

DELIVERED ELECTRONICALLY

TO: Green Mountain Care Board

FROM: Geoffrey Battista
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RE: Outpatient Surgical Capacity and Volumes

DATE: December 29, 2021

I. Introduction

On July 30, 2021, the Collaborative Surgery Center (CSC) applied to the Green Mountain Care Board for a Certificate of Need (CON) to establish a multi-specialty ambulatory surgical center in Colchester, Vermont consisting of four operating rooms. CSC plans to open the new ambulatory surgical center within 12 to 18 months of obtaining a CON. Board staff have prepared this report regarding outpatient surgical capacity and volumes to help the Board analyze CSC's application.

II. Approach

Board staff anticipate that the new ambulatory surgical center will have a service area that extends throughout northwestern Vermont, a six-county region served by five hospital outpatient departments and two ambulatory surgical centers. In October 2021, Board staff sent a survey to these facilities. The survey included two tables:

1. "Outpatient Surgical Capacity and Volume" (Survey Table 1) determined the occupancy rate of operating rooms and procedure rooms. Total capacity equaled total available hours according to day-hour inputs divided by average procedure length. Total volume was reported by facilities. Occupancy rate equaled total volume divided by total capacity.
2. "Case Volume by Room and Product Line" (Survey Table 2) determined the total volume of cases by product line for operating rooms and procedure rooms. Board staff classified cases according to the following product lines: Orthopedics/Musculoskeletal, Ear, Nose, and Throat, Ophthalmology, Urology/Male Reproduction, Obstetrics/Gynecology, Gastrointestinal, Dentistry, Plastic Surgery, and All Other Outpatient Surgery. All values were reported by the facilities themselves. Facilities had to list the product lines under All Other Outpatient Surgery.

Facilities were also asked to explain differences between Survey Tables 1 and 2 in a separate narrative.

Board staff aggregated the responses by facility, room type, and product line according to two scenarios. The **Status Quo** scenario assumes that CSC does not enter the market; case capacity and volume are the sums of those projected by existing facilities. The **New Entrant** scenario assumes that CSC enters the market in CY 2023; case capacity and volume are those reported by CSC and existing facilities. As CSC does not propose procedure rooms, only operating rooms are considered in this report.

Efficient HOPDs and ASCs can expect to use at least 75% of their OR-hours per year. A 2010 analysis of 241 U.S. and Canadian HOPDs and ASCs found a median occupancy rate of 75.3% with one in ten

facilities attaining an occupancy rate of 93.9% or greater.¹ Smith et al. assume an 80% occupancy rate when modelling OR performance in a hospital setting.² In a 2011 interview in Becker's ASC Review,³ one expert notes that benchmarks should consider the practice's characteristics and scope of products:

Although 60 percent is often the norm, it's not the "benchmark" [that] centers should measure themselves against. The benchmark is in the 70-80 percent range depending on the type of center, with single-specialty centers in the higher range and multi-specialty centers towards the lower end.

Please note the following limitations when interpreting the results for each scenario:

- Providers could assign cases to product lines as they saw fit. In the future, Board staff may denote diagnosis or procedure groupers to classify cases in a uniform manner.
- Capacity and volume are self-reported by facilities. The inputs behind their projections, e.g., turnaround time and average procedure length, are not uniform.
- Providers could project changes to volume as they saw fit. Some case volumes in the source data are not whole numbers due to percentage-based projections.
- Survey Tables 1 and 2 did not yield identical case volumes for operating rooms. These discrepancies, though small and consistent year-to-year, have not yet been reconciled.
- Increases to case volume are treated as new cases, i.e., not captured from other providers.
- Projections do not account for competitive responses in a dynamic market.

Please note that this report examines the issue at a high level. Its findings should be considered in the context of other evidence at the Board's disposal. For example, CSC has requested permission to undertake all ambulatory surgical center procedures allowed by Medicare.

III. Results

A. Capacity and Volume

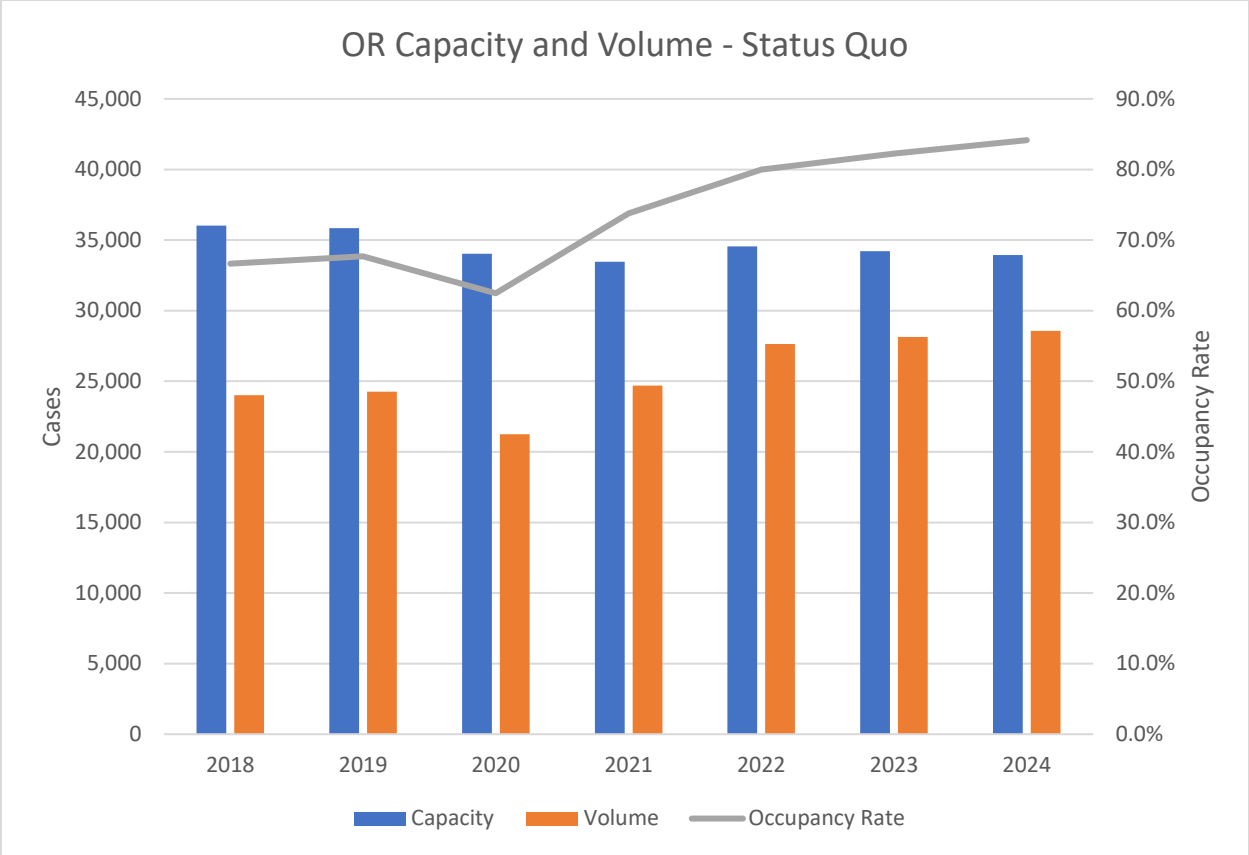
This section aggregates OR case capacity and volumes as submitted in Table 1. The figures and tables represent outcomes for both the Status Quo and New Entrant scenarios. All OR product lines are represented, including those not proposed by CSC.

In the Status Quo scenario, OR capacity plateaus at around 34,000 cases per year from 2020 onward. Case volume increases over this period from 21,000 in 2020 to 28,500 in 2024. Increasing volume will draw the OR occupancy rate upward to 84.2% in 2024.

¹ McKesson OR Benchmarks Collaborative, 2012. Data for benchmarking your OR's performance. *OR Manager* 28. <https://www.ormanager.com/wp-content/uploads/2012/06/ORMVol28No1ORBenchmarks.pdf>

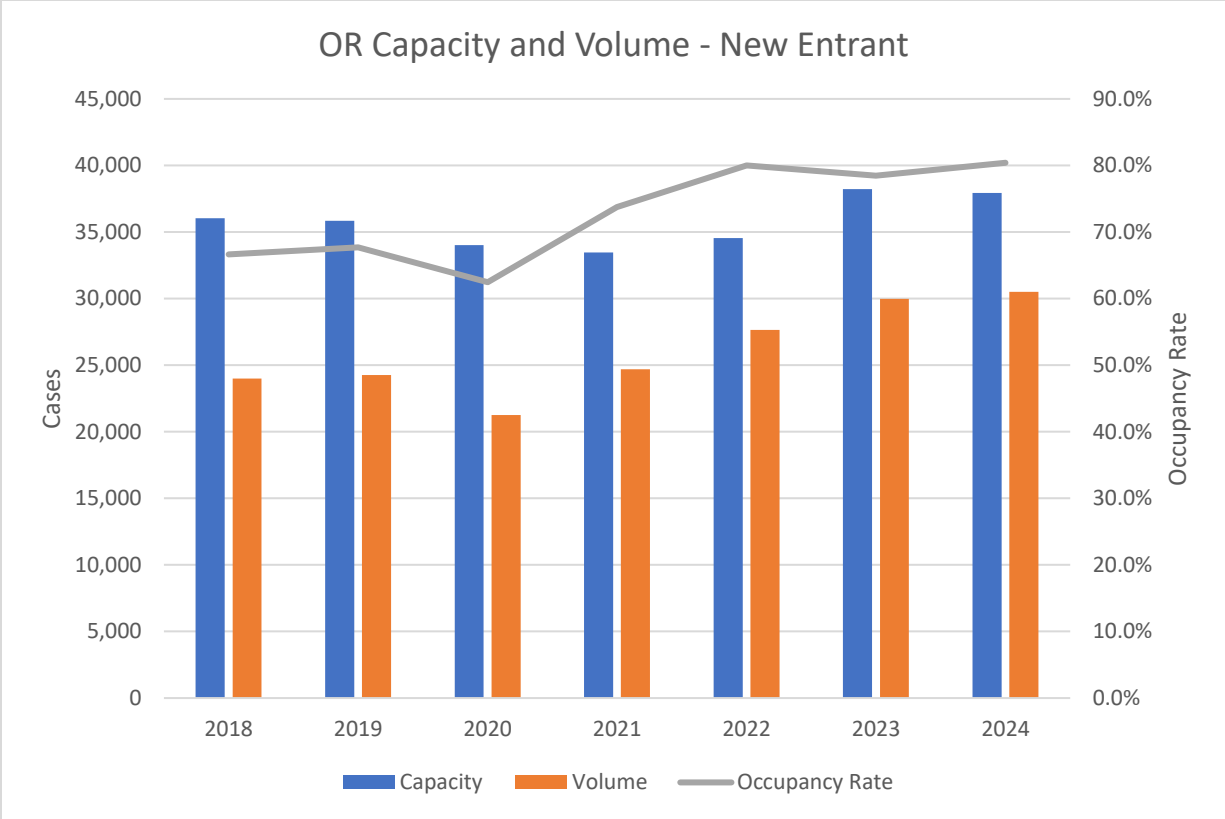
² Smith, C.D., Spackman, T., Brommer, K., Stewart, M.W., Vizzini, M., Frye, J., Rupp, W.C., 2013. Re-Engineering the Operating Room Using Variability Methodology to Improve Health Care Value. *Journal of the American College of Surgeons* 216, 559–568. <https://doi.org/10.1016/j.jamcollsurg.2012.12.046>

³ Fields, R., 2011. Defining "Full Utilization" of an Ambulatory Surgery Center: Q&A With Jim Scarsella of Anesthesia Staffing Consultants. *Becker's ASC Review*. <https://www.beckersasc.com/asc-news/defining-full-utilization-of-an-ambulatory-surgery-center-qaa-with-jim-scarsella-of-anesthesia-staffing-consultants.html>



	2018	2019	2020	2021	2022	2023	2024
Capacity	36,026	35,842	34,026	33,474	34,553	34,217	33,939
Volume	24,006	24,269	21,254	24,692	27,645	28,149	28,563
Excess Capacity	12,020	11,573	12,772	8,782	6,909	6,068	5,377
Occupancy Rate	66.6%	67.7%	62.5%	73.8%	80.0%	82.3%	84.2%

In the New Entrant scenario, OR capacity increases to around 38,000 cases per year by 2024. Case volume increases over this period from 21,000 in 2020 to 30,500 in 2024. Increasing volume will draw the OR occupancy rate upward to 80.4% in 2024.



	2018	2019	2020	2021	2022	2023	2024
Capacity	36,026	35,842	34,026	33,474	34,553	38,217	37,939
Volume	24,006	24,269	21,254	24,692	27,645	29,989	30,506
Excess Capacity	12,020	11,573	12,772	8,782	6,909	8,228	7,434
Occupancy Rate	66.6%	67.7%	62.5%	73.8%	80.0%	78.5%	80.4%

The New Entrant scenario—which adds CSC’s capacity and volume to northwestern Vermont—increases OR capacity by 4,000 cases per year, or an 11.8% increase from Status Quo projections. OR volume increases by nearly 2,000 cases per year, or a 6.4% increase from the status quo. Overall, the New Entrant scenario lowers the occupancy rate by 6.1%, or 3.8 percentage points, by 2024.

B. Operating Room Volume by Product Line

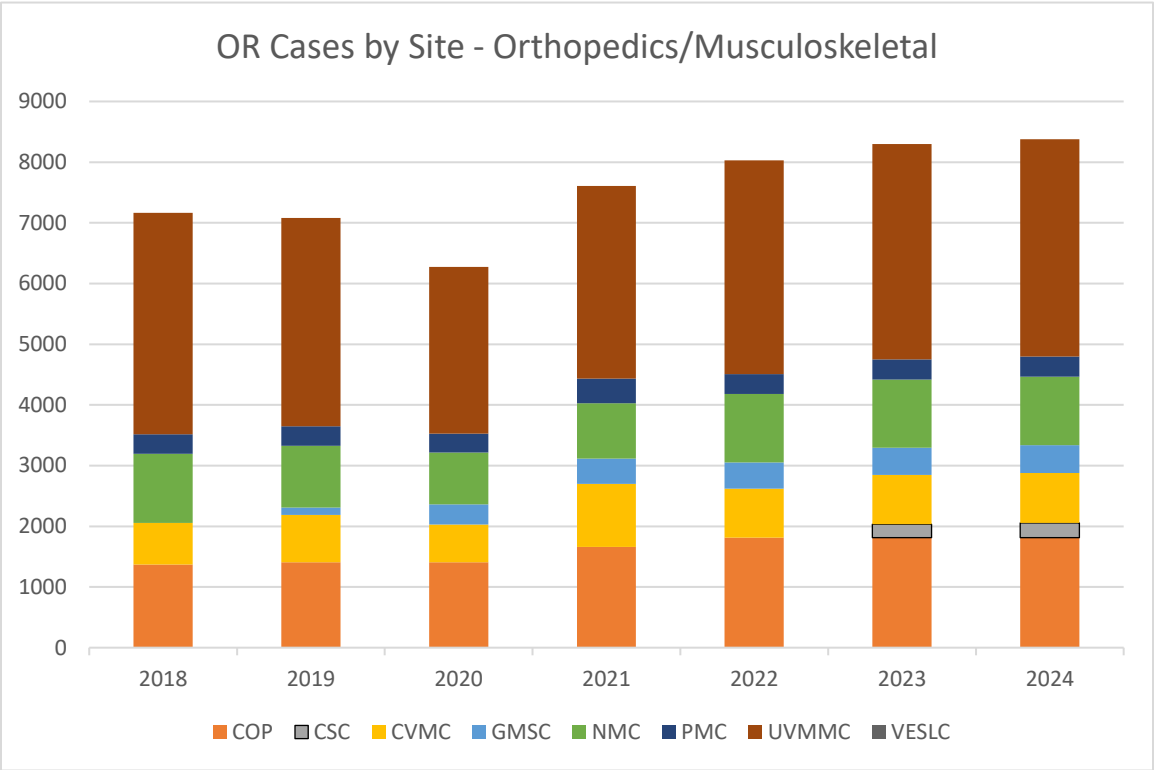
This section aggregates OR case volumes per product line as submitted in Table 2. All figures show volumes under the New Entrant scenario. Only OR product lines proposed by CSC are included.

The New Entrant Scenario increases the volume of the following service lines by 2024:

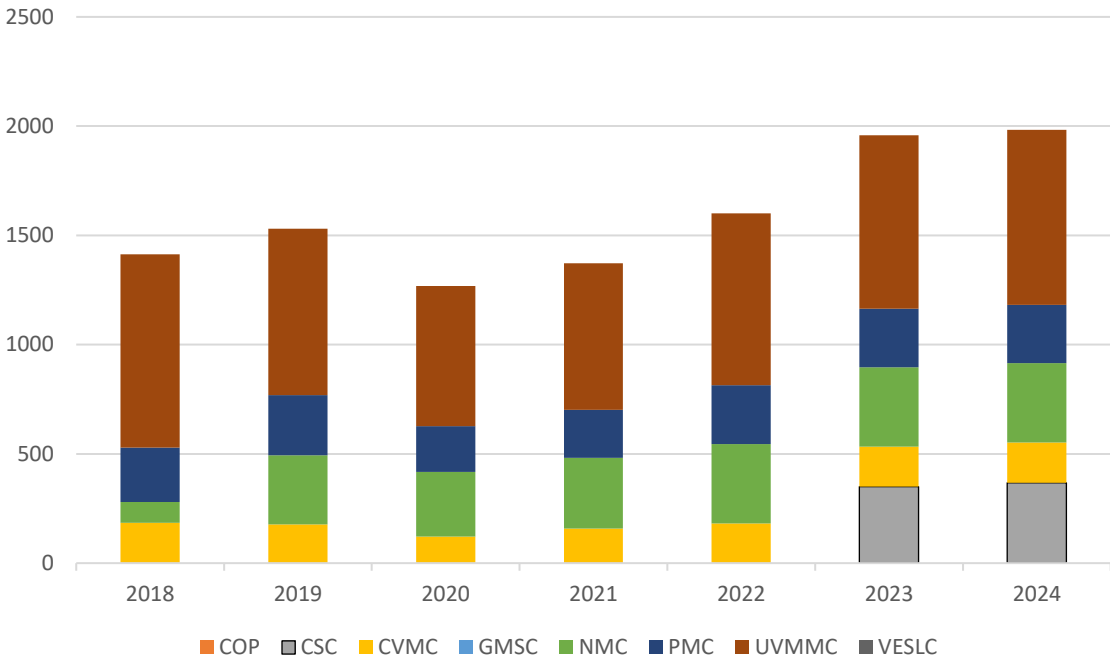
Orthopedics/Musculoskeletal (3.8% above the Status Quo scenario), Ear, Nose, and Throat (22.8%), Urology/Male Reproduction (20.5%), Obstetrics/Gynecology (8.9%), Dentistry (52.3%), Plastic Surgery (21.6%), and Other Outpatient Surgery excluding Gastrointestinal and Ophthalmology (6.1%).

Product Line	CY 2023		CY 2024	
	New Entrant Volume	Change from Status Quo	New Entrant Volume	Change from Status Quo
Orthopedics/Musculoskeletal	220	3.5%	242	3.8%
Ear, Nose, and Throat	350	21.8%	368	22.8%
Urology/Male Reproduction	400	19.9%	420	20.5%
Obstetrics/Gynecology	225	8.6%	236	8.9%
Dentistry	200	49.6%	210	52.3%
Plastic Surgery	200	21.0%	210	21.6%
Other Outpatient Surgery	245	5.9%	257	6.1%

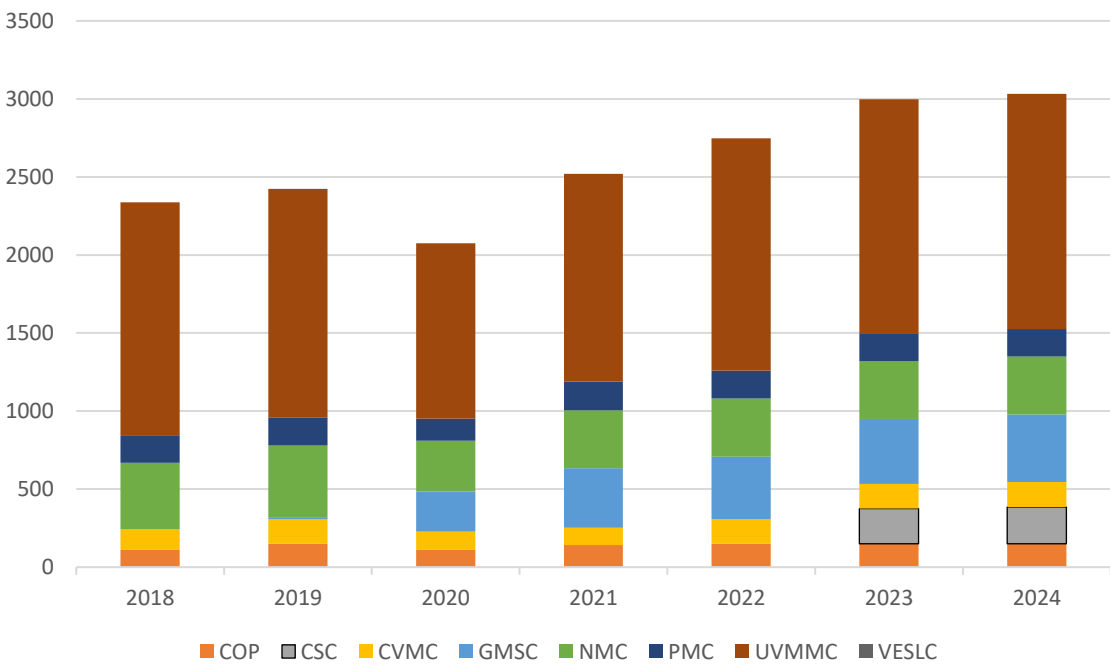
The figures below show the impact of CSC operating rooms on case volume in 2023 and 2024.



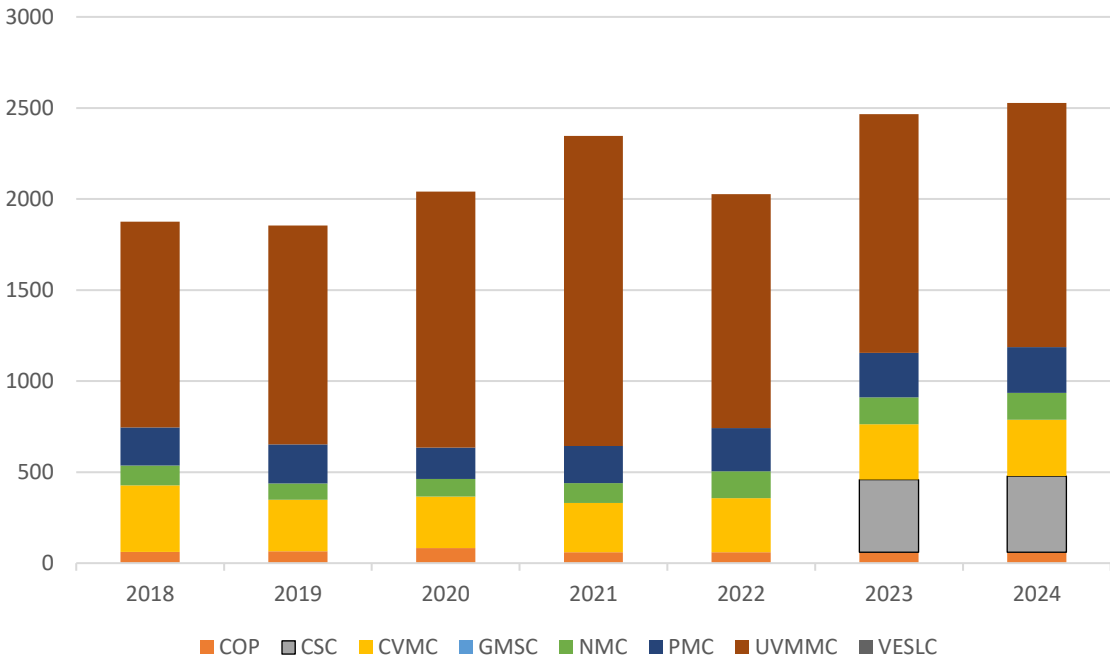
OR Cases by Site - Ear, Nose, and Throat



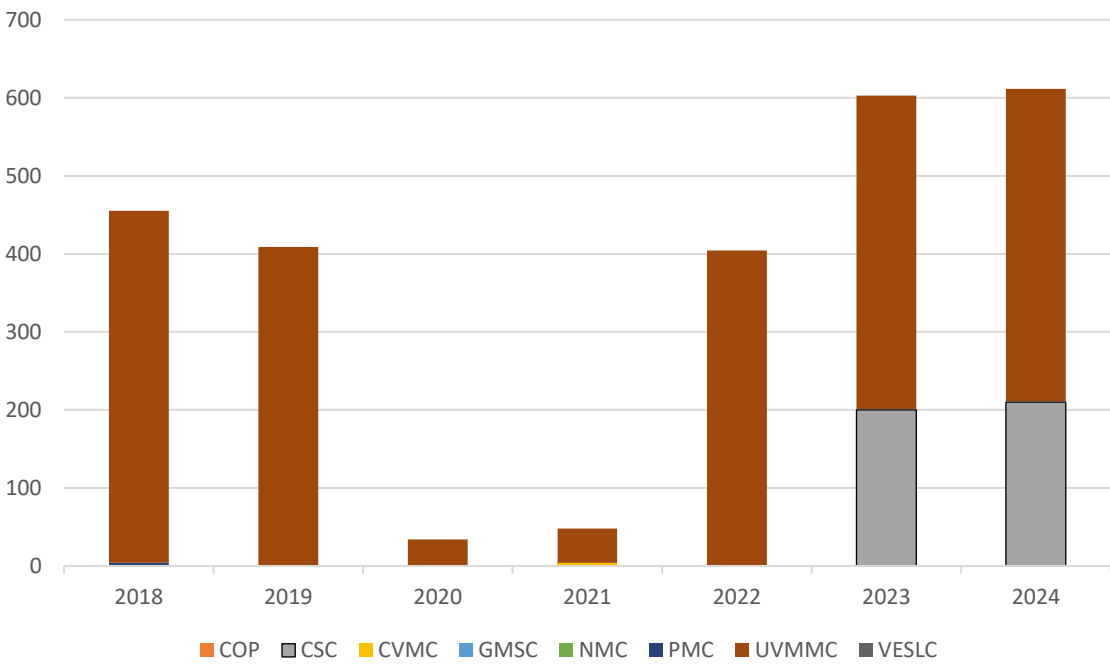
OR Cases by Site - Obstetrics/Gynecology

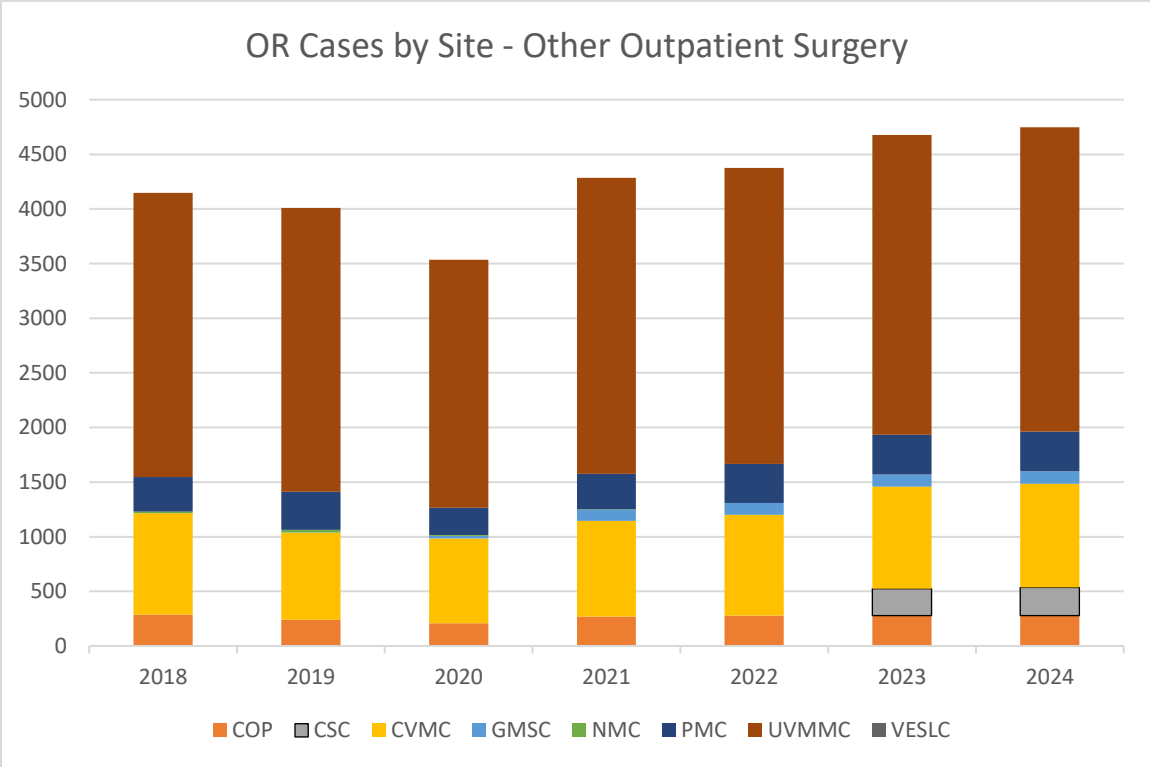
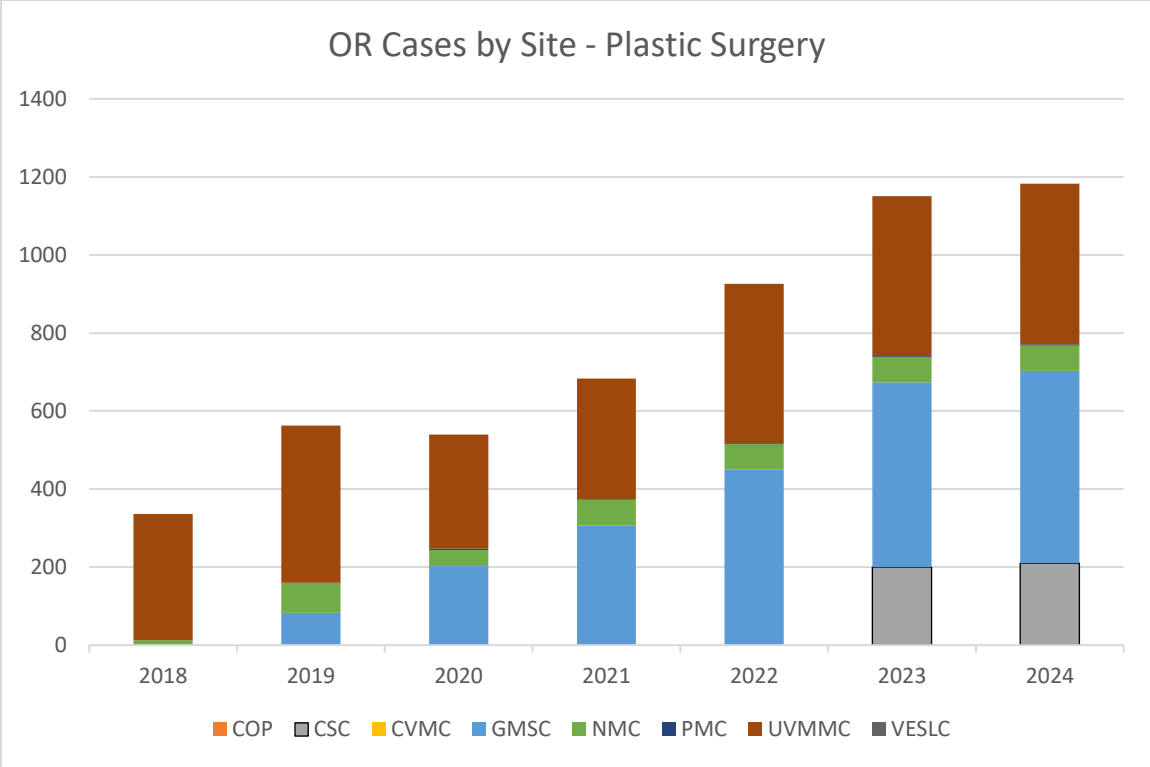


OR Cases by Site - Urology/Male Reproduction



OR Cases by Site - Dentistry





Note. "Other Outpatient Surgery" excludes gastrointestinal and ophthalmology, which are separate product lines in the survey that are not expected to be offered at CSC.