GRAND ROUNDS
Challenges in the Management of COVID-19: Case-Based Presentations

Kelly Bookman, MD
Professor and Vice Chair of Operations
Department of Emergency Medicine
University of Colorado School of Medicine

Abigail (Abbey) Lara, MD
Associate Professor of Medicine
Division of Pulmonary Sciences and Critical Care Medicine; Medical Director, Medical-Surgical Progressive Care Unit
University of Colorado School of Medicine

Anunta Virapongse, MD, MPH
Assistant Professor of Medicine
Division of Hospital Medicine
Assistant Vice-Chair of Quality and Patient Safety, Department of Medicine
University of Colorado School of Medicine

CME/ABIM Credit

APRIL 29, 2020 from 12-1:30pm
ED COVID Decision Making—Evolution over 2 months

Kelly Bookman, MD
Professor and Vice Chair of Operations
Dept of Emergency Medicine
4/29/20
ED timeline

• 3/5 --- first positive in CO; airborne transmission
• 3/10 --- Epic COVID test not available in Epic except for ID; tests still being sent to CDPHE (TAT 5-14 days)
• 3/12 --- droplet + contact + eye for COVID patients, except during aerosol-generating procedures; MDI shortage
• 3/13 --- ED surge plans specific to COVID developed; ED volumes not up (or down) yet
• 3/14 --- ED pathway for testing—(questions to prevent testing “inappropriate patients”); RVP being sent with every test. If RVP neg, COVID “excluded” and COVID test not sent. Admit when RVP back.
Early testing algorithm
Early COVID order
ED timeline

- 3/20 --- “Special Precautions for Intubation of a COVID-19 patient” document created
- 3/22 --- first conversations about testing first responders
- 3/24 --- developed process to admit pts < 30 yo to CHCO
- 3/26 --- marketing creates outpatient handouts in English and Spanish
- 3/26 --- **ED census down by 40%**
- 3/28 --- **Cephied testing goes live**; hold patients in ED until COVID test is back
Iterative COVID test

When “Symptomatic ED admission or hospitalized patient” is answered “Yes”, these questions cascade.

When “Symptomatic ED patient who will discharge or outpatient” is answered “Yes”, these questions cascade.

**If the all Cepheid/Alere questions are answered as “No”, the test goes to UCH Roche.**
• 3/28 --- any intubation system-wide be performed by an operator wearing a PAPR, gown, and double gloves

• 3/28 --- no longer awaiting RVP results due co-infection

• 3/30 --- ED pathway for initial evaluation and management; who can be safely discharged? considering calling back patients q day for 5 days
First iteration of ED evaluation pathway
ED timeline

• 3/30 --- shut down one of the ED night shifts
• 3/31 --- starting to talk about scarcity
• 4/2 --- consider proning awake patients
• 4/5 --- expanded outpatient COVID testing criteria
  • immunocompromised patients and symptomatic homeless patient
  • concerns about Cephied rapid results—lots of retesting
ED timeline

• 4/6 --- arranged for **vendor to give O2 for home from ED**
• 4/6 --- **resuscitation appropriateness pathway**
• 4/7 --- **sending admissions to VA**
• 4/7 --- **shut down morning intake and ST**
• 4/8 --- **Alere testing started**
• 4/8 --- **acute phase reactants removed from ED pathway**
• 4/10 --- fentanyl and midazolam shortages; Cephied tests are as sensitive/specific as Roche
• 4/10 --- testing asymptomatic patients going to cath lab and IR
• 4/13 --- all risk stratification blood tests moved to consider ordering from ED pathway
• 4/15 --- expanded outpatient testing to all symptomatic patients; increased age ok to dc home to 70 yo
• 4/16 --- oxygenation rec’s change to reflect intubation based on WOB not hypoxemia
ED timeline

• 4/16 --- UV reprocessing starts
• 4/22 --- Alere testing abandoned
• 4/23 --- pre op/procedural testing for asymptomatic patients added to ED pathway
• 4/25 --- running out of rapid turn around tests
• 4/27 --- elective surgeries resume
• 4/29 --- ????????
ED evaluation pathway—current

Disposition decision making arm
Not all heroes wear capes.
Some wear masks.