



## McKinney - Improved Documentation for Patients taking chloroquine or hydroxychloroquine, increasing Identification of high risk individuals

Version: v1 2016  
Progress: 100%  
Status: Approved

### Self-Directed Practice Improvement Module Application

**\* Title of Project: (a succinct description of what you intend to improve, e.g. Reduction of Waiting Times for Scheduled Appointments)**

McKinney - Improved Documentation for Patients taking chloroquine or hydroxychloroquine, increasing Identification of high risk individuals

## Part 1 : SELF DIRECTED PRACTICE IMPROVEMENT ACTIVITY

### Instructions

The purpose of this document is to guide the Diplomate through the process of developing a Self-Directed Process Improvement Activity. Each of the sections described below is important in documenting your proposed project. With your permission, it is the ABO's intention to share these projects with other Diplomates so they may benefit from your experience and lessons learned in improving care delivery processes.

**Physician Name:**

J. McKinney

**Board ID:**

22038

**Physician Email Address:**

jkmeve@comcast.net

**\* Project Description: (describe the quality concern being addressed in 100 words or less)**

Improve the percentage of patients with chart documentation identifying high risk factors for for development of retinal toxicity in patients on Chloroquine or Hydroxychloroquine using the updated AAO Recommendations on Screening for Chloroquine and Hydroxychloroquine Retinopathy (2016 Revision).

**\* Background Information: (provide any additional information that may be pertinent)**

In addition to a physical exam screening for the presence or absence of retinal toxicity, there are several components of the subjective history that are critical to ensuring that patients taking retino-toxic drugs are adequately screened for their risk level. This project was designed to assess our success at identifying high risk individuals and to implement a strategy to increase our performance on some of those identified components.

A baseline internal peer review was performed looking at all patients who had Chloroquine or Hydroxychloroquine listed in their EHR medication module and also had a dilated visit between January 1st, 2014 to December 31st, 2017. Measures critical to risk determination were taken from the AAO guidelines. Charts were reviewed for completeness of documentation of the following three measures with percentages complete as noted. 199 charts were reviewed. Length of time on medication recorded - 67%

- Dosing adequate for real weight - 30%
- Tamoxifen use noted - 41%

These percentages were recognized to be substandard. The creation of a data entry template was proposed to be used by technician and physician staff to enter these critical pieces of data, standardizing documentation and recognition of high risk patients.

**\* Project Setting: (please select from options below)**

Group Practice

**\* Study Population: (describe the type of patient for whom the care process will be improved, e.g., all patients in your practice, patients with diabetes, patients presenting for emergency care)**

All patients in our practice taking chloroquine or hydroxychloroquine.

**\* Quality Indicators / Performance Measures:**

It is important to carefully define outcome or performance measures that will be quantified at baseline (before the care process is changed) and at re-measurement (after you have implemented the proposed improvement) to quantify the impact of your care process change. There are two basic types of performance measures - process of care measures and outcomes of care measures.

- Process of care measures (e.g. timely treatment of diabetic retinopathy) can influence outcome measure (e.g. decreased risk of severe vision loss);
- Outcome measures can be linked to processes of care that can be improved.

Generally, performance measures are expressed as rates, often as percentage rates. For example, if the intent of a project is to improve the quality of glaucoma care in your practice, you may choose to improve your rate of establishing a goal IOP in patients with newly diagnosed glaucoma, measured over a 3 month period.

- The numerator of this process measure would be the number of newly diagnosed patients during this time who have a goal IOP recorded in the medical record.
- The denominator would be the total number of patients diagnosed during that same time period.

Continuous variables (e.g. the refracted spherical equivalent after cataract surgery) can often be simplified and transformed then into percentage rates by setting a quality threshold (within 0.5 diopters in the intended spherical equivalent) which, if attained, would qualify the patient to be in the numerator (e.g. number of patients within 0.5 diopters / total number of patients).

It can be advantageous but not mandatory to have more than one quality measure in order to gauge the impact of your process change. In the example above, an additional outcome measure might be the percentage of patients in whom the goal IOP is attained within the first 6 months after diagnosis. If possible, measure quality indicators for at least 30 individual patients or data points during the baseline and again during the follow up period.

We realize that this may not be feasible or appropriate for all projects. Please indicate at least one measure below; either a process or outcome measure:

**Example Measure:**

- **Measure Type:** Process Measure
- **Measure Name:** Patient pain level during intravitreal injection
- **Numerator Statement:** Number of patients in who pain levels decreased by 2 points on a 1-10 scale
- **Denominator Statement:** 30 consecutive paties undergoin intravitreal injection

**Measure Type:** Process

**Measure Name:** Duration of therapy documented

**Numerator Statement:** Number of patients seen during study interval with EHR documentation of this measure

**Denominator Statement:** All clinic patients taking chloroquine or hydroxychloroquine seen during study interval.

**Measure Type:** Process

**Measure Name:** Risk level of current medication dosage calculated based on patient's real weight

**Numerator Statement:** Number of patient seen during study interval with EHR documentation of this measure

**Denominator Statement:** All clinic patients taking chloroquine or hydroxychloroquine seen during study interval

**Measure Type:** Process

**Measure Name:** Tamoxifen use documented in EHR

**Numerator Statement:** Number of patients seen during study interval with EHR documentation of this measure

**Denominator Statement:** All clinic patients taking chloroquine or hydroxychloroquine seen during study interval

**\* Project Interventions:**

Quality improvement requires that you analyze your care delivery processes and identify changes, which if implemented, will improve care and outcomes. Generally, educational interventions are thought to be weak and demonstrate little impact. The introduction of tools, strategies or systematic approaches to care delivery is more powerful. A tool is a thing, for example a preoperative checklist, or written standardized process or protocol. Strategies include changes in procedures or policies like the introduction of a surgical time out before surgery is initiated. Systematic approaches to care delivery involve a comprehensive analysis of care process and the introduction of a combination of tools and strategies designed as a complete process. Please describe the changes to your care processes you intend to introduce:

1. All providers informed of this performance gap and the specific data that should be collected. All providers given the updated 2016 AAO Plaquenil Care Guidelines for review.
2. Modifications made to the EHR to prompt providers to collect the recommended data and to facilitate risk determination.
  - a pop-up data entry window has been added to the technician intake template and physician exam template
  - shows dates of last dilation, visual field and macular OCT (per guidelines, to be done yearly)
  - data entry for medication dosage and real weight
  - template automatically converts pounds to kilograms, and calculates mg/kg dosage
  - summary of exam frequency guidelines, high risk characteristics, and dosing recommendations provided for reference (note for future revision: template should have checkbox for renal disease and data entry window for duration of therapy).

Our target for this intervention is to increase documentation compliance by 20% for each of the measures listed above over the study interval.

**\* Project Team (include roles for yourself and all members of your team):**

List the individuals who will be involved in your quality improvement project (i.e., solo project, partners in practice, office staff, OR personnel, anesthesiologists) and the roles they will contribute.

**Project Lead - J Kevin McKinney, MD**

**Analytics, EHR Development and Management - Sharon Jean-Louis**

**Provider Quality Committee: (only listing names of MOC participants)**

- . **Alan Bengtzen, MD**
- . **Brian Chan-Kai, MD**
- . **Sonal Dave, MD**
- . **William Flanary, MD**
- . **Jonathan Kemp, MD**
- . **Jordon Lubahn, MD**

**\* Will any other ophthalmologists be requesting MOC credit for participation in this SD-PIM?**

**Additional Active Participants (all see study patients, perform data acquisition and will be impacted by study results):**

- . **Christopher Aderman, MD**
- . **Rebecca Armour, MD**
- . **Charles Bock, MD**
- . **Francisco Castillo, MD**
- . **Daniel Holland, MD**
- . **Scott Grealish, MD**
- . **Shane Kim, MD**
- . **Robert McGlynn, MD**
- . **Jason Skalet, MD**
- . **Prashanth Vallabanath, MD**
- . **Elizabeth Verner-Cole, MD**
- . **Jillian Wang, MD**
- . **Charles Weber, MD**
- . **Jonathan Yoken, MD**

## **System Only Fields**

## Part 2 : SD-PIM PROJECT EVALUATION

### Instructions

This evaluation is displayed in 2 parts. The first part is a review of what has previously been provided to the ABO. The second part is intended for you to provide an update on the project.

### Project Summary



In the following sections, please prepare a brief summary of the project highlighting the data collected, effectiveness of your measurement approach, interventions, and the overall impact of the project.

#### \* Baseline Data:

**Quantify each of the quality indicators / performance measures described above for the baseline period (before interventions for improvement were introduced). Report the numerator, denominator and the calculated percentage rate for each measure.**

- Length of time on medication recorded -  $133/199 = 67\%$
- Dosing adequate fir real weight -  $60/199 = 30\%$
- Tamoxifen use noted -  $81/199 = 41\%$

#### \* Follow-up Data:

**Quantify each of the quality indicators / performance measures described above for the re-measurement period (the period following implementation of the interventions for improvement).**

- Length of time on medication recorded -  $73/77 = 95\%$
- Dosing adequate fir real weight -  $73/77 = 95\%$
- Tamoxifen use noted -  $73/77 = 95\%$

Note - the percentages above are the same for each measure by chance

- there were 9 total charts (out of 77 total) that failed one or more indicators.
- one chart failed all three indicators, a second chart failed two indicators. The remaining charts failed only one measure.

#### \* Project Impact:

**Compare the baseline data to the re-measurement / follow-up data and quantify the impact of the process of care changes (your project interventions). The project hopefully resulted in improvement; however, some projects may result in a diminution in quality. If a lack of improvement or reduction in quality occurred, suggest other strategies that might be more effective.**

This was a dramatically effective intervention, likely due to the very poor performance on these measures prior to intervention combined with an elegant intervention that was easy for practitioners to incorporate into their clinic flow. The EHR pop-up template made this possible.

### Project Reflection

#### \* Do you feel that the project was worthwhile, effective?

Yes

**\* How might you have performed the project differently?**

Basic design of the project was solid. I would add a feedback mechanism for practitioners to make suggestions for template and/or process improvements.

It would be most beneficial if ABO could coordinate with AAO IRIS Registry system to allow customized data mining of one's practice data on projects such as this one. We did this review internally, but this would be a wonderful use of the IRIS system.

**\* Please offer suggestions for other ophthalmologists undertaking a similar project.**

For ease of transition and measurement, start with a recognized practice improvement measure. If your clinic has a quality committee, enlist their assistance to identify an issue and assist with design and data collection.

## Project Release



The ABO would like to share your successful project with other ABO Diplomates seeking to improve the same care processes. Please answer the following questions.

**\* May the ABO share this Project Document with other Diplomates?**

Yes

**\* Provide five (5) searchable keywords.**

Plaquenil  
hydroxychloroquine  
chloroquine  
drug monitoring  
risk assessment

**\* Should it be de-identified or should your authorship of the document remain?**

Authorship Remain

**\* Would you be willing to serve as a resource to other Diplomates seeking to improve in this area?**

Yes

**Provide email for contact:**

mckinne@EHNpc.com

**Provide phone for contact:**

503-656-4221

\* The ABO may be interested in transforming your Self-Directed PIM into a standardized Process Improvement Module. Would this be acceptable to you?

Yes

## System Only Fields

---