



Duke Ortho Action Plan to Improve PRO Collection

John Bonini- Director of Clinical Operations
Duke Orthopaedics





Foundation Work for the Project

- Division Chiefs had met with faculty and decided which PRO measures they wanted to collect going forward and the timepoints for data collection.
- The PRO tools were available as part of Bones Module or built by Duke Epic analysts so they could be distributed to patients through MyChart.
- We placed tablets in our clinic sites and presented them to patients who had not completed assigned PROs in advance of the visit.
- A Tableau report was created to track the collection of this data.



Chosen PROs and Timepoints for Collection

Orthopaedic Division	PROMIS Measures	Region-Specific PROs	Timepoints for Collection
Adult Reconstruction	CAT Physical Function, Pain Interference, Depression PROMIS-Global Health	HOOS-JR (hip) KOOS-JR (knee)	HOOS-JR (New Patient, Pre-Op, 6 wks, 1 year) KOOS-JR (New Patient, Pre-Op, 6 wks, 1 year) PROMIS-GH (New Patient, Pre-Op, 6 wks, 1 year)
Hand and Upper Extremity	CAT Upper Extremity, Pain Interference, Depression	DASH (shoulder)	New Patient, Operative (Pre-Op, 6wks, 3mo, 6mo, 1yr)
Sports Medicine	CAT Physical Function, Pain Interference, Depression	ASES SANE (shoulder) IKDC SANE (knee) FAAM (ankle)	ASES SANE (Pre-Op, 4mo, 10mo, 2yrs) IKDC SANE (Pre-Op; 4mo, 10mo, 2yrs) FAAM
Hip Preservation	CAT Physical Function, Pain Interference, Depression	OSPRO-YF (all) iHOT-12 (sports hip) HOOS-JR (total hips)	OSPRO-YF (New Patient) iHOT-12 (New Patient, Pre-op, 1 year, 2 years) HOOS-JR (New Patient, Pre-op, 1 year)
Trauma	CAT Physical Function, Pain Interference	PTSD (all)	New Patient
Pediatrics	CAT Mobility, Pain Interference	None	New patients (no specialty peds patients)
Foot and Ankle	CAT Physical Function, Pain Interference, Depression	VAS, SMFA (ankle), SF-12	Total ankle patients
Spine	CAT Physical Function, Pain Interference PROMIS-Global Health	NRS (all) ODI (back) NDI (neck)	American Spine Registry (New Patient, Pre-Op, 3mo, 6mo, 1 year, 2 years), all operative providers



- Through 2019 and the first half of 2020 we varied from 20%-28% of Department wide assigned PROs collected monthly on New Patient visits.
- Most of this collection effort happened as a result of an email patients received automatically from MyChart in advance of their appointment asking for their compliance in completing the PROs.
- Some of our clinics did not have tablets to provide patients to complete questionnaires not attempted/finished in advance of the visit.
- Most of the Windows tablets in our clinics did not work on a daily basis and required daily IT support and a lot of human resource effort.
- Problems with tablets led to provider and staff frustration in clinic and suppressed the number of patients filling out PROs in clinic.



Conflicting Priorities

In August 2020 our Department leadership challenged the Operations team to come up with a plan to significantly boost PRO data collection:

- to include at least **60% of ALL patient encounters** by the end of calendar year and **70% of ALL patient encounters** by the end of the fiscal year.
- without increasing costs to the Department
- that will not adversely affect patient flow in clinic



Shifting the Charting Burden

In order to collect many more PROs from patients without affecting daily clinic flow we decided we needed to collect as much of this data as possible outside of the clinic encounter itself. We would need to develop a plan to engage patients to fill out the PROs in advance of their appointment. Up to this point only about 20% of patients were filling them out in advance. Changes implemented were:

- We engaged the Access Center and added scripting to let patients know they will receive some questionnaires on MyChart and we request they complete them prior to their visit.
- We developed a provider narrated video explaining the importance of completing the questionnaires and started emailing it to all New Patients.
- All staff added a column to their schedule view in Epic so they could easily determine if patients have completed all visit questionnaires.
- When prepping clinics 24-48 hours in advance, if clinic staff notice PROs have not been completed an additional voice message is left for patients reminding them to complete them prior to the appointment.
- When we speak to patient on day of appointment to confirm they are in the parking lot, if clinic staff notice PROs have not been completed they ask them to complete them on their phone before coming into the clinic.



Data Collection within Clinic

We had a limited number of tablets in our clinics for PRO collection as we had only been attempting to capture data on New Patients up to this point in time. We knew that we would need a lot more hardware to capture PROs on all patients. However, we had a mandate not to increase costs and knew the tablets didn't always work well. We needed a different solution...and luckily each patient had one on their person.

- A recent Epic upgrade made it possible for patients to complete PROs on their cell phones from the MyChart APP or MyChart URL any time the day of their appointment right through midnight (previously this functionality was disabled at the appt time).
- We decided against purchasing any additional hardware and to use the hardware the patients willingly brought to clinic with them.
- We created tip sheets for patients to illustrate how to go on MyChart and complete their PROs and placed them in every exam room.
- When staff roomed a patient who still had not complete their PROs, they asked the patient to use the directions posted to complete the PROs on their phones and to open the exam room door when they were finished so the provider could come in.
- This process eliminated the need to spend money on hardware. It also reduced the burden of the staff being distracted in clinic trying to help the patients utilize the tablets or fix IT issues with the tablets.



Communicating the Plan

- Once we developed a plan I met with all the clinic operations management team to communicate the challenge and how we were going to meet it. Managers were informed that that PRO collection targets would factor into the annual performance evals for the management team.
- Managers had staff meetings and reviewed the plan with all the clinic support staff. They were also informed that results for PRO collections for the providers they support would play a large factor in the annual performance evaluations.
- Staff started making pre-visit calls a week before implementation to start boosting PRO collection response rates prior to the visit.
- Once the plan had been communicated and materials were distributed we decided to go live with the plan on Monday 8/31- just a few weeks from receiving the challenge.



The first 30 days

- Between the period of Monday 8/31 and Wednesday 9/30 we collected **55%** of PROs that were sent to all patients during the reporting period. Several sites topped 65% in the very first month.
- Sites that had some tablets and had been collecting data in the past had the highest results.
- Clinics that did not have experience collecting PROs in the past still came close to 50% the first month with this initiative.
- The extra communication prior to the visit has increased the number of patients completing PROs outside of clinic.
- Having patients utilizing cell phones to complete PROs in clinic has reduced staff burden and enabled clinic flow to have minimal impact.
- Some patients over 65 have complained it is difficult to read the PROs on their phones and have requested tablets.



Adjusting the Plan

- Upon receiving results for the first 30 days, we continued to adjust our communication plan to increase response rate prior to the visit.
- We started using our checkout staff in clinic to remind patients they will receive questionnaires again for their return visit. We are asking them to complete them in advance to avoid delays in clinic.
- We ordered 2 tablets for sites that didn't have them to assist patients who are unable to read the PROs on cell phone screens.
- We started sharing results weekly with providers, site managers and staff.
- We began providing positive reinforcement to staff exceeding the metrics and meeting with staff struggling to achieve the target metrics.
- We have seen steady progress in PRO collection every month since implementation: **October 2020- 58%, November 2020- 62%, December 2020- 68%** (exceeding our initial challenge of 60%) with some individual sites performing **above 80%**.
- Our revised goal is to now to achieve 75% across the full Department by end of FY21.