ABO NON-CLINICAL IMPROVEMENT IN MEDICAL PRACTICE ACTIVITY

Topic

Title of Project:	Communication with NICU Parents on Initiation of New Tele-Screening for ROP Program

Project Description

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.	Newly instituted RetCam photo screening requires a different type of communication with NICU families regarding their infant's diagnosis and treatment program.
Background Information: The month you pulled the baseline IRIS performance report and any additional information that me be pertinent:	As of January 1, 2019, the Banner-University of Arizona NICU Program is transitioning to a telemedicine screening program, which includes 3/4 weeks per month of RetCam photos and 1/4 week per month of in-person examinations. Given the change in the screening program, communication with the families must be improved from the current program which involves in-person updates on a scheduled weekly basis. As such, standardized communication templates for the nursing staff at the NICU has been developed in addition to educational material for the families to understand the importance of the photo screening and the follow up requirements. A secondary measure will be success of the team, which I have been working with to improve photo taking capacity, over the past 4 months.
Project Setting: (Please select from options below): • 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:	Infants in the NICU

Quality Indicators / Performance Measures:	**Measure Type:** Process
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.	**Measure Name**: Success in Timely Communication with NICU parents whose infants required tele screening for ROP.
	Numerator Statement: Families who receive the communication materials (which require their signature) within 24 hours of each exam.
	Denominator Statement: All individual examinations performed via in-person and tele screening for ROP.
· Process of care measures (e.g. timely treatment of diabetic retinopathy) can influence outcome measure (e.g. decreased risk of severe vision loss);	**Measure Type:** Outcome
· 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.	**Measure Name**: Success of achieving good retinal photos by NICU team.
	Numerator Statement: All eyes required to have photographic examinations for ROP screening in the NICU that can be analyzed via RetCam photos.
	Denominator Statement: All eyes having photographic examinations for ROP.
· 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 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:	The intervention is two-fold. The first is implementation of a standardized sheet that reviews findings for ROP examinations both in-person and via tele-screening to families whose infants have had eye examinations so that every family can have verified information that includes education on their infant's stage, zone and potential need for treatment as well as any pertinent follow up information. Currently the examinations are performed in-person on a weekly basis and each family is updated at bedside when they are available, otherwise the findings are communicated to the team who then discussed with the family. This should significantly improve communication with families whose infants require screening. Secondly, I have been working with the nursing staff in the NICU to improve their ability to take the retinal photographs and this intervention requires follow up of success including percentage of infants who are adequately photographed for telemedicine interpretations.
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 and NICU nursing staff involved in telemedicine screening (five nurses) - perform the telescreening and fill out forms for families at bedside for communication purposes
Will any other ophthalmologists be requesting MOC credit for participation in this SD-PIM?	No

Project Outcomes/Results

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.	Before intervention, the measures were distribution of information to parents of NICU infants requiring ROP examinations. As there was no protocol for distribution the numerator was 0 - denominator was not measured for this given the lack of information distributed.
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).	We monitored the distribution of information via printout (as available to all NICU staff including physicians (attendings & residents), nurse practitioners, and the nursing staff responsible for the ROP telemedicine photos), via the online note format, and also via discharge summaries.

During the project itself we noted that the nursing staff performing the photos themselves were not adept at printing out the appropriate forms, locating them in the EMR, and even after encouragement did not distribute the summaries after each telemedicine exam well. The physicians as well did not take the responsibility for this aspect of care. However, the nurse practitioners did a much better job, when prompted, to do the printouts and accumulate the paperwork. It was still challenging to get the information sheets printed, signed by families, and the education performed with overall (over 3 months) only 15 examinations with the supplied information and sheets returned out of 61 examinations via telemedicine. This yielded a 25% success overall, which is improved over the prior methods, but still leaves plenty of room for improvement. |

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.	There was definitive improvement in communication with families however it required a lot of communication and encouragement from my standpoint (the MD in charge) to get staff to perform this role/task. The biggest issue was recall during a busy time when also burdened by other tasks.

Project Reflection

Did you feel the project was worthwhile, effective?	YES

How might you have performed the project differently?	After performing this project, I noted quite a few reasons why the implementation was challenging. First is the EMR system we have, which requires that a pre-created form be individually printed from each patient's chart (which is approximately a 15+ click process once the chart is opened) instead of having pre-printed forms that stickers can be placed on which would make the nursing staff's time much easier to manage. Second is that the set up for doing the telemedicine exams themselves by the nursing staff have not yet reached a definite schedule and so fitting the exams in during shifts created a multi-tasking scenario for the nurses where recall to use the system to print notes while also continuing to handle the equipment, doing the exams, and uploading made for an increased burden on the staff. There was some continuous staff changes in the NICU at the time which also provided some confusion about who would be in charge of which element of the process. I think there are a lot of elements that we can use to improve the communication with families with this new program and this project identified many areas in which better alignment of service can be provided.
Please offer suggestions for other ophthalmologists undertaking a similar project.	Good communications with nursing staff is critical.