

Establishment of multi-specialty telemedicine pediatric services in Appalachia and the scope of managed diagnoses

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Purpose

- WVU intended to improve patient access to care via two-way, real time interactive communication between the patient at the spoke site and the specialist at the hub site.

Background

- In 2018 WVU Medicine Children's (WVU) launched a telemedicine clinic in rural West Virginia that incorporated ten pediatric specialties: Cardiology, Endocrinology, Craniofacial surgery, Gastroenterology, Genetics, Infectious Disease, Nephrology, Orthopedics, Pulmonology, and Urology.
- The spoke site is a standard WVU clinic where a nurse practitioner sees the patient and then works with the appropriate specialist.
- She obtains the patient's history and perform a physical. She reviews them with the specialist. Then, the specialist is brought into the patient's room via video conferencing to communicate with the family.
- The specialist has immediate viewing capabilities of documentation, labs, and imaging with the shared charting platform.

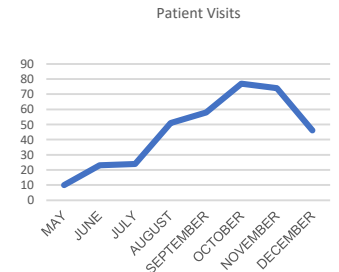
Methods:

- A quantitative analysis of historical electronic medical records was performed to evaluate: number of patient visits, if initial telemedicine visit was a new patient or return patient, follow up appointments scheduled via telemedicine, follow up visits scheduled at the hub site, procedures at the spoke site, and procedures at the hub site. The types of diagnoses seen by each department was also evaluated.

Results:

Top diagnosis evaluated

- **Cardiology**- Post op, Murmur, Supraventricular Tachycardia
- **Endocrinology**- Hypothyroidism, Short Stature, Growth hormone deficiency
- **Gastroenterology**- Constipation, Abdominal pain, Gastroesophageal Reflux
- **Genetics**- Abnormal newborn screen
- **Infectious Disease**- Osteomyelitis, MRSA infection, recurrent fevers
- **Nephrology**- Vesicoureteral reflux, Hypertension, Hydronephrosis
- **Neurology**- Observed seizure like activity, Epilepsy, Headaches
- **Craniofacial Surgery**- Post-op evaluation cleft lip/cleft palate repair
- **Orthopedics**- Knee pain, Toe-walking, Tibial/femoral torsion
- **Pulmonology**- Asthma, snoring, Bronchopulmonary dysplasia
- **Urology**- Recurrent urinary tract infections, undescended testicles, phimosis



DEPARTMENT	PATIENT VISITS
CARDIOLOGY	4
ENDOCRINOLOGY	39
GASTROENTEROLOGY	162
GENETICS	1
INFECTIOUS DISEASE	6
NEPHROLOGY	20
NEUROLOGY	31
CRANIOFACIAL SURGERY	1
ORTHOPEDECS	16
PULMONOLOGY	52
UROLOGY	30
INDEPENDENT	1
TOTAL	363

Department	Initial Telemedicine Visit- New Patient Visit	Initial Telemedicine Visit- Return Patient Visit	Scheduled follow up appointment via Telemedicine	Scheduled follow up appointment in Morgantown	Procedure in Morgantown	Procedure in Martinsburg
Cardiology	1	3	3	0	0	0
Endocrinology	20	17	37	0	0	0
Gastroenterology	102	28	143	1	26	16
Genetics	1	0	1	0	0	0
Infectious Disease	1	3	4	2	0	0
Nephrology	2	12	17	0	1	11
Neurology	19	12	12	3	8	5
Craniofacial surgery	0	1	1	0	0	0
Orthopedics	11	6	2	3	4	0
Pulmonology	23	8	51	0	10	2
Urology	20	7	14	6	14	7
TOTAL	200	97	285	15	63	41

Future Growth: The Telemedicine Clinic continues to have steady growth since its' inception. Each specialty continues to broaden the types of diagnoses they manage via telemedicine. The number of visits to the main campus continue to be consolidated for patient families. Due to the clinic's early success in increasing patient's access to care, WVU plans to open additional multi-specialty telemedicine clinics based on this model.