

Sustaining Improvement Work in Orthopaedics



The Problem in 2006

The average lead time for a patient to be seen by a physician ranged from 4 to 6 weeks which resulted in high cancellation and no show rates, as well as uncaptured volume. The average patient visit time (including cast removal, x-ray, provider visit, and new cast) exceeded 3 hours, which created serious patient satisfaction issues. Appointment lengths and start time were the same for most providers causing contention for scarce resources. There were waves of patients checking in, checking out, and waiting to be x-rayed. In addition, providers were often waiting for patients, creating "unproductive" time for the providers.

2006 Goal

- Improve access for new and follow-up appointments to reduce lead time
- Decrease patient visit time (from check-in to check-out) by improving throughput
- Expand capacity by billable visit volume

Timeline

2006	2007	2011	2012
Symptoms Oct 2006 <ul style="list-style-type: none"> Excessive patient waiting Patient queuing Peaks and valleys of volume throughout the week Low patient satisfaction No standard work 	Countermeasures FY 2007 <ul style="list-style-type: none"> Created standard work throughout clinic <ul style="list-style-type: none"> X-Ray Techs, MA's, Physicians Front Desk check in/out Call Center chart prep & scripts Created visual signals to flow patients through their clinic visit: <ul style="list-style-type: none"> X-Ray board Visual cues on charts for patient tracking Created level clinic schedule to reduce contention for resources: <ul style="list-style-type: none"> Right sized appt lengths Staggered appt slots & MD start/end times 	Results Oct 2007 <ul style="list-style-type: none"> Decreased average visit time from 187 mins to 56 mins Added an additional 114 appointments per week Increased the accuracy of x-ray orders from 75% to 98.9% Brought volume from under budget to exceeding budget by 14% 	Symptoms Today <ul style="list-style-type: none"> Patient Waiting (based on observation): <ul style="list-style-type: none"> Average visit time: 59 mins Maximum visit time: 110 mins Some standard work still in place Peaks and valleys of volume seen in the clinic throughout the day:

Changes in Orthopaedics Clinic

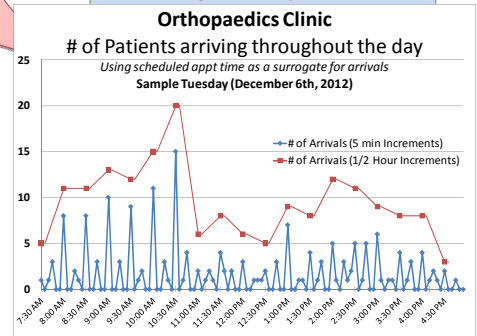
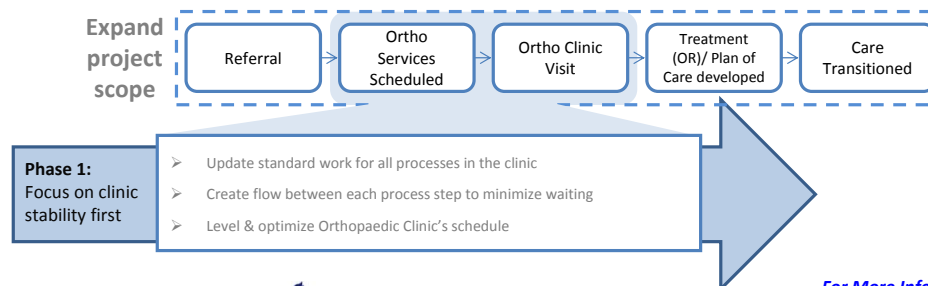
- # of Physicians increased from 10 to 22
- High staff turnover (including Manager & Admin. Director)
- Monthly billable visits increased 1.7x
- Call Center integrated with Admin staff

Lessons Learned

Even with the significant changes in the clinic over the past 5 years, the average patient visit time has remained close to the initial results, illustrating there is power in standard work. However, with the high staff turnover and the addition of providers over time, the systems in the clinic have become fragile, exposing a need to revisit the improvement work completed 5 years ago.

Next Steps in 2011-12

- Now in FY12, Business Transformation is working with Orthopaedics to revisit the improvement work completed previously. The scope has been adjusted to include the entire Orthopaedics service line to support further sustainment.



Team

- Louise Borda
- Labridgette Combs
- Kimberly Eng
- Joseph DeAngelis, MD
- Melisa Difusco
- Avril Etienne
- Charles Gerbrands
- Thomas Kelly
- Stacy Lewis
- Sean Naegeli
- Carine Noel
- Kelvin Sylvester
- Nancy Stevens
- Keila Teixeira

For More Information Contact

Joseph DeAngelis, MD, Orthopaedics, jpeange@bidmc.harvard.edu
 Louise Borda, Chief Administrative Officer, Orthopaedics lborda@bidmc.harvard.edu