Infection and bone marrow suppression surveillance is standard of care in transplant recipients. Ordering incorrect lab tests can lead to repetitive blood draws, delay in results and patient care, increased cost (multiple lab visits to collect missed or correct tests), and potential patient dissatisfaction.

In 2016, a protocol aimed at reducing sources of variability in monitoring the complete blood count (CBC) and cytomegalovirus (CMV) infection status of heart, liver, and kidney transplant patients was established. Cost in US dollars.

- Identified cost of CBC vs CBC with differential and CMV vs CMV-PCR.
- Verified that the less expensive labs provided adequate and necessary data to complete routine patient surveillance.
- Chose the most cost-effective tests (CBC with differential and CMV-PCR).
- Created new and standardized order sets across all solid organ transplant groups with the most cost-effective tests.
- Assigned attending by alpha split to patients’ lab orders to help patients identify the specific labs required for routine surveillance.
- Educated patients and staff regarding changes.
- Compared the proportion of incorrect tests and associated costs between the pre- and post-protocol periods.

DISCLOSURES

No financial relationships with commercial interests to disclose.

RESULTS

- 1,532 CMV tests were collected among all solid organ transplant recipients between FY-16 and FY-17
  - n=692 (45%) corresponded to the pre-protocol era
  - n=840 (55%) corresponded to the post-protocol era
  - After protocol implementation, there was a 6.6% reduction in inappropriate CMV testing across all organs (P<0.001), which resulted in savings.
- The most significant decline in the number of inappropriate CMV test after protocol implementation was with the liver transplant recipient cohort (pre- vs. post-protocol: 33.5% vs. 1.2%, p <0.001), which resulted in savings.
- 11,231 CBC tests were collected among all solid organ transplant recipients between FY-16 and FY-17
  - n=6,201 (55%) corresponded to the pre-protocol era
  - n=5,030 (45%) corresponded to the post-protocol era
  - The most significant decline in the number of inappropriate CBC tests after protocol implementation was with the heart transplant recipient cohort (pre- vs. post-protocol: 26.2% vs. 20.3%, p=0.04), which resulted in savings.

CONCLUSIONS

Standardizing post-transplant laboratory testing in solid organ transplant recipients resulted in reduced number of inappropriate tests and associated healthcare costs. These changes could be translatable across other disciplines and implemented in other facets of patient care. Further studies are needed.