**ABO IMPROVEMENT IN MEDICAL PRACTICE ACTIVITY**

**(CLINICAL)**

**Topic**

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| **Title of Project**: | Tetravisc Versus Lidocaine Pledget for Short-Term and Intermediate-Term Pain Control After Intravitreal Injections |

**Project Description**

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| Describe the quality gap or issued addressed by this activity. (Included in your response to this question should be a description of the resources that informed your decision to pursue this topic, a description of what the literature says about the issue you identified, and the rationale for choosing to address this clinical project | Compare and contrast side effects and pain relief during injection of Tetravisc versus lidocaine pledget during the cold months. Patients already receive the injections using a variation of lidocaine pledget versus Tetravisc drops. I hope to document a preference for each according to each patient’s wishes and discover statistically which method seems best to start their treatment. |
| **Background Information**:  The month you pulled the baseline IRIS performance report and any additional information that me be pertinent: | Retina practices are increasingly becoming injection clinics. Twenty, thirty, and forty injections are common many days. Each patient experience pain differently during the injection and in the hours after the injection. Some physicians use a pledget soaked in 4% lidocaine while others prefer Tetravisc drops. During the cold months I have noticed that the scratchy burning pain that occurs hours later increases, presumably due to the cold dry air. |
| **Project Setting**: (Please select from options below):   * Group Practice * Healthcare Network * Hospital * Multi-Specialty Group * Solo Practice * Surgical Center * Other | 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: | Patients in my practice receiving intravitreal injections of aflibercept, ranibizumab, bevacizumab and triamcinolone for DME, RVO and AMD. |
| **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. | **Measure Type:** Process  **Measure Name:** Patient pain level during and after intravitreal injections  **Numerator Statement:** Number of patients who experience significant pain at time of injections and 6 hours after.  **Denominator Statement:** 30 Consecutive patients undergoing intravitreal injections. |
| 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 patients undergoing intravitreal injection. |  |
| **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: | I hope to discover which technique, Tetravisc drops or lidocaine pledget provide the best overall experience for the patient for initial treatment. I also hope to customize the treatment protocol for each patient who seems to prefer one method over the other. |
| **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. | Myself; will do injections, ask patient to judge the pain from 1-10 ( ten being the worst) call patient 4-6 hours later to gauge the pain after all numbing wears off in similar 1-10 scale. average the 2 numbers for an overall pain score. |
| Will any other ophthalmologists be requesting MOC credit for participation in this SD-PIM? | NO |

**Project Outcomes/Results**

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| **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. | Baseline period.  0/30 = 0% experienced moderate or severe pain at injection. 3/30 = 10% of patients experienced mild pain and burning 4-6 hours after injection. No patients experienced severe pain. All 3 patients had a lidocaine pledget placed 10 minutes before the injection. No patients with Tetravisc drops experienced pain/burning later. |
| **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). | Since the measurement period ended, we have been using Tetravisc drops for all new and return patients unless the (return) patient specifically requests a pledget. No patients have called after hours or reported significant pain when they return. |

**Project Impact**

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| 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. | Since the measurement period ended, we have been using Tetravisc drops for all new and return patients unless the ( return) patient specifically requests a pledget. While it takes longer for the Tetravisc drops to take effect (20 versus 10 minutes) waiting the 20 minutes is worth it for the patient experience. Especially for new patients, we want the experience to be as pain free as possible. The better their overall experience is during the process, the higher chance they will stick with the program and treatment regimen thereby leading to better visual outcomes. |

**Project Reflection**

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| Did you feel the project was worthwhile, effective? | YES |
| How might you have performed the project differently? | Surveying more patients is helpful. We continue to ask patients about their experience to tailor it for them in many ways |
| Please offer suggestions for other ophthalmologists undertaking a similar project. | Some people use subconjunctival lidocaine injections before the vitreal injection. I rarely if ever do so. Possibly comparing that technique to the Tetravisc and or pledget would save an additional injection for the patients. |