QOMAD:
Quality Opioid Management
from Admission to Discharge

Developing a Toolkit and Dissemination Model
to Improve Hospital Pain Management

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QOMAD PROPOSAL

_Background__:_ For many patients in the hospital, their pain is inadequately controlled. We propose to establish a new approach for safe and effective pain control in the adult non-critical care patient population. We will create a system to balance the concerns of adequate pain control and the risks for abuse and misuse of opioids.

The QOMAD approach is based on a model developed by the Society of Hospital Medicine (SHM). The Joint Commission and the National Quality Foundation awarded SHM the prestigious Eisenberg Award in April 2012 for its _Resource Room/Mentored Implementation model_. Over the past eight years, this model has been successfully applied to address other critical clinical quality improvement challenges. Upon engagement in this initiative, SHM will develop a Mentored Implementation model to assist hospitals in fostering inpatient pain management. SHM will also develop a Resource Room to facilitate access to key resources. SHM will assist hospitals nationwide in translating the model into practice. To date SHM has worked with over 300 hospitals to help engineer quality improvement. The four basic principles of the Resource Room/Mentored Implementation model are:

1. Identify and disseminate actionable best practices—not just the "what" of the guideline(s) but the "how" to launch and sustain the initiative
2. Share effective, field-tested implementation strategies, identify common pitfalls and roadblocks, and recommend tactics to overcome these issues
3. Devise practical measurement strategies to assess baseline performance /track progress
4. Foster leadership skills in QI in the targeted clinical champion—the hospitalist—and his/her affiliated QI teams

This proposal seeks to apply this proven approach to better management of patients with pain in the inpatient environment.

1. Overall Aim & Objectives: The overall aim for the QOMAD initiative is to improve the acute and chronic pain management of hospitalized patients with chronic, non-cancer illnesses, both while they are in the hospital and post-discharge.   The two objectives of this initiative are

- To demonstrate the effectiveness of pain management strategies in two hospitals
- To disseminate toolkits to assist other hospitals in achieving the same breakthrough levels of improvement.

In essence we will figure out what pain management strategies work and then build an infrastructure that will facilitate their broad-scale dissemination.

2. Current Assessment of Need in Target Area: The need for the QOMAD program can be framed in terms of three documented challenges facing the American healthcare systems:

1. The disease burden of patients with pain: Chronic pain affects 30.7% of Americans.[4] Pain is the chief complaint for 52.2% of emergency room visits.[5]   Uncontrolled pain predicts a higher likelihood of hospital admission.[6]   Patients with chronic illness have high prevalence of pain in the hospital. For example, patients with heart failure have a 50.3% prevalence, HIV 69.2%, and respiratory conditions 54%.[7] Inadequately managed pain can lead to unfavorable physical and psychological outcomes not only for patients, but for their families.[8]   In addition, acute pain is regarded as the most common symptom of many illnesses, and if left untreated it can produce long-lasting psychological and emotional distress which may lead to prolonged chronic pain states. Untreated acute post-operative pain can also result in subsequent

increases in morbidity and mortality.[9, 10] In the hospital, the cost of unrelieved pain translates to longer hospital stays, increased rates of rehospitalization, increased outpatient visits, and decreased ability to function, resulting in an inability to work and maintain health insurance.[11]

       2. Barriers to improving pain management: Physicians want to provide effective pain management for their patients. However, there are several barriers to accomplishing this objective.   Common barriers include perceptions that pain is not "real" or "legitimate."[12] Additional concerns include patients' susceptibility to abuse or addiction. This is a major predictor of the willingness to prescribe opioids for chronic non-malignant pain.[13] Regulatory scrutiny also limits physicians from prescribing long-acting opioids for chronic non-malignant pain, despite their belief in their effectiveness. For example, one study showed that 78% of physicians believed they would likely encounter regulatory scrutiny, even though 80% believed that long-acting opioids would be effective in controlling pain and improving quality of life.[14]

Another major concern of physicians is the adverse effects of opioid therapy.[15]   A recent study looked at which medications are implicated in emergency hospitalizations for adverse drug events in older US adults. Opioid medications were in the top five classes of medications, impacting 4.8% of all of these admissions.[16]   Other physician concerns include:

- Need to increase doses as a function of tolerance and disease progression
- The inability to predict when an opioid will be effective
- Need for relatively higher doses when chronic opioids are used to treat non-cancer pain
- Lack of belief in patient subjective reports of pain
- Complexity of having to write monthly prescriptions for controlled substances
- Difficulty dealing with co-morbidities in the chronic pain population

An additional barrier to physicians providing optimal pain management is the lack of physician training. A recent survey of medical schools suggests that education in pain management is not optimal. This knowledge deficit affects the prescribing practices of practicing physicians.[17]   For example a study of in-patients in the hospital revealed staff had "a limited understanding of opioid(s)" leading to "barriers to opioid use", "submaximal doses" and "opioid side effects."[18]   The Johns Hopkins Pain Curriculum Development Team concluded that US medical education on pain is limited, variable, and often fragmentary.   Unfortunately pain treatment guidelines and education do not change opioid prescribing practices.[19]

"Systems" barriers also limit appropriate prescribing of opioid medications. Clinical decision support from protocols and related order sets are rarely robust in the inpatient setting. Optimal pain management involves an interdisciplinary approach.[20] Hospitalists must not only use their leadership and coordination skills but they must also rely on nurses, physician assistants, pharmacists and others working together to ensure patients understand their medication regimen, potential side effects, what to do if pain is not managed, and to screen for potential misuse and abuse.[21] A recent needs assessment study revealed that "key challenges for nurses included not always having breakthrough pain medication orders and the gap in pain management between cessation of patient-controlled analgesia and ordering and administering oral medications."[22]   The study also found that "orthopedic residents and nurses receive little formal education on pain management, despite having to address pain on a daily basis." Nurses identified the most common pain knowledge gaps for patients before and after

discharge and had concerns about the need to use multiple pain management strategies and preparing patients to manage pain at home.[23]

     3. The opportunity to improve patient outcomes by focusing on care transitions (admission and discharge): The admission to a hospital represents a significant opportunity to improve a patient's pain management. However, a hospitalization can also create additional challenges to patient care. New or acute pain or an acute medical problem in addition to a patient's chronic pain may complicate the ability to treat patients and manage their pain. Hospital admission therefore places the patient at a higher risk for uncontrolled pain.

One of the major opportunities to improve patient outcomes is enhancing communication. Studies have documented communication deficits between office-based physicians and hospital-based physicians at the time of transitions in and out of the hospital.[24-26] A joint task force of SHM and the Society of General Internal Medicine found that effective communication between hospital physicians and PCPs occurs in only 3% to 20% of cases.[27] Most studies focused on communication at time of discharge.[28-29] A study focused on communication at time of admission reported a high incidence of medication errors.[30]

    Summary: QOMAD will meet the need for more appropriate use of opiates for non-cancer pain by: 1) overcoming the challenges of the opioid pain management for hospitalized patients and taking an interdisciplinary approach; 2) overcoming barriers related to physician beliefs and attitudes and addressing the educational deficit of physicians; and 3) focusing on improving care transitions from/to the hospital.

3. Technical Approach, Intervention Design and Methods:
Describe how this initiative will be constructed to meet the overall aim and objectives.

    QOMAD will assist hospitalists and their multi-disciplinary teams in improving the pain management of patients in the hospital. It will accomplish this goal through a demonstration project at two sites (Phase 1) and building the infrastructure to disseminate the model nationwide using SHM's Resource Room/Mentored Implementation model (Phase 2). The target population will consist of inpatients at the two hospitals admitted to Hospital Medicine services with chronic, non-cancer illness experiencing acute or chronic pain at a level of ≥ 6, or deemed unacceptable by the patient.

    Phase 1 will emphasize safe and effective pain management on admission and discharge through the use of a proven quality improvement framework. This framework will seek to identify and intervene with a target population in a real-time fashion (see discussion of *measure-vention* below). The framework outlines: 1) a call for securing institutional support; 2) forming an empowered interdisciplinary opioid management team; 3) designing and implementing protocols, order sets, and quality checklists; 4) using practical and meaningful metrics; and 5) incorporating pain assessment/management into daily interdisciplinary rounds.
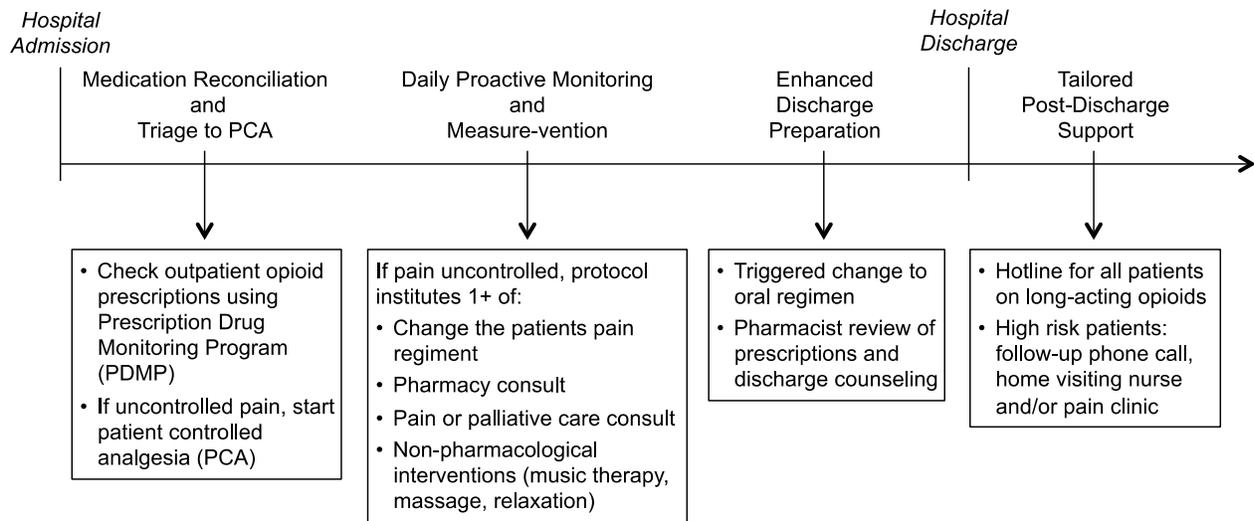
    California's prescription monitoring program will be used on admission or readmission for appropriate candidates, and tools from Project BOOST[31] (SHM's Mentored Implementation program for care transitions) will be utilized to enhance care at discharge.

Describe the implementation methods that will be used. Describe how the intervention approach addresses the established need and will produce the desired outcomes.

    QOMAD is envisioned as a two-phased project. In Phase 1, we will demonstrate (at two hospitals) effective interventions for managing patients with pain. The interventions will focus on transitions into the hospital (admission) and out of the hospital (discharge). The goal is to

incorporate these interventions into the process flow and systems of the two hospitals, so they become part of the fabric of care delivery, impacting patients in a real-time fashion and producing consistent/reliable performance improvement.

PHASE 1: The Phase 1 interventions are displayed in the following diagram:

Hospital Admission   *Hospital Discharge*

Medication Reconciliation and Triage to PCA	Daily Proactive Monitoring and Measure-vention	Enhanced Discharge Preparation	Tailored Post-Discharge Support
• Check outpatient opioid prescriptions using Prescription Drug Monitoring Program (PDMP) • If uncontrolled pain, start patient controlled analgesia (PCA)	If pain uncontrolled, protocol institutes 1+ of: • Change the patients pain regiment • Pharmacy consult • Pain or palliative care consult • Non-pharmacological interventions (music therapy, massage, relaxation)	• Triggered change to oral regimen • Pharmacist review of prescriptions and discharge counseling	• Hotline for all patients on long-acting opioids • High risk patients: follow-up phone call, home visiting nurse and/or pain clinic

Design and Implementation of Pain Management Protocols: The improvement teams will formulate a best practice protocol to guide patient pain management. The protocol will likely address: 1) pain assessment and documentation; 2) opioid dosing at initiation; 3) opioid titration advice; 4) use of a Patient Controlled Analgesia (PCA) pump; 5) ancillary methods for pain control; 6) appropriate use of a bowel regimen; and 7) when and how to refer to the inpatient pain specialists. This guidance will be reinforced in regular educational sessions, integrated into protocol-driven pain management order sets, quality checklists, and consultation note templates. A screening algorithm will be implemented at daily interdisciplinary rounds to identify patients with uncontrolled or inadequately controlled pain. These interventions will be designed to allow the interdisciplinary teams to manage opioids more effectively via clinical decision support (CDS) available at the point of care.

Proactive monitoring with measure-vention: The pain consultant/management teams will proactively monitor pain management and adherence to the protocol through daily reports that identify patients that have not reached acceptable pain ratings, and triage them for further intervention. This coupling of daily *measure*ment of high risk patients that may need further *intervention* is described by the term *measure-vention.* Measure-vention can trigger a proactive outreach from an expert consulting team, rather than passively awaiting a referral from the primary team. This "real time" technique has rendered accelerated improvement in several SHM efforts, including VTE prevention and inpatient glycemic control.[32]

Prescription Drug Monitoring Program: To address the issue of communication regarding opioid prescribing amongst multiple physicians and multiple pharmacies, many states have implemented prescription monitoring programs (PDMPs). The guidelines from the American Society of Interventional Pain Physicians state, "there is fair evidence to support the identification of patients who are non-compliant or abusing prescription drugs or illicit drugs through urine drug testing and prescription drug monitoring programs, both of which can

reduce prescription drug abuse or doctor shopping". They therefore recommend that "prescription monitoring programs must be implemented, as they provide data on patterns of prescription usage, reduce prescription drug abuse or doctor shopping."[33] Combined with special prescription forms, PDMP has significantly lowered overdose mortality rates in California, New York, and Texas.[34] Compared to patients living in non-PDMP states, those patients living in PDMP states had increased odds of receiving an analgesic medication.[35] Unfortunately despite the benefits of PDMP, physician knowledge of and access to their state PDMP is only 25%.[36]

For optimal pain management, hospitalists need to know what opioids the patients they are admitting has taken, particularly for patients with recurrent evaluations in the ED or inpatient setting, patients with a history of abuse, and patients with multiple stated allergies that limit the opioid choices. We will increase the use of the California electronic PDMP database by educating the interdisciplinary rounding team, establishing convenient links to the PDMP database from within the medical record, and assuring Pharmacy assistance in running the query and documenting the results.

Daily Interdisciplinary Rounds: We will incorporate pain assessment and management into daily interdisciplinary rounds. These rounds occur every weekday morning and include the hospitalists, the unit charge nurse, the case manager/discharge planner, and the social worker. At these rounds, the goals for pain relief will be discussed for each patient as part of their discharge dashboard. Pain is consider uncontrolled at 24 and 48 hours after admission if the patient's pain severity score is above a 4 out of 10 or reduced by less than 50% from admission pain severity. Inadequately controlled pain will trigger a mandatory intervention. The interdisciplinary team will have a choice of the following options:

- Pain consultation from the acute pain service or palliative care
- Pharmacist consult
- Change the patients pain regimen
- Non-pharmacological therapies (e.g. music, massage, relaxation)

Centralized monitoring by the pain consultant team will assure that patients do not "slip between the cracks" and offer opportunities for "just in time" educational sessions.

Patient Controlled Analgesia: Patient controlled analgesia (PCA) provides a solution to balancing adequate pain control and minimizing adverse effects. Since 1990 PCAs have been shown to provide better pain controlled with less side-effects.[37] However, physicians still underutilize PCAs for hospitalized patients that are capable of self-titrating their medication needs. We will educate hospitalists on the use of PCAs and encourage their use. Specifically we will teach hospitalists how to use PCAs to titrate opioids and to determine if the patient's pain is opioid responsive verse opioid refractory. If the patient's pain is opioid refractory, the interdisciplinary team should implement one of the options mentioned in the daily rounds section above. If the patient's pain is opioid responsive, protocol guidance instructs the hospitalists on how to convert the PCA to a long acting opioid prior to discharge from the hospital and provide an appropriate additional (as-needed) short acting opioid for breakthrough or rescue medication. Expert assistance and proactively triggered interactions will enhance the reliability of optimal transitions and PCA use.

To improve discharge planning, hospitalists will be encouraged to transition the patient to the discharge pain regiment at least 24 hours prior to discharge with at least a 12 hour

overlap with the PCA. However, if the patient needs to be discharged immediately, in order to avoid holding up the discharge, we will instruct the hospitalists in alternative approaches to a rapid transition. For example, simultaneous administration of a dose of intravenous morphine, short acting oral morphine, and long-acting morphine can allow the patient to leave immediately, since one medication will take effect as the previous one wears off.

Interventions at Discharge: We will apply SHM's Project BOOST program to opioid management at discharge from the hospital. The UCSF hospitalist faculty has had good success and a wealth of experience in using BOOST. We will utilize patient activation and education techniques, such as the TeachBack method of communicating with patients. Pain control and use of opioid medications will be incorporated into checklists that assess the risk of readmission.   We will implement post discharge follow-up activities, e.g., phone calls, outpatient visits, home health visits, and use of community resources. Home health referrals for pain management are under-utilized, because physicians and even nurse case managers often forget that pain management is a skilled nursing need. We will institute reminders at daily interdisciplinary rounds to initiate home health referrals for pain management for patients at high risk for readmission. These patients have one or more of the following risk factors: 1) recurrent hospitalizations or ED visits; 2) pain score greater than 4 (out of 10) at discharge; 3) organ failure or other advance illness; 4) uncontrolled psychiatric condition; 5) multiple opioid prescribers or pharmacy dispensers; 6) poor health literacy; or 7) inadequate family support.

PHASE 2: Phase 2 will focus on building an infrastructure that can support expansion of QOMAD to hundreds of hospitals. The elements of a Mentored Implementation program consist of:

- Implementation Guide: Based on the experience gained from Phase 1, the project team will produce a detailed step-by-step QOMAD Implementation Guide.
- Resource Room: SHM will build an on-line repository of information and toolkits related to in-hospital pain management, including the QOMAD Implementation Guide, annotated bibliographies, slide sets, Web links, webinars, sample order sets, measure-vention techniques, etc.
- Mentors: These are hospitalists that have expertise in pain management and experience in implementing performance improvement initiatives. Mentors work with individual hospitals/health systems to guide them through the project life cycle using tele-conferences, email, group webinars, and site visits.
- eQUIPS (electronic Quality Improvement System): This is SHM's data platform that includes the following elements: 1) on-line performance data capture, reporting, and benchmarking; 2) electronic project tracking that reflects the milestones in the Implementation Guide; 3) an on-line call log supporting communication between the mentor and the hospital site; and 4) a web-based peer learning environment that sites can use to share modifications of tools and directly communicate with one another.

For each institution/organization/association, describe the specific role that they will undertake to meet the goals of this initiative.

As the prime contractor, SHM will manage the overall project. The SHM team will consist of an Executive and a Project Manager from SHM's Center for Hospital Innovation and Improvement, who will provide overall leadership in project execution, based on SHM's experience building and deploying Resource Rooms and Mentored Implementation programs.

SHM will bring to bear the Mentored Implementation infrastructure elements it has used on previous initiatives (Resource Room design, Implementation Guide formats, Mentor University, eQUIPS). SHM will provide an Experienced Mentor, a physician who has mentored sites for SHM's Mentored Implementation programs. SHM will be the primary contact with the funder.

The Principal Investigator will provide the overall clinical leadership for the QOMAD initiative. He will lead and facilitate the Interdisciplinary Expert Team meetings and will make final decisions on the interventions and evaluation strategy. He will serve as the spokesperson for the QOMAD initiative and will lead the QOMAD interventions at his hospital.

The co-investigator will lead the QOMAD intervention at her hospital. She will also support the Principal Investigator with the above activities. At the end of the 2-year project, both investigators will be experienced mentors, able to proliferate the QOMAD model at other hospitals.

An Interdisciplinary Expert Team at each site will provide support in systems/process change required to improve outcomes and support QOMAD data collection efforts. The teams will consist of multiple disciplines including hospitalists, pain physicians, pharmacists, nurses, and case managers. The teams will advise the investigators on the key deliverables, i.e. the interventions and tools to be incorporated into the QOMAD Implementation Guide, Resource Room, and Mentored Implementation program structure.

Describe how the approach will be sustained after the funding period. Evidence of feasibility for program implementation is required.

The results of this initiative will be incorporated into SHM's array of Resource Rooms and Mentored Implementation programs. SHM has a track record of working with state hospital associations, insurance payers, and foundations to proliferate proven Mentored Implementation programs. The Centers for Medicare & Medicaid Services (CMS) prominently features SHM's toolkits as resources for their Partnership for Patients initiative. These SHM programs have also resulted in collaborations with the Agency for Healthcare Research and Quality (AHRQ), the American Society of Health-System Pharmacists (ASHP), and the Centers for Disease Control (CDC).   Once success has been demonstrated, a broad group of stakeholders have helped expand SHM's Mentored Implementation programs to over 300 hospitals. SHM's has demonstrated that this is a sustainable model for hospital-based QI initiatives.

4. Evaluation Design:

Describe the metrics that will be used to measure the extent to which the practice gap identified in the needs assessment was addressed for the target group.

For phase 1, SHM will define benchmarks for key process measures, such as the percent of patients with a documented PDMP check within 24 hours of admission, and the percent of patients with uncontrolled pain who are started on a PCA. The percentage of patients who appropriately receive each step in the protocol will be tracked proactively, and used in audit and feedback as part of our quality improvement process. The key outcome for in-hospital pain management will be the percent of patients receiving relief (50% better or pain score < 4) by hospital day 3, as assessed by medical record review of nursing pain assessments. In addition, we will assess key post-discharge outcomes including hospital length of stay, 7-day emergency department visits, and 7-day and 30-day readmission rates, and patient satisfaction.

For phase 2 and beyond, the metrics of success are the number of hospitals that: 1) visit the Resource Room; 2) download the Implementation Guide; 3) participate in the QOMAD e-community; and 4) request mentoring support from SHM.

Identify the sources of data that you anticipate using.

For phase 1, the sources of the data will include daily information about whether patients admitted with pain received key aspects of pain management per our protocol, as well as administrative data and hospital satisfaction surveys. For phase 2, the data sources will include SHM website statistics and requests for SHM support.

Describe how you expect to collect and analyze the data.

Each hospital will create a database to track patients admitted with pain. This database will be used in real time to administer the protocol, as well as for audit, feedback, and evaluation. Daily, a pharmacist in conjunction with the physician lead will identify admitted patients who have pain and enter them into the database. The pharmacist will review medical records to ensure that medication reconciliation and PDMP occurred and was documented. If this has not occurred a pharmacy technician will attempt to ensure task completion and documentation within 24 hours of admission. The highest, lowest, and average pain scores as documented in the medical record by a patient's bedside nurses will be entered into the database. For patients with uncontrolled pain, the measure-vention performed will be entered into the database. Similar processes will be performed for discharge activities. For analysis, we will track the percentage of quality improvement metrics from the protocol on a monthly basis.

In addition, we will extract administrative data to track 7-day emergency department visits, and 7-day and 30-day readmission rates. Patient satisfaction with pain control will be assessed at the hospital level using the HCAHPS pain management survey items.

Identify the method used to control for other factors outside of this intervention (e.g., use of a comparison or control group).

We will use a pre-post design to test the effect of the intervention on the percent of patients receiving relief (50% better or pain score < 4) by hospital day 3, 7-day emergency department visits, and 7-day and 30-day readmission rates. To accomplish this, we will identify a cohort of 200 patients discharged from the study hospitals (100 patients per site) with length of stay >= 3-4 days, AND a documented pain score of 6 or more with 24 hours of admission. We will exclude those with Cancer by ICD-9 codes. We will compare these outcomes in the baseline period to a cohort of 200 patients identified from each of the study hospitals in the last months of implementation of the intervention. Pain satisfaction scores will be tracked on a quarterly basis for the two hospitals before and after the intervention implementation begins.

Describe how you estimate the extent to which the target audience was engaged in the intervention (e.g., translation into practice).

We will require the hospitalist to engage in the intervention on all primary and co-management services, i.e., on services for which they have direct control over the patients care as opposed to consult services in which they only provide advice.

Describe the primary audience(s) who will directly utilize or benefit from the project outcomes and how the project outcomes might be broadly disseminated.

Many audiences will benefit from the QOMAD project. We anticipate that hospitals and hospitalists will directly utilize the interventions and achieve better outcomes. Patients with pain who come to the hospital, their families, and the health professionals who care for them

will also benefit from this project. The outcomes will be disseminated nationally by SHM as materials in their Resource Room and Mentoring Implementation model. The data captured and analyzed with will also be reported at Annual Meetings of medical societies, such as SHM and submitted as a manuscript to a peer reviewed journal.

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Detailed Work Plan and Deliverables Schedule

The work plan included below provides an overview of the project schedule. SHM will divide the project schedule into three distinct phases. The project phases are defined as Phase 1: Convening of an Interdisciplinary Expert Team; Phase 2: Launch of demonstration projects and Phase 3: Building infrastructure to support expansion of QOMAD. During Phase 1, SHM will focus on convening an Interdisciplinary Expert Team to identify best practices while during phase 2, SHM will deploy the demonstration projects in the two hospitals through implementation of SHM's Mentored Implementation quality improvement framework. Phase 3 will focus on building infrastructure that can support expansion of QOMAD to hundreds of hospitals through dissemination of SHM's Mentored Implementation model. SHM will execute all three phases of the program during the Period of performance (PoP) and evaluate the outcomes upon conclusion of the program.

Deliverable	Timeline	Additional Information/Supporting Details
Phase 1: Convene Expert Panel		
Identify and recruit prospective mentors/experts	Phase 1: Upon notification of award	
Send invitations/ Request Letters of Interest From Potential Interdisciplinary Expert Team	Phase 1: Upon notification of award	
Review submitted Letters of Interest	Phase 1: Upon notification of award	
Confirm Interdisciplinary Expert Team Members	Phase 1: By January 4, 2013	
Convene Interdisciplinary Expert Team	Phase 1: January-February 2013	
Identify pain management best practices through Interdisciplinary Expert Team	Phase 1: January-February 2013	
Phase 2: Conduct launch of Demonstration Projects 1 and 2		
Conduct launch of demonstration projects at 2 hospitals	Phase 2: January 2013	
Develop and finalize pain management quality improvement framework	Phase 2: January 2013	
Develop a database to track patients admitted with pain	Phase 2: January 2013-February 2013	The database will be used in real time to administer the protocol, as well as for audit, feedback, and evaluation.

Develop data collection tools and process measures to measure at baseline	Phase 2: January 2013-February 2013	
Conduct collection of baseline data	Phase 2: January 2013-March 2013	
Conduct demonstration projects at hospitals 1 and 2	Phase 2: January 2013-January 31, 2014	
Implement pain management quality improvement framework in 2 hospitals	Phase 2: January 2013-January 31, 2014	
Design and implement pain management protocols	Phase 2: January 2013-January 31, 2014	Document on a daily basis whether patients admitted with pain received key aspects of pain management per protocol.
Phase 3: Build infrastructure to support expansion of QOMAD: Deploying the Mentored Implementation model		
Modify SHM's web based data platform (e-QUIPS) to facilitate project tracking, reporting, benchmarking, peer learning, etc.	Phase 3: February 2014-April 2014	Capabilities include facilitated communication between the mentor and the hospital site.
Develop and update a detailed step-by-step QOMAD Implementation Guide	Phase 3: February 2014-December 2014	
Create a resource room (on-line) repository of information and toolkits related to in-hospital pain management; update as needed	Phase 3: February 2014-December 2014	Includes the QOMAD Implementation Guide, annotated bibliographies, slide files, Web links, webinars, sample order sets, measure-vention techniques, etc.
Measure project outcomes after full project implementation	Post PoP	
Identify and assign mentors to work with individual hospitals/health systems; formally deploy complete Mentored Implementation model	Post PoP	Mentors will guide hospitals through the project life cycle.