

Table. Number of surgical procedures sampled each time point of the study*

Surgical procedures	Baseline	Intervention 1	Intervention 2	One year
General surgery	78	61	48	64
Orthopedics	25	28	30	23
Endoscopy	33	24	24	28
Urology	21	11	14	27
Radiology (Int)	3	14	12	8
Neurosurgery	9	10	13	4
Plastics	15	13	16	13
Cardiac	8	5	9	7
Dental/OMF	14	18	8	18
Otolaryngology	86	76	46	65
Hematology	4	4	4	6
Botox injections	7	15	18	45
Ophthalmology	7	13	11	12
Other	1	2	2	3

*Int indicates interventional, OMF indicates oral maxillofacial surgery and other

indicates kidney biopsies, electroencephalogram lead placement, and gynecology procedures (2)

Supplemental Figure Legends

Supplemental Figure 1 – Example of “Voice of the Customer.” Representative data collected by recording the “*voice of the customer.*” Using this tool, we interviewed all stake holders involved in the anesthesia supply chain [anesthesiologists (MD), anesthesia assistants (AA), materials suppliers, and anesthesia technicians (ATs)]. We asked questions regarding cost effectiveness, timeliness, and quality of the current process - requirements critical to the quality and success of the supply chain. Sample questions included: What does it cost in terms of time and money when a product needs to be ordered emergently; how much time does it take to get the product from the workroom if it is not in the OR; and how satisfied are you with the location of the products in the OR cart? This excerpt of the tool revealed dissatisfaction with supply stocking and stocking levels by all staff interviewed.

Supplemental Figure 2 – Swim Lane for the anesthesia supply chain. *Value Stream Map or Swim Lane* tracks in detail the steps a product takes from the initiation of an order to the final “customer” (anesthesia provider and patient). It identifies duplicated efforts or “non-value added steps” that can be eliminated. Such duplications are depicted here with circles: the stock level check by multiple people multiple times a day. FTE represents full time equivalent, MD anesthesiologists, AA anesthesia assistants, and AT anesthesia technicians.

Supplemental Figure 3 – Number of call-outs for each stage of the study. Box-plots show median, interquartile range and 5th and 95th percentiles (whiskers) for number of call-outs at each study period. With regards to number of call outs for supplies, from baseline to the one year follow up time point, the redesign of the anesthesia carts [interventions 1 (Int 1) and 2 (Int 2)]

significantly decreased the number of daily call-outs for anesthesia supplies during weekdays (overall effect, $p=0.028$), which was also sustained at the one year follow up time point.