



12th Annual DNP Conference

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TELEMEDICINE STUDY

- ▶ Completed in 2016 using post op knee arthroscopy patients after IRB approval and consent/assent
- ▶ Quasi-experimental pilot study
- ▶ Metric measured via telemedicine 24 hours before in-office appointment
 - ▶ Range of motion
 - ▶ Incision color
 - ▶ Effusion size



Results

- ▶ 59 subjects consented and enrolled
- ▶ 34 completed study
- ▶ No difference noted between telemedicine and in office visit when evaluating range of motion, effusion size or incision color
- ▶ No complications identified on either visit
- ▶ No urgent or emergency room visits were required
- ▶ SPSS used for statistical analyses
 - ▶ Descriptive statistics used for demographics.
 - ▶ Flexion/extension comparison - t test.
 - ▶ Color and effusion size comparison - intraclass correlation (ICC)

Results

- ▶ 2/3 patients preferred telehealth visit
- ▶ 96% were satisfied
- ▶ Average miles traveled one way to a visit was 35 miles
- ▶ Average wait time in office 1-3 hours (not including travel time)

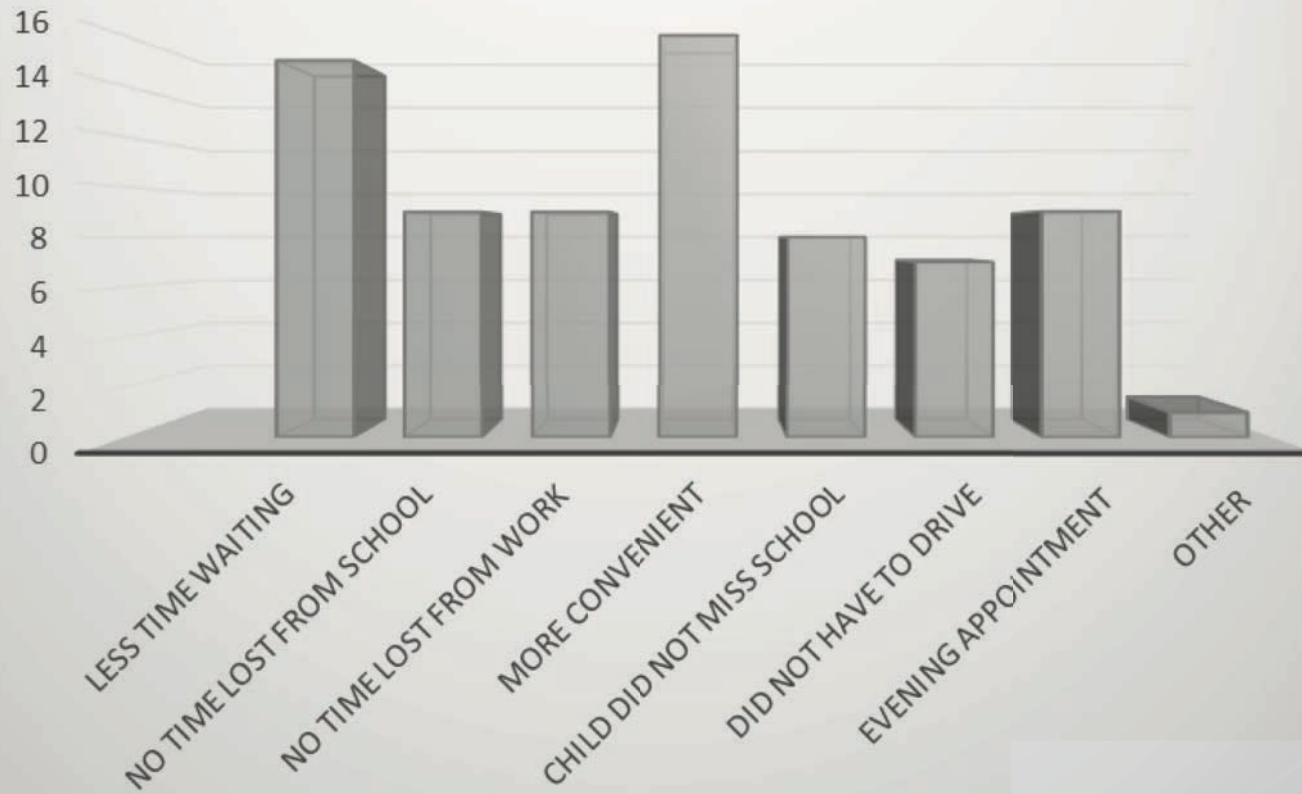


Results

- ▶ Provider satisfaction was high
 - ▶ Opportunity to see patient in home environment
 - ▶ Observe walking, donning/doffing brace
 - ▶ Ample time for patient teaching
 - ▶ Time to review restrictions, discuss home exercise program, brace wear, weight bearing status, physical therapy recommendations
 - ▶ Early contact with post op patients and ability to “see” them
 - ▶ Is this prescription right?
 - ▶ Am I using the CPM correctly?
 - ▶ Did I use the right dressing?

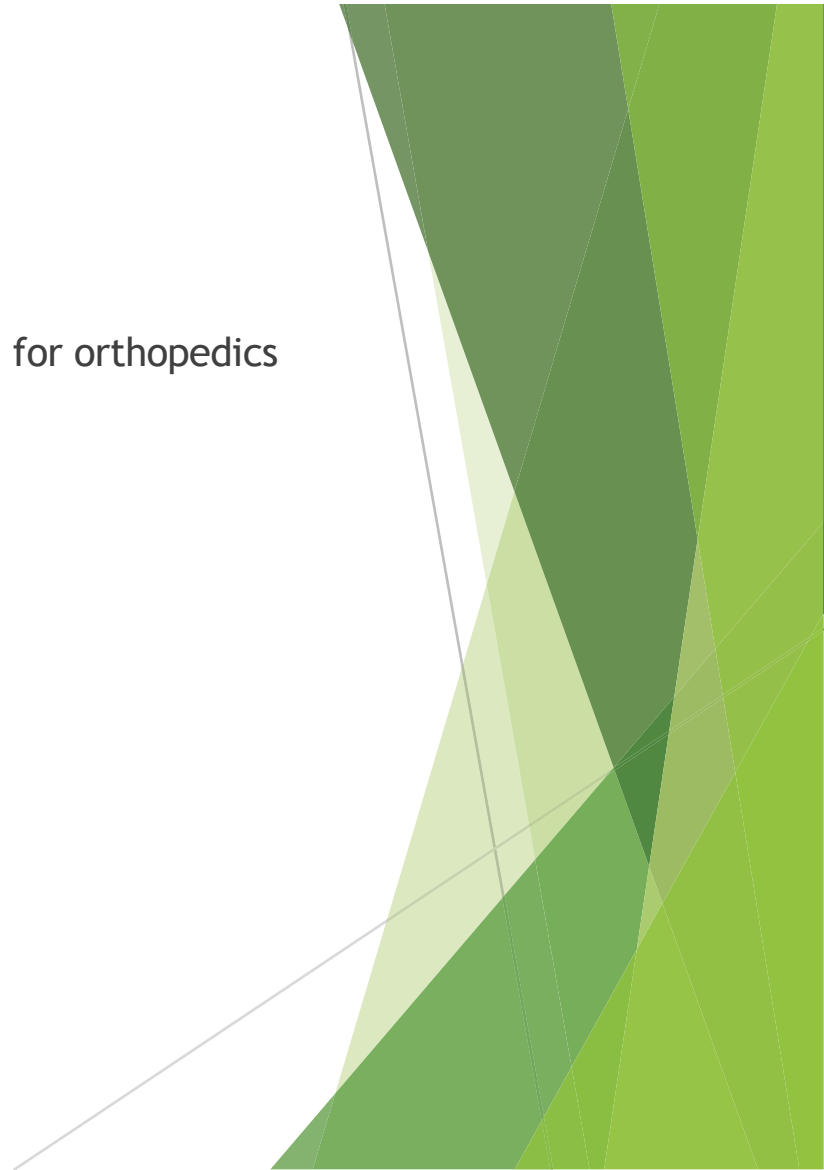


REASONS FOR CHOOSING TELEHEALTH



Where are we now?

- ▶ Approximately 70 telemedicine visits successfully completed for orthopedics by one nurse practitioner
 - ▶ Think about the saved days from school
 - ▶ Saved parental days lost from work
 - ▶ Decreased travel expenses
 - ▶ Decreased wait times
 - ▶ Highly satisfied patients
 - ▶ Now using this program to model for other divisions



References

- ▶ Aiello, M. (2012, April 11). How iPads Improve the Patient Experience. Retrieved from <http://www.healthleadersmedia.com/>
- ▶ Good, D. W., Lui, D. F., Leonard, M., Morris, S., & Mcelwain, J. P. (2012). Skype: A tool for functional assessment in orthopaedic research. *Journal of Telemedicine and Telecare*, 18, 94-98.
- ▶ Hunter, T. B., Weinstein, R. S., & Krupinski, E. A. (2015). State Medical Licensure for Telemedicine and Teleradiology. *Telemedicine and E-Health*, 21(4), 315-318. doi:10.1089/tmj.2015.9997
- ▶ Kassmann, B. P., Docherty, S. L., Rice, H. E., Bailey, D. E., & Schweitzer, M. (2012). Telephone Follow-up for Pediatric Ambulatory Surgery: Parent and Provider Satisfaction. *Journal of Pediatric Nursing*, 27(6), 715-724. Doi:10.1016/j.pedn.2012.02.004.
- ▶ Kirsch, S.D., Wilson, L. S., Harkins, M., Albin, D. * Del Beccaro, M.A. (2015). Feasibility of Using a Pediatric Call Center as Part of a Quality Improvement Effort to Prevent Hospital Readmission. *Journal of Pediatric Nursing*, 30, 333-337.
- ▶ Landit, H. (2015, December 11). AHRQ Calls for More Validation of Telemedicine's Effectiveness to Guide Policy Decisions. Retrieved January 16, 2016, from <http://www.healthcare-informatics.com/news-item/ahrq-calls-more-validation-telemedicine-s-effectiveness-guide-policy-decisions>.
- ▶ Prodromos, C. C., Han, Y., Rogowski, J., Joyce, B., & Shi, K. (2007). A Meta-analysis of the Incidence of Anterior Cruciate Ligament Tears as a Function of Gender, Sport, and a Knee Injury-Reduction Regimen. *Arthroscopy: The Journal of Arthroscopic & Related Surgery*, 23(12), 1320-1325.e6. doi: 10.1016/j.arthro.2007.07.003
- ▶ Research Electronic Data Capture. (2015). Retrieved July 17, 2015, from <http://www.project-redcap.org/>
- ▶ Salmon, L., Russell, V., Musgrove, Pinczewski, & Refshauge. (2005). Incidence and risk factors for graft rupture and contralateral rupture after anterior cruciate ligament reconstruction. *The Journal of Arthroscopic and Related Surgery*, 21(8), 948-957.
- ▶ Sathiyakumar, V., Apfeld, J.D., Obremsky, W.T., Thakore, R.V., Sethi M.K. (2015). Prospective randomized controlled trial using telemedicine for follow-ups in an orthopedic trauma population: a pilot study. *The Journal of Orthopedic Trauma*, 29(3), 139-45.
- ▶ Siew, L, Jsaiao, A., McCarthy, P., Agarwal, A., Lee, E., & Chen, L. (2015). Reliability of Telemedicine in the Assessment of Seriously Ill Children. *Pediatrics*, 137(3), 1-6.
- ▶ Singh, A., Wilkinson, S., & Braganza, S. (2014). Smartphones and Pediatric Apps to Mobilize the Medical Home. *The Journal of Pediatrics*, 165(3), 606-610.
- ▶ Teh, a., Turner, B., Tan, S. B. & Tham, C.S., (2016). Effectiveness of an Advanced Practice Nurse led Preoperative Telephone Assessment. *Journal of Nursing Care Quality*, 31(2), 191-196.
- ▶ Wade, V., Karnon, J., Eishaug, A., & Hiller, J. (2010). A systematic review of economic analyses of telehealth services using real time video communication. *BMC Health Services Research*, 10(233).