

Carilion Clinic
Virginia Tech Carilion
School of Medicine
Department of Surgery

State of the Department 2022
Quality and Excellence Across Our Missions

Michael S. Nussbaum, MD, FACS
Senior VP, Professor and Chair
Department of Surgery

Gary L. Scott, RRT, MBA, MHA

1956-2022



Department of Surgery Leadership Team

- Michael Abbott, Pharm D, MBA, BCPS, FACHE – Senior VP and COO
- Vicky Beckner, MSN, RN, CNOR, NEA-BC – OR Director, CRCH
- Stephen Lovern, DNP, RN, NEA-BC – Vice President
- Heather McGlothlin, MA – Director, Financial Services
- Jim Miller, MBA, MHA – Senior Director, Practice Operations
- Mark Miller, MHSA, MS, CMPE – Vice President
- Lori Peggins, MSN, RN – Director Operations, OR Services
- Jami Salzberg, DNP, MSN, RN – Director ORS Quality & Informatics
- Daniel Tershak, MD, FACS – Vice Chair, Clinical
- Lori Teubert, MHSA, BS, PMP – Senior Director, Business Operations

Department of Surgery

Surgical Sections

- Acute Care Surgery (Trauma, Critical Care, EGS)
- Anesthesiology
- Cardiothoracic /Aortic
- Dental
- General Surgery
(CRMH, CFMH, CRBH CGCH)
- Neurosurgery
- Otolaryngology
- Pain Management
- Pediatric Surgery
- Plastic Surgery
- Urology *
- Western Region
(CNRV General, Vascular, & Urology, CGCH General)
- Wound Care

Vice Chairs & Section Chiefs

- Daniel Tershak, MD Vice-Chair, Clinical
- Charles Paget, MD Vice-Chair, Education
- Daniel Rukstalis, MD Vice-Chair, Research *

- Joseph Baker, MD Cardiothoracic Surgery
- Kathryn Bass, MD Pediatric Surgery *
- Charles Bissell, MD Western Region
- Curtis Bower, MD General Surgery
- Bryan Collier, DO Acute Care Surgery
- John “Al” Hagy, Jr, MD Wound Care
- Lee Jones, DMD Dental
- Neil Macdonald, MD Anesthesiology
- Kurtis Moyer, MD Plastic & Reconstructive Surgery
- Michael Nussbaum, MD ENT (Interim), Neurosurgery (Interim)
- Elizabeth Russo-Stringer, MD Pain Management

Carilion Clinic

- **Mission** - Improve the health of the communities we serve
- **Vision** - We are committed to a common purpose of better patient care, better community health, and lower cost
- We strive to be a national leader in quality, collaboration and efficiency



Virginia Tech Carilion (VTC)

School of Medicine and Fralin Biomedical Research Institute

- VTC improves human health and quality of life by providing leadership in medical education and biomedical and clinical research
- Clinical research is a fundamental and integral component of quality patient care



Department of Surgery Mission

- **Educate** – Train the next generation of physicians and surgeons and the future leaders of surgery and medicine
- **Discover** – Create the new knowledge that underlies the biology of surgical disease and that shapes future practice
- **Comfort** – Respond to unmet health care and social needs in our community
- **Heal** – Provide high quality surgical care to the communities we serve

Guiding Vision

- What we stand for - should never change
- How we do things - should never stop changing
- Greatness is not an accident
 - We need to be as disciplined and scientific in how we run our organization as we practice our craft
 - Give credit, don't take it
 - Embrace change even when it is scary
 - Believe in something

Core Values

- Collaboration - Teamwork
- Commitment - Excellence
- Courage - Quality
- Compassion - Caring/Passion
- Curiosity - Innovation

Collaboration / Teamwork



- Teams within Sections
- Interdisciplinary teams
- Collaborative efforts
- Respect and inspiration
- Community outreach

Department of Surgery – Key Internal Partners

- Cardiovascular Institute



Department of Surgery – Key Internal Partners

- Cardiovascular Institute
- Center for Simulation
Research & Patient Safety



Department of Surgery – Key Internal Partners

- Cardiovascular Institute
- Center for Simulation
Research & Patient Safety
- **VTC**SOM
- FBRI at **VTC**

VTC | Fralin Biomedical
Research Institute



Department of Surgery – Key Internal Partners

- Cardiovascular Institute
- Center for Simulation Research & Patient Safety
- **VTC**SOM
- FBRI at **VTC**
- **RUC**



Department of Surgery – Key Internal Partners

- Cardiovascular Institute
- Center for Simulation
Research & Patient Safety
- **VTC**SOM
- FBRI at **VTC**
- **RUC**
- VT School of Neuroscience
- VT Biomedical Engineering

Department of Surgery – Key Internal Partners

- Cardiovascular Institute
- Center for Simulation Research & Patient Safety
- **VTCSOM**
- **FBRI at VTC**
- **RUC**
- VT School of Neuroscience
- VT Biomedical Engineering
- Departments
 - Clinical Advancement & Patient Safety
 - Emergency Medicine
 - Family & Community Medicine
 - Internal Medicine
 - Orthopaedics
 - OB/GYN
 - Pediatrics
 - Psychiatry
 - Radiology

Commitment / Educational Excellence

- Rigorous training for our residents, fellows, and students
- Training the next generation of surgeons for our community and elsewhere
- Safety and quality education as part of core resident curriculum

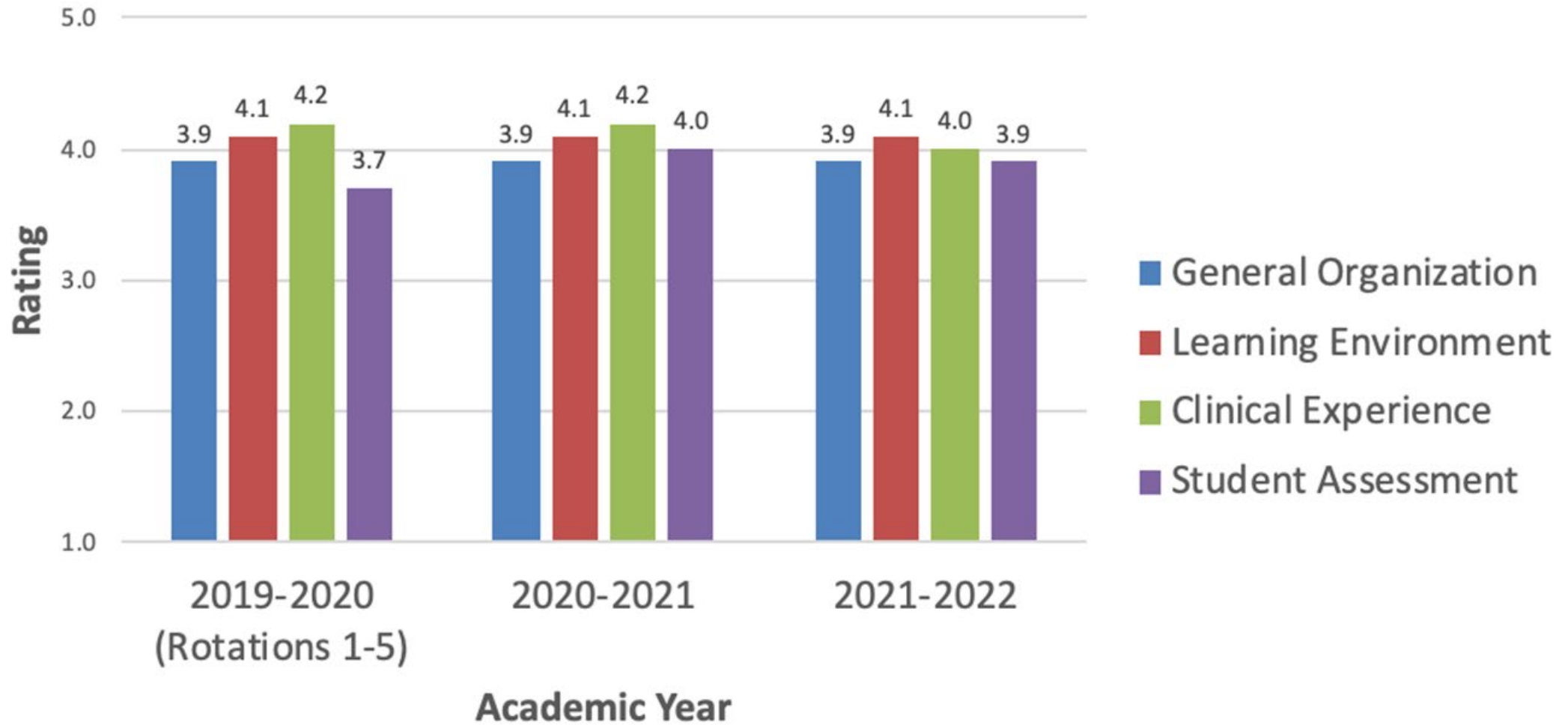


Educate

- Develop outstanding surgeons and surgeon/scientists
- Create an environment where:
 - Students feel they learned the most
 - Residents want to do their training
 - Surgical faculty want to build their careers



Surgery



2022 AAMC Graduate Questionnaire

- Surgery Clerkship > 90th Percentile in:
 - Quality of clerkship
 - Faculty teaching
 - Resident teaching
 - Fostering and nurturing development as a person
 - Fostering and nurturing development as a physician

2022 VTCSOM Match Results

- **Anesthesiology-1**
- **OB-GYN-2**
- **Surgery- 4 (3 Prelim)**
- **Orthopaedic Surgery-1**
- **Plastic Surgery-1**
- **Urology - 1**
- Dermatology-1
- Emergency Medicine-6
- Family Medicine-4
- Internal Medicine-8 (1 Prelim)
- Internal Medicine/Peds-1
- Neurology -2
- Pediatrics-1
- PM&R -1
- Psychiatry -4
- Radiology/Diagnostic-1
- Radiology/Interventional-1

361 graduates since 2014

112 (31%) categorical surgical disciplines

Department of Surgery – GME

4 GME Residencies + 4 Fellowships

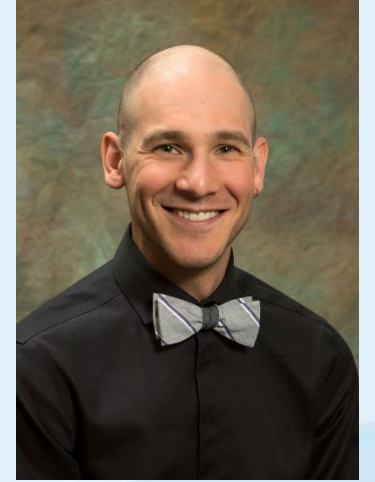
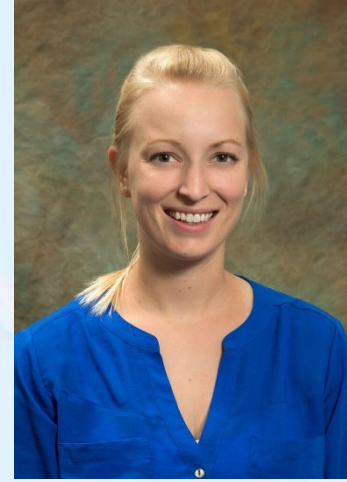
RESIDENCY	GRADUATES/YR	FTE POSITIONS	FTE CURRENT
General Surgery	5	29	29
Plastic Surgery	2	12	12
Neurosurgery	1	7	7
General Dental	5	5	5
FELLOWSHIP			
Advanced GI/MIS	1	1	1
Surg Critical Care	2	2	2
Mastery Gen Surg	1	1	1
ACP Fellowship	2	2	2
TOTAL	19	59	59

Surgery Chief Residents 2021-2022

Thank you for your outstanding leadership!



Chief Residents 2021-2022



Eric Ambroz, DO

Katherine Howe, MD

Rebecca Kirschner, MD

Samantha Koenig, MD

Adam Maerz, MBBS

PROGRAM AVERAGE FOR EACH RESIDENT OF PROCEDURES IN DEFINED CATEGORIES

Resident	SS (25) &B(40)	H&N 24	ALTR 180	AB 250	LV 5	PANC 5	VASC 50	ENDO 15	THOR 20
Ambroz	74	53	276	283	7	5	182	24	20
Howe	120	73	292	395	10	7	127	29	20
Kirschner	131	49	280	390	22	10	102	27	26
Koenig	100	47	252	374	7	5	114	21	28
Maerz	118	75	284	382	11	7	112	41	13



PROGRAM AVERAGE FOR EACH RESIDENT OF PROCEDURES IN DEFINED CATEGORIES

Resident	TRAUM OP 10	TRAUM NONOP 40	PED 20	PLA 10	LAP-B 100	ENDSY 85	LAP-C 75	TTL MAJ 850	TTL CHIEF 200	TTL TA 25
Ambroz	37	49	30	10	227	96	114	922	284	50
Howe	66	46	40	23	215	166	140	1123	242	77
Kirschner	35	53	37	48	234	142	126	1062	212	76
Koenig	28	86	60	12	281	139	127	965	248	44
Maerz	29	40	32	19	238	190	138	1029	248	71



General Surgery Board Certification Data

Academic Year	# Graduates	Passed QE 1 st Attempt	Passed CE 1 st Attempt	Ultimate Pass%
2021-2022	5	5/5	-	-
2020-2021	4	4/4	3/4	75%
2019-2020*	4	2/2	3/3	67%
2018-2019	3	3/3	3/3	100%
National (2019-21)	3809	96%	86%	83%
Carilion-VTC (2019-21)	11	100% (99%ile)	91% (64%ile)	91%
2017-2018	4	4/4	3/4	4/4 (100%)
2016-2017	5	5/5	4/4	4/4 (100%)
2015-2016	5	5/5	5/5	5/5 (100%)

Resident End of Year Awards 2021-2022

- **Intern of the Year Award**
 - Jinman Cai, MD
- **Junior Resident of the Year**
 - Sarah Lucente, DO
- **Senior Resident of the Year**
 - Samantha Koenig, MD
- **Robert E. Berry, M.D. Award**
 - Katherine Howe, MD
- **Administrative Excellence Award**
 - Britany Thompson, MD
- **Big Hokie/Little Hokie Award**
 - Guy Katz, MD
- **Gold Humanism Award**
 - Jeffrey Lawrence, MBBS

Faculty Awards 2020-2021

- **Young Faculty of the Year**
 - Ashley Gerrish, MD
- **Faculty Mentor of the Year**
 - Al Hagy, MD
- **Teacher of the Year**
 - Keith Stephenson, MD
- **VTCSOM Dean's Diversity Faculty Champion (Inaugural Year)**
 - Sharon Williams, MD
- **Roanoker Magazine Top Surgeons 2021**
 - Joshua Adams, MD
 - Farrell Adkins, MD
 - Lisa Apfel, MD
 - Joseph Baker, MD
 - Kurt Chen, MD
 - Al Hagy, MD
 - Mark Joseph, MD
 - A. Lucktong, MD
 - Eric Marvin, DO
 - Kurtis Moyer, MD
 - Paul Nickerson, MD
 - David Salzberg, MD
 - Daniel Tershak, MD
 - Mark Witcher, MD

Welcome New Residents

PGY-1 Categorical



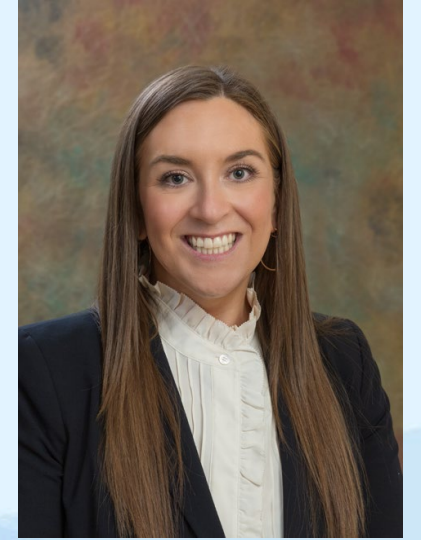
Marisa Doran, MD
University of
Queensland



Taneen Maghsoudi, MD*
George Washington
University



Martin Nde, MBBS
Royal College of
Surgeons in Ireland



Maria Williams, MD
University of Arizona

Welcome New Residents

PGY-1 Preliminary



Chris Childers, MD
VTCSOM



Jane Gay, MD
VTCSOM



Grey Klosinski, DO
VCOM, Carolinas



Jacq Steffen, DO
Idaho College of
Osteopathic Medicine

Welcome “New” Resident PGY-2



Zachary den Besten, MD
University of South Alabama

Chief Residents 2022-2023



Guy Katz, MD



Martinique Lamb, MD



Jeffrey Lawrence, MBBS



Britany Thompson, MD



Daniel White, MD

Plastic Surgery Chief Residents 2021-2022

Thank you for your outstanding leadership!



Brian Cripe, MD
Plastic Surgeons of
Northern Arizona,
Flagstaff, AZ



Joey Rodriguez, MD
Craniofacial Fellowship
UCSD

Welcome New PG-1 Plastic Surgery Residents 2022-2023



Joowon Choi, MD
VTCSOM



Patrick Dugom, MD
Brody School of Medicine at ECU

Plastic Surgery Chief Residents 2022-2023



Matthew Applebaum, MD



Andrew Tranmer, MD

Plastic Surgery Resident End of Year Awards 2021-2022

- **Academic Excellence Award – First Place**
 - Christina Canzoneri, MD
- **Academic Excellence Award – Runner-Up**
 - Nikitha Potturi, MD
- **Research Excellence Award**
 - Joey Rodriguez, MD

Neurosurgery Chief Resident 2021-2022

Thank you for your outstanding leadership!



Michael Benko, DO

Captain, US Air Force

David Grant Medical Center

Travis Air Force Base, CA

Welcome New PGY-1 Neurosurgery Residents 2022-2023



Cole Sloboda, DO
Campbell University
School of Osteopathic Medicine



Kristine Ravina, MD
Riga Strandis University
Latvia

Neurosurgery Chief Residents 2022-2023



Brendan Klein, DO
Senior Chief



Evin Guilliams, DO
Junior Chief

Neurosurgery Resident End of Year Awards 2021-2022

- **ED Resident of the Year**
–Evin Guilliams, DO

Board Certification Data

Academic Year	# of graduates completing program	% passed QE 1 st attempt	Board Certified
2021-2022	1	-	BE
2020-21	2	100%	BE
2019-20	0 Transition to 7 yr program	-	-
2018-19	1	100%	BE
2017-18 (AOA)	1	100%	100%
2016-17* (AOA)	1	100%	100%
5 YEAR ROLLING RESULTS	5	100%	100%

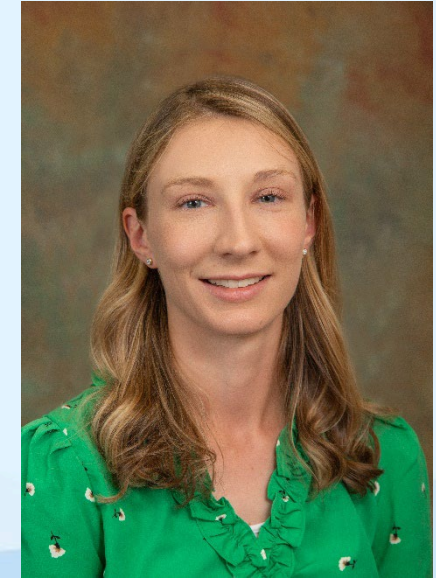
Dental Residents 2021-2022



Kathryn Howland, DDS
Madison, WI



Briana Ruskiewicz, DMD
Fayetteville, NC



Courtney Stout, DDS
Waynesboro, VA

New Dental Residents 2022-2023



Clarke Monet Allen, DDS
Howard University



Wesley Gillette, DDS
University of Minnesota



Charleton Goodman, DMD
Boston University



Camila Negrón García, DDS
Marquette University

Dental Resident PGY-2 2022-2023



Chloe Eisenhour, DMD
University of New England

Surgical Critical Care Fellows 2021-2022

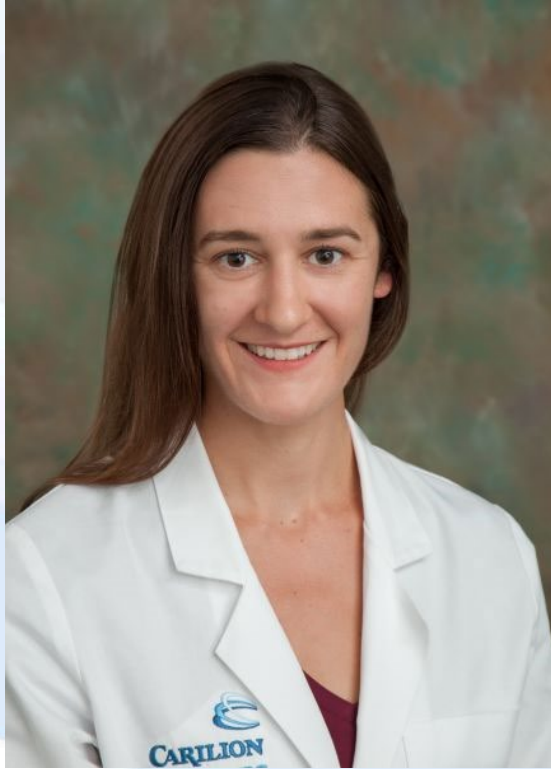


Kryillos Awad, DO
Marian Regional MC
Santa Maria, CA

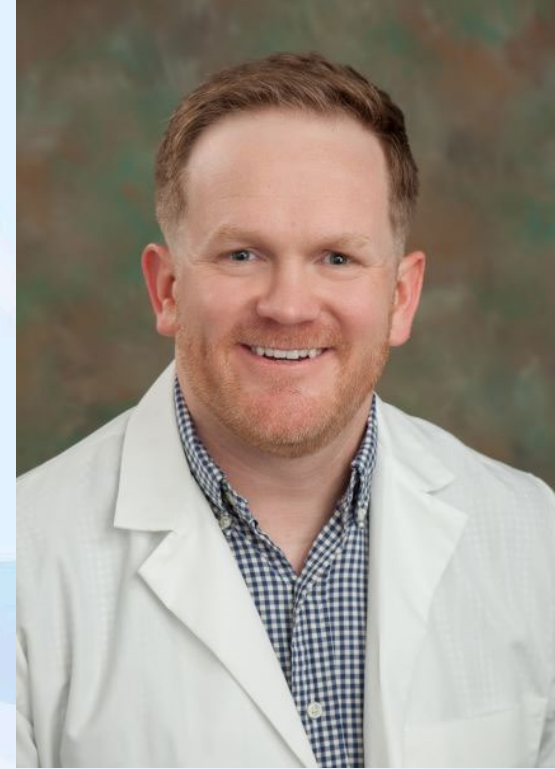


Isaac Theerman, DO
Mayo Clinic
Eau Claire, WI

Surgical Critical Care Fellows 2022-2021

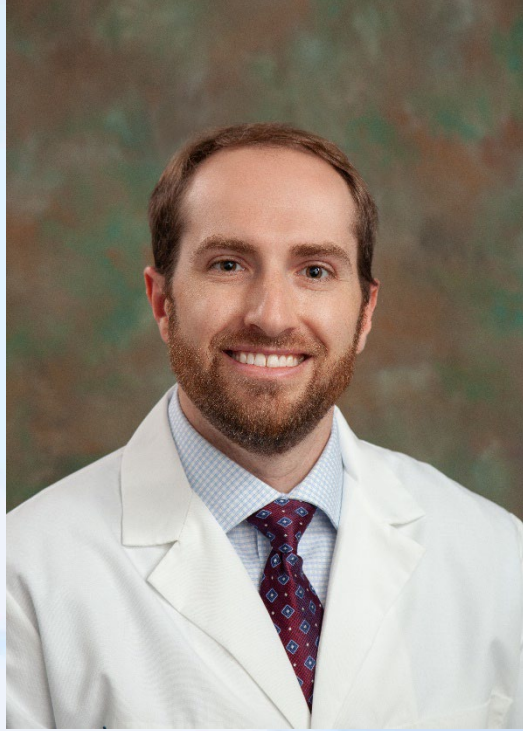


Lauren Gorton, MD
Iowa Methodist Medical Center



Eric Morrison, DO
Ascension Genesys Hospital

Advanced GI/MIS Fellow 2021-2022



Paul Appleby, MD
MUSC
Columbia, SC

Advanced GI/MIS Fellow 2022-2023



Bavana Ketha, MD
MedStar Georgetown University Hospital
Washington Hospital Center

Mastery in General Surgery Fellow 2021-2022



Stacie Adkins, DO
Carilion -VTCSOM

Mastery in General Surgery Fellow 2022-2023



Katherine Howe, MD
Carilion - VTCSOM

Surgical ACP Fellows 2022-2023



Sally Normandin, NP
University of Texas, Medical Branch



Eric Thompson, NP
East Tennessee State Univ.

Department of Surgery – Recent Key Accomplishments

GME

- 2022 Graduates
 - 4 different fellowships and 1 into practice within Carilion system
 - Plastic Surgery – 1 fellowship
- Carilion – VTC Faculty (past 5 years) – 9 graduates of GME residencies/fellowship
 - 6/20 General Surgery
 - 2/3 Plastic Surgery
 - 1/4 MIS Fellow
- Department DEI effort to increase diversity of resident groups for the past 2 years
 - Increased URiM residents in General Surgery from 4% - 16% (30% of incoming classes 2021 and 2022)
 - 3/4 Dental 2022 residents URiM
 - Presentation at SEW and publication in *J Surg Ed* on this effort
- Global Surgery
 - 1st international rotation in Malawi
 - Plans for future faculty and resident participation
 - Fundraising efforts

Department of Surgery GME Summary

- Rigorous training for our residents, fellows, and students
- Expanding role in producing academic and community surgeons in a wide variety of specialties
- Training a broad representation of modern clinical surgeons at both the local and national levels
- Safety and quality education as part of core resident/student curriculum
- Continue to serve as role models and mentors for all trainees
- Must have a continued focus on recruiting a diverse group of candidates for all GME Programs

Courage / Surgical Quality

T. A Lucktong, MD, FACS

Jake Gillen, MD, FACS

Co-Directors of Surgical Quality

Jami Salzberg, DNP, MSN, RN

Director of Quality and Informatics Surgical Services

**The ACS
Quality Verification
Program™**

A QUALITY PROGRAM
of the AMERICAN COLLEGE
OF SURGEONS

**ACS
NSQIP®**

American College of Surgeons

National Surgical Quality
Improvement Program

Surgical Quality Initiatives

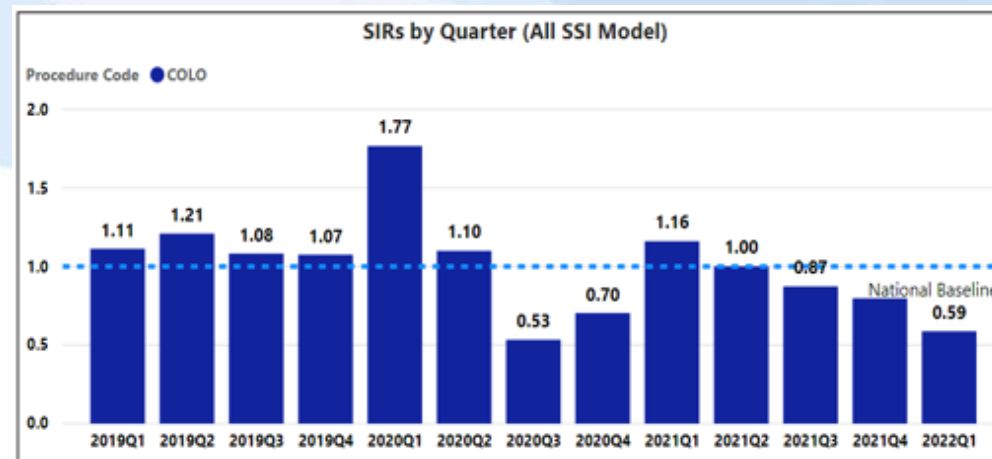
- Surgical Site Infection (SSI) Reduction
- CAUTI reduction
- Perioperative glucose protocol
- Reduction of Opioid Rx on Discharge
- Perioperative Surgical Home
- Smarter Care Virginia--Low Value Testing Reduction
- Fascial Dehiscence
 - Retention Suture Protocol
 - Small-bite technique for fascial closure (5mm)
- VTE reduction
- Perioperative Smoking Cessation/Nicotine Replacement
- Sepsis

Surgical Quality Initiatives (Continued)

- ACS THRIVE (Value = Quality/Cost)
- ACS System Quality Verification Program—In preparation for site visit Spring 2023
- Education
 - HSSIP curriculum development—Dr. Lucktong participating in year long VTC Clinical Champions Faculty Development
 - M3 Surgical Quality Lectures pilot completed
 - Delivered Surgery System Session June 2022 (AKA Domain Day)
 - Education day abstract Oct 2022
 - Dr. Gillen starting Masters of Health Care Delivery Science program at Dartmouth
- Research
 - Developing partnerships with VT School of Engineering and VT School of Business
 - 12 IRB approved studies, 2 more under development
 - Mentor to 12 residents, 6 VTCSOM students
- PSI Reviews — 12 overturned

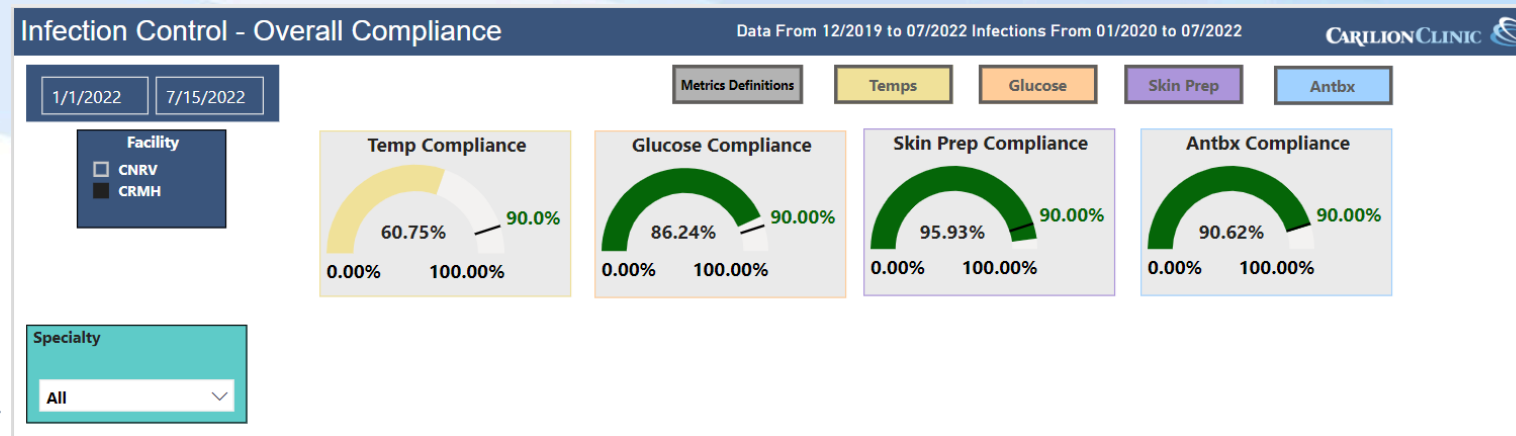
Preventing Surgical Site Infections

- SSI rate - Surgery Department Scorecard
 - Baseline 1.62%, Target 1.40%
 - **YTD 0.86%**
- Colon SSI - Health System Quality Plan
 - Baseline SIR 1.04 (~O/E ratio for infections)
 - **YTD SIR 0.75**



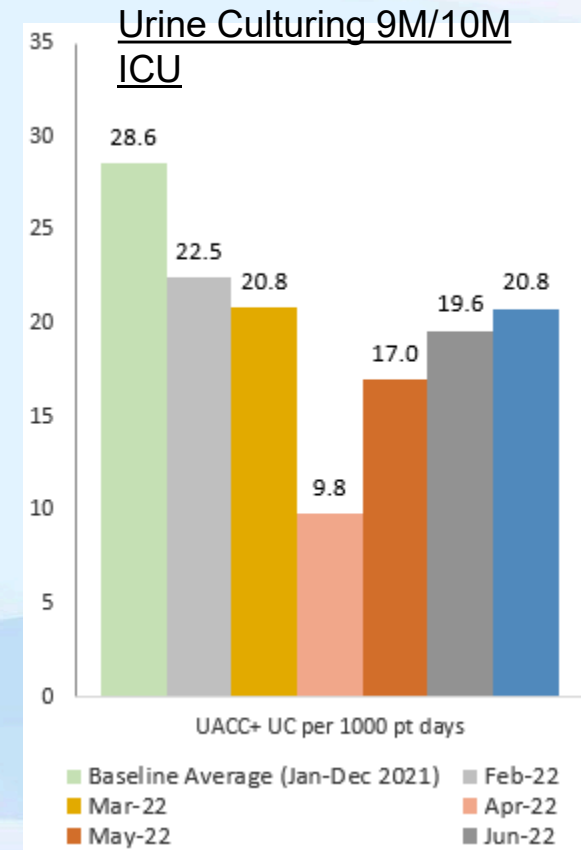
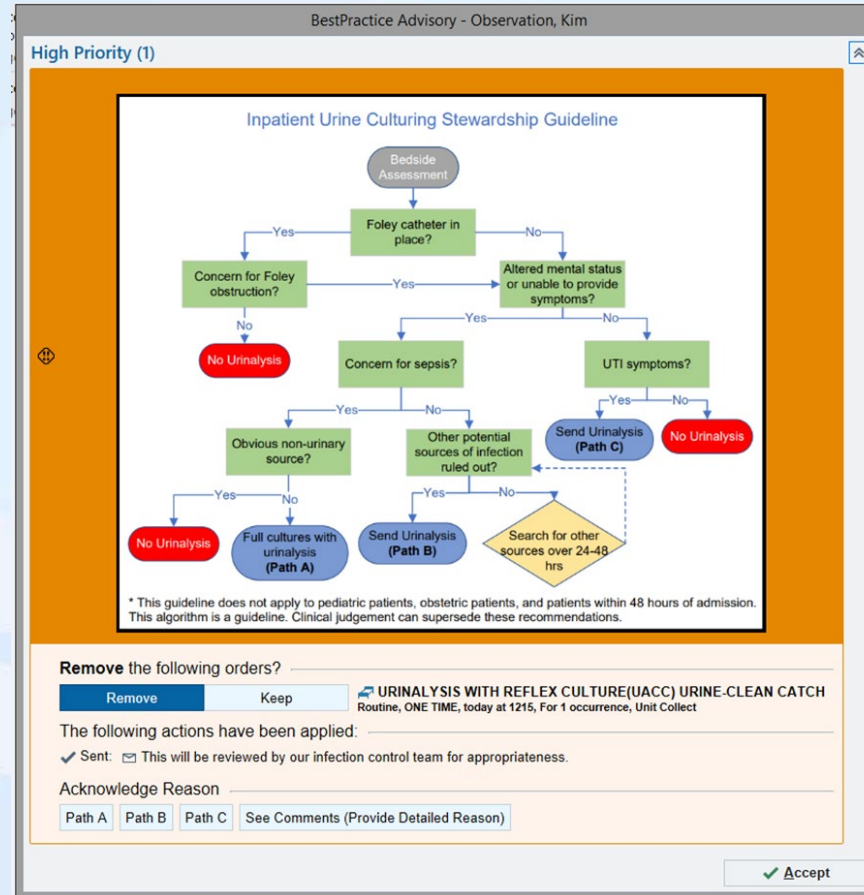
SSI Reduction - Initiatives

- Triclosan (antiseptic suture)
- Betadine irrigation (>80% success)
- Increasing preop bowel prep (mechanical and PO antibiotics)
 - >90% success for elective colorectal
- Wound protector use
- Wound class audit
- Increasing PATOS documentation
- SSI dashboard 2.0 – process metrics (coming soon)



CAUTI Reduction

- 9M ICU – no CAUTI from 10/20– 11/21
- 10M ICU – no CAUTI since 6/21
- Urine Culture Guideline with BPA



Opioid Reduction

- Significant reduction in MME prescribed at D/C for:
 - Trauma: 186.9 to 130.4, $p < 0.0001$
 - General Surgery: 145.5 to 119.1 ($p < 0.001$)
- Over the past 22 months since intervention, there have been at least 13,000 fewer tabs of oxycodone prescribed into our community
- Implemented perioperative suboxone protocol

Perioperative Surgical Home

- Centralization of preoperative patient preparation
- Enlisted Enterprise Project Management Office
 - Partnering with Internal Medicine and Anesthesiology
 - Calculated anticipated volume and growth and submitted business proposal
 - Approval secured for Nurse Practitioner FTE supervised by Hospital Medicine for on-site management of patients with identified risk factors

Smarter Care Virginia--Low Value Testing Reduction

- Leading indicator tracking
 - Only center in Virginia to date with this capability
 - Operational reporting system under development
- Reduction of excess testing via Procedure Pass protocol
 - Low Risk Patients undergoing Low Risk Procedures-Gen Surg Pilot
 - 95 % reduction of preop A1C
 - 80 % reduction of diff routinely added to CBC
 - 45 % reduction of preop CBC overall

ACS THRIVE

- Developed by the American College of Surgeons and Harvard Business School's Institute for Strategy and Competitiveness
- Leading change from Fee-for-Service to Value-Based payment model
- Time Derived Activity Based Costing (TDABC) methodology to calculate total cost of production--broken down by
 - Personnel, space, and cost of consumables and time spent to provide care
- Analysis of Carilion Colon Surgery Care Cycle completed

The ACS Quality Verification Program™



Verifying Quality Across All Surgical Specialties

The ACS Quality Verification Program™ (ACS QVP) provides a proven, standardized method for establishing, measuring, and improving your hospital's quality infrastructure across all surgical departments.

4 Key Pillars of Continuous Quality Improvement

Continuous Quality Improvement



QVP

Setting standards
to guide practice

QVP

Building
infrastructure

NSQIP

Collecting data to
measure performance

QVP

Verifying performance
through external peer
review

The ACS
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Program™

A QUALITY PROGRAM
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OF SURGEONS

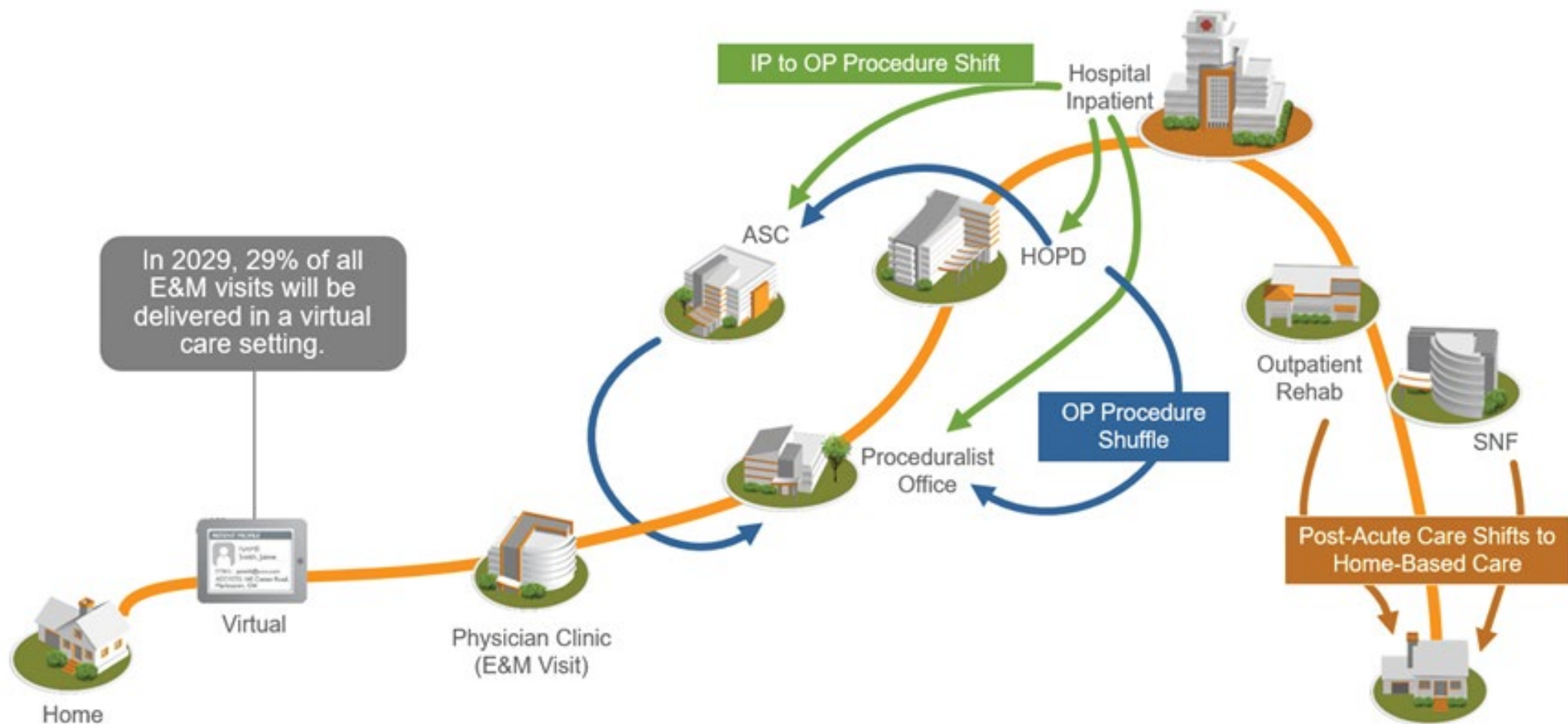
- Site visit like other Centers of Excellence
- Provide assessment and recommendations for improving Surgical Quality
- Preparing for site visit March 27-28, 2023

Commitment / Excellence

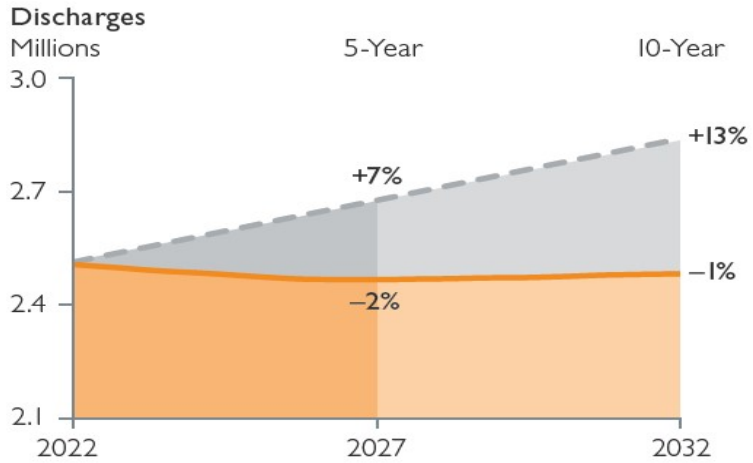
Department of Surgery Volume Update FY22 August YTD

Volume Trends

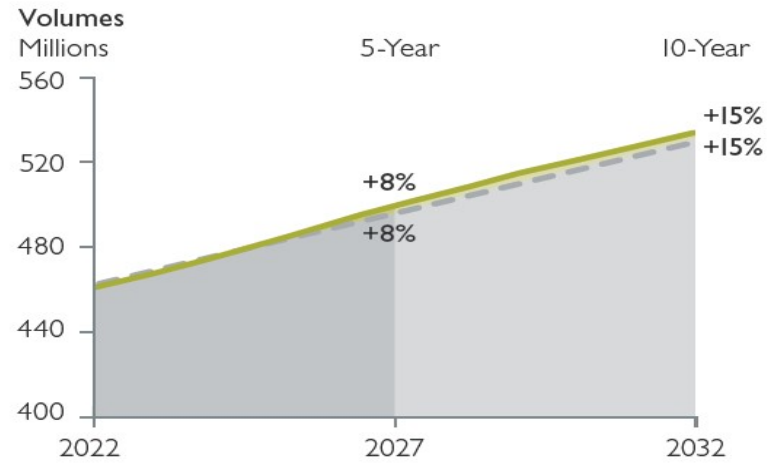
Site of Care Shifts and Innovation Fuel Growth Trends Across Sites



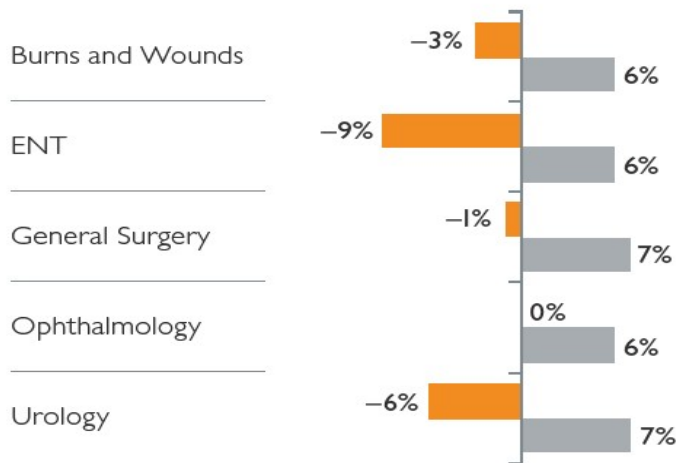
Inpatient Surgery Forecast
US Market, 2022–2032



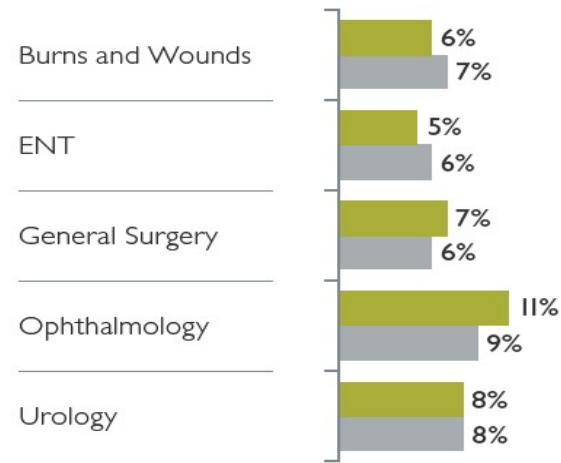
Outpatient Surgery Forecast
US Market, 2022–2032



Inpatient Surgery Discharges by Service Line
US Market, 2022–2027

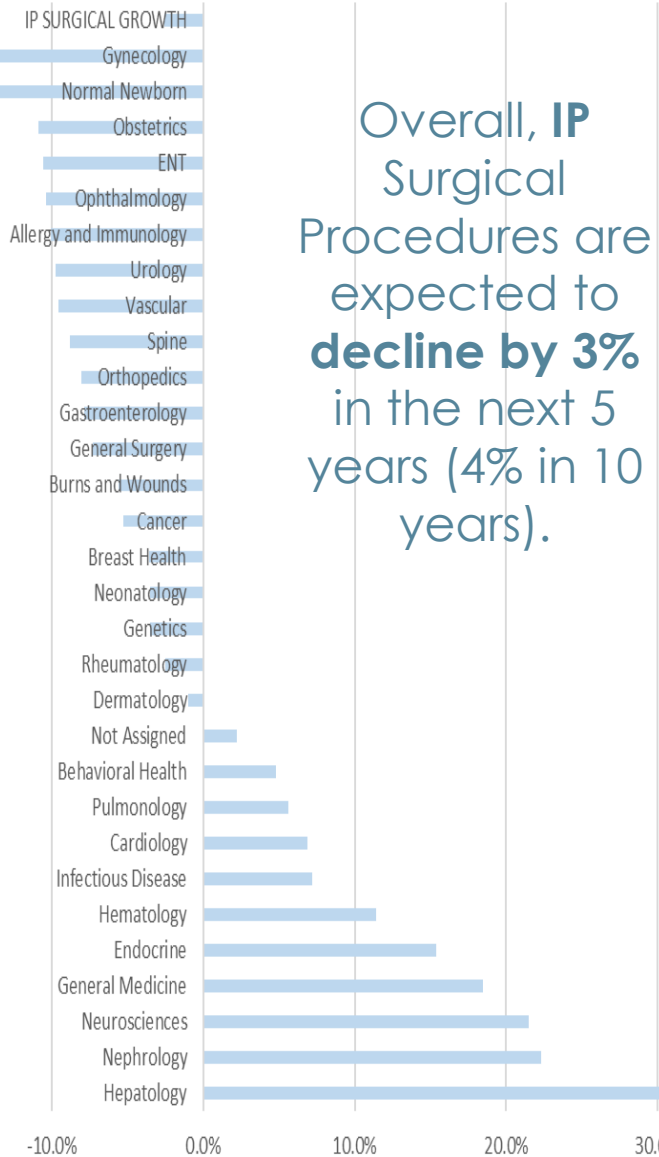


Outpatient Surgery Volumes by Service Line
US Market, 2022–2027



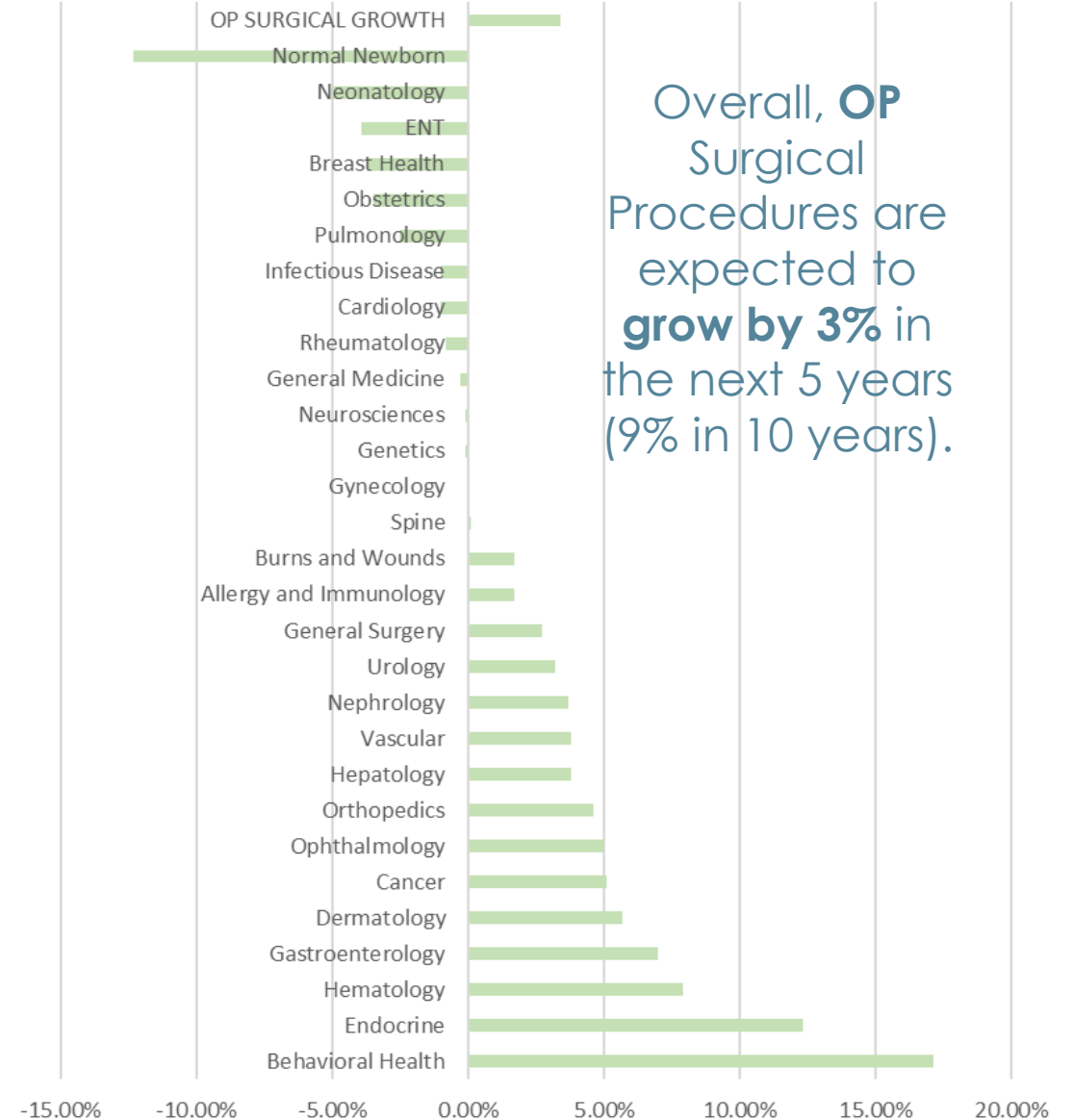
■ Sg2 IP Forecast
 ■ Population-Based Forecast
 ■ Sg2 OP Forecast

5-Yr Inpatient Surgical Growth Projections by Service Line



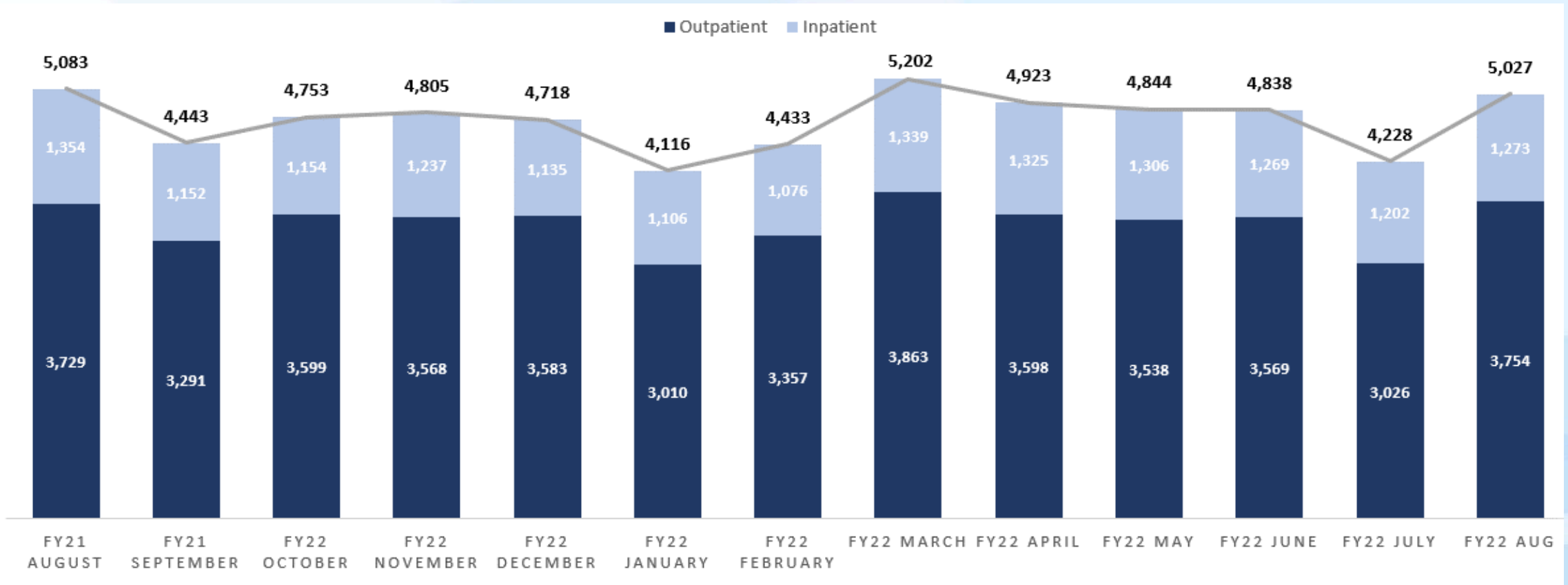
Overall, **IP** Surgical Procedures are expected to **decline by 3%** in the next 5 years (4% in 10 years).

5-Yr Outpatient Surgical Growth Projections



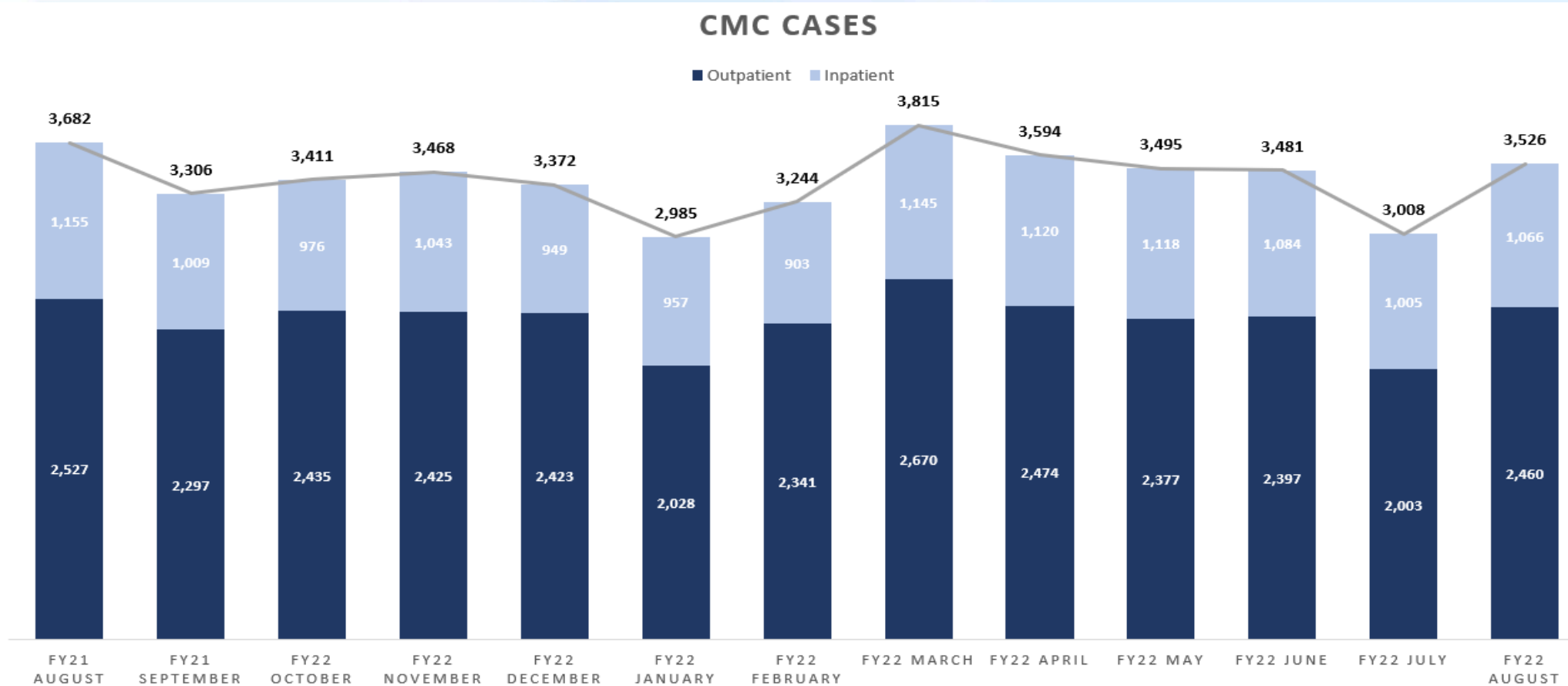
Overall, **OP** Surgical Procedures are expected to **grow by 3%** in the next 5 years (9% in 10 years).

Cases Volumes: System



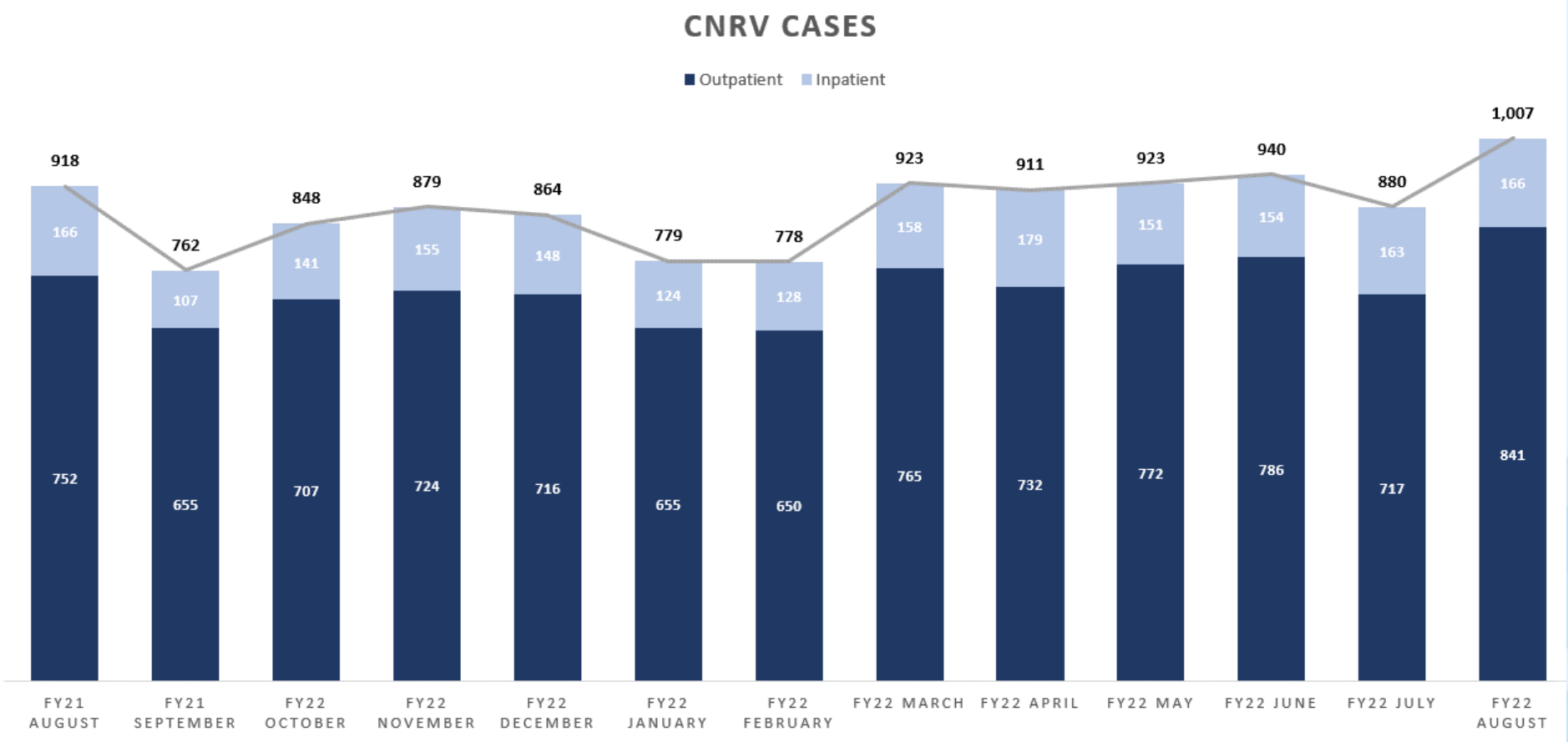
August YTD in FY22 has had 330 less inpatient cases and 365 more outpatient cases than the same time period in FY21.

Case Volumes: CMC



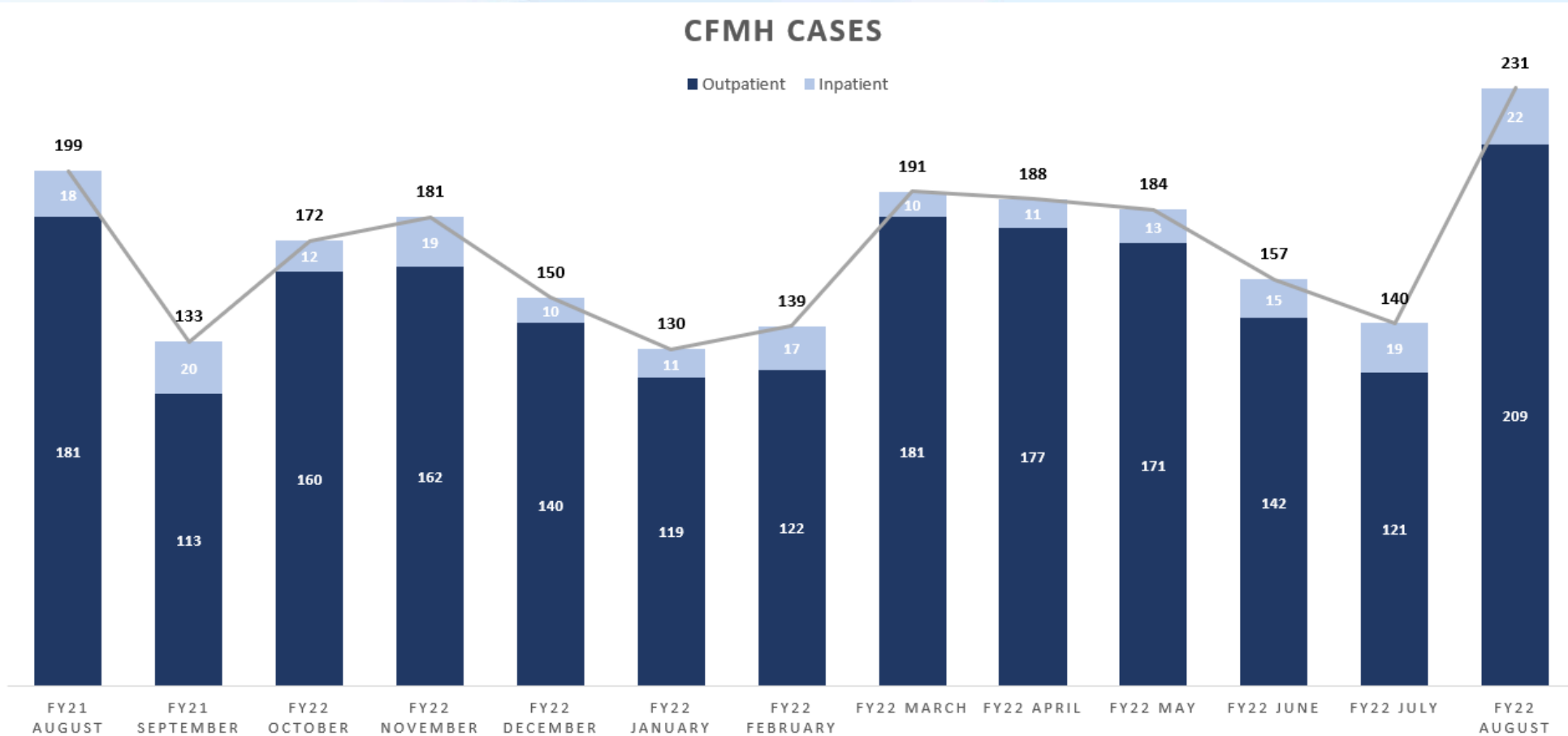
**CMC has had 772 less cases August YTD
FY22 than August YTD FY21**

Case Volumes: CNRV



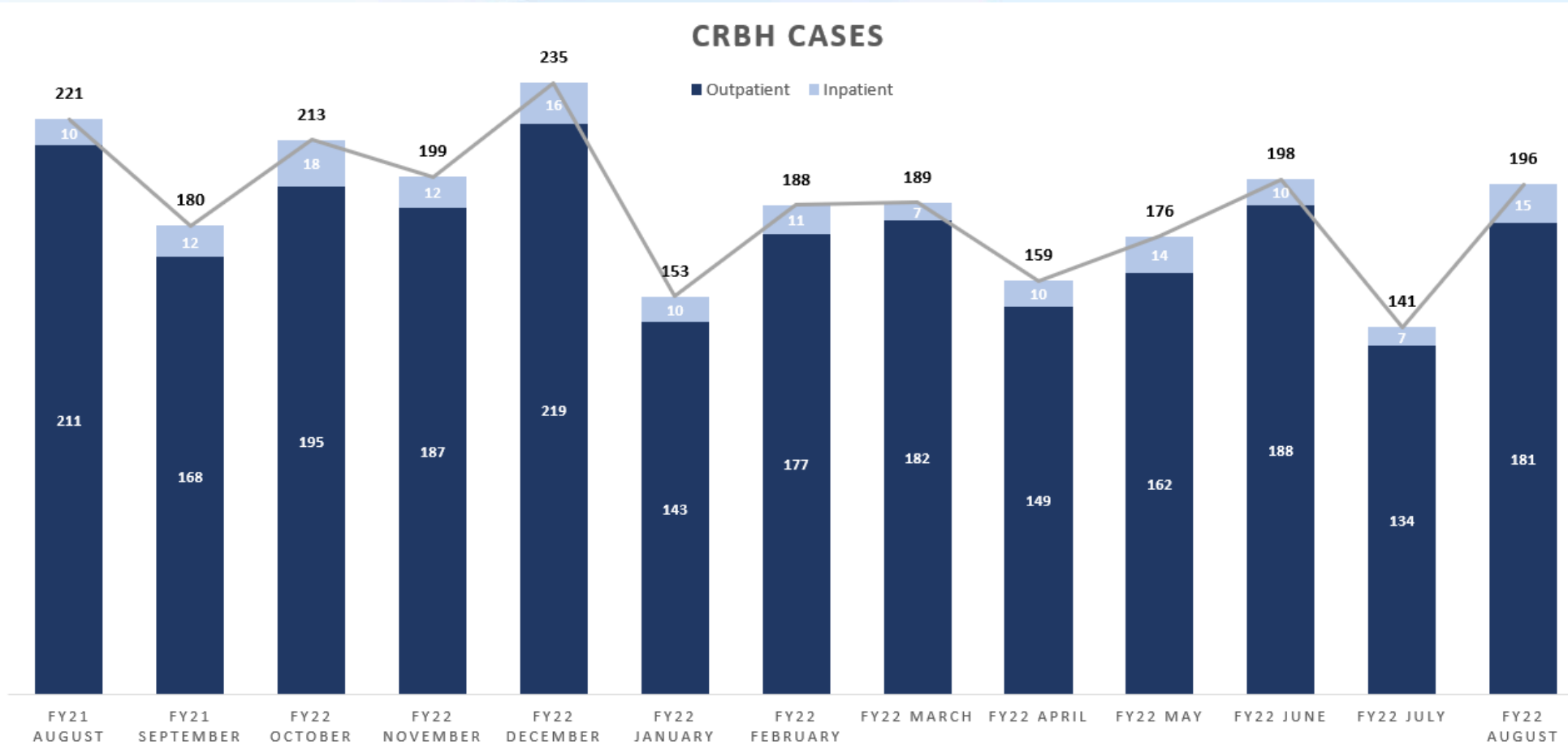
CNRV has had 582 more cases August YTD FY22 than August YTD FY21

Case Volumes: CFMH



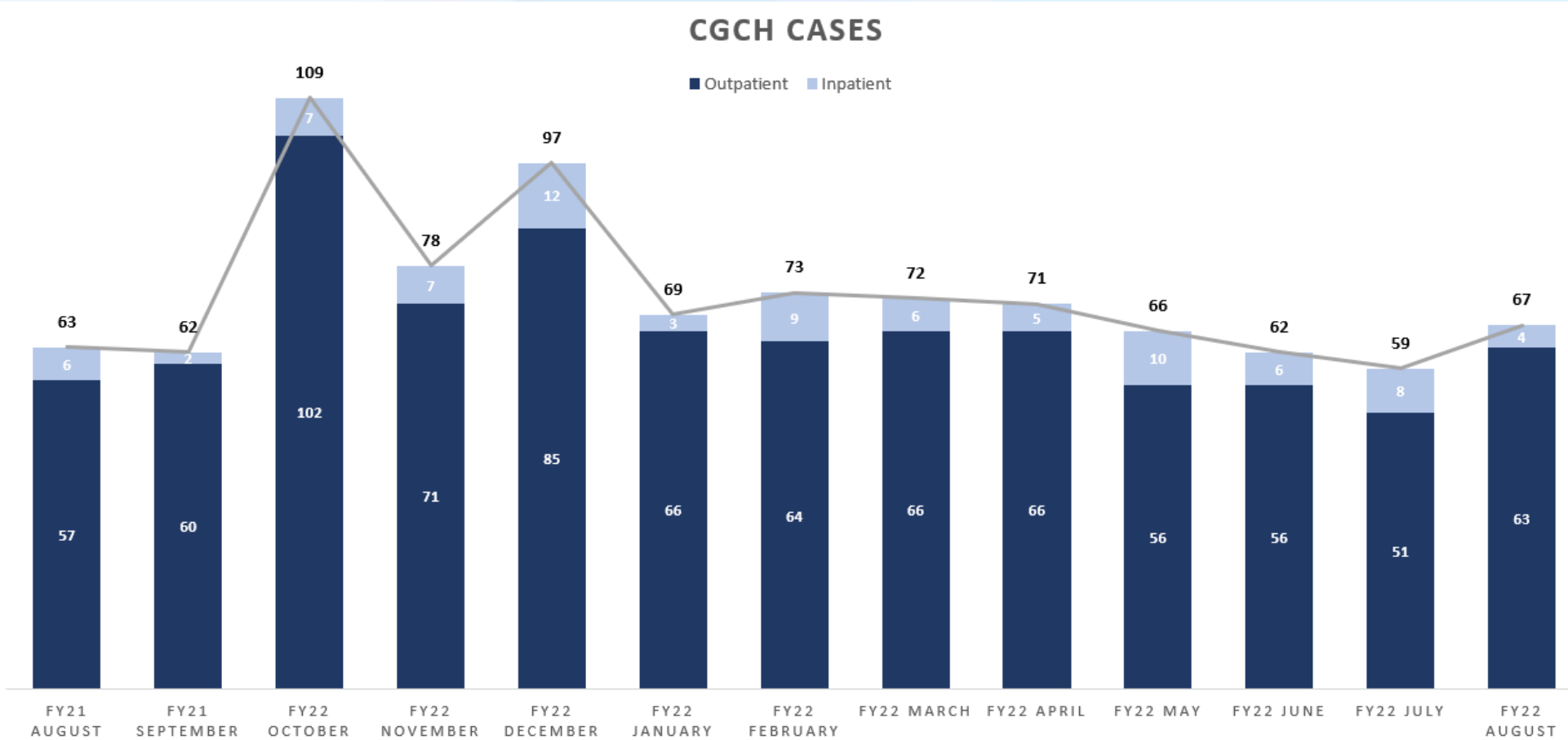
CFMH has had 13 more cases August YTD FY22 than August YTD FY21

Case Volumes: CRBH



CRBH has had 27 more cases August YTD FY22 than August YTD FY21

Case Volumes: CGCH



CGCH has had 185 more cases August YTD FY22 than August YTD FY21

Dept of Surgery- Practice Visits by Month



**Dept of Surgery has had 4,275 more visits
August YTD FY22 than August YTD FY21**

Operating Room & Department of Surgery Key Performance Metrics

Productivity & Cost Indicators:

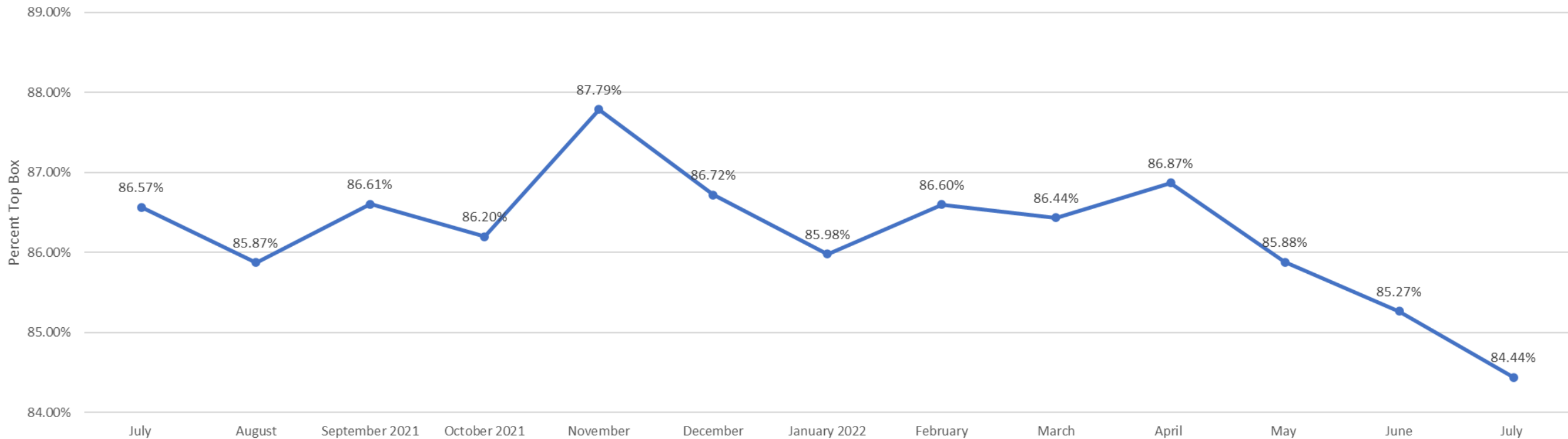
Physician Practices	FY2019	FY2020	FY2021	FY2022 (projected)
wRVUs	688,970	648,313	748,766	744,546
Physician FTE	76.87	80.3	86.18	86.46
wRVUS per Physician FTE	8,963	8,073	8,688	8,612
Staff Expense / Encounter	\$ 67.67	\$ 75.26	\$ 73.85	\$ 86.26
Non Salary Expense / Encounter	\$ 56.38	\$ 57.76	\$ 61.79	\$ 60.39
Operating Room				
Non Salary Costs per Procedural Hou	\$ 1,498	\$ 1,517	\$ 1,662	\$ 1,764
Salary costs per Procedural Hour	\$ 206	\$ 218	\$ 200	\$ 271
Procedural Hours	40,837	37,510	41,682	38,475

*wRVUs in prior years normalized for current CMS table

FY2022 – Carilion Clinic: From July 2022

- **Insights (All Areas):**
- Areas where we see positive upswings in patient perceptions: Ambulatory Surgery (outpatient), Hospice, Inpatient Rehab, Inpatient Behavioral Health, Outpatient Behavioral Health.
- The YTD Carilion Clinic scorecard PX metric (Likely to Recommend = LTR) through July 2022 is **86.19%** Top Box. (The target is 86.70%; the stretch target is 86.90%)

Carilion Clinic-Likely to Recommend; Data by Received Date; All Services; 12-Month View



Department of Surgery – New Physician Hires (FY22)

	Recruitments	Terminations/ Retirements	Open Positions
Acute Care Surgery	2	1	-
Cardiothoracic / Aortic	1	-	-
Dental	3	1	-
General Surgery (CRMH, CFMH, CRBH)	3	3	-
Neurosurgery	-	1	1
Otolaryngology	2	1	2
Pain Management	-	-	-
Pediatric Surgery	1	-	2
Plastic & Reconstructive Surgery	-	-	-
Western Region (CNRV General, Vascular & Urology, CGCH General)	-	3	3
Wound Care	-	-	-
Total	12	10	8

New Faculty 2021-2022

- ACUTE CARE SURGERY
 - Benjamin Cragun, MD
 - Michael Collins, MD
- CARDIOTHORACIC
 - W. Scott Arnold, MD
- DENTAL
 - Greta-Anne Castonguay, DMD
 - Elizabeth Stapleton, DDS
- GENERAL SURGERY
 - Stacie Adkins, DO
 - Adam Maerz, MBBS - CRBH
 - Kristin McCoy, MD/ MIS - Endocrine
- UROLOGY
 - Daniel Rukstalis, MD

New ACP's 2021-2022

- ACUT CARE SURGERY

- EGS

- Mia Anglin, PA
- Lisa Zettler, NP

- SCC

- Kathy Gill, NP

- Trauma

- Kristina Dobson, NP
- Chelsea Frame, PA
- Emma Perdue, PA

- PAIN MANAGEMENT

- Stephanie May, NP

- CT SURGERY

- Kim Bolling, NP

- Ashlyn Conrad, NP

- Stephen Holman, NP

- Matthew Persinger, PA

- Hannah Scarboro, PA

- Ashley Scott, PA

- Zach Tinsley, NP

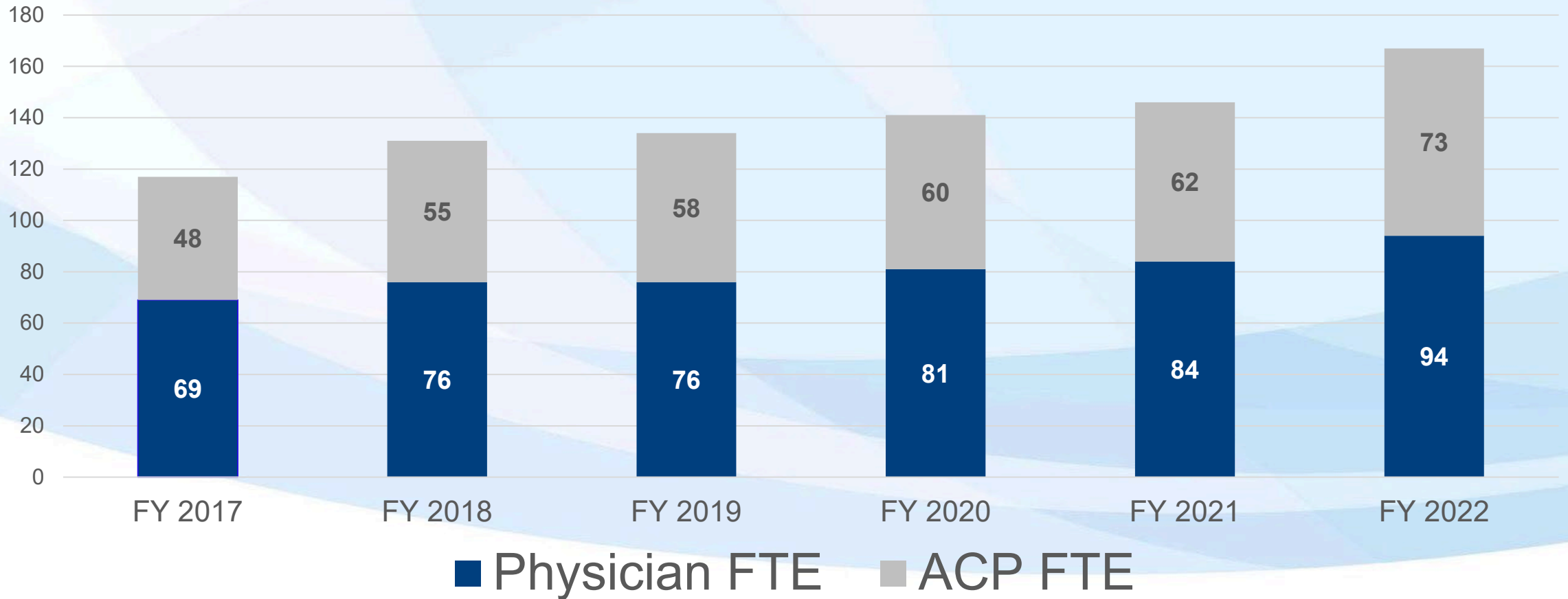
- NEUROSURGERY

- Heidi Peters, PA

- John Sessoms, II, NP

- Rebecca Levy, PA

Provider (ACP + Physician) Growth



Farewell

2020-2021

- Astrid Botty van den Bruele, MD Breast
- Meghan Cooper, MD Urology/ CNRV
- Charles Harris, MD General/ CNRV
- Leighton Lee, MD Urology/ CNRV
- Miguel Matos, DO Acute Care Surgery
- Sandeep Mittal, MD Neurosurgery
- Jessica Partin, MD Breast
- Travis Reeves, MD Otolaryngology
- John Sedovy, MD General / CRBH
- E. Jackson Threet, DDS Dental



Compassion / Caring

- **Heal**
 - We are committed to a common purpose of better patient care, better community health, and lower cost
- **Doing what matters – Patient Care**
 - Patient and family satisfaction continues to improve
 - Focus
 - Reducing patient wait times for appointments
 - Engaging patients in decision making
 - Employee engagement

OR Governance

- Revised workflow based on situation and best-practice
 - CDC guidance
 - Infection control partnerships
- Monitoring testing results and fluctuations in positivity rates
- Manage workforce challenges
 - Block adjustments
- Frequent communication with providers
- Manage variant strains impacting our community
- Address supply chain issues
 - Contrast
 - Sterile gloves

Construction/Remodel

- Carilion Children's Tanglewood – Opened October 2021
 - Pediatric Surgery
 - Pediatric Plastic Surgery
 - Pediatric Neurosurgery
 - Otolaryngology (Pediatric and Adult)
 - Audiology (Pediatric and Adult)
 - Dental (Pediatric and Adult)
- Family Dentistry Practice (1111 South Jefferson)
 - Opened October 2021
- Remodel
 - OR expansion at CFMH – Anticipated October 1, 2022
 - CRCH ORs and Endoscopy expansion – Final target November 1, 2023
 - Akers Farm Urology renovation – Completed July 2022
 - Riverside 3 renovation to expand Bariatric/Weight Loss access – August 1, 2022
 - Working on system-wide facility plan

Department of Surgery – Recent Key Accomplishments

ACUTE CARE SURGERY

- ACS and Virginia Level 1 adult trauma verification
- Surgical Critical Care Fellowship in 4th year
- Organ Donation:
 - Platinum Recognition from US Department of HHS -HRSA, 5th year in a row
 - Virginia’s first successful heart transplant from DCD patient (2021).
 - As of July 2022, 27 successful Organ Donors at CRMH – previous record was 23 in 2018
- **Dr. Katie Love Bower** completed Palliative Care Fellowship
- Department of Justice for Hospital Violence Injury Prevention Grant (\$200,000)
- 2020 Nurse with Outstanding Contribution to EMS –Commonwealth Governor’s Award – **Dan Freeman MSN, RN TCRN**
- 1st successful diaphragmatic pacer at CRMH and for an acutely injured trauma patient in Virginia

Department of Surgery – Recent Key Accomplishments

ANESTHESIOLOGY

- Standardizing anesthesia care throughout the Carilion system and optimizing availability
- Actively recruiting anesthesiologists and CRNA's
- Inaugural anesthesiology resident cohort for cardiovascular surgery from Portsmouth Naval Hospital, initiating plans for an Anesthesiology residency
- Anesthesia quality metrics pulling real time data for both CMC and CNRV
- Continued Epic revisions / additions to anesthesia documentation
- Extended EndoTool use intraoperatively, with additional education planned for the expansion of perioperative glucose control
- Instituted individualized PSI 11 deep dives
- Active involvement in several departmental Peer Review committees
- Innovating staffing and scheduling changes to keep room disruptions to a minimum

Department of Surgery – Recent Key Accomplishments

CARDIOTHORACIC SURGERY

- Celebrated 40th Anniversary of cardiac surgery at CRMH
- CT Surgery ACP, Charles Bullins, DNP accepted to Ohio State University DNP post-doctoral fellowship
- Promoted new Chief of Perfusion (Phillip Strole)
- Created and filled new position of Perfusion Consultant (Rachel Mills) as part of our Path to a COE for the ECMO Program
- ELSO ECMO Platinum Award – 7/2021
- Pending reaccreditation for Ventricular Assist Device Center in December 2022
- US News and World Report 2022-2023 Best Regional Hospital - CRMH rated “High Performing” for CABG, TAVR, and lung cancer surgery
- Society of Thoracic Surgery - Thoracic - 3-Star rating Overall 2021 for lobectomy for lung cancer
- Society of Thoracic Surgery – Adult Cardiac - 2-Star rating Overall 2021 for CABG
- Multi-center Research site:
 - STAR-T trial randomized prospective study of use of CytoSorbents device for Ticagrelor clearance in cardiac surgery.
 - Proact Xa randomized prospective study evaluating Apixaban versus Warfarin anticoagulation for On-X mechanical aortic valves.
 - Dr Joseph has several collaborative studies with Fralin Biomedical Research Institute:

Department of Surgery – Recent Key Accomplishments

DENTAL

- Received \$2M grant from Delta Dental of Virginia Foundation to establish a Pediatric Dental Residency at Carilion Clinic
- Continuation of 5-year \$2.14M HRSA grant / supplemental \$65K for resident opioid education
- General Practice Residency achieved CODA reaccreditation
- Opened the Carilion Clinic Family Dentistry practice
- Hospital and Pediatric Dentistry relocated to Carilion Children's Tanglewood Center
- Dr. Lee Jones, Section Chief, appointed by Virginia Governor to a 4-year term on the Virginia Department of Health Professionals Board of Dentistry

Department of Surgery – Recent Key Accomplishments

GENERAL SURGERY

- ACS/NABPC application in process for CMC and CNRV
- MIS/Robotics
 - 2 additional Xi robots at CRMH/ 1 Xi and 1 X robot at CNRV
 - Outpatient X robot at CRCH
 - Foundation for Surgical Fellowships Grant funding for MIS fellowship 2020, 2021, 2022, 2023
 - Graduated our 4th Advanced GI/MIS/ASMBS Fellow
 - In April 2022 Dr. Salzberg was the 1st Carilion surgeon to complete his 1000th DaVinci procedure
 - In March 2022 Dr. Nussbaum completed his 32-year tenure with the ABS having examined over 1200 certification candidates
 - Dr. Nussbaum – Member Academy of Master Surgeon Educators of the ACS, Sept 30, 2022
- Continued collaboration with VCU Massey Cancer Center for clinical collaboration (Liver Tumor Board) and research trials

Department of Surgery – Recent Key Accomplishments

NEUROSURGERY

- Re-launched “Clinical Neuroscience in Practice” course for VT students
- Initiation of Research Updates Program with VT and FBRI
- Established NS cadaver lab and VP Program
- Recruited a Director of Research
- Expansion of grant funding in collaboration with FBRI and School of Neuroscience: RO1 (3); R21; NSF
- Expanded basic research capabilities
- Developing Focused Ultrasound program at FBRI
- CNS tissue repository
- Expanded craniofacial pain service
- 8 satellite NS offices and participating in e-consults

Department of Surgery – Recent Key Accomplishments

OTOLARYNGOLOGY

- Successful move to Carilion Children's Tanglewood Center
- Realignment of clinic with Carilion Direct to better serve customer needs
- Successful recruitment of new ENT Physician for CNRV
- Continue to provide GME support - Peds, CFM, Internal Medicine, Surgery, Plastic Surgery
- Continue to provide educational experience for senior ENT residents from Portsmouth Naval Hospital
- Successful recruitment of two managers to support the section at CNRV and Roanoke
- Procurement of artwork funds for Tanglewood location to improve clinic appearance

Department of Surgery – Recent Key Accomplishments

PAIN MANAGEMENT

- Expanding interventional pain practice into markets outside of Roanoke
- Developing a unique hybrid small group-based therapy for chronic pain patients using START NOW techniques co-developed with Dr. Robert Trestman, Chair of Psychiatry
- Participating in a multiple research projects including VTCSOM students FBRI researchers
- Publishing and presenting at national and international conferences
- Continuing integrative approach
 - Integrative Pain Management
 - Pain Nutrition – Lifestyle Medicine
 - Recovery Rx Fibromyalgia – Neuromuscular Training
 - Spinal stimulation
 - Kyphoplasty

Department of Surgery – Recent Key Accomplishments

PEDIATRIC SURGERY

- Opening of the Carilion Children’s Tanglewood Center
 - Multispecialty surgical care (ENT, Neurosurgery, Plastic Surgery)
- Kathryn Bass, MD named Section Chief
- Recruiting additional pediatric surgeons
- Family Donation of wound care supplies for families in need
- Virginia Pediatric Level 1 Trauma Center Reverification
- Pediatric Disaster Workgroup reconvening
- Onsite Safe Kids Coordinator started January 2022
 - In-house injury prevention efforts/onsite child passenger safety checks
 - Free gun locks
 - Back-to-school events promoting child and home safety

Department of Surgery – Recent Key Accomplishments

PLASTIC SURGERY

- Faculty active in Southeastern Society of Plastic and Reconstructive Surgeons (SESPRS), Virginia Society of Plastic Surgeons (VASPS), and American Board of Plastic Surgeons
- American Cleft Palate Craniofacial Association certified clinic
- Transitioned Pediatric Plastic Surgery to Carilion Children's Tanglewood Center
- First lymphatic reconstructive operation in the region performed at CRMH

Department of Surgery – Recent Key Accomplishments

UROLOGY IN ROANOKE

- Growing MRI directed prostate biopsy program
- Recruited a fulltime Carilion Urologist to initiate a residency program and assist with recruitment of additional urologists

WOUND CARE

- Added 3rd HBO Chamber
- Opening CFMH OP WCC to serve Franklin, Floyd, Bedford, Henry and Patrick Counties
- Renovation of CNRV OP WCC
- CNRV IP Wound Care growing
 - Rob Knowles, MD , Medical Director of CNRV Wound Care

Department of Surgery – Recent Key Accomplishments

WESTERN REGION

- 40% attrition in urologists, continue to provide the same level of services
- Initiated MRI directed prostate biopsy program
- Expanded urology services regionally including operations at CGCH
- Renovated urology practice space – 30% increase
- Continue to grow the Hillsville urology clinic (opened April 2021).
- Vascular TCAR program >100 procedures
- Dr. Charles Harris retired 4/2022

Curiosity / Innovation

- Inspire and cultivate innovation
- Support an environment where scientific investigators want to create the new knowledge that translates into breakthroughs in surgical care
- Underlying theme in research, education and patient care



Expansion of Research Efforts

- Total Research Dollars AY2021-2022
 - \$3.3 million
- Reach beyond traditional boundaries
 - Biodesign Program development
 - Interdepartmental and cross-campus
 - Translational initiatives (bench to bedside)
 - Industry
- Departmental
 - Resident research requirement
 - Monthly Departmental Research Meeting
 - Faculty advancement, promotion, & tenure

Department of Surgery Faculty/Resident Academic Accomplishments AY 2021-2022

Category	Number
Publications	116
Presentations	78
Book Chapters	11
Grants	25
Leadership/ Editorial Board	55
Teaching Formal Courses	64

Department Goals Next 5 Years

- Continue developing academic and research initiatives
- Be a top performer in quality metrics
- Achieve top decile customer service
- Continue fiscal accountability-cost/revenue/external funding
- Continue recruiting and retaining top talent

Department Goals Next 5 Years

Expand clinic and perioperative space to increase access throughout the region with additional focus on:

- Anesthesia – ACV contract completed July 2022, Began collaboration with Portsmouth Naval Hospital, start an Anesthesiology Residency
- Cardiovascular disease
- Cancer care – Cancer Center
- Dental – New grant from Delta Dental to start a Pediatric Dental Residency
- Collaborative effort to develop Biodesign Program and Fellowship(s)
- Expand Pediatric Surgery services
- Metabolism
- Minimally Invasive Surgery
- Global Surgery
- Neurosciences – Recruiting a Chair for the Department of Neurosurgery
- Otolaryngology – Recruit a Section Chief, continue collaboration with Portsmouth Naval Hospital residents, start an Otolaryngology – Head and Neck Surgery residency
- Urology – Increase clinical services, start a Urology Residency
- AI/enhanced technology

Key Success Factors

- Growth in academic and research activities
- Increased surgical volumes
- Recognized leader in surgical quality
- 90%ile in customer service
- Achieve targeted cost reductions/revenue improvements, research, and philanthropic endeavors

Conclusion

- Department of Surgery continues to lead
- Each Section contributes to our identity and the vision
- Sections collaborate within and outside
- Everyone working together
- Core mission of teaching, research, and patient care
- Core values of **C**ollaboration, **C**ourage, **C**ommitment, **C**ompassion, **C**uriosity

Our Future

- New developments built on solid foundation
- Excellence in patient care
- Strong reputation for surgical training
- State-of-the art research
- Sustained greatness achieved through our collective efforts and adherence to our mission, vision, and values

