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Development and Implementation of an Evidence-Based Process for Scarce Resource Allocation

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Background

Intravenous immune globulin (IVIG) is a plasma-derived product from pooled donors. It has six FDA approved indications. It is also considered standard of care for a few other conditions in specific populations. Additionally, there is growing non-evidence-based use. Due to a global shortage, IVIG has become increasing difficult to obtain.

Methods

In June 2019, key stakeholders from impacted medical services convened to discuss the situation and develop evidence-based criteria for use. These recommendations were sent to department and division leaders for review and comment. The agreed upon criteria were approved by Pharmacy and Therapeutics (P&T) Committee in July 2019. Along with these approved criteria, an appeals process was implemented to address situations of desired IVIG treatment that deviated from the approved criteria. A TheraDoc® alert was created to notify pharmacy formulary administration when an order was placed for IVIG. Requests for deviation from approved criteria were submitted by providers and addressed by the P&T Secretary (pharmacist) and Chair (physician) via electronic and verbal communication.

Criteria for Use

Hematology/Oncology:
- ITP population
- Infant ALL

Bone Marrow Transplant and Cell-based Immunotherapy:
- Replacement threshold for all patients will be < 400 mg/dL , except, for SCID and CVID the threshold is < 800 mg/dL
- Post-CAR T

Neurology:
- Chronic Inflammatory Demyelinating Polyneuropathy
- Guillain-Barre Syndrome
- Myasthenia Gravis
- Myelin Oligodendrocyte Glycoprotein
- Opsoclonus Myoclonus Syndrome

Nephrology:
- Antibody-mediated transplant rejection
- Parvovirus

Rheumatology:
- Juvenile dermatomyositis

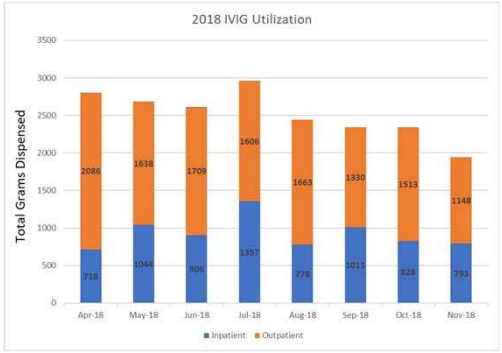
Heart Transplant:
- Antibody-mediated transplant rejection

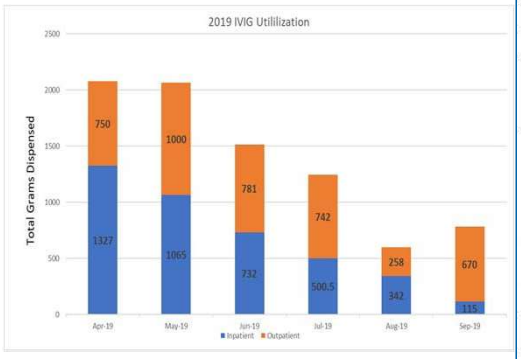
Liver Transplant:
- Antibody-mediated transplant rejection
- Post-transplant lymphoproliferative disease

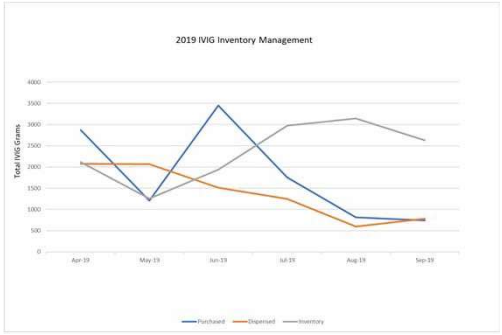
Infectious Disease:
- Kawasaki's Disease

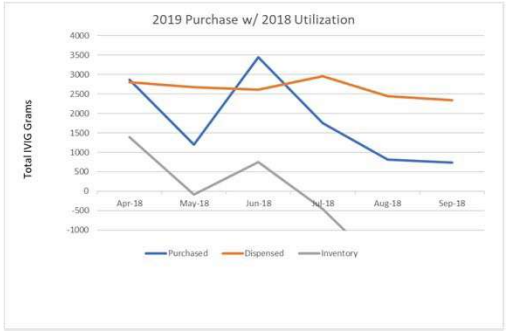
Immunology:
- Primary immunodeficiency

Results



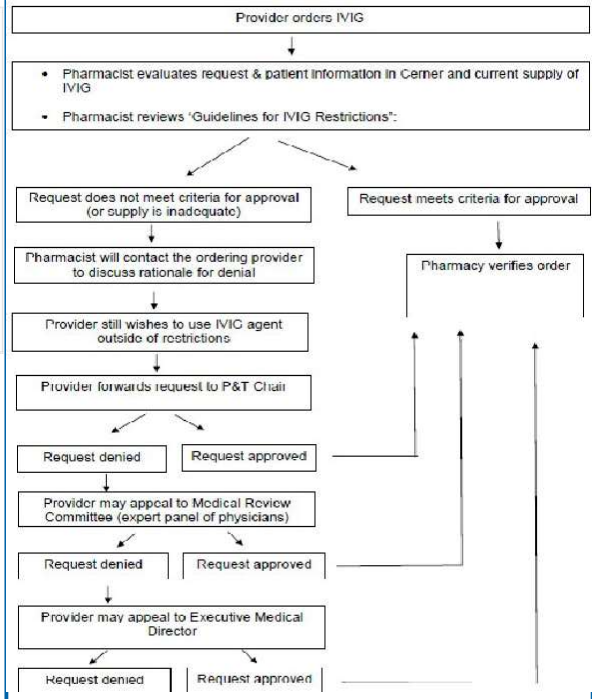






TheraDoc®

Process for Provider Appeal



Results

From April 2019 to August 2019, a 72% reduction in total IVIG administered was seen across the Children's Mercy system. This correlated exactly with the 72% reduction in purchasing activity during this time. 11 occasions where providers requested IVIG use deviating from the approved criteria list. When comparing the 2018 utilization rate of IVIG with the purchasing capacity of 2019, it was modeled that without an extreme intervention, Children's Mercy would have run out of IVIG before August 2019.

Conclusions

Development, implementation, and promotion of adherence to an evidence-based criterion allowed our scarce IVIG supply to be sustained. Further refinement of the criteria for use is ongoing, as is an evaluation of IVIG utilization by indication, pre- and post-implementation. This process can be applied to other situations of scarce resources.