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Study Title

Determining Workload Capacity of CT Processing Laboratory

Study Description

Assessing the day-to-day capacity for the SCL is challenging yet necessary to ensure patient safety, staff well-being/retainment and ultimately, sustained productivity. Moreover, SCLs are often requested to justify resource utilization and budgeting requests in the context of other comparable HSC laboratories. However, standards on how to determine daily/weekly operational capacity and benchmark data for the industry are not readily available. Some unique aspects of SCL operations which make comparing one laboratory to another are wide variation in hands-on-time required for various procedures (e.g. numbers of allogeneic cord blood/bone marrow/apheresis products requiring red cell reduction vs. unmanipulated or autologous products) and the availability of automation. In addition, the scope of practice (e.g. whether SCL staff are present at collection site and/or perform bedside thawing) also varies. In addition, SCLs differ from other clinical labs in varying availability of software to manage testing, reporting, and integration of patient data. To address these gaps we undertook time studies of ~20 common procedures/tasks in three distinct but large academic transplant programs using manual processing. Staff were instructed to time actual hands-on time spent performing tasks, including necessary paperwork/data entry (Table 1). Tasks such as infusion of cryopreserved products and preparation of HPC for shipping required significant time investment commensurate with HPC processing. Also DLI product manipulations take significant time. Since, many SCL laboratories are not involved in product infusions or do not serve as NMDP sites, inclusion of these activities would significantly alter transplant volume capacity per FTE.

Study Status

Completed

Publication Number

141

Teams

CT

Study Leaders

Young