

FINANCIAL DISCLOSURE: NONE

○ Acknowledgement:

Dana Hawkinson, MD, Medical Director, Infection Control and Prevention



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THE UNIVERSITY OF  
KANSAS SCHOOL OF  
MEDICINE DEPARTMENT  
OF OPHTHALMOLOGY:  
RESPONSE TO COVID 19

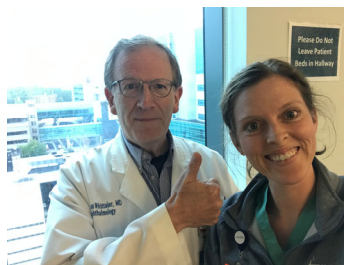
Educating Tomorrow's Generation  
--Caring for Today's

The University of Kansas logo, featuring a blue and yellow jay with the letters 'KU' on its chest, is positioned on the left side of the slide. The background is a blue gradient with vertical red and white stripes on the left and several red circles of varying sizes.

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## ACADEMICS AT KU

- Nine residents
- Starting July 1, 2020 – Joint Internship with Internal Medicine of 3 PGY1 interns
- Rotations at Kansas City Veteran's Hospital and Children's Mercy Hospital, as well as with private practice volunteer faculty
- KU Clinical faculty: 13



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### DEPARTMENT OF OPHTHALMOLOGY SCHOOL OF MEDICINE CLINICAL FACULTY

7400 State Line Rd, Prairie Village, KS  
Appointments: 913-588-6600

4000 Cambridge St., Miller Suite 1011, Kansas City, KS  
Appointments: 913-588-6600

[kumed.com/kueye](http://kumed.com/kueye)



John Sutphin, MD, Chair  
Cornea & Anterior Segment



Nathan Ajan, MBSO, FRCSC  
Retina and Vitreous



Neel Anagari, MD  
Glaucoma



Mary Champion, MD  
Retina and Vitreous



Erik Deffenwer, OD  
Optometrist



William Godfrey, MD  
Uveitis



Kenneth Golim, MD  
Cornea, Anterior Segment & Refractive



Anjolie Quirk, MD  
Comprehensive



Jason Sokol, MD  
Oculofacial Plastic & Orbital Surg.



Matthew Twardowski, O.D.  
Optometrist



W. Abraham White, MD  
Comprehensive



Thomas J. Whittaker, JD, MD  
Neuro-Ophthalmology




Jane Wisna, MD  
Comprehensive




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**DEPARTMENT OF OPHTHALMOLOGY  
SCHOOL OF MEDICINE RESIDENTS  
2020 – 2021**


**Third-Year Residents**



Connor Brass, MD

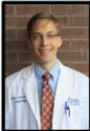


Travis Kimple, MD

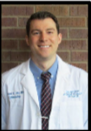


Chris Stefanowicz, MD


**Second-Year Residents**



Stephen Ambrose, MD




Samuel Long, MD




David Nasrazadani, MD


**First-Year Residents**



Ahhila Alapati, MD



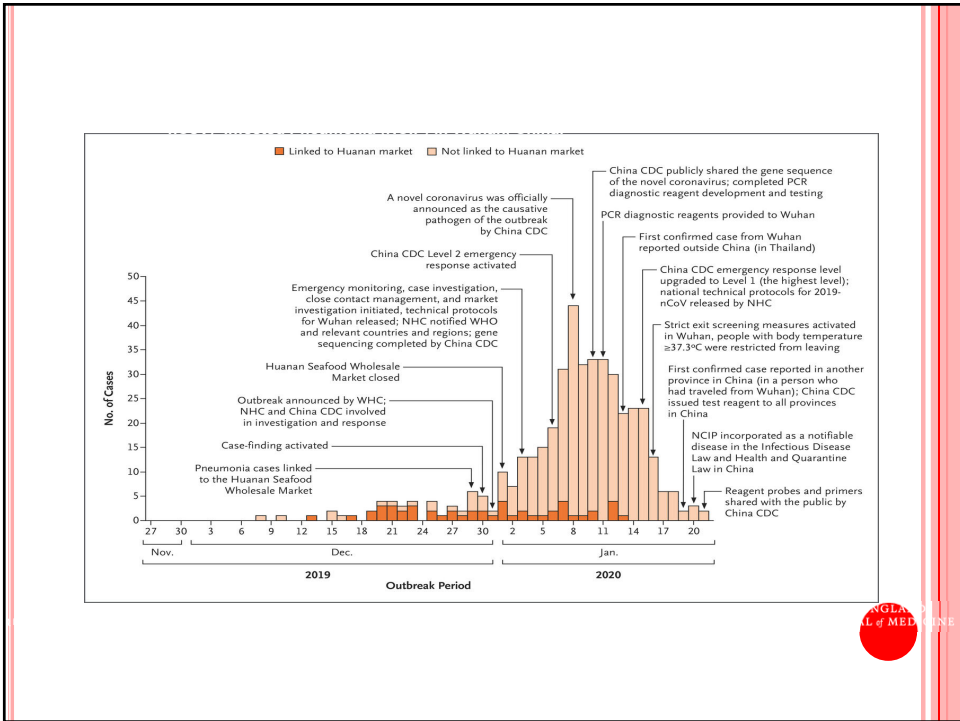
Megan Hagneghdar, MD



Jordan Miller, MD

EDUCATING TOMORROW'S GENERATION - CARING FOR TODAY'S

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## COVID-19 in the United States

- First U.S. cases of nontravel–related COVID-19 were confirmed on February 26 and 28, 2020
  - 1/21-2/23/20 there were 14 cases of China travel-related cases
- In 14 counties with early community-acquired cases of COVID-19, no substantial increase was observed in the proportion of COVID-19–like illness before February 28
- Retrospective SARS-CoV-2 testing of approximately 11,000 respiratory specimens from several U.S. locations beginning January 1 identified no positive results before February 20
- Sustained, community transmission had begun before detection of the first two nontravel–related U.S. cases from the importation of a single lineage of virus from China in late January or early February, followed by several importations from Europe

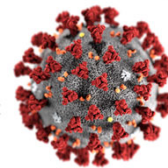
COVID-19 Response team, Jorden et al., MMWR 6/5/20



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## SARS-COV-2

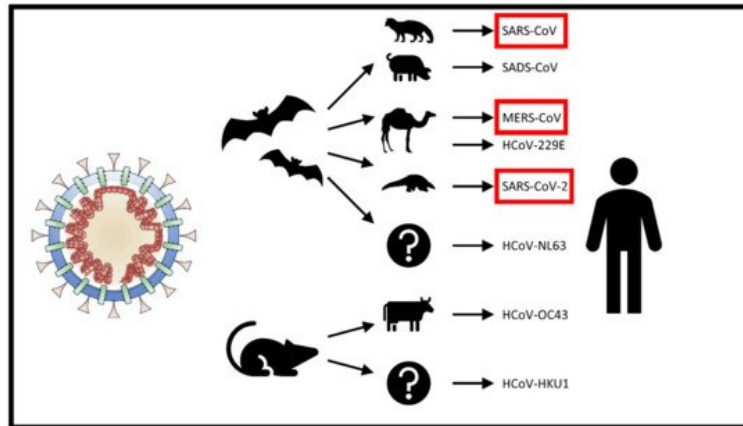
- Coronavirus– named for the spikes seen on the virus surfac
- 7<sup>th</sup> known coronavirus to infect humans
- Etiologic agent of COVID-19
- 4 common coronavirus cause mild cough/cold illness (~10-15% of colds)
- SARS 2002 –mortality rate of 10-15%, but >50% in those over 65
- MERS 2012—mortality rate of 35%, MERS cases continue
- Case fatality rate of SARS-COV-2 in the US is ~4-5% (Johns Hopkins Coronavirus Resource center)
  - However there are many more cases that go undiagnosed



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## ORIGIN OF SARS-COV-2

- Suspected to have originated in bats
  - Has ~70% genome sequence homology to SARS
  - Has 96% sequence homology to bat CoV RaTG13<sup>1</sup>
- Possible intermediate host such as the pangolin
- There are likely several thousand more CoV in bats



1. Zhou et al., 2020, Current Biology 30, 2196–2203

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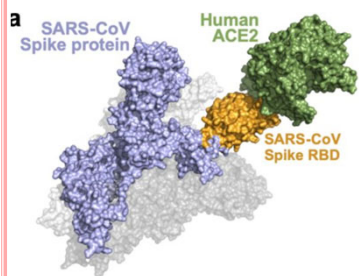
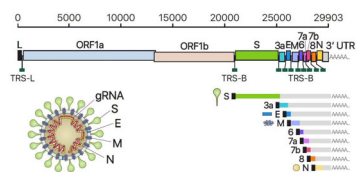


Figure 1.a., Letko M, Munster V, bioRxiv, 1/22/20



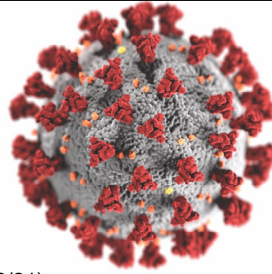
www.epigentek.com

## SARS-COV-2

- 30kb genome, large genome. Positive sense single stranded RNA.
- N, or nucleocapsid, protein encapsidates the genome
- S (spike), E (envelope), and M (membrane) proteins comprise the surrounding lipid bilayer envelope
- Nonstructural proteins, such as RNA-dependent RNA polymerase
- Angiotensin converting enzyme-2 (ACE2) receptor
  - Receptor for SARS-CoV
  - Expressed on variety of cells in heart, GI and lung
- Specifically concentrated in type II alveolar cells (Zhao Y, Zhao Z et al, bioRxiv, 1/26/20)
- Interaction with TMPRSS2 as well (serine protease)

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## COVID OVERVIEW



- In Kansas, total of 50,870 cases reported (9/21)
- At KU:
  - 721 COVID inpatients discharged to date (9/23), including deaths
  - KUH inpatient census: 872 (9/23) compares to 861 on 3/12 before pandemic; 484 on 4/18 and 705 on 5/18
  - KUH surgical cases and procedures: 314 (9/18), compares to 345 cases averaged per day before pandemic and 132 cases per day in March and April
- Link to KS stats and information: <https://www.kansashealthsystem.com/-/media/Project/Website/PDFs-for-Download/COVID19/Kansas-and-Local-COVID-Cases-To-Date.pdf>

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## CLINIC STRATEGY




- March 23 – May 4th: Reduced clinic to 3 days a week
  - Operating at 30-60% of normal patient volume; 77% of March 2019; 60% of April 2019 and 74% of May 2019
  - Telemedicine visits beginning March 30th
  - Drive-Through IOP exams and other routine clinic visits
  - Restrictions on number of patients in building and staff/physicians in exam rooms
- Canceled free vision clinics for JayDoc and KU Eye Lions, resuming in July and August, respectively
- May 11th: Back to Monday-Friday schedules
- No transmissions from eye clinic

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## GUIDANCE – COMPLIANCE WITH REGULATIONS & RECOMMENDATIONS

In Eye Clinic, March 17<sup>th</sup>:

- Travel screening for patients and visitors
  - Keeping PPE secured
  - Patients are only allowed 1 visitor with them
  - Anyone with symptoms or screens positively is given a mask and being asked to see their PCP (not seen for eye visit)
  - Encouraging social distancing in clinic and office spaces
  - Non-clinical staff being encouraged to work from home, when appropriate
  - Signage with Visitor Policy & Medical Symptoms to look out for
  - Ordered additional PPE for isolation patients
  - Reducing clinical and surgical schedules to postpone any routine care (follow ups > 6 months) and elective surgeries to May 1st and beyond
  - Using approved cleaning products effective against the virus, staff wiping down waiting and sub waiting areas once an hour and cleaning exam rooms thoroughly between patients and at closing
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## GUIDANCE – COMPLIANCE WITH REGULATIONS & RECOMMENDATIONS

- Designating specific areas of the office for patients with suspected or positive COVID-19
  - 5/1: Minimizing patients' time in the traditional waiting area, pre-screening and direct rooming
  - 5/11: University masking for all staff, faculty, patients, visitors or others to enter/remain in facilities
  - 6/1: Patient screenings discontinued; staff and visitors still screened
  - 6/15: Temporary work from home accommodations end
  - 7/10: Travel quarantine policy revised, rescinding 14-day quarantine following domestic travel; 9/16: asymptomatic employees okayed to work with self-monitoring following international travel
  - 7/17 & 7/22: Exposure at moderate risk level and asymptomatic employees and physicians no longer requiring 14-day quarantine
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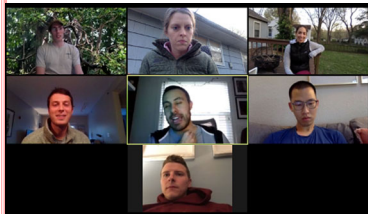
## RESIDENTS' ACTIVITIES

- March 16th: Residents removed from clinic and OR, except for emergency procedures
- Divided into three teams (call, consult and clinic)
- April 25th: Elective procedures permitted
- May 4th: VA resuming OR cases and residents rotations
- May 18th: Pre-pandemic schedule and responsibilities resumed
- July 7th: Resumed CMH rotations



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## EDUCATIONAL IMPACTS



- Virtual Graduation for Seniors Drs. Denise Capps, Christina Gillmor and Yong Kam (pictured above)
- Virtual Grand Rounds, Morning Reports and EyeCon
- OKAPs delayed and eventually done virtually
- Restrictions on medical student and other visiting student shadowing
- Reduced rotations at KCVA, CMH etc.
- Virtual resident interview sessions



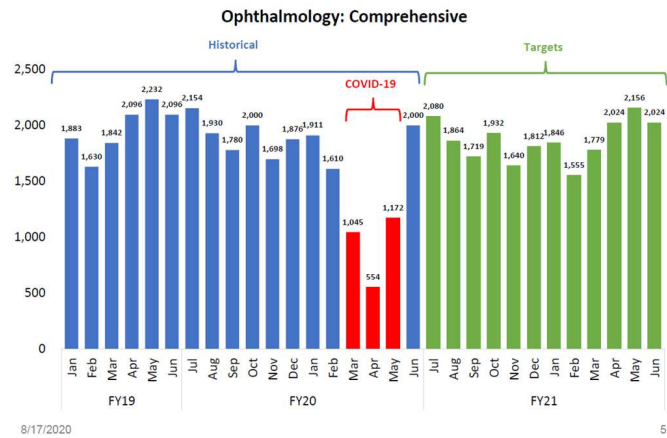
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## CLINIC IMPACTS

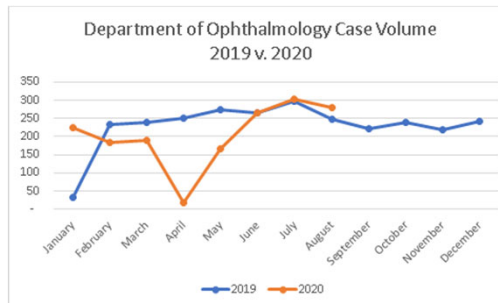
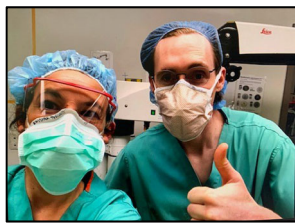
THE UNIVERSITY OF KANSAS HEALTH SYSTEM

### Historical & FY21 Appointments



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## SURGERY IMPACTS



- March 23rd: Canceled all cataracts and review of surgeries requiring PPE. Lasers continued normally.
- April: Hospital census decreased to 40-60% and elective procedures suspended
- Use of ASC significantly reduced
- April 29th: Slow acceleration of ORs

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## STAFFING, RECRUITMENT AND FINANCIAL IMPACTS

- Postponing faculty recruitment
- Hiring freeze for staff positions
- April: Clinical staff at 60%
- Deployment to other departments
- Administrative/support staff working remotely
- No job loss at KUHA
  
- \$175 billion in federal funding through
  - Paycheck Protection Program
  - Health Care Enhancement Act
  - Coronavirus Aid, Relief and Economic Security (CARES) Act



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## SOCIAL AND DAILY IMPACTS

- Annual Welcome Picnic cancelled (picture from 2019 above)
- Reduced number allowed in staff breakrooms and other shared spaces
- Virtual meetings with School of Medicine, Health System and within the department
- Decreased involvement with Royals and Chiefs players
- 37th Annual KU Eye Lemoine Alumni & Friends will be virtual on Saturday, November 14th, 7 p.m. – 8:30 p.m. (details coming soon!)
- Annual Holiday Party likely to be cancelled



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## LESSONS LEARNED

- Patient satisfaction ratings improved, largely due to reduced wait times, shorter appointment duration and increased appointment availability
- New modules of telemedicine and drive-through testing to improve efficiencies. Since the end of March, more than 125,000 telehealth visits provided to date (9/23) and represent approximately 15% of total ambulatory visits.
- Cleaner facilities
- Reduced size of waiting areas



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## HOW TO DECREASE RISK OF GETTING AND SPREADING COVID-19

- The best way to prevent illness is to avoid being exposed to this virus. You can take steps to slow the spread.
- Maintain good social distance (about 6 feet, more if able). This is very important in preventing the spread of COVID-19.
- Wash your hands often with soap and water. If soap and water are not available, use a hand sanitizer that contains at least 60% alcohol.
- Routinely clean and disinfect frequently touched surfaces.
- Cover your mouth and nose with a cloth face covering when around others.
- Also, do not go out if you are sick



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