GADGET (GEMINI Analytics Dashboard to Guide Effective Transfusion)

PROJECT AIMS

There are 48 randomized controlled trials to inform appropriate use of red cell transfusion, yet rates of unnecessary transfusion remain substantial (20% for red cells, 30% for platelets, 35% for plasma, and 50% for albumin). This highlights a large modifiable gap in knowledge translation for transfusion practice. Unnecessary transfusions exacerbate on-going blood shortages, harm patients, and create wasted costs. We have partnered with GEMINI to create an online dashboard for personalized, behaviorally informed feedback on blood prescribing for clinicians and administrators. We have received grant funding to assemble a team of biostatistics, computer scientists, and behavioral experts to produce and refine the dashboard. Our future plan is for a randomized trial at GEMINI hospitals to assess the dashboard's impact on blood utilization.

We are seeking clinicians who may be interested in leading quality improvement and implementation initiatives in transfusion. GADGET subsumes several sub-projects (e.g. one for each blood product)…

   
Randomized trials and guidelines published for transfusion guidance (e.g., red cell use informed by 48 trials involving 21,000 patients).

 Provincial blood programs conducted repeated audits and published reports.

 High rates of unnecessary transfusions: 20% for red cells, 30% for platelets, 35% for plasma, and 50% for albumin.

 Unnecessary transfusions lead to negative outcomes for patients, donors, and healthcare costs.

 Need for a novel approach to reduce unnecessary transfusions.

 Developed a big-data approach to tackle unnecessary transfusions.

 Collaboration with GEMINI medicine (healthcare database covering 30 Ontario hospitals).

 Creation of GADGET, a real-time online dashboard to display personalized blood prescribing data for clinicians and administrators.

 Expert team assembled, including biostatisticians, computer and behavioral scientists.

 GADGET designed to show physicians how their blood use ranks among peers and gather user perceptions for dashboard refinement.

 Future plan for a randomized trial at GEMINI hospitals to assess the dashboard's impact on blood utilization.

 Project aligned with the goal of optimizing blood utilization at a system level.