

Preoperative Clinic in a Pediatric Hospital: who benefits the most?

Laura Alencar C N Lima M.D., Ph.D., Gianluca Bertolizio M.D., F.R.P.C.P.

Department of Anesthesia, Montreal Children's Hospital, 1001 Decarie Blvd, Montreal, QC, Canada

INTRODUCTION. Preoperative Clinic (POC) decreases cancellations within 24 hours prior surgery, which in children are 4%-26% and mostly preventable^{1,2}. From 2013 to 2015, we gradually implemented a POC for patients scheduled as day surgery or same-day admission. The POC included: mandatory visit by nurse practitioner and pediatrician; anesthesiologists' visit for complex patients; single preoperative electronic document and centralized booking system. We determined the incidence and the causes of cancellations during and after the POC implementation.

METHODS. Retrospective study from January 2013 to December 2019. Preventable cancellations included: patient not contacted/unavailable/refused surgery, blood products unavailable, booking errors, operative room list changed/overbooked by surgeon, need of further investigation, documentation incomplete/unavailable, preparation issues, surgery no longer indicated, patient not NPO/not shown. Unpreventable cancellations included: anesthesiologist/surgeon/nurse unavailable, case standby, emergency surgery, environmental/equipment issues, hospital/ICU/PACU bed unavailable, patient with no accompaniment or late, previous case too long. Possibly preventable cancellations included patient sickness only. Patients already admitted were excluded from the analysis. Pearson test was used to correlate the POC visits with the cancellations. Cancellations during (2013-2015) and after (2016-2019) the POC implementation were compared with Fisher exact test.

RESULTS. We recorded 37,474 surgeries, 15,919 preoperative visits and 2,500 (6.6%) cancellations. Table 1 shows the overall cancellation rate: some specialties decreased the preventable cancellations after the POC implementation (grey columns). Figure 1 shows the POC visits, which inversely correlated with the preventable cancellations only ($r=-0.98$, $p<0.001$; Figure 2). The POC decreased system-related (i.e., booking errors) but not patient-related preventable cancellations (Table 2).

CONCLUSIONS. In our Institution, POC decreased the preventable cancellations. Possibly preventable cancellations appeared not to be affected. Otorhinolaryngology, Ophthalmology, Urology and Plastics are the specialties that benefited the most.

REFERENCES. 1. UEA Beijnen et al., Ann Plast Surg 80 (4), 412 (2018). 2. GD Pohlman et al., J Urol 188 (4 Suppl), 1634 (2012).

Specialty	Unpreventable	Possibly Preventable	Preventable	Before POC n ^o (% relative to surgeries)	After POC n ^o (% relative to surgeries)
Otorhinolaryngology	312	331	174	85 (0.6%)	89 (0.4%)*
General Surgery	169	149	120	52 (0.4%)	68 (0.3%)
Ophthalmology	52	128	81	43 (0.3%)	38 (0.2%)*
Urology	112	146	68	40 (0.3%)	28 (0.1%)*
Plastic	89	52	68	36 (0.3%)	32 (0.1%)*
Maxillo Facial	37	66	47	18 (0.1%)	29 (0.1%)
Other surgical specialties	183	58	58	20 (0.1%)	38 (0.2%)
Total	954	930	616	294 (2.2%)	322 (1.4%)*

* p<0.001; compared to before POC implementation

Table1. Number of cancellations during the period 2013-2019.

Some specialties significantly decreased preventable cancellations with the Perioperative Clinic (POC) implementation (grey columns).

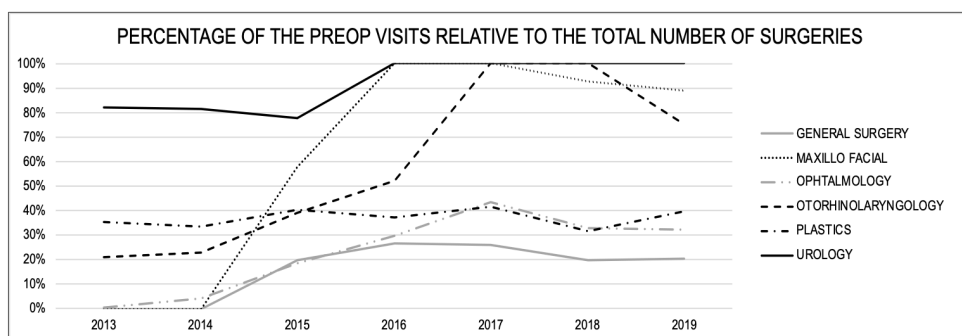


Figure 1. Preoperative visits among specialties with high surgical activity.

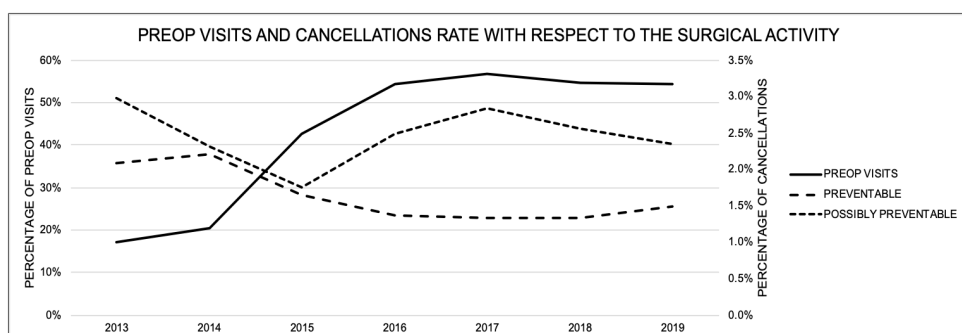


Figure 2. Preop visits, preventable and possibly preventable cancellations.

Reason	Before POC n ^o (% relative to surgeries)	After POC n ^o (% relative to surgeries)
Operating room list changed by surgeon	164 (1.2%)	75 (0.3%)*
Patient unavailable or refused surgery	39 (0.3%)	68 (0.3%)
Surgery no longer indicated	26 (0.2%)	58 (0.2%)
Patient not NPO	24 (0.2%)	57 (0.2%)
Patient needs further investigation	15 (0.1%)	24 (0.1%)
Overbooking by surgeon	14 (0.1%)	10 (<0.1%)+
Office booking error	5 (<0.1%)	11 (<0.1%)
Surgery already performed	3 (<0.1%)	5 (<0.1%)
Documentation incomplete or unavailable	2 (<0.1%)	8 (<0.1%)
Patient not contacted	1 (<0.1%)	1 (<0.1%)
Operative room booking error	1 (<0.1%)	5 (<0.1%)
Total	294 (2.2%)	322 (1.4%)*

* p<0.001; + p=0.02 compared to before the POC implementation.

Table 2. Preventable cancellations and Preoperative Clinic (POC) implementation.