

REGISTRY-BASED SELF-DIRECTED IMPROVEMENT IN MEDICAL PRACTICE ACTIVITY

Topic

Title of Project:	Increase in Attendance Rate for Outpatient Retinopathy of Prematurity (ROP) Screening Examinations.
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Project Description

Describe the quality gap or issue 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 QI project.)	The concern being address is the attendance rate for outpatient retinopathy of prematurity examinations. ROP examinations are critical to reduce the risk of blindness in severely premature infants. ROP examinations typically begin in the inpatient setting, but for many infants ROP examinations must continue after discharge from the NICU. Outpatient follow up is critical. We aimed to create policies which would improve outpatient follow up rates.
Background Information: Describe the specific aim(s) of this activity (explanation of the numeric goals and importance to your work processes and your organization).	The transition from inpatient to outpatient ROP examinations is an area where infants are vulnerable to missing critical ROP examinations. We had a baseline level of policy aimed at ensuring adequate follow-up to the outpatient ROP examinations. Despite these policies, we felt there may be room for improvement in outpatient attendance rates. After looking at data, we created a series of new policies and instituted them over several months. We then compared follow up rates from the baseline policy period to the period after the new policies are implemented.
Project Setting: (Please select from options below) <ul style="list-style-type: none"> • Group Practice • Healthcare Network • Hospital • Multi-Specialty Group • Solo Practice • Surgical Center • Other 	Hospital
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:	Severely premature infants in tertiary NICU, at risk for ROP, with a gestational age of <32 week or a birth weight of <1500gm

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: Attendance rate for first outpatient ROP screening examination on the recommended date

Numerator Statement: Number of patients who showed up to their first outpatient ROP screening examination on the recommended date

Denominator Statement: 52 consecutive NICU patients who required ROP screening examinations as inpatient and outpatients

Measure Type: Process

Measure Name: Patients completing ROP screening

Numerator Statement: Number of patients who ultimately met criteria for conclusion of acute retinal screening examinations

Denominator Statement: 52 consecutive NICU patients who required ROP screening examinations as inpatients and outpatients

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.

<p>Project Interventions:</p> <p>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:</p>	<p>We instituted 5 policies to improve the attendance rate for outpatient ROP examinations for patients being discharge from the NICU. Below are the 5 new policies that were instituted all within 3 months.</p> <ol style="list-style-type: none"> 1. A parent education sheet was created, explaining the risks of ROP, including blindness, critical need for timely follow-up and listing the time and location of the follow-up appointment. Nurses reviewed the sheet and both parents and nurses signed the sheet. 2. We streamlined the scheduling process for outpatient ROP examinations. All outpatient appointments were made at Tuesday at 2PM on the exact date requested. No calls were required from the NICU personnel to the eye clinic. 3. We improved communication between the pediatric ophthalmologist and the NICU personnel via a single sheet which summarized all inpatient ROP examination findings and recommended follow-up date. 4. If a patient missed his/her first outpatient appointment, a certified letter was sent. If we received no response after 1 week, child protective services were notified. 5. A log book was maintained by the pediatric ophthalmology attending recording all examination findings and recommended follow-up dates, for both inpatients and outpatients.
<p>Project Team: (include roles for yourself and all members of your team):</p> <p>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.</p>	<ol style="list-style-type: none"> 1. Pediatric ophthalmology attending physician. Performs all exams, develops policy aimed at improving follow up for outpatient ROP exams, collect and analyze data. 2. NICU attending physician. Review NICU protocols, develops and implement policy aimed at improving follow up for outpatient ROP exams, analyze data. 3. Medical student. collect data 4. NICU attending physician. Review NICU protocols, develops and implement policy aimed at improving follow up for outpatient ROP exams, analyze data. 5. John Simon, MD - Pediatric ophthalmology attending physician. Analyze data.
<p>Will any other ophthalmologists be requesting MOC credit for participation in this SD-PIM?</p>	<p>No additional ophthalmologists will be requesting MOC credit for this project. This project was already performed, written up and accepted in a peer-reviewed journal (J AAPOS, Journal of the American Association of Pediatric Ophthalmology and Strabismus). I would like to submit the same content for consideration by the ABO as my self-directed practice improvement activity. I will complete all requirements.</p>

Project Outcomes/Results

<p>Project Summary</p> <p>In the following sections, please prepare a summary of the project highlighting the data collected, effectiveness of your measurement approach, interventions, and the overall impact of the project.</p>	
<p>Baseline Data:</p> <p>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.</p>	<p>Attendance rate for first outpatient ROP screening examination 22/52 patients = 42%</p> <p>Patients meeting criteria for conclusion of acute retinal screening examinations 47/52 patients = 90%</p>
<p>Follow-up Data:</p> <p>Quantify each of the quality indicators / performance measures described above for the re-measurement period (the period following implementation of the interventions for improvement).</p>	<p>Attendance rate for first outpatient ROP screening examination 46/55 patients = 81%</p> <p>Patients meeting criteria for conclusion of acute retinal screening examinations 57/57 patients = 100%</p>

Project Impact

<p>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.</p>	<p>Attendance rate for first outpatient ROP screening</p> <p>Pre-22/52 (42%), vs. Post 46/57 (81%), represents a significant improvement ($P < 0.01$) via two-tailed Fisher exact test</p> <p>Patients meeting criteria for conclusion of acuter retinal screening examinations</p> <p>Pre-47/52 (90%), vs Post 57/57 (100%), represents a significant improvement ($P = 0.02$) via two-tailed Fisher exact test</p> <p>We were very pleased with the improvement in attendance rates for outpatient ROP examinations. We implemented all 5 policies on a permanent basis</p>
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Project Reflection

<p>Did you feel the project was worthwhile, effective?</p>	<p>Yes</p>
<p>How might you have performed the project differently?</p>	<p>From a scientific standpoint, it would have been better to implement and evaluate the efficacy of one policy at a time. We didn't feel that was practical, but in retrospect I would like to have those data. A long-term follow-up would also be nice, as I worry that enthusiasm for and implementation of policies may wane over time.</p>
<p>Please offer suggestions for other ophthalmologists undertaking a similar project.</p>	<p>Keep it simple. Focus on one or two outcome variables and implement one or two policy changes. We implemented 5 policy changes at once, which created some difficulty with implementation and roll out of the policies.</p>