

Utilizing Time-Driven Activity Based Costing to Explore Variation in the Value of Hip Arthroscopy for Acetabular Labral Repair

Dean MC, Etges AP, Cherian NJ, LaPorte ZL, Dowley KS, Torabian KT, Eberlin CT, Best MJ, Martin SD

Appendix Table 1. Time-Driven Activity-Based Costing (TDABC) Process Maps: Preoperative Phase

Task	Personnel	Duration (minutes)	Probability
Check-In/Registration	Receptionist/Registration Clerk	10	1
Pre-Op Room Preparation	Orderly	10	1
Anesthesia Machine Preparation	Anesthesia tech	5	1
Anesthesia ‘MSMAIDS’ Setup	CRNA	20	1
Registered Nurse Consult and Assessment (consent, IV placement, etc.)	Registered nurse	35	1
Preoperative Monitoring	Registered nurse	5/hour	NA*
Circulating Nurse Consult	Circulating nurse	8	1
Orthopedics Pre-Op Consult and Evaluation (Discussion of risks, benefits, post-op pain management, surgical site confirmation/markings)	Orthopedic surgeon	10	1
Surgical Team Consult and Assessment	Resident, Fellow, or PA	10	NA [†]
Anesthesia Consult with Pre-Op Evaluation (i.e., consent, history, physical, airway examination, post-operative pain management)	Anesthesiologist	15	1
CRNA Consult and Assessment	CRNA	3	1
Patient Transport from Pre-Op Holding to OR	Anesthesiologist	5	0.2
Patient Transport from Pre-Op Holding to OR	CRNA	5	0.8

*Number of occurrences/time interval derived from case-specific timestamps. [†]Member of team derived from operative note.

Abbreviations: Pre-Op, preoperative; MSMAIDS, machine/suction/monitors/airway/intravenous access/drugs/special; CRNA, nurse anesthetist; PA, physician's assistant/associate; OR, operating room.

Appendix Table 2. Time-Driven Activity-Based Costing (TDABC) Process Maps: Intraoperative Phase

Personnel	Duration before case (preparation time; minutes)	Start time*	Stop time*	Duration after case (preparation time; minutes)	Probability
Anesthesiologist	0	Anesthesia start	Incision	3	1
Circulating nurse #1	22	Wheeled into OR	Wheeled out of OR	15	1
Circulating nurse #2	22	Wheeled into OR	Wheeled out of OR	15	0.9
Medical device sales representative	0	Incision	Closure	0	0.1
Nurse anesthetist (CRNA)	30	Anesthesia start	Anesthesia stop	0	1
Scrub technician	30	Wheeled into OR	Wheeled out of OR	10	1
Resident, Fellow, or PA	0	Wheeled into OR	Wheeled out of OR	3	NA [†]
Orthopedic surgeon	20	Incision	Closure	5	1
Radiology technologist	15	Wheeled into OR	Closure	0	1

*Time interval derived from case-specific timestamps. [†]Member of team derived from operative note.

Abbreviations: PA, physician's assistant/associate; OR, operating room.

Appendix Table 3. Time-Driven Activity-Based Costing (TDABC) Process Maps:
Postoperative Phase

Task	Personnel	Duration	Probability
Sign out to PACU team	Resident, Fellow, or PA	5	NA*
Clean room	Orderly	15	1
Clean after anesthesia	Anesthesia tech	5	1
Monitor patient in PACU	Registered Nurse	6/hour	NA [†]
Post-Op visit	Orthopedic Surgeon	5	1
Post-Op visit	Anesthesiologist	3	1
Discharge	Registered Nurse	20	1
Surgical documentation	Orthopedic Surgeon	12	1

*Member of team derived from operative note. [†]Number of occurrences determined from case-specific timestamps.

Abbreviations: PACU, post-anesthesia care unit; PA, physician's assistant/associate; Post-Op, postoperative.