treatment. The University of Michigan also received a grant to effectively disseminate guidelines through patient activation, an intervention providing patients with education, skills and support to participate more fully in shared medical decision-making.⁴¹

III. Initiative Description

Specific Area of Focus

The MUSIC program will focus on achieving quality improvement in urology care through the collaborative efforts of urologists throughout Michigan. This collaborative will establish a Michigan clinical registry that will collect data on patient demographics, cancer severity (including pathological details from needle biopsies), utilization and outcomes for radiographic staging studies, and patterns of care for both local therapies (e.g., radical prostatectomy, radiation therapy) and systemic androgen deprivation therapy.

Data will be analyzed to determine the performance of each participating Michigan urology practice in comparison to peers. The MUSIC Coordinating Center will also undertake analyses designed to identify specific care components associated with better patient outcomes. Based on these analyses, MUSIC leadership will then develop strategies for both dissemination of this information to participating providers and the broader Michigan healthcare community, as well as implementation of best practices in local communities. Initial efforts will focus on:

- Improving patterns of care in the radiographic staging of men with newly-diagnosed prostate cancer
- Reducing variation in the discretionary use of androgen deprivation therapy (ADT)
- Improving patient-centered decision making among men considering local therapy for early-stage prostate cancer.

See **Appendix I** for the cause and effect diagram.

Target Population

The target population includes adult men 18 and older with prostate cancer.

Criteria for Participation

To participate in MUSIC, a urology practice must meet the following requirements:

- All practice members must be participants in BCBSM's Physician Group Incentive Program
- All practice members must be affiliated with a PGIP Physician Organization
- The practice must evaluate at least 50 adult men with prostate cancer annually.

Coordinating Center Role and Responsibilities

The Coordinating Center has been charged with implementing the specific project aims including, among others:

1. **To improve patterns of care in the radiographic staging of men with newly-diagnosed prostate cancer.**
 - This aim will involve the use of strategies built around comparative performance feedback and guideline dissemination to both reduce unnecessary testing in men at low-risk for metastatic disease and to optimize the use of appropriate radiographic staging evaluations among men with higher-risk cancers. The Coordinating Center will also pursue opportunities to communicate our findings and methods with physicians outside the collaborative (i.e., both urologists and

primary care physicians) in order to improve the utilization of staging evaluations prior to referral.

2. **To reduce variation in the discretionary use of androgen deprivation therapy.**
 - For this aim, the Coordinating Center will again lead the collaborative data collection, performance feedback, and clinical guideline review necessary to reduce inappropriate utilization of ADT among men with clinically-localized disease, as well as to better understand current practice patterns (and potential opportunities for improvement) in the timing of ADT among men with metastatic prostate cancer or recurrent cancer after primary therapy.
3. **To improve patient-centered decision making among men considering local therapy for early-stage prostate cancer.**
 - The Coordinating Center will also lead the collaborative's efforts aimed at improving patient knowledge and participation in the treatment decision-making process for early-stage prostate cancer.

Beyond the specific aims described above, the Coordinating Center will also undertake the following cross-cutting activities necessary for the development, maintenance, sustainability, and success of the Collaborative.

- Work with the clinical champions in each participating practice to formalize an organizational structure for the collaborative, including an Executive Committee, Working Group, and Writing Group. Individually and collectively, these committees will comprise the collaborative leadership and will be responsible for its principal activities including data coordination and collection, provider feedback, quality improvement activities, and dissemination of best practices.
- Work with partnering practices and private vendors to develop the content and definitions of a standardized data registry for men with prostate cancer; establish methods for local data collection and centralized data management; and define strategies for data analysis and feedback. The data collection templates and variable definitions will be based on the priorities of consortium participants, focusing on the impact areas described above.
- Develop an operating manual with data collection protocols and specific variable definitions. The document will be reviewed prior to initiation of pilot testing, again after pilot testing, and before implementation of the clinical database. Data collection, management, and reporting will be performed using a flexible, web-based data entry and registry platform that is currently under development.
- Work with the clinical champion and data coordinator at each center to provide detailed training on each step in the data collection, entry and transmission process.
- Develop and maintain a collaborative-specific operational manual. This manual will include standardized protocols and data collection procedures that will be developed and refined by the consortium during the process described above.
- Monitor project compliance, including quality assurance activities designed to ensure data integrity. These activities will include, among others, direct review of a sample of cases from each participating practice, collaboration with data coordinators in each practice to reconcile missing and/or erroneous data, and project-wide database review to

identify missing and/or incomplete data and to resolve any discrepancies identified during the quality assurance process.

- Conduct annual or semi-annual site visits to audit the data collection process in each participating practice. During these visits, the Coordinating Center will evaluate the level of concordance between the data collection form and the medical record for a random sample (e.g., 10%) of cases in each practice.
- Work with each site will to ensure compliance with all regulatory requirements, including Institutional Review Board approvals (as indicated). The Coordinating Center will be responsible for reviewing all compliance activities on a regular basis as new practices are added to the collaborative.
- Review data, monitor progress, troubleshoot problems, share concerns and lessons learned, and (as necessary) revise previously-established protocols and procedures. As indicated, the Coordinating Center will also hold supplemental conference calls and conduct formal e-mail communications to provide real-time updates on procedures or data collection concerns, and to resolve problems that inevitably arise during the course of collaborative activities. The Coordinating Center program manager will be the primary contact for representatives from participating urology practices, and will be empowered to undertake ad hoc site visits to facilitate data collection and process improvement.
- Generate feedback reports that will be made available to each center at the time of the collaborative wide meetings. The reports will contain data on patient demographics and variations in the staging evaluations and patterns of care for men with prostate cancer (described in more detail above). By virtue of this approach, each practice will be able to compare their performance with other practices and the consortium as a whole in a non-threatening, confidential manner. Review of these data will focus on identification of variations in care and outcomes across practices, in order to identify high-yield opportunities for quality improvement. In particular, these reports will be used to identify process of care variables that may correlate with outcomes, as well as to uncover and address local barriers to optimizing the implementation of evidence-based practice patterns.
- Establish quality improvement activities that take into account the actual patterns of care and comparative performance achieved in individual practices.
- Develop and review manuscripts, and disseminate program findings and accomplishments.

In general, the MUSIC Coordinating Center will orchestrate, assist, and provide consultative feedback to participating practices in order to achieve the collaborative goals of improving the quality and cost-efficiency of prostate cancer provided to men in Michigan.

BCBSM Deliverables

1. Financial support to the MUSIC Coordinating Center as well as to the physician practices actively participating in this initiative via payments to the PO
2. Program oversight and evaluation in concert with the Coordinating Center to keep this initiative on track.

3. Survey of Coordinating Center performance and participant experience.

BCBSM reserves the right to modify its evaluative and administrative processes related to the Initiative.

PO Expectations/Deliverables

PO expectations:

- Understand site contributions to overall program
- Forward reward payment appropriately to the participating practice units

Practice unit (PU) expectations:

As part of its participation, each site will be expected to:

- Develop and maintain an organizational commitment to active participation in the initiative, including clinician and administrative support and adequate staff levels to support the CQI's activities
- Identify a clinically active urologist to serve as the clinical champion. This clinical champion:
 - Will lead the practice in quality improvement efforts
 - Will attend at least two out of three tri-annual collaborative meetings
 - May be asked to serve on the initiative's executive board or in other governance roles or positions

Note: If the managing partner or executive director of the urology practice is not the clinical champion, then he or she must be fully supportive of the program and the designated clinical champion with regard to collaborative quality improvement efforts
- Identify an administrative lead or site coordinator. This individual will:
 - Be the administrative lead for the initiative within the urology practice
 - Be responsible for data collection and quality assurance in the practice
 - Support and ensure full project participation, including preparing for site visits and data audits conducted by the data coordinating center
 - Attend at least two of the three tri-annual collaborative meetings
- Focus on quality improvement. This includes actively integrating the initiative's activities into existing practice-level quality improvement programs
- Commit to using a common registry software package
- Agree to measuring the initiative's data elements and using its data definitions
- Commit to tri-annual submission of data in a timely manner (within two weeks of data request)
- Collaborate with the initiative's Coordinating Center. This includes:
 - Completing an initial self-assessment and implementation plan
 - Participating in coordinating center-led site visits and external data validation audits of patient data entered into the initiative's registry
 - Committing to developing and implementing a site-specific quality improvement agenda. The agenda would be linked to the collaborative-wide quality improvement agenda and driven by opportunities specific to the practice
- Commit to attending tri-annual meetings
 - The team will include, at a minimum, the clinical champion and administrative lead

- While not all members may be able to attend every tri-annual meeting, we require that at least the clinical champion or a physician designee attend each meeting
- Collaborate with other participating CQI practices
- Be willing to explore quality improvement opportunities identified through comparative performance reporting
- Note:** The participation of each site in process improvement — including the sharing of best practices — is essential to the success of the program
- Focus on promoting confidentiality and collegiality
 - The Coordinating Center will provide each participating practice with anonymity and will approach the practice for permission prior to use or disclosure of center-specific data in meetings
 - BCBSM will only have access to de-identified data, typically at the aggregate level
 - Coordinating Center will strive at all times to promote a friendly and collegial atmosphere
 - The initiative may use collective data for publication or other data dissemination.
 - Representatives from each practice will be eligible to participate in committee activities and in opportunities for dissemination of collaborative findings and activities (e.g., publications, presentations)
 - All participating practices will maintain a continual focus on improving care for patients within their own practices and throughout the state of Michigan
- Note:** Failure to abide by these principles may result in termination of collaborative participation

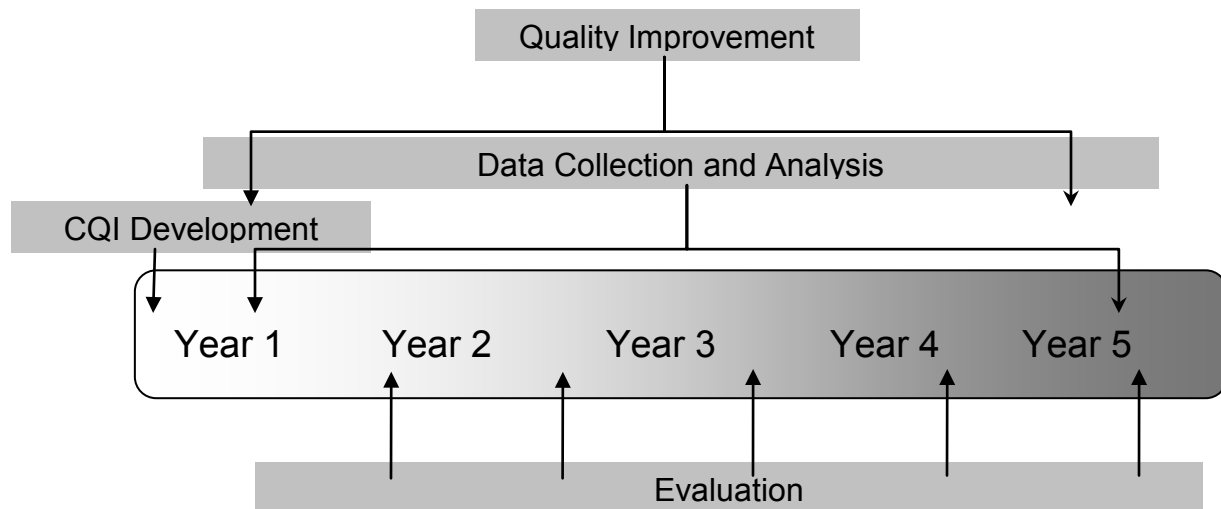
Quality Improvement Model

The MUSIC initiative will be implemented in the following five phases:

- Phase I. Recruitment of participating practices and development of web-based data collection infrastructure
- Phase II. Data Collection
- Phase III. Data Analysis and Performance Feedback
- Phase IV. Quality Improvement
- Phase V. Assess Impact of Quality Improvement Efforts

Phases I through IV are either already in progress or will be implemented by the end of 2012 (program year 1). We anticipate that Phase V (Assess Impact of Quality Improvement Efforts) will be initiated in mid to late 2013 when robust data are available through the registry.

MUSIC Implementation Timeline



Phase I – Recruitment of participating practices and development of web-based data collection infrastructure. During the summer of 2011, PGIP POs were notified that the MUSIC initiative was being developed and several practices expressed interest in participating. A physician champion has been identified for each interested practice and confirmation of the administrative support staff is in process. Upon formal recruitment into MUSIC in the fall of 2011, the individual practices will begin to work with the MUSIC Coordinating Center and BCBSM on developing the registry database and program structure for participating in the initiative.

During this phase, the MUSIC Coordinating Center is also working with a software development company to create the web-based data collection infrastructure that will support the program.

Phase II – Data collection. During this phase, participating urology practices will begin to collect data related to patient demographics, cancer severity (including pathological details from needle biopsies), utilization and outcomes for radiographic staging studies, and patterns of care for both local therapies (e.g., radical prostatectomy, radiation therapy) and systemic ADT. Importantly, this phase will include training, pilot testing, site visits, explicit data collection, and data quality assessments.

Phase III – Data analysis and feedback. The Coordinating Center will begin a continual analysis of patterns of care and treatment outcomes to identify unwarranted variations in care, as well as specific care processes associated with higher quality and more efficient care. All data summarizing both processes and outcomes of care will be reported back to individual practices.

Phase IV – Quality improvement. The data will then be analyzed to determine the performance of each MUSIC practice in comparison to their peers. Metrics related to radiographic staging, androgen deprivation therapy, needle biopsies and patient-centered decision making will be shared among the participants. The Coordinating Center will also undertake analyses designed to identify specific care components associated with better patient outcomes. Based on these analyses, MUSIC leadership will then develop strategies for both dissemination of this information to participating providers and subsequently the broader

Michigan and national healthcare community, as well as implementation of best practices in local communities.

Phase V – Assess impact of quality improvement efforts. This phase will evaluate the effectiveness of implemented quality improvement (QI) initiatives. Metrics will be developed that focus on provider outcomes, cost and utilization, and quality.

Anticipated Outcomes

1. Enhanced collaboration between urologists
2. Increased adherence to clinical practice guidelines for prostate cancer care
3. Development of new prostate cancer care guidelines through use of the MUSIC registry
4. Decreased unnecessary prostate-cancer related procedures
5. Decreased adverse events associated with prostate cancer care
6. Improved quality of care for prostate cancer patients

Incentive Model and Payment Methodology

BCBSM is providing reward funding to assist participants in staffing and maintaining this project. MUSIC participants will be rewarded bi-annually via the PGIP payment mechanism for participating in this registry initiative. The participation model is designed to cover the following costs:

Start-Up Costs: BCBSM understands that there are certain additional costs for starting up operations. To assist participants, BCBSM will provide additional support to assist providers with the start up costs of \$16,625 (.25 FTE).

Data Abstraction Costs: The time required to extract data for the first encounter is approximately one hour, and approximately 30 minutes for all subsequent encounters. In the event that the Coordinating Center decides to obtain the patients' consent this process would require an additional 20 minutes per patient.

BCBSM will pay 80% of total projected data abstraction costs for BCBSM, Blue Care Network (BCN), government insured and uninsured patients and that those participants will be reimbursed based on the projected volume of all applicable patients as estimated by each practice.

As mentioned previously, BCBSM will formally recruit participants into MUSIC in the fall of 2011. In January of 2012, each participating site will receive a welcome letter with details of MUSIC funding. Each site will be paid for one half of the Start-Up Costs. In July of 2012, each participating site will be paid for Data Abstraction Costs (based on the estimated volume of patients that will be entered into the registry) and for the second installment of Start-Up Costs.

BCBSM reserves the right to use discretion in making incentive payments based on the data and relative PO performance.

IV. Evaluation

Evaluation Overview

The evaluation of the MUSIC Initiative is designed to assess the effectiveness of the Initiative in achieving stated objectives. The process evaluation (generally the short-term and possibly intermediate-term evaluation) will address how the Intervention is functioning, including process, structure, behavioral and knowledge-based changes brought about as a result of the Initiative. The outcome evaluation (generally the long-term and possibly intermediate term evaluation) will focus on the effects theorized to result from the Initiative's interventions.

There are multiple and diverse stakeholders with an interest in evaluating the progress and impact of the MUSIC collaborative. Included among these are BCBSM leadership and team members both within and outside the Physician Group Incentive and Value Partnership programs, affiliated Physician Organizations, participating urologists, other providers, and patients in Michigan with prostate cancer. Accordingly, we anticipate a multi-step and multi-dimensional approach to program evaluation. In the first year, our evaluation efforts will focus primarily on measures of practice engagement and participation. Collectively, these short-term, primarily process related, measures will be crucial to assessing progress towards establishment of the infrastructure necessary to achieve long-term success and sustainability. See **Appendix II** for detailed evaluation metrics.

Progress Reporting

MUSIC's coordinating center will submit a progress report quarterly to BCBSM. These reports will provide updates on goal attainment, key accomplishments and challenges and future plans. No identifying information about specific participating practices will be provided to BCBSM.

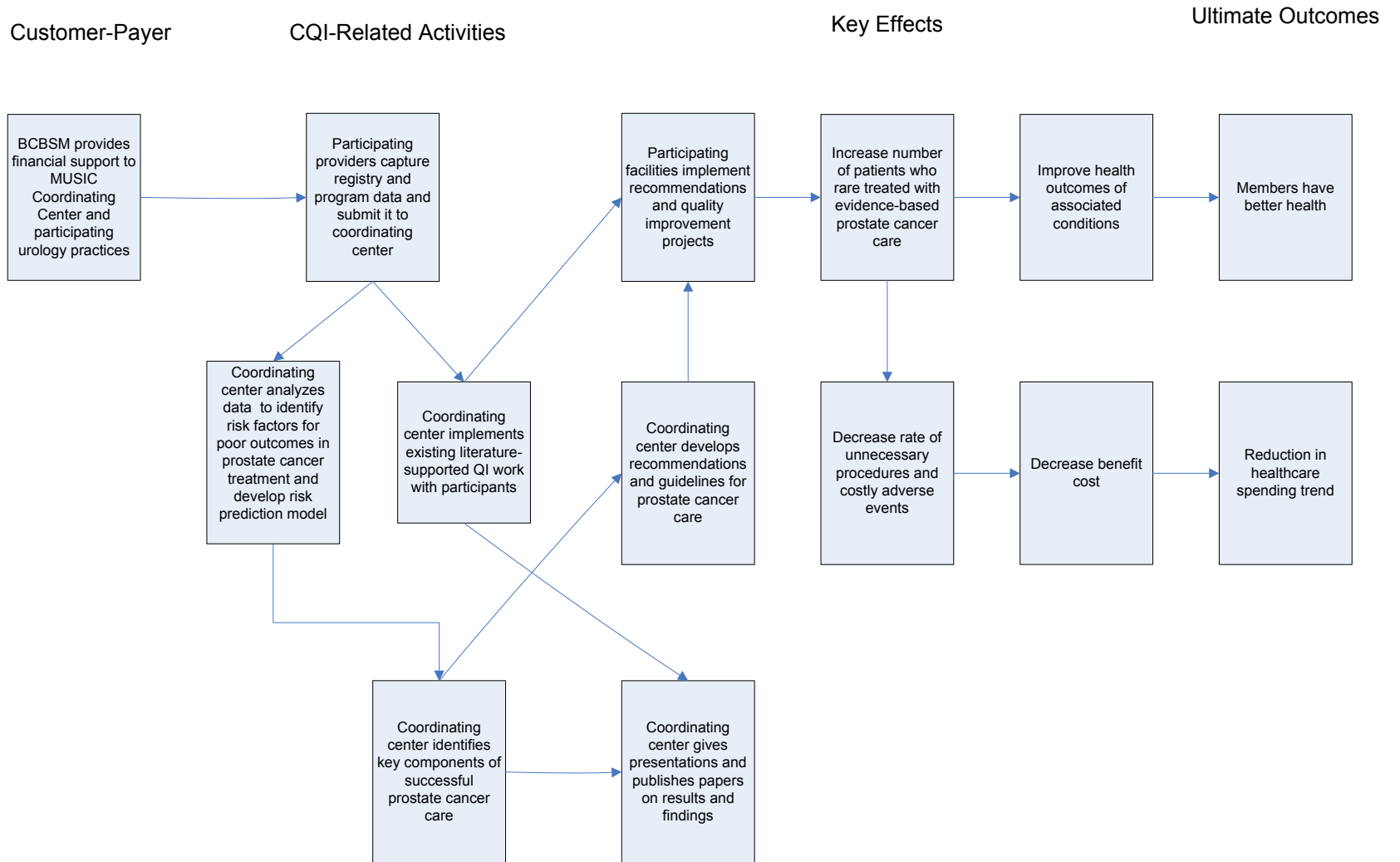
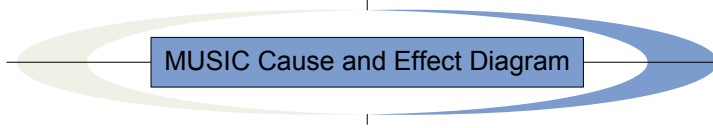
V. Results

Results will be forthcoming.

Appendices

- Appendix I - Cause and effect diagrams
- Appendix II - Evaluation metrics
- Appendix III - PGIP contacts

Appendix I



Appendix II

Year 1: Process Measures of Practice Engagement and Participation

Category	Process Metric	Data Source	Measurement	Metric	Goal
Year 1 Participation Metrics	Physician participation	PGIP Physician List	Participation in the MUSIC initiative	Number of urologists participating in MUSIC	80 or more
				Percentage of urologists participating over those eligible in our BCBSM book of business	15 Percent or more
	Data Collection	Coordinating Center's Quarterly Report	Registry data entered on- time	Percentage of data submitted on time (within two weeks of data request)	80%
			Registry data entered accurately	Percentage of data submitted accurately	80%
	Practice engagement	Coordinating Center's Quarterly Report	Attendance of each practice's Clinical Champion's at MUSIC's three collaborative meetings	Percentage of MUSIC's collaborative meetings attended by its Clinical Champion (must be 2/3)	Attended 2/3 of the meetings
		Coordinating Center's Quarterly Report	Attendance of each practice's Administrative Lead at MUSIC's three collaborative meetings	Percentage of MUSIC's collaborative meetings attended by its Administrative Lead (must be 2/3)	Attended 2/3 of the meetings
		Coordinating Center's Quarterly Report	Practice is prepared for site visit	Practice is prepared for site visit. This includes participating in coordinating center-led site visits and external data validation audits of patient data entered into the initiative's registry	80%
		Coordinating Center's Quarterly Report	Practice submitted Self- Assessment and Implementation Plan	Practice submitted Self- Assessment and Implementation Plan on time and completely	Submitted on-time and completely
		Practice Self- Assessment and Implementation Plan	Practice capabilities	Practice has identified it's current capabilities and initiative implementation plan	Submitted on-time and completely
		Practice Self- Assessment and Implementation Plan	Quality improvement agenda	Practice has identified a site- specific quality improvement agenda.	Submitted on-time and completely

As outlined in the Table above, in year 1 we will evaluate participation for each practice through a variety of sources, including a Participant Self-Assessment and Implementation Plan, and the Coordinating Center Quarterly Report.

More specifically, all practices participating in MUSIC will be required to submit a Self-Assessment and Implementation Plan to the Coordinating Center. The report template will be sent out in early 2012 and its return requested by no later than spring 2012 (exact date TBD). During year 1, the Coordinating Center will also conduct site evaluations designed to assess

each practice's participation and engagement in the initiative and will report results to BCBSM through their quarterly report. This evaluation will be ongoing and will include tracking attendance to quarterly meetings, auditing of registry data, and site visits throughout the year. We anticipate that results from the site evaluations will be available in late 2011

Performance Evaluation Design and Schedule

Longer-term Performance Evaluation Design and Schedule

Beginning with year two (2013), the Coordinating Center will report on clinical performance of participating practices on a quarterly basis. The Coordinating Center will distribute blinded reports that include data elements on patient demographics, utilization and outcomes of radiographic staging evaluations, and patterns of care in the use of prostate biopsies, localized therapies for prostate cancer (e.g., active surveillance, radical prostatectomy, radiation therapy) and androgen deprivation therapy to each participating practice. These reports will allow the Coordinating Center and participating clinicians to study relationships between processes and outcomes of care that will serve as the basis for quality improvement interventions. Ultimately, long term outcome measures will allow MUSIC leadership and participating practices to objectively assess progress toward our primary goals, including (among others) optimizing the use of appropriate radiographic staging evaluations, reducing inappropriate utilization of ADT among men with clinically-localized prostate cancer, and improving patient decision-making for prostate cancer treatments, including the use of active surveillance.

Appendix III

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Endnotes

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