Safety in Office-Based Anesthesia: Research and Outcomes 2021

Fred E. Shapiro DO, FASA
Associate Professor of Anaesthesia
Harvard Medical School
Beth Israel Deaconess Medical Center
Department of Anesthesia, Critical Care,
and Pain Medicine
Boston, MA

Beth Israel Lahey Health

Beth Israel Deaconess Medical Center | HARVARD MEDICAL SCHOOL TEACHING HOSPITAL

1

Overview 2021

Beth Israel Deaconess Medical Center
HARVARD MEDICAL SCHOOL TEACHING HOSPITAL

Growth of ambulatory anesthesia in both ASC and OBS over past two decades

Most safety outcome data is limited

Little data on safety of ASC or OBS individually

No true benchmarks

No disclosures or conflicts of interest

Beth Israel Lahey Health

2

Office-Based Anesthesia: Safety and Outcomes

Fred E. Shapiro, DO,* Nathan Punwani, MD,† Noah M. Rosenberg, MD,‡ Arnaldo Valedon, MD,§ Rebecca Twersky, MD, MPH,‖ and Richard D. Urman, MD, MBA¶   (Anesth Analg 2014;119:276–85)

Lack of randomized controlled trials

Enhanced quality of care :

- proper procedure and patient selection

- provider credentialing

- facility accreditation

- patient safety checklists (cognitive aids)

- professional society guidelines

3

---

journal
of healthcare risk management

ASHRM
AMERICAN SOCIETY FOR HEALTHCARE RISK MANAGEMENT

Ambulatory Surgical Risk

A Comparison between office and other ambulatory practices: Analysis from the National Anesthesia Clinical Outcomes Registry

23 million Anesthesia cases, 2010 - 2014

180,000 office vs 4.6 million ASC

Statistically significant differences in patient demographics, procedure types, and reported events

4

Research in 2021

Beth Israel Deaconess Medical Center
HARVARD MEDICAL SCHOOL TEACHING HOSPITAL

Advent of EHR allows better analysis

New research provides quantitative insights

Software designed for Anesthesia care

Beth Israel Lahey Health

5

2016-19 OBA Research

Beth Israel Deaconess Medical Center
HARVARD MEDICAL SCHOOL TEACHING HOSPITAL

Retrospective data **~90,000 patients** in growing anesthesia practice from **2016-2019**

Data extracted from **administrative claims and electronic medical records**

Segregated into ASC and OBS

Beth Israel Lahey Health

6

ASC and OBS 2019 (Annualized)

Volume	ASC	OBS	Total	% OBS
Number of Procedures	31,428	8,954	40,382	22.2%
Complication Rate	0.0727%	0.1268%	0.0847%	

7

Demographics ASC vs OBS

	ASC	OBS
Average Age	52.6	**58.5**
Average ASA Status	2.10	**2.24**
Average Number of Procedures per MD per Year	661	**167**
Average Number of Procedures per Office per Year	4,490	**176**

Beth Israel Lahey Health

8

Most Common Procedures ASC vs OBS 2019

ASC		OBS	
Procedure Name	**% of 2019 annualized Total**	**Procedure Name**	**% of 2019 annualized Total**
Cataract removal	38.9%	Colonoscopy	17.3%
Epidural Steroid Injection (lumbar)	20.1%	Prostate Biopsy	15.5%
Arthroscopy (shoulder)	13.8%	Angiogram (upper extremity)	13.4%
Arthroscopy (knee)	11.4%	Cystoscopy	8.8%
Microdiscectomy (lumbar)	5.2%	Uterine Fibroid Embolization	7.8%

Beth Israel Lahey Health

9

Future Direction

Suggestion: Field would benefit if everyone undertakes research and publishes

Develop best practices, safety protocols and benchmarks

Beth Israel Lahey Health

10

References

Shapiro FE, Punwani N, Rosenberg NM, et al. Office-based anesthesia: safety and outcomes. *Anesth Analg.* 2014;119:276–85.

Jani S, Shapiro FE, Kordylewski H, et al. A comparison between office and other ambulatory practices: analysis from the National Anesthesia Clinical Outcomes Registry. *J Healthc Risk Manag* 2016;35(4):38–47.

Beth Israel Lahey Health

11