

IOWA STATE UNIVERSITY



Virtual VM4 Clinical Rotations:

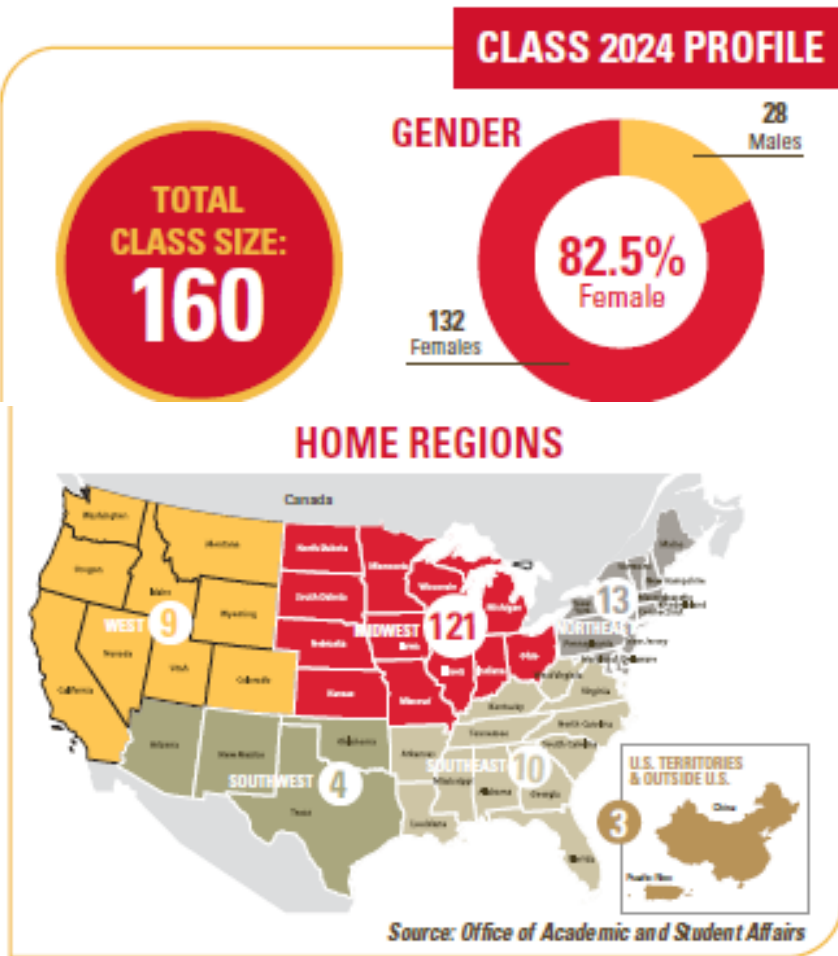
Pandemic response at Iowa State University College of Veterinary Medicine

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Iowa State University College of Veterinary Medicine

ISU-CVM by the numbers



STUDENTS

- Total Enrollment: 2nd highest
- Enrollment (Class of 2024): 3rd highest
- Non-resident Applicants: 4th highest
- 2020 MS, PhD Graduates: 4th highest



TUITION AND FEES

- Resident Total Cost of Education (Total 4 Years): 3rd lowest (\$168,056)
- Non-Resident Total Cost of Education (Total 4 Years): 8th lowest (\$280,028)
- Cost of Living in Ames: 1st lowest (\$14,426/year)

RESEARCH FUNDING EXPENDITURES

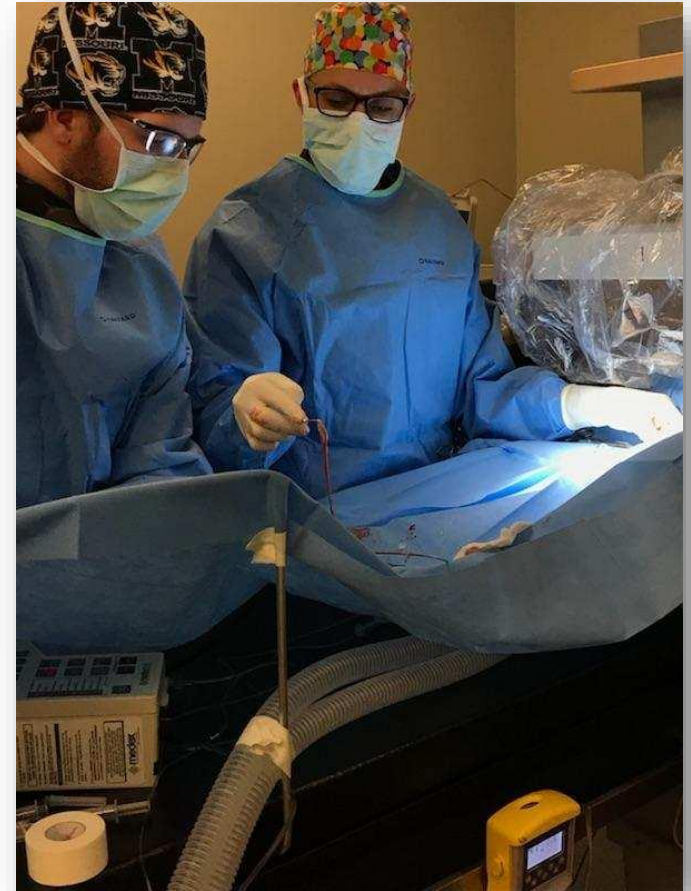
- USDA Expenditures: 2nd highest
- DoD Expenditures: 12th highest
- Industry Expenditures: 2nd highest
- NIH Expenditures: 16th highest



VM1-3 Curriculum



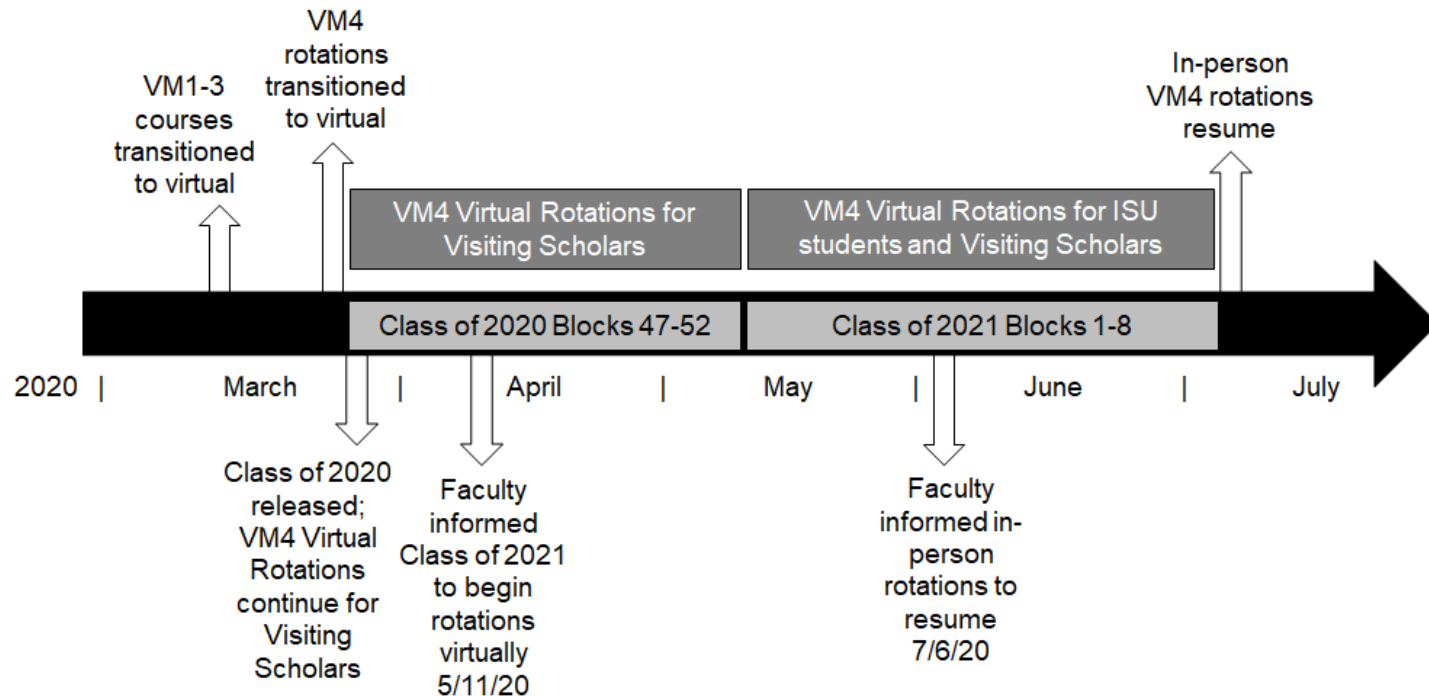
VM4 Curriculum



Virtual VM4 Clinical Rotations: A COVID-19 Pandemic Response at Iowa State University College of Veterinary Medicine

Jessica L. Ward ■ Brenda L. Mulherin ■ Courtney A. Vengrin

Timeline: What happened and when?



What rotations were offered?

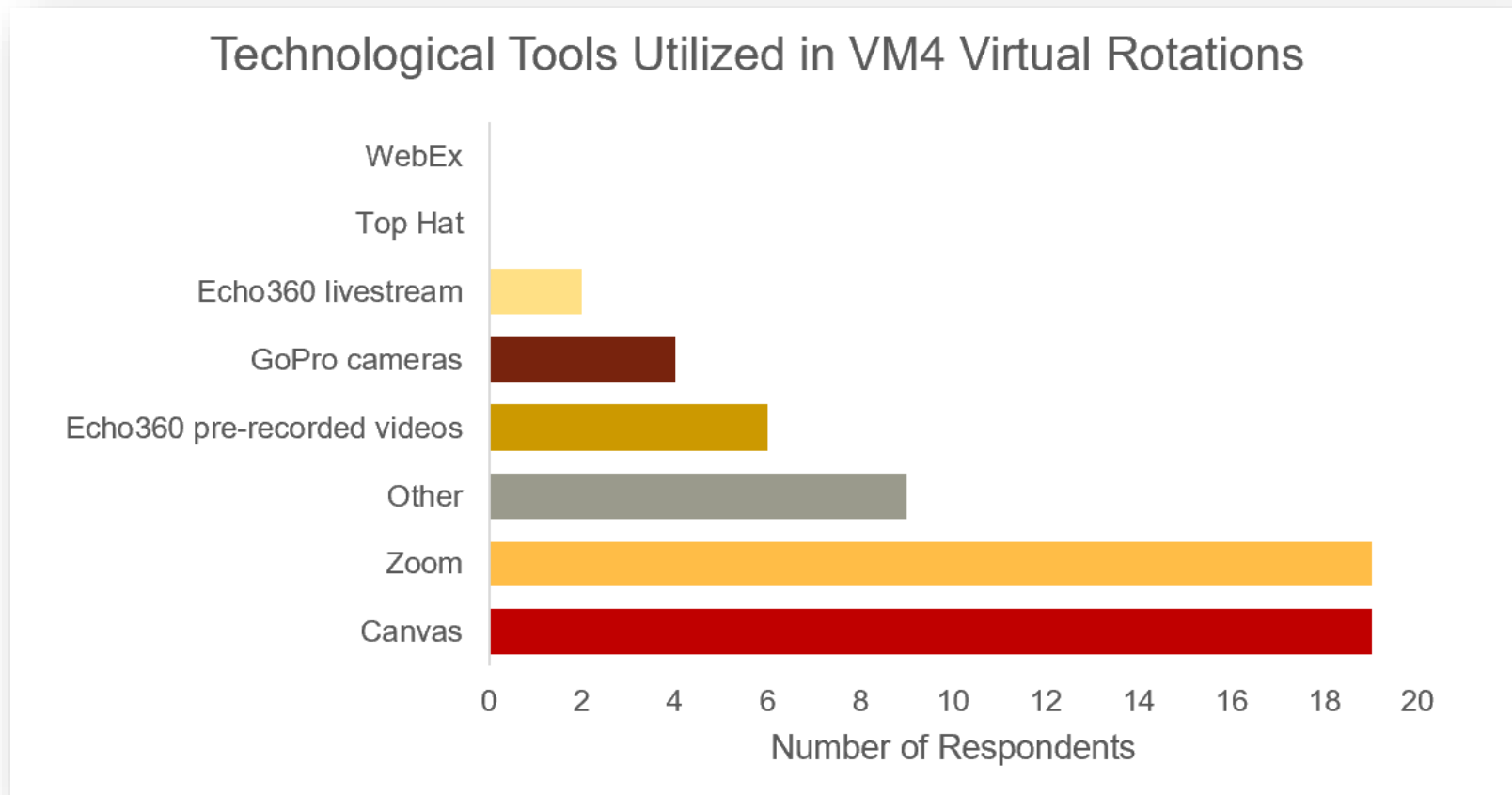
- **C/O 2020 (blocks 47-52):**
 - 9 rotations
 - 24 Visiting Scholars
- **C/O 2021 (blocks 1-8):**
 - 15 rotations
 - 137 ISU students, 28 Visiting Scholars
- Total of **36** VCS faculty participated
- Total of **18** VCS faculty completed survey (50%), representing 11/15 (73%) rotations

VCS VM4 Virtual Rotations offered blocks 47-52	VCS VM4 Virtual Rotations offered blocks 1-8
Anesthesia Cardiology Dermatology/Ophthalmology Equine Medicine/Ambulatory Equine Surgery/Farrier Neurology Oncology Primary Care/Dentistry Zoo/Wildlife	Anesthesia Cardiology Dermatology Equine Medicine/Ambulatory Equine Surgery/Farrier Intensive Care Neurology Oncology Ophthalmology Primary Care/Dentistry Small Animal Internal Medicine Small Animal Orthopedic Surgery Small Animal Soft Tissue Surgery Shelter/Community Outreach Zoo/Wildlife

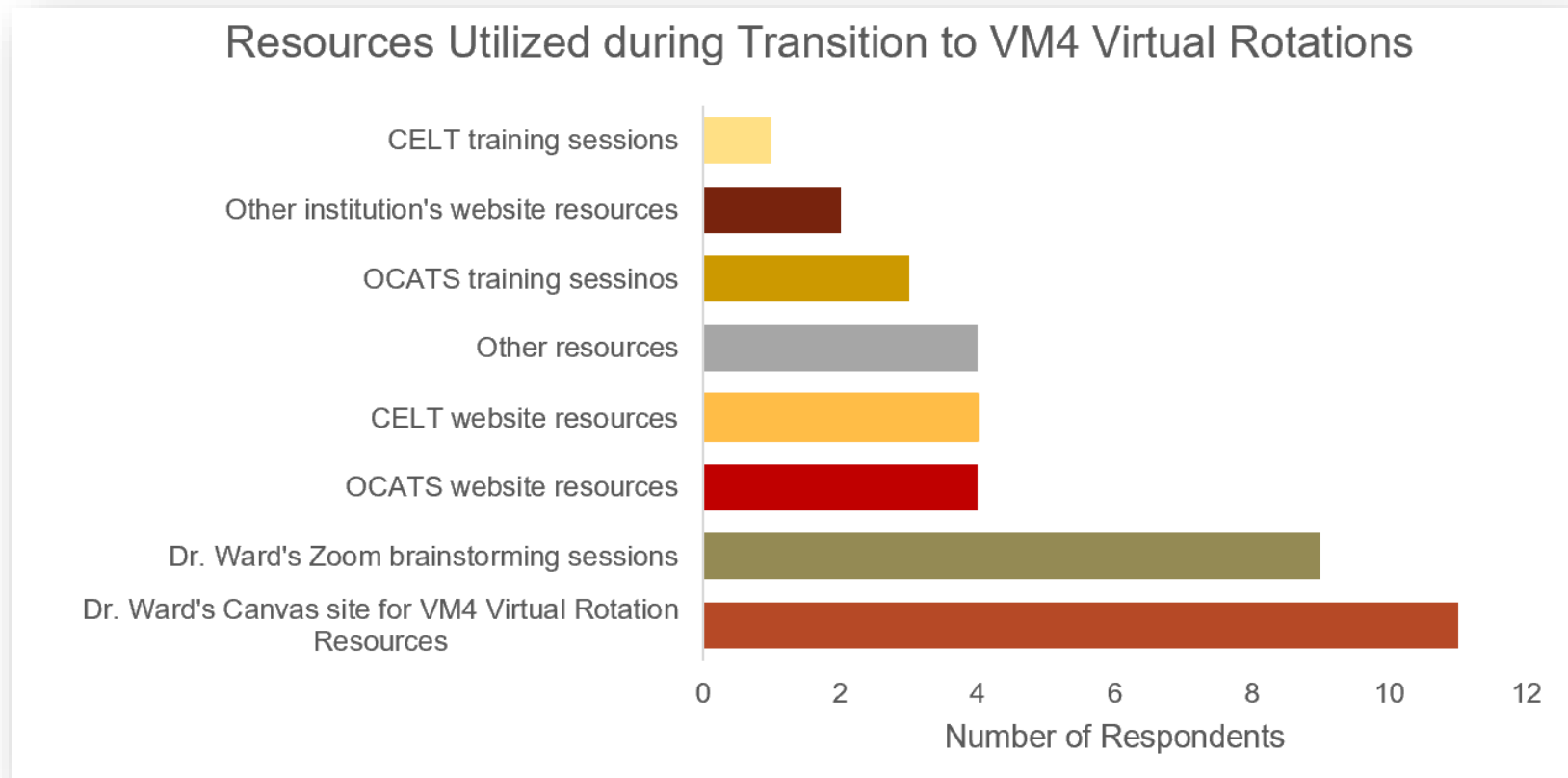
Time investment: faculty reported . . .

- Being **directly involved with VM4 Virtual Rotation educational delivery** for a **median of 8 weeks** (range 3-15 weeks)
- Spending a **median of 40 hours** (range 4-105 hours) **preparing educational materials** for VM4 Virtual Rotations
- Spending a median of **14 hours per week** (range 3-45 hours) **delivering VM4 Virtual Rotations** during assigned weeks
- Extrapolated to all 36 faculty participating in VM4 Virtual Rotations, **total investment by VCS faculty in VM4 Virtual Rotations was >5,000 faculty hours**

Resources utilized: faculty used . . .



Resources utilized: faculty used . . .



Educational outcomes: faculty thought . . .

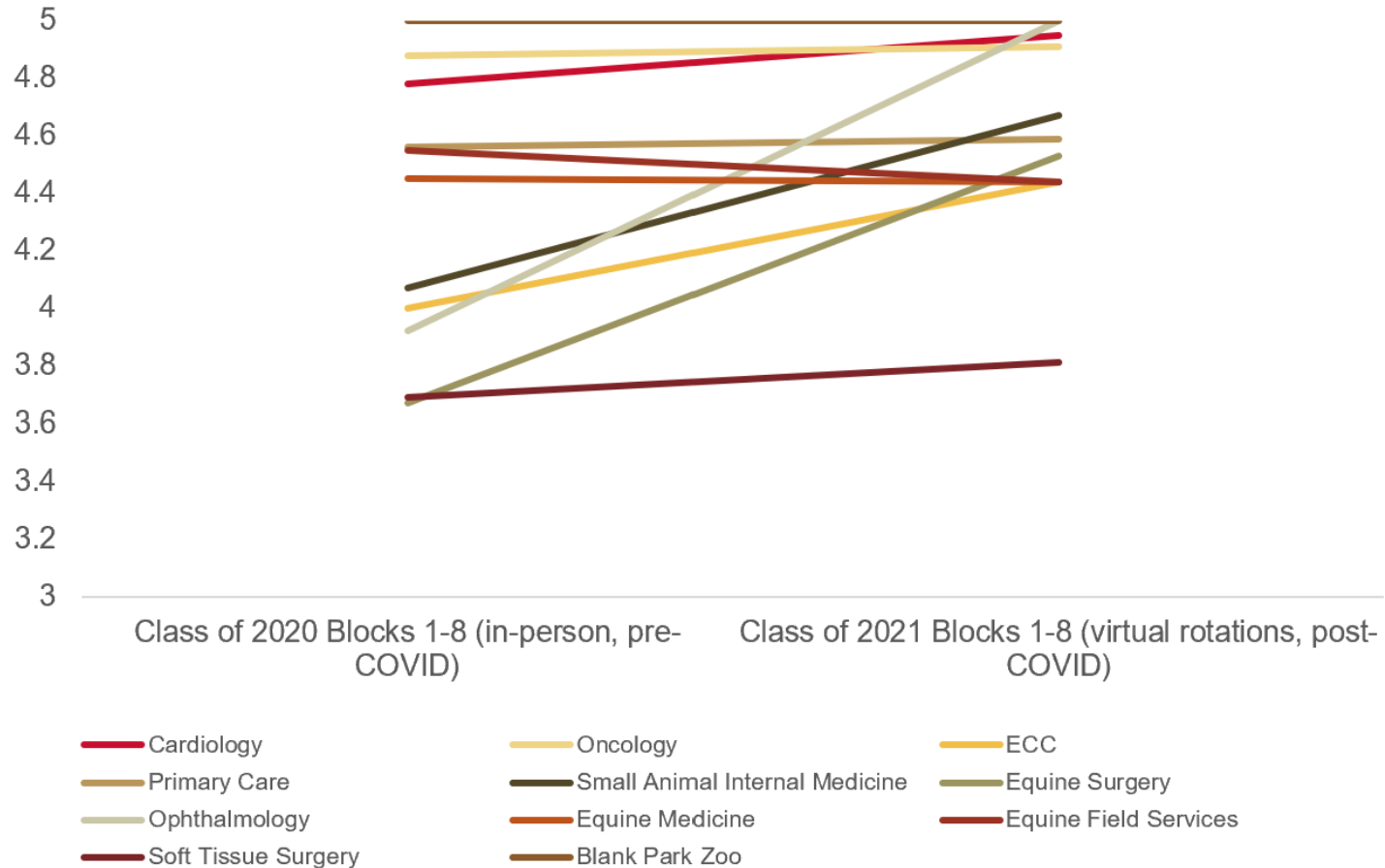
- Percent of **knowledge and skills** students gained on VM4 Virtual Rotation (compared to in-person): median **56% (range 30-85%)**
- Likelihood that faculty would **hire a student** who had completed their particular VM4 rotation virtually (compared to in-person): median difference **25% (range 0-80%)**
- Specific knowledge or skills missing or deficient: **physical examination > technical skills > client communications = patient assessment and inpatient management**

Student perceptions: students felt . . .

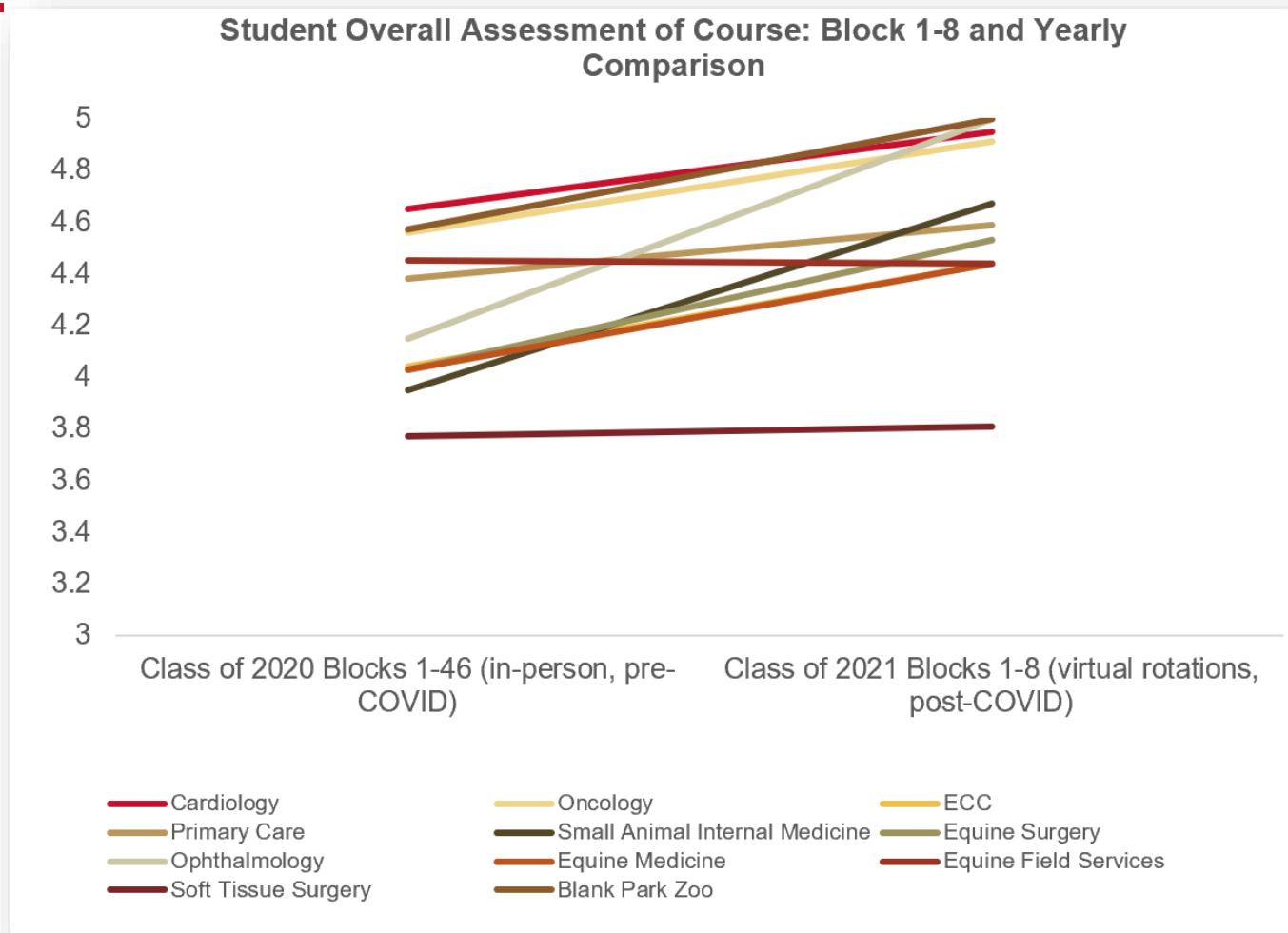
- Most faculty (17/18, 94%) felt that **VM4 Virtual Rotations were positive and well-received by students**
- For rotations that solicited direct feedback at the conclusion of the rotation, ratings of the instructor were **uniformly positive** (“Great” or “Excellent”)
- Example student feedback:
 - *“I think this was a really great rotation. I learned a TON and enjoyed discussing. The format was nice, and I had plenty of time to work on the case studies.”*
 - *“I am so thankful that you have worked so hard to put it together.”*
 - *“Thank you for taking the time to put together a highly organized and beneficial online rotation. I feel that I was able to learn a lot of valuable information during this rotation.”*

Student evaluations: students scored .

Student Overall Assessment of Course: Block 1-8 Comparison



Student evaluations: students scored .



Faculty perceptions: faculty felt . . .

- **Unanticipated benefits:** additional focused time (esp. Neurology, Dentistry)
- **Most common comment:** faculty did the best they could under the circumstances
 - *“I think the majority of people did a great job improving, adapting, and overcoming through the challenge and will be able to do so again if the need arises.”*
- **Most common concern:** time & burden for VCS faculty, most of whom were also engaged in concurrent clinical duty
 - *“In general I felt like administration didn't comprehend the amount of time that people were having to put into this, especially those of us that were trying to run a clinical service that was still busy. I understand that they couldn't change it and that we all had to do what we had to do to get it done but it would be nice to see that time/effort acknowledged and valued.”*

Take-homes: extraordinary time and effort!

- 36 faculty from 15 services invested >5000 hours to deliver educational content to 165 students
- Faculty utilized technology tools, novel educational resources and cooperative brainstorming sessions
- Rotations were well-received and appreciated by students (same or higher evaluation scores vs. typical rotations)
- Faculty and students recognize inherent limitations in teaching certain clinical skills virtually
- Faculty demonstrated adaptability and resilience in challenging circumstances

What were others' experiences?

- What do we think now that C/O 2021 has graduated?
- What did we do well vs. what could we do better next time?
- What pandemic changes will we keep?

Thank you!

