The Operations Manual is a compilation of information and documents related to the MSQC program. It is intended to inform and assist with the implementation and operation of the MSQC program at the site.

The information contained in the Operations Manual is proprietary. Release or sharing of information contained in the manual to entities outside of the Collaborative is prohibited. The user is expected to protect and retain the information as confidential. This manual is to be used solely for the purpose of referencing information regarding the operations of the MSQC Program.

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Introduction to MSQC

“What’s measured, improves.” – Peter Drucker

Quality Improvement is a formal approach to the analysis of performance and requires the application of systematic efforts to improve performance. Regular measurement of performance allows for recognition and optimization of opportunities for improvement. Quality Improvement attempts to avoid assigning blame; instead, it promotes problem solving within a collaborative environment leading to the development and sustainment of a culture of safety. Nowhere is this more important than in healthcare.

Regulatory groups, providers and payers are increasingly using quality standards as a method of controlling the rising cost of health care. To meet these standards, it is essential for surgeons, nurses and hospitals to be able to measure performance, share data and collaborate on quality improvement initiatives related to surgical outcomes.

MSQC’s established vision is to lead surgical patient quality, safety and value. Through its reputation as a premiere surgical registry committed to developing opportunities for improving patient safety, care and outcomes, MSQC’s mission is to cultivate creativity and inspire innovation to promote best practices while realizing value for its members, patients and the community. MSQC’s approach to improving surgical care quality is rooted in a teamwork approach to outcomes analysis, patient feedback and quality improvement initiatives implementation.

Background & History

The need for a proper system to allow comparative assessment of the quality of surgical care in the Veterans Health Administration (VHA) became critical in the mid-1980s following Congress’ passage of Public Law 99-166. This law, newly compelling the Veteran’s Administration (VA) to participate in mandatory reporting of surgical outcomes “in comparison to the national average” and risk adjust “for the severity of patient illness of the VHA surgical patient population,” was in direct response to the wide, circulating criticism regarding the VHA’s high operative mortality rates (Khuri et al., 2002).

The group of VA surgeons asked to consult with the VA Central Office regarding a response to the congressional mandate advised that there had been no known national averages for outcomes of
surgical procedures and no known risk adjustment models that were applicable to the various surgical specialties. They recognized, however, that the VA, by virtue of its centralized authority and its advanced medical informatics infrastructure, was in a unique position to develop national averages and risk adjustment models, and to set up a model system for the comparative assessment of the quality of surgical care among its various institutions. Subsequently, the National VA Surgical Risk Study (NVASRS) commenced on October 1, 1991 and continued on through December 31, 1993. Beginning with 44 Veteran's Administration Medical Centers, the study was initiated by an executive committee composed of VA surgeons, health services researchers, and biostatisticians. An advisory panel of experts from outside the VA provided the scientific oversight for the design and conduct of the study. Initial efforts focused on analyzing existing administrative databases and by conducting limited reviews of data solicited from the field (Khuri et al., 2002).

The objectives of the NVASRS were to:

1. Develop a reliable clinical database of patients’ preoperative risk factors and postoperative outcomes
2. Develop analytic tools for proper risk adjustment. These models would adjust for differences in patient mix and differences in patient preoperative risk among the hospitals. Risk assessment models were developed for surgical mortality and morbidity for groups of common surgical procedures as well as for seven surgical subspecialties (general, vascular, urology, orthopedics, neurosurgery, ENT, and thoracic surgery).

In 1994, the demonstration of the feasibility and validity of these methods prompted the VA to establish an ongoing program for monitoring and improving the quality of surgical care in all VA medical centers performing major surgery. This resulted in the evolution of the program to include all 128 VHA hospitals performing surgery to become the National Surgical Quality Improvement Program (NSQIP). In 1995, a validation study was conducted to determine the validity of the risk-adjusted surgical morbidity and mortality rates as measures of quality of care. This study focused on assessing the processes and structures of care in surgical services in order to determine which sites had higher- or lower-than-expected risk-adjusted mortality and morbidity rates. By 2003, there were over 1.3 million major surgical cases in the VHA database and results from the NSQIP demonstrated a 27% decrease in 30-day surgical mortality and a 45% decrease in 30-day surgical morbidity (Khuri et al., 2002).

In 1999, the NSQIP expanded to include three alpha sites in initially determining its feasibility and applicability within the private sector: Emory University in Atlanta, University of Kentucky in Lexington, and the University of Michigan in Ann Arbor. Alpha testing confirmed that the risk-adjustment models were just as predictive of outcomes in the private sector as they were in the VHA. Subsequent extension of the project to 18 beta sites further demonstrated relevance of the NSQIP models to the private sector patient population through uniform application of the NSQIP data collection methods (Fink et al., 2002). By September 2004, full expansion of the NSQIP into the private hospital-surgical domain was achieved through the support of the American College of Surgeons (ACS) in assuming responsibility for the administration of the program at eligible institutions volunteering participation.
In 2004, following the early success of a cardiac collaborative, Blue Cross and Blue Shield of Michigan/Blue Care Network (BCBSM/BCN) incorporated regional collaborative improvement as a major component of its statewide Value Partnership program and subsequently began supporting the initiation of new collaboratives in other clinical areas. Stimulated by the work done in the VHA by Dr. Shukri Khuri, a template was developed for quality improvement in the state of Michigan which resulted in the creation and development of the Michigan Surgical Quality Collaborative (MSQC) in 2005.

The MSQC began as a means for BCBSM/BCN, the ACS and the participating 17 hospitals in Michigan to develop a collaborative relationship to advance surgical quality improvement. The overarching goal of the MSQC was to support regional collaboration amongst hospitals within the state of Michigan aiming to improve the quality of surgical care and patient outcomes. BCBSM/BCN funded hospital participation in the ACS NSQIP and provided financial support for an administrative and analytic center located at the University of Michigan. Further expansion of the BCBSM/BCN Value Partnership Program in 2007 led to the addition of 16 more hospitals to the MSQC. A newly-opened hospital joining in 2009 brought the total hospital membership of the MSQC to 34 hospitals, where it remained as such until 2010.

In early 2010, as a result of notably reduced surgical complications and successful development of several important clinical initiatives in specific areas of interest to Michigan hospitals, BCBSM/BCN expressed a desire to extend the MSQC membership by inviting Michigan hospitals not already participating in the ACS NSQIP and meeting program inclusion criteria to join. Successful recruitment efforts led to the addition of 18 hospitals in 2011, 12 hospitals in 2014, and 9 hospitals in 2015, bringing the MSQC’s total membership to 72 hospitals.

Due to increasingly diverging paths, the MSQC made the decision to discontinue its use of the ACS NSQIP platform for the measurement of surgical outcomes and, as of April 2011, it exists and operates as its own separate quality improvement program, with continued support and funding from BCBSM/BCN. In 2013 MSQC was listed as a Patient Safety Organization (PSO) by the Agency for Healthcare Research and Quality, on behalf of the Secretary of the U.S. Department of Health and Human Services (University of Michigan, 2013). This PSO designation signifies high quality and security in the way MSQC gathers, analyzes, and shares data from each of its hospitals for use in quality work.

**MSQC Today**

The MSQC is now an independent, full-fledged quality improvement program, providing risk-adjusted data to assist hospitals in meeting quality standards and improving surgical care. The goal of the MSQC has remained the same: continuous surgical quality improvement through the promotion of evidence-based best practices that result in optimal surgical outcomes, enhanced patient care delivery systems, and improved efficiency leading to cost savings. The MSQC collects data from surgical patients meeting program criteria for the following measures:
• Pre-operative risk factors
• Surgery/intraoperative factors
• Postoperative care factors
• Laboratory values
• Perioperative/anesthesia care factors

• 30-day morbidity/mortality
• 30-day readmissions
• Return to the OR within 30 days
• Presentation to ED/urgent care within 30 days

In addition, MSQC collects variables of targeted procedures for special projects such as colorectal cancer, hysterectomy, pain and opioid use and enhanced recovery. Participation in special projects is determined at the site level.

Data Collection

A stratified sampling method is used to capture a representative portion of surgical cases which are abstracted for data by a trained Surgical Clinical Quality Reviewer (SCQR), who then inputs the data into the secure MSQC Workstation, which is accessible online through the MSQC website. Individual login access by the SCQR and Surgeon Champion (SC) allows for sites to have immediate access to a reporting system via the MSQC Workstation which enables real-time benchmarking (risk adjusted and non-risk adjusted) of surgical outcomes within the Collaborative.

Data Reliability

An important strength of MSQC is the reliable data it generates. The MSQC continuously monitors data and site data collection practices to assure the reliability of the data through a variety of means, such as, intensive SCQR training, inter-rater reliability assessments (IRR), online case studies, and conference calls. MSQC participants can trust the reliability of the data and confidently use the online reports to effectively identify opportunities for improving processes in rendering more favorable surgical outcomes.

Risk-Adjustment

Risk-adjustment is crucial to the hospital-to-hospital comparisons done routinely by MSQC. The risk adjustment formulae are built into the report-generation process, making up-to-date, risk adjusted results available at any time. Reliability adjustment is also inherent in the reporting in order to minimize variation due to sample size. MSQC data is analyzed using scientifically and clinically validated proprietary econometric models and algorithms to separate performance measures from random and meaningless unwanted data.

MSQC and Quality Improvement

The statistical results of the data are reported back to participating sites in the form of annual Executive Summary Reports for review and utilization in their quality improvement initiatives.
Through detailed study of these reports, the comparative outcome statistics may reveal areas for process improvement. Additionally, a suite of continuously updated and available online reports are on the website for each site to use and review. These reports contain benchmarking data generated from averages of all participating sites within the Collaborative. In addition to the robust selection of canned and custom reports, the data analysis features within the MSQC reports application equip the user with the capability to drill down to case level detail for review and/or export, providing opportunity for early and on-going identification of areas for quality improvement.

**MSQC Structure**

Under the direction and leadership of the Program Director and Operations Director, the Coordinating Center of the MSQC has the overall responsibility for the management of all contractual, financial, and marketing efforts of the program. While providing oversight of all of the functions of the program, the MSQC provides consultation and education to its members and associates. Additionally, the MSQC provides program and clinical support to SCQRs through a dedicated team of MSQC Clinical Site Coordinators (CSCs) available to assist with clinical and data issues and may assist individual sites in streamlining the data collection process to assure appropriate accumulation of cases. The Quality Improvement (QI) team at the MSQC assists sites in identifying and implementing QI initiatives aimed at improving patient outcomes. In terms of business operations, the Administrative team manages the day-to-day operations at the MSQC. The MSQC Operations Team, in support with ArborMetrix, is available to provide assistance with the data collection platform. The data collection platform, a collaborative endeavor provided by ArborMetrix and MSQC, is known as the MSQC (web-based) Workstation, where SCQRs are able to “abstract” MSQC-eligible cases. Healthcare analytics support for MSQC comes from the MSQC Statisticians and ArborMetrix, to produce real-time risk adjusted and statistically analyzed reports to individual participating sites for their use in developing quality improvement measures.

The MSQC is governed by an Executive Committee who maintains and oversees the processes, structures, and functions of the MSQC. The Executive Committee is comprised of SCQRS and Surgeon Champions who encompass a representative sampling from our hospital sites/systems. Responsibilities of the Committee include, but are not exclusive to, the reliable collection of the data, annual review of the risk-adjusted outcomes with feedback, strategic planning, scientific mining of the data, and peer review.

**References**


Responsibilities of the Surgical Clinical Quality Reviewer (SCQR)

“Let me tell you the secret that has led me to my goals: my strength lies solely in my tenacity.”  –Louis Pasteur

The MSQC’s success depends on receiving consistently reliable and valid data because from the data emerges the impetus and inspiration for quality improvement endeavors to favorably affect patient outcomes. The dedicated efforts of the SCQR in collecting and reporting clinically accurate information are regarded as critical to the success of the Collaborative. An understanding of the SCQR role and knowledge of the associated responsibilities will establish a foundation for the development of a workflow that will be effective and efficient for the SCQR.

Caseload

Achieving and maintaining statistical viability of data necessitates caseload volume requirements. Caseload volume requirements are based on a repeating and rotating 8-day cycle over a 12-month period, which yields 46 cycles per year. In accordance with the sampling methodology, SCQRs are expected to identify all MSQC-eligible cases and supply those to the MSQC Workstation, in the form of a Sampling Frame, for all 46 cycles. Submission of the sampling frame provides an accurate annual volume for each type of MSQC-eligible procedure performed at the hospital.

Though SCQRs must submit a sampling frame for all 46 cycles, data abstraction on the sampled cases needs to be completed for only 42 cycles, as a site may allot up to 4 cycles as “vacation”. For each 8-day cycle that is not designated as vacation, the workstation will generate a random sample of up to twenty-five (25) cases (or 35 cases for eligible participating sites) for data abstraction and 30-day follow-up; totaling a maximum of 1050 or 1470 cases per year (42 x 25 = 1050; 42 x 35 = 1470).

Managing Caseload

30-day Follow-Up

All sampled cases for a given cycle must be followed through postoperative day 30 for postoperative morbidity and mortality occurrences. It is the expectation of the MSQC that at a minimum 80% of the cases are followed through postoperative day 30. A 30-day follow-up rate of less than 80% can
jeopardize data viability; therefore, every effort must be made to obtain follow-up through postoperative day 30 by reviewing the medical record, directly corresponding with the patient via letter or phone call, and/or by contacting the surgeon’s/physician’s office. Resources to assist SCQRs with obtaining 30-day follow-up are available through the MSQC private site.

**Case Abstraction and Data Entry**

Data abstraction must be performed by a MSQC-trained SCQR; however, data entry may be performed by someone other than the SCQR (e.g., data entry person trained by the SCQR). Though data entry may be delegated to an individual other than the SCQR, it is the SCQR who is ultimately accountable for the accuracy of the submitted data.

**Data Entry Completion Deadline**

Data must be entered into the MSQC Workstation on a continual basis. The goal for each site is to submit a case, with 30-day follow-up, no later than 90 days following the date of surgery. However, cases can be submitted through 120 days from the surgery date. Once the case reaches 23:59 on the 120th postoperative day, the case will no longer be accessible for data entry, thereby “locking out”. Incomplete cases that are locked will not be included in the reports or annual case volume calculation.

**Program Participation Requirements**

**Conference Calls**

MSQC hosts regular conference calls in an effort to provide a forum for the dissemination of Collaborative information and updates and to provide opportunity for collaboration between the sites. Participation by both the Surgeon Champion and SCQR in conference calls is mandatory in order to fulfill MSQC participation requirements. The conference call schedule and call content are available via the MSQC website.

**MSQC Meetings**

MSQC Collaborative meetings are held two to four times a year. The Collaborative meetings and Conferences present a variety of topics relevant to MSQC, Surgery and Healthcare Quality. These meetings are intended to provide an opportunity for the SCQR and Surgeon Champion to meet and network with other colleagues participating in the Collaborative. In order to fulfill MSQC participation requirements, attendance by both the Surgeon Champion and SCQR (or alternates) is required at all meetings, which take place in various locations around the state. The meeting schedule and content is available via the MSQC website.

The biennial MSQC Conference replaces the fall Collaborative meeting for that year. The biennial MSQC Conference showcases nationally renowned experts presenting best practice guidelines while
also introducing innovative practical applications for improving quality in healthcare at the individual sites.

**Certification and Continuing Education**

Certification is required for all MSQC SCQRs, including full-time, part-time and alternate roles. All newly hired SCQRs will complete the certification requirements within the first six (6) months of participation in the program. (See Chapter 4 for additional details in regards to certification)

Case studies may be included in the certification exam but also may be sent out periodically to SCQRs as part of continued training and education. It is mandatory that all SCQRs participate in reviewing and completing the case studies. Case study exam scores are used to help determine inter-rater reliability (IRR) of data for respective sites, and are also used to identify content for future MSQC educational offerings.

**MSQC Calendars**

**Calendar Year**

January 1, XXXX to December 31, XXXX: Calendar year applies to the 8-day cycle schedule, sampling process, calculation of annual case volume, use of vacation cycles and MSQC Coordinating Center closures.

**Program Year**

September 1, XXXX to August 31, XXXX: Program year applies to the timeline for implementing quality improvement project initiatives, and the 30-day follow-up rate.

**Data Lapses**

**Leaves**

Although each site is responsible for full data abstraction for 42 of 46 cycles, exceptions may be made for special circumstances (e.g. medical leave, FMLA, changes in personnel, unforeseen life events, etc.). The SCQR should contact a MSQC Clinical Site Coordinator as soon as possible so arrangements can be made to account for any lapses in data transmission.

**Vacation Cycles**

As previously stated, each site is allotted (4) eight-day cycles for vacations. Full data abstraction and 30-day follow-up is not required for these cycles, however, submission of the sample frame will be required. Vacation cycles may be used at the individual site’s discretion. Sites are not required to use all of their vacation cycles and no more than 4 vacation cycles may be used during any 46 consecutive cycles. Vacation cycles not used in one calendar year of 46 consecutive cycles cannot be rolled over into the next year of 46 consecutive cycles.
The 4 vacation cycles are *per site, not per SCQR*. If a site has multiple SCQRs, coordination of the use of vacation cycles between the SCQRs is left to the site, and vacations must follow the guidelines stated above.

**Alternate SCQR**

The MSQC strongly recommends for each site to have an alternate SCQR, also known as the ‘backup’ or secondary SCQR. The role of the alternate SCQR is to assist with Program responsibilities and to be available to assume the role of the primary SCQR in the event it should become necessary (e.g., prolonged illness, maternity leave, military leave, or a change in personnel). The alternate SCQR is required to participate in the same training and certification process as the primary SCQR. Additionally, the alternate SCQR is required to abstract and transmit cases on a regular basis (see MSQC policy 400.10 *Alternate SCQR Role Requirements*).
Getting Started: Contacts and Meetings

“So I picked a field where I had a little exposure. Where I thought I could have an enormous challenge, and have a chance to really do some good, to be a pioneer in an area, and not just be like everyone else.” --Henry Kravis

Getting the program operational at the site is imperative to successful data collection and implementation of quality improvement projects. Early efforts should be aimed at making useful contacts, as well as identifying and attending important meetings and/or workgroups to help establish channels and networks for communication. Identifying key stakeholders and venues to present data is foundationally important to a site’s ability to launch and sustain future quality improvement initiatives.

Important Contacts

Effective working relationships favorably impact the overall efficiency of the SCQR’s efforts. Seeking out individuals within the organization who may serve as a resource, collaborator and/or supporter is vital to the site’s success with the Program. Establishing relationships with key stakeholders and getting individual buy-in of the program will prove to be invaluable.

Clinical Contacts

Surgeon Champion

- Review and discuss the objectives of the program
- Describe the SCQR role and responsibilities
- Ask for Surgeon Champion support with data collection if/when encountering problems with the surgical team members
- Request introductions to other surgeons, including the surgical residents.
- Request permission to regularly attend the hospital’s surgical staff and/or surgical quality meetings
- Inform Surgeon Champion of the importance of attending the site’s Morbidity and Mortality conferences to facilitate the SCQR in obtaining 30-day postoperative outcomes
• Share with the Surgeon Champion the list of other individuals that the SCQR will have available to support data collection efforts. This list may include but is not limited to, medical records staff, ward administrator/surgical floor unit coordinators, quality improvement coordinators, Infection Control/Surveillance team, and IT staff.

Chief of Anesthesia

• Review and discuss the objectives of the MSQC as well as the SCQR role
• Review the anesthesia-related variables abstracted for the program and, if needed, request his/her assistance with locating those variables within the patient medical record

OR Nurse Manager

• Orient him/her to the MSQC and request access to the Operative Log for case selection, confirmation of procedures performed, and intraoperative times
• Explain the importance of accessing the Operative Log in a timely manner as well as the importance of accurate documentation by the OR staff of intraoperative variables

Surgical Service Administrator

• Provide brief introduction to the MSQC and the SCQR role
• Request a list of all surgical clinics, and the names of those in charge of the clinics. This is important to know in order to access documentation from the care providers who see the discharged patients for follow up since it can assist the SCQR in obtaining 30-day postoperative follow-up.

Infection Control/Surveillance Practitioner

• Review and discuss the MSQC as well as the SCQR role
• Discuss their areas of routine surveillance to determine how working together can facilitate the capturing postoperative occurrences. Regular communication with Infection Control can be mutually beneficial in identifying cases, classifying SSI, and for agreement in reporting.

Administrative Contacts

Computer Support Staff

• Examples of various Computer Support Staff include Information Rights Management (IRM), Information Technology (IT), Information Management (IM) and Clinical Transformation
• Establish support of the IT service for trouble-shooting any access problems that may occur at the local site.
• Establish a computer support contact for possible assistance with locating data elements in the electronic medical record (EMR) and/or assistance with installing and implementing the Secure File Transfer Protocol (sFTP) required for data integration automation.
• Request the appropriate documents so MSQC can gain remote access to the site EMR during IRR or at other appropriate times

Supervisor/Director, Medical Records

• Introduce the SCQR role and establish a relationship with the medical records staff responsible for retrieving the medical records. Even if a site’s medical records are electronic, it is important to establish and maintain a working relationship with the site’s medical records staff.
• Review and discuss the MSQC, emphasizing the importance of accessing the medical records in a timely manner (maintaining a collegial relationship with the person in this position is crucial).
• Obtain the department’s procedures for medical records requests and inquire about the possibility of the SCQR obtaining medical records when the department is overwhelmed with clinical requests or short staffed.
• Inquire about access to the hospital’s encoder product (if one is used) to assist with the translation of ICD-10-CM codes and CPT® codes. In some settings, the Medical Records department will provide access to this software to those with a demonstrated need. It may be useful to explore this option as it can result in a significant time savings.

Quality Improvement Coordinator

• Provide introduction to MSQC and to the SCQR role.
• Discuss data/data platforms available through MSQC reports, and how this information will be shared
• Request their assistance in developing and implementing quality improvement initiatives sourced in MSQC data

Chief/VP of Nursing

• Provide brief introduction to the program and to the SCQR role
• Request their assistance in developing and implementing quality improvement initiatives as they relate to Nursing

Miscellaneous Contacts

• Maintain contacts with professional colleagues by continued attendance at in-services, participation in clinical activities, and other avenues that may, in addition to the use of the data that is collected, assist with improving patient outcomes through professional networking and result in support from staff
• Develop relationships and network with the reviewers/abstractors of other quality programs at the hospital (e.g. Core Measures, STS, BMC2, etc.).
• Coordination with the hospital’s billing department may be another useful resource for gathering data. This may require assistance from a supervisor in order to facilitate gaining access to this information.
• Obtain approval from a supervisor to obtain metered or stamped envelopes and/or postage for 30-day postoperative follow-up letters

Important Meetings to Attend

**Morbidity & Mortality Conference**

The hospital’s Morbidity and Mortality (M&M) conferences can provide some of the reportable surgical morbidity variables of a particular case. Attendance at these meetings may assist in providing clarification regarding 30-day outcomes, especially if there is a question about a postoperative occurrence meeting the program’s definition for inclusion.

**Surgical Staff Meeting/Surgical Quality Meeting**

To increase visibility amongst individuals of a site’s surgical services, the SCQR should work closely with the Surgeon Champion to ensure that the SCQR is able to participate in the Surgical Staff meetings and/or Surgical Quality meetings. This is a useful forum for notifying the surgical staff of Program updates and/or information. If regular attendance is not permitted, the SCQR may ask to be placed on the meeting agenda on an ad hoc basis. These meetings serve as an ideal venue for discussing issues of concern, presenting data, and for exploring and developing quality improvement initiatives.
Data Validity and Reliability

“If you have built castles in the air, your work need not be lost; that is where they should be. Now put the foundations under them.” --Henry David Thoreau

The MSQC considers accurate and precise data to be of critical importance to the success of the Program. As such, MSQC utilizes standardized collection and testing processes to ensure consistent credibility of its data. This is achieved through initial and recurrent SCQR training, certification, and inter-rater reliability assessment (IRR).

Initial Training

The new SCQR will receive an orientation to the MSQC data collection requirements through an initial training which may occur one-on-one or within a group, depending on the circumstance and/or need. During this training, a detailed review of the MSQC Operations Manual, MSQC Data Collection Manual and MSQC Variables and Definitions Manual will be offered to help familiarize the SCQR to the program requirements and to assist them in formulating a method for consistent and accurate data collection. Introduction to the MSQC Workstation will be provided through a Workstation webinar. This webinar will provide step-by-step instruction on creating the sampling frame and will allow the opportunity to experiment with data entry within the test-site version of the Workstation.

One month following the SCQR ‘go-live’ date, the SCQR may receive feedback via a remote or on-site chart review. This could also occur again at six months post the ‘go-live’ date. The chart review is for educational purposes only and is not a pass/fail.

Certification

Certification is required biennially, on the even years, for all MSQC SCQRs (full-time, part-time, and alternate). SCQRs new to the program will be required to complete certification status within four to six months of joining the program by successfully completing a certification examination with a score of ≥90%. The certification exam is administered electronically through the MSQC Learning Center.

SCQRs may take the certification examination a maximum of 3 times in order to obtain a minimum passing score of 90%. The examination must be taken without the assistance of other individuals.
However, the SCQR may utilize all available written or online resources, with the exception of the Definition Help Line (DHL), to complete the certification examination.

In the event the SCQR fails to achieve a score of 90% on the certification exam within the required timeframe and/or after 3 attempts, the MSQC reserves the right to recommend additional training for the SCQR and/or recommend replacement of the SCQR.

**Inter-Rater Reliability (IRR) Assessment**

**Biennial IRR Site Assessment:**
Biennial assessment is a planned IRR assessment that will occur every other year at each site.

**Random IRR Site Assessment:**
Random assessment can occur when requested by the site and/or when significant variations in data have been identified since MSQC routinely monitors data that is received.

IRR assessments are intended to be for educational purposes and to ensure the validity and reliability of the MSQC data. Each site is expected to attain a rate of agreement of ≥95% (no more than 5% disagreement is allowed). Sites that attain less than 95% will receive a score rating of “remedial”, at which time an assessment of the contributing factors will be completed in order to collaboratively develop a site-specific corrective plan of action. Three to six (3-6) months following, a second audit may be conducted.

Prior to the IRR assessment, MSQC will notify the SCQR of an impending review and will provide instruction regarding expectation and processes to follow. As part of the review process, time is allotted for a discussion of the findings with one-on-one, sequential analysis and examination of disagreements. By engaging mutually educational dialogue between the SCQR(s) and the MSQC Reviewer(s), the discussion is intended to provide an opportunity for the IRR findings to be validated or refuted. Subsequent to the debriefing, the MSQC will compose a final report of the IRR assessment, including a list and description of the identified disagreements, as well as any related education provided to the site’s SCQR(s) (See MSQC policy 400.06 Inter-rater Reliability Clinical Data Review).

**Ad Hoc Training and Education**

Training and education for changes in Workstation functionality, Program variables and definitions, special projects and any other Program content changes and updates are provided on an annual and ad hoc basis with multiple offerings to accommodate SCQR availability (e.g. webinars, online learning modules, meeting breakout sessions, SCQR-only meetings, conference calls, etc.). Additionally, case studies and other educational offerings may be offered to enhance understanding and practical application of program variables and definitions to medical record review and the related data collection process.