

## Case Study:

# Pediatric Tele dermatology: Improving Access in an Academic Children's Hospital

Children's Hospital of Pittsburgh of UPMC is a 296-bed facility that is distinguished nationally by its ranking in the top ten children's hospitals in 2012-13 by US News and World Report. As cited in the same US News and World Report, it was the fastest pediatric hospital in the U.S. to achieve Stage 7 recognition from HIMSS Analytics for its electronic medical record and has also been recognized by KLAS as the number one pediatric hospital in its use of health care information technology.

In accordance with the national shortage of pediatric dermatologists, Pittsburgh has only two board-certified pediatric dermatologists located within a 125-mile radius of the city. In order to improve access to care and decrease wait time for urgent pediatric dermatology consultations in the emergency room and inpatient floors, a formal telemedicine program was established in January 2011. A grant was obtained by Highmark Blue Cross Blue Shield to support a pilot of this program.

Between January 2011 and November 2012 a total of 492 consultations were seen by store and forward tele dermatology at Children's Hospital of Pittsburgh of UPMC. Of these, 305 (62%) were seen in the emergency department, 152 (31%) on the inpatient medical floors, 12 (2%) in the neonatal ICU's and 23 (5%) in the pediatric ICU's. The response time was less than 1 hour in all emergency room consultations and less than 12 hours (the majority, however, were less than 1 hour) on the inpatient floor and ICU consults. While this list is not all-inclusive, several examples of some of the most common reasons for teleconsultation included: urticaria, drug eruptions (DRESS and Stevens Johnson's syndrome), atopic dermatitis, skin infections (Staphylococcal scalded skin syndrome and eczema herpeticum), contact dermatitis, neonatal dermatoses, and atypical viral exanthems.

The process was implemented as follows: digital cameras were placed in locked safes in the emergency department and every inpatient floor and ICU so that they were readily available to the busy hospital teams. A consultation could then be initiated by a member of the emergency department or hospital team by downloading at least 3 high-quality, clear digital images directly into the patient's electronic medical record in Cerner Powerchart along with a full note explaining the chief complaint, medical history and physical examination. The hospital team then paged the dermatology resident on-call, who together with the pediatric dermatology attending remotely accessed the electronic record with a secure remote login and provided recommendations to the team both by phone as well as in the patient's electronic record. The primary in-house team then carried out the treatment as they saw fit based on these recommendations. For the majority of patients an in-person follow up with pediatric dermatology was performed later in the hospital or as an outpatient to ensure that the recommendations were effective and that the patient was improving. All interactions were HIPPA-secure and remain permanently archived in each patient's electronic medical record.



Our experience has demonstrated that an organized store and forward teledermatology program can enhance patient access to an underserved pediatric subspecialty, such as pediatric dermatology. It provides more time-efficient, precise care, decreasing patient travel and expense, and even in many cases decreasing prolonged hospital stays which previously may have occurred while patients waited in-house for a subspecialty in-person consult. This translates into cost savings to both the healthcare system and the patient. Our pediatric teledermatology program has been met with tremendous patient and provider satisfaction. The first month's pilot in 2011 also won a "Best of Blue Clinical Distinction Award" within Blue Cross Blue Shield. While the initial pilot grant has now been exhausted, a bridging grant was just provided by the Children's Hospital of Pittsburgh Foundation. The challenge moving forward will be to secure a more lasting and widespread insurance reimbursement pattern for these valuable store and forward interactions in order to continue to expand patient care.

[Click here](#) to view video – Pediatric Dermatology: Improving Access in an Academic Children's Hospital

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