Welcome (Back) to Inpatient Care Part 2: Updates, Recommendations, and Resources for Optimizing Inpatient Practice

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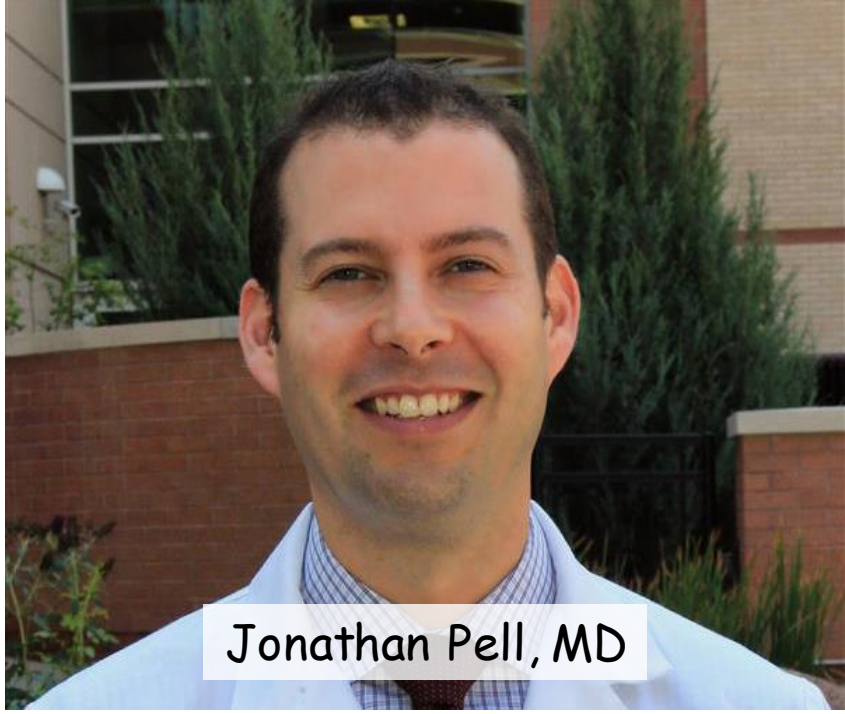
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Learning Objectives

1. Understand the **framework** for the DHM response to the current pandemic
2. List **resources** for successfully practicing inpatient medicine
3. Understand the **roles** of your inpatient team members
4. Recognize differences in working with **Residents and Advanced Practice Providers (APPs)** in the inpatient setting.

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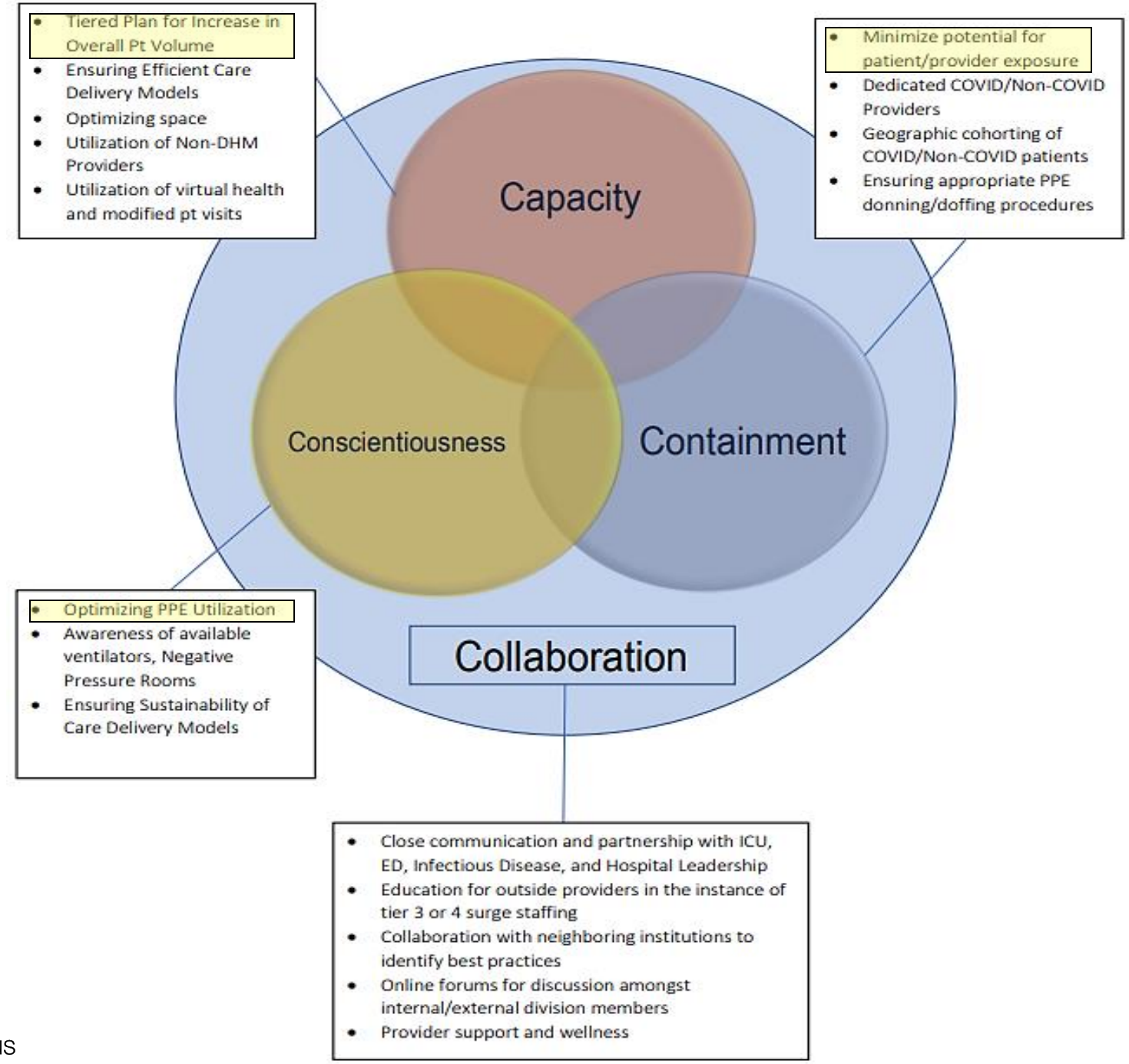

Tiered Plan for Increase in Overall Pt Volume
Ensuring Efficient Care Delivery Models
Optimizing space
Utilization of Non-DHM Providers
Utilization of virtual health and modified pt visits
Minimize potential for patient/provider exposure
Dedicated COVID/Non-COVID Providers
Geographic cohorting of COVID/Non-COVID patients
Ensuring appropriate PPE donning/doffing procedures
Capacity
Conscientiousness
Containment
Collaboration
Optimizing PPE Utilization
Awareness of available ventilators, Negative Pressure Rooms
Ensuring Sustainability of Care Delivery Models
Close communication and partnership with ICU, ED, Infectious Disease, and Hospital Leadership
Education for outside providers in the instance of tier 3 or 4 surge staffing
Collaboration with neighboring institutions to identify best practices
Online forums for discussion amongst internal/external division members
Provider support and wellness

The Washington Post
Democracy Dies in Darkness

Health

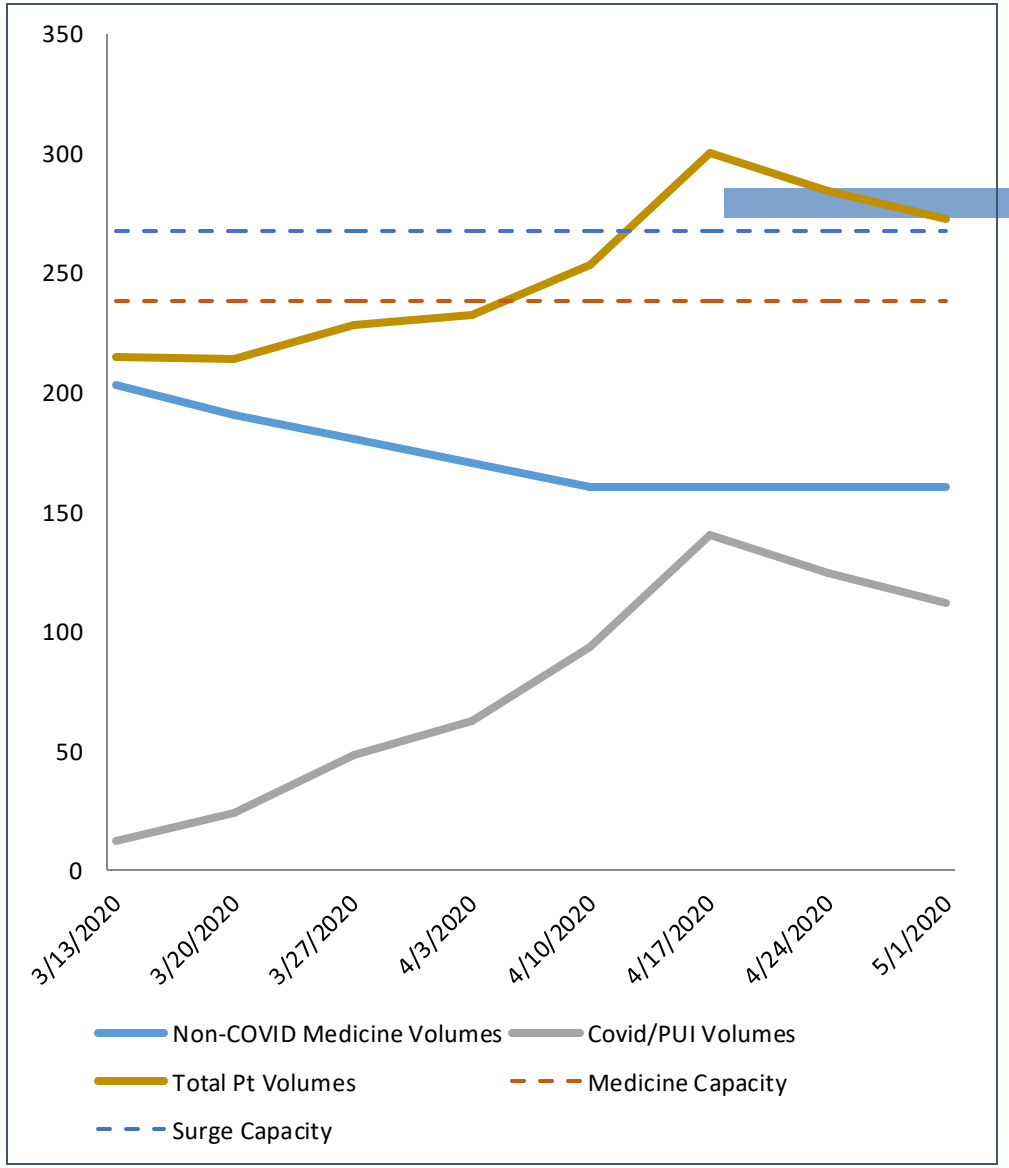
Ninety thousand medical workers volunteered to help New York battle coronavirus. Most are sitting idle.

New York Gov. Andrew M. Cuomo , center, and other officials have called on volunteers to help the fight against the coronavirus in the state of New York. But few of them have been put to work since. (drew M. Cuomo D, center, and other officials have called on volunteers to help the fight against the coronavirus in the state of New York. But few of them have been put to work since.)

Non-DHM Provider Utilization

- Physician: Prioritize Non-COVID Rounding Teams
  - Minimize PPE
  - Minimize COVID Exposure
  - Added Clinical Support with Housestaff
  - Teaching Opportunities
- APPs: Swing/Cross Cover
  - Minimize PPE
  - Minimize COVID Exposure
  - Streamlined onboarding
  - Clinical Support with DHM Swing APP

What We Planned For:

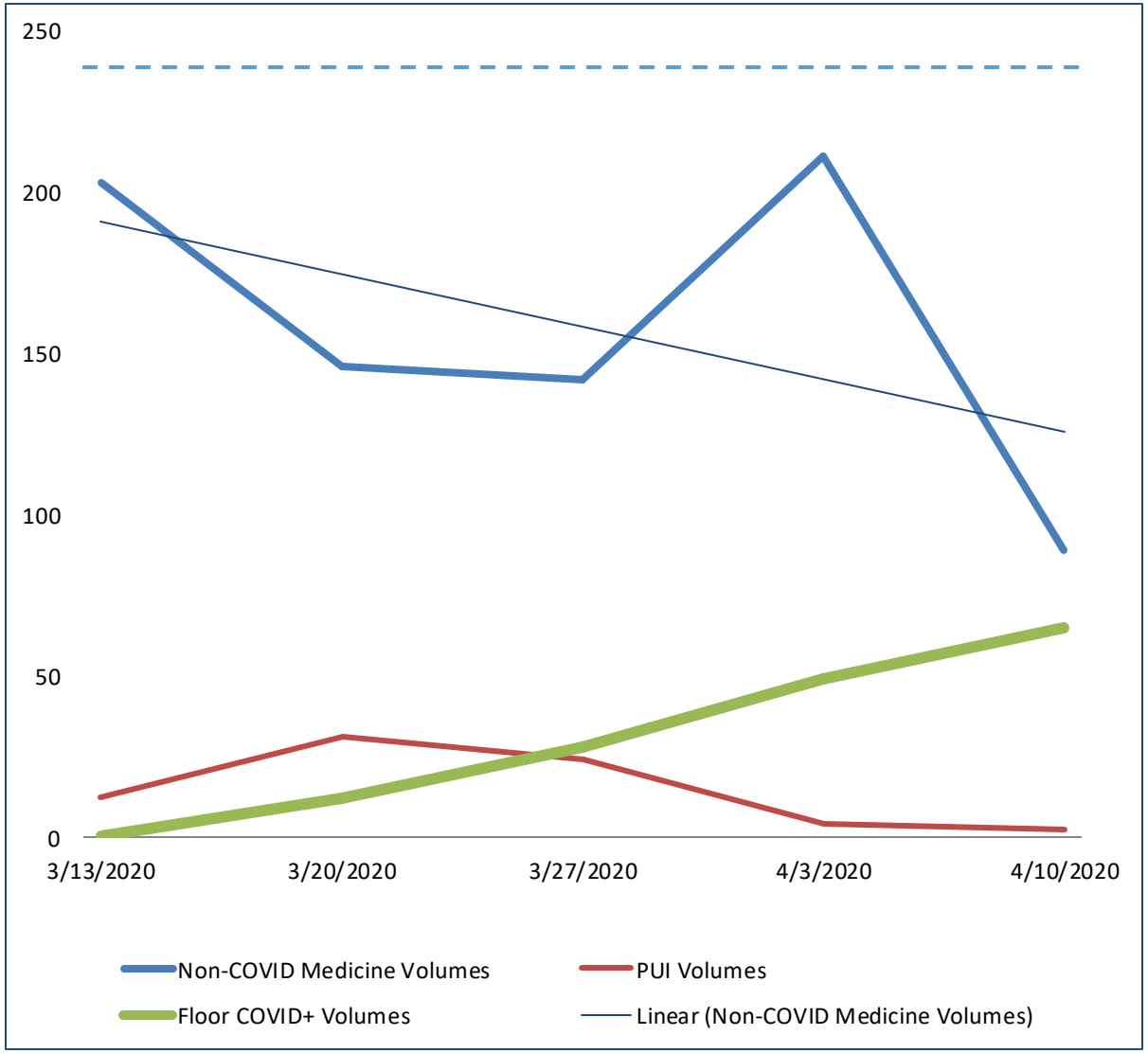


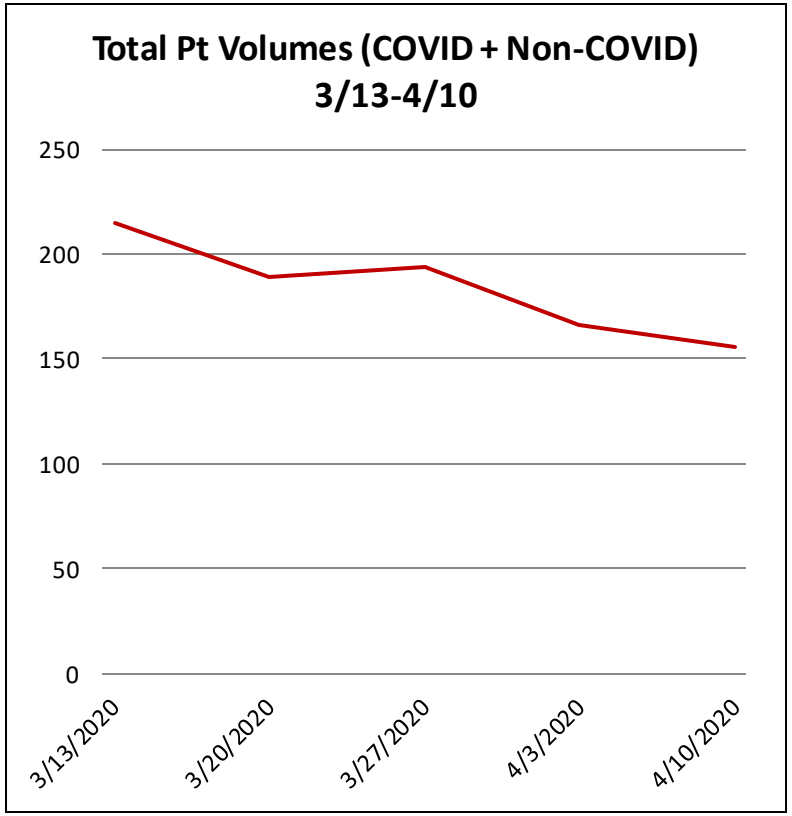
Provider Deficit

Unknown Variables:

- New Case Doubling Time
- Length of Stay
- Provider Illness

Our Experience 3/13-4/10:





Variables:

- New Case Doubling Time: **2-10 days**
- Provider Illness: **Minimal to date**
- **General Medicine:** >50% Decrease in Pt Volumes

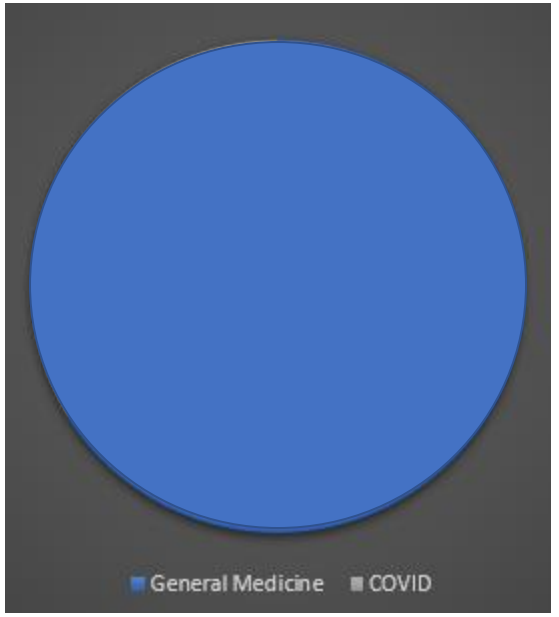
University of Colorado Division of Hospital Medicine Daytime Faculty Staffing:

21 Teams (Flex Teams Based on Pt Volumes)

21 Attendings

7 APPs

Total Patient Capacity: ~**238** Patients



6 Floor COVID Teams
- 4 Attending/APP Teams
- 1 Attending/Resident Team
- 1 Attending Only Team

COVID Capacity: ~**80 patients**

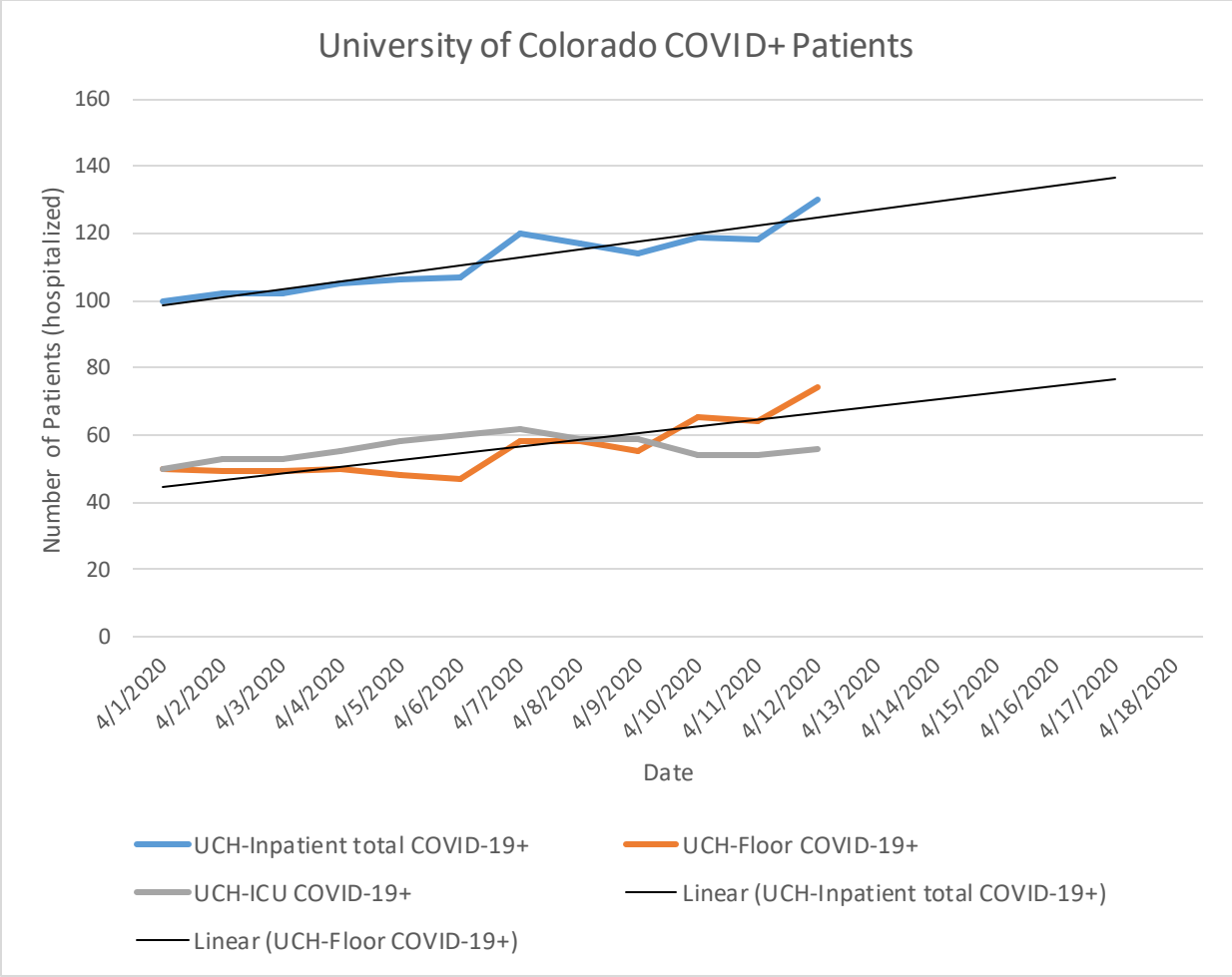
7 DHM COVID Providers on 4 ICU Teams
- 4 Daytime Attendings
- 2 Daytime APPs
- 1 Nighttime Attending

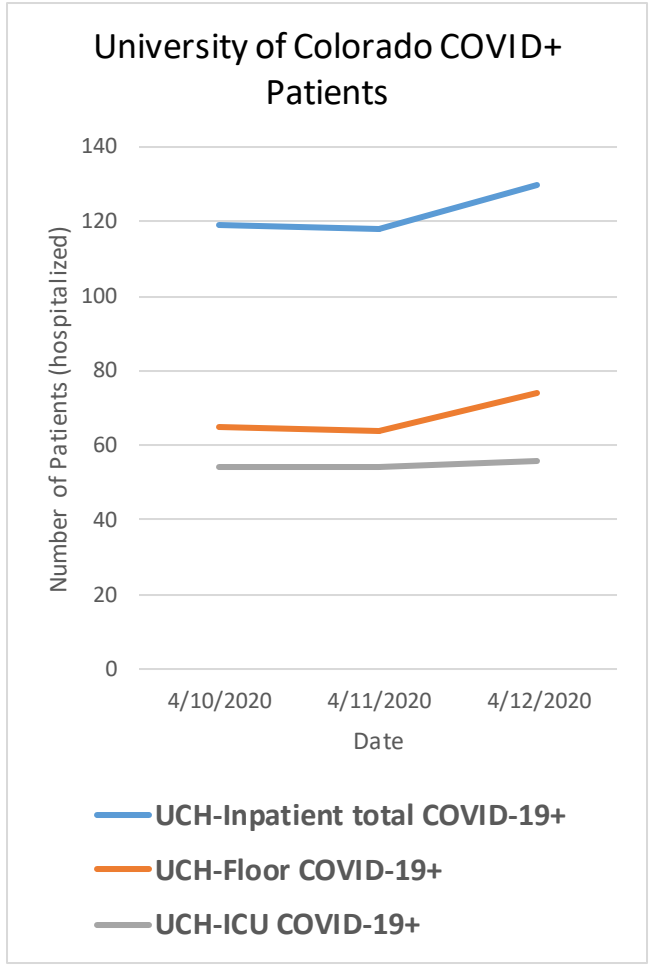
11 General Medicine Teams
- 7 Attending/Resident Team
- 1 Attending/APP Team
- 3 Attending Only Teams

General Medicine Capacity: ~**136-158 Patients**

Non-DHM Provider Need: Attending Coverage, 3 Day Teams

Another Perspective:





New Surge vs Bi-Modal Surge? 4/17-5/1?

+General Medicine Surge?

Length of Stay:
4/8: **3.9** ± 3.1
4/12: **4.5** ± 3.8
4/13: 5.3 ± 4.8

Majority of Increase in Floor volumes r/t New Cases, Not ICU Transfers

DHM Operations Strategy 'Take-Home' Points

- Drastic decrease in medicine volumes have allowed DHM faculty to cover majority of COVID and Non-COVID Medicine Population with less initial outside coverage than expected
- COVID volumes continue to increase, Surge is still expected
- Expect 'surge' in general medical volumes as clinics re-open or more procedures performed
- Continued need for additional support in the coming months
- Thank you!!

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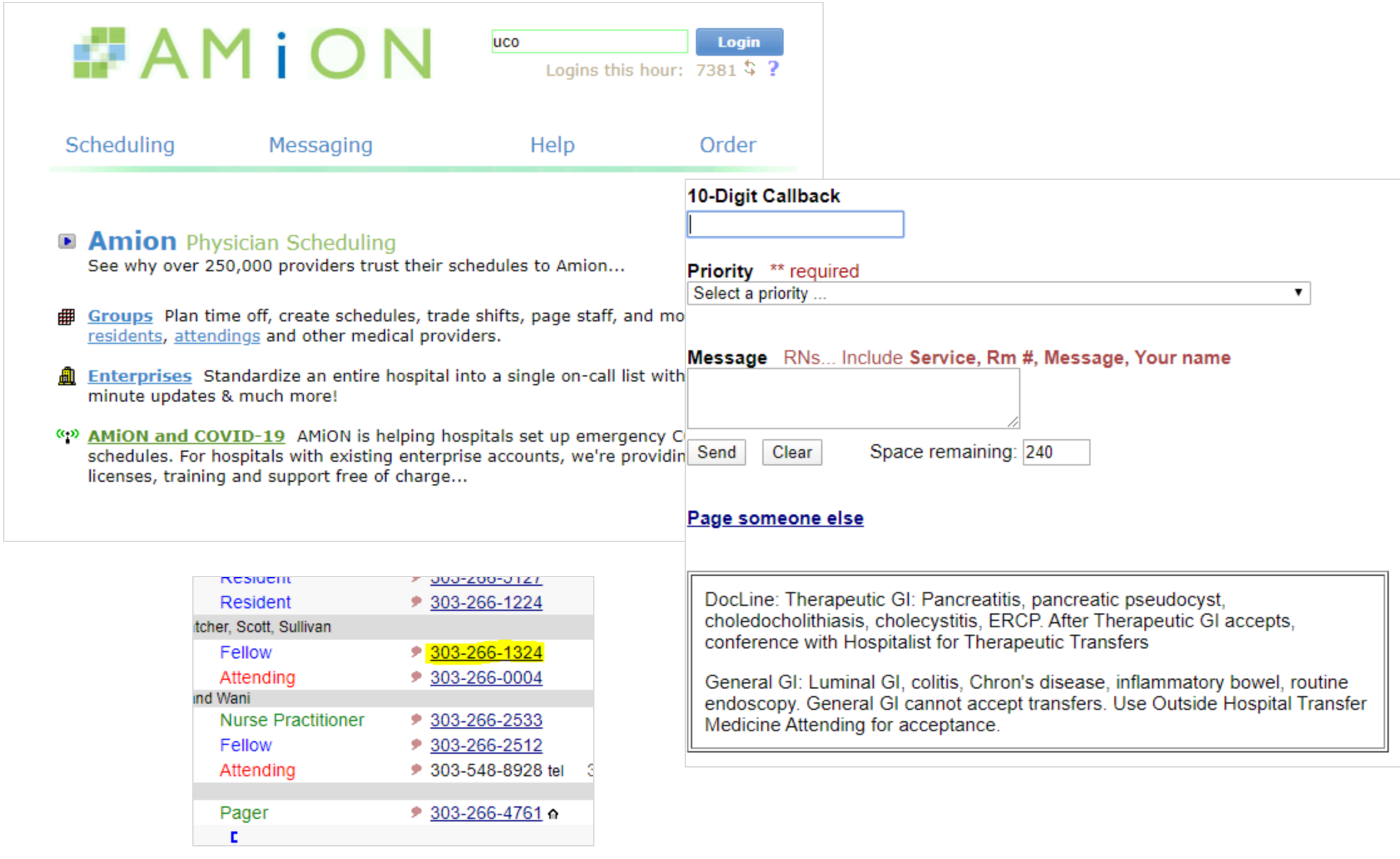
How to Page

- Call the number you want and wait for the beep.
- Put in the number at which you would like to be called back.
- Press the * button and put the last 4 digits of your pager in.
- Text pages can also be sent by clicking on a phone number on Amion.

This may seem like a silly reminder but knowing "paging etiquette":

- ✓ **Allows individuals to triage their pages (decide how quickly they need to return it)**
- ✓ **Allows you to continue rounding while waiting for a call back from a consultant**


AMiON
uco
Login
Logins this hour: 7381
Scheduling
Messaging
Help
Order
Amion Physician Scheduling
See why over 250,000 providers trust their schedules to Amion...
Groups Plan time off, create schedules, trade shifts, page staff, and mo
residents, attendings and other medical providers.
Enterprises Standardize an entire hospital into a single on-call list with
minute updates & much more!
AMiON and COVID-19 AMiON is helping hospitals set up emergency C
schedules. For hospitals with existing enterprise accounts, we're providin
licenses, training and support free of charge...
10-Digit Callback
Priority ** required
Select a priority ...
Message RNs... Include Service, Rm #, Message, Your name
Send
Clear
Space remaining: 240
Page someone else
DocLine: Therapeutic GI: Pancreatitis, pancreatic pseudocyst, choledocholithiasis, cholecystitis, ERCP. After Therapeutic GI accepts, conference with Hospitalist for Therapeutic Transfers
General GI: Luminal GI, colitis, Chron's disease, inflammatory bowel, routine endoscopy. General GI cannot accept transfers. Use Outside Hospital Transfer Medicine Attending for acceptance.
Resident
303-266-1224
tcher, Scott, Sullivan
Fellow
303-266-1324
Attending
303-266-0004
nd Wani
Nurse Practitioner
303-266-2533
Fellow
303-266-2512
Attending
303-548-8928 tel
Pager
303-266-4761

Who to Page For Procedures

- **Medicine 2 Team** – LP, Paracentesis, Thoracentesis
- **Interventional Radiology (IR)** – LP, Paracentesis, Thoracentesis, Line Placements, PEG Tubes – computer order + page (if urgent)
- **GI** – PEG Tubes
- **GI Therapeutics** – ERCP, EUS

- ✓ **Is you patient on anticoagulation? If so, when was their last dose? Does it need to be held?**
- ✓ **What are your patient's platelets, PTT, PT, and INR?**
- ✓ **Is your patient NPO (for procedures that will or may require sedation)?**
- ✓ **For OSH transfers, have their images been uploaded to EPIC?**

Consults

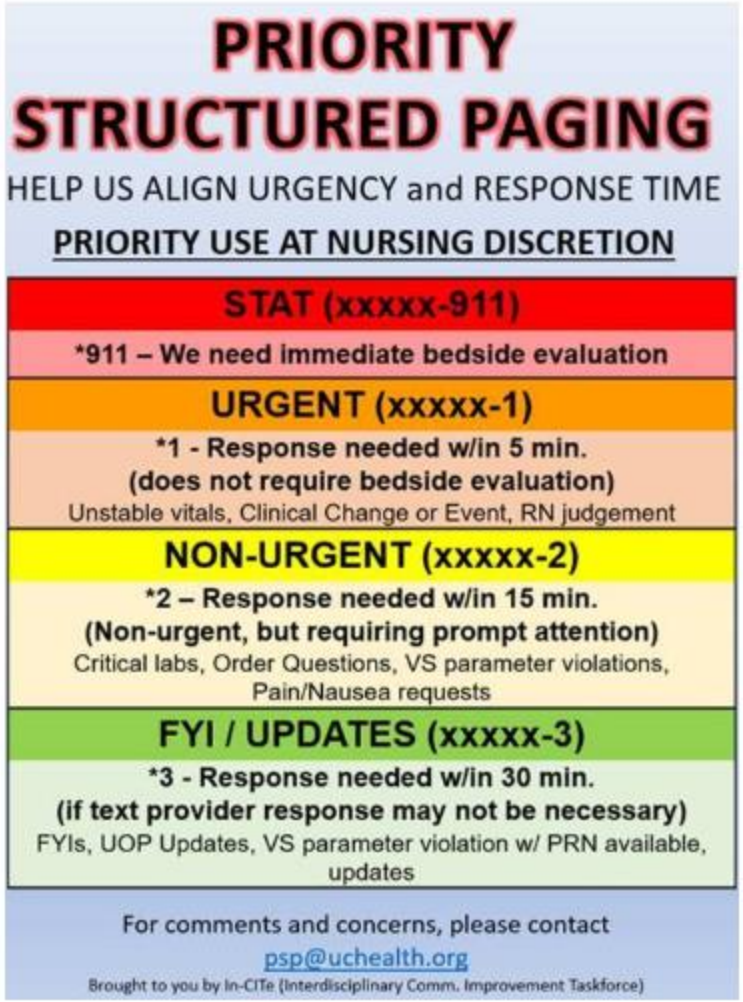
- Try to consult teams as early as possible (during pre-rounds and while rounding)
- Make sure any relevant outside hospital records are available for them to review (paper chart or uploaded – see "media" tab)
- Place consult order in the computer

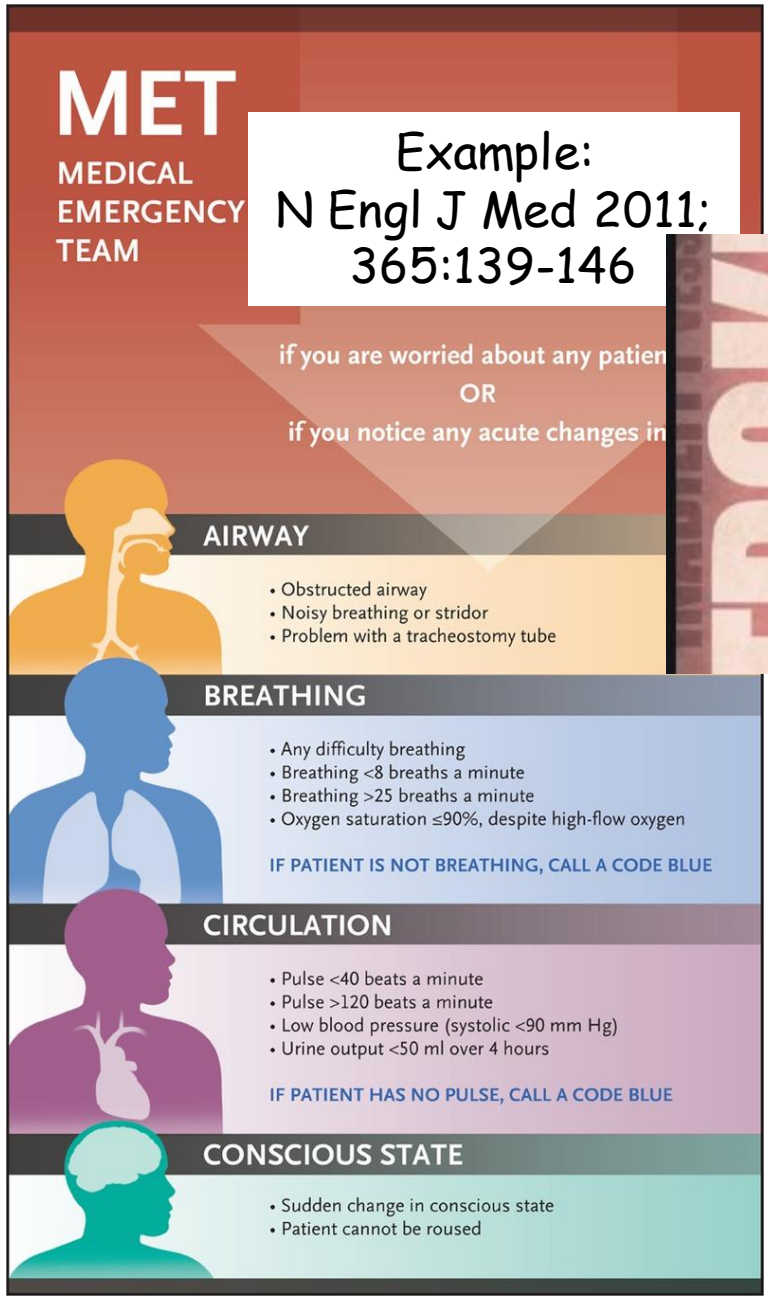
Consultants are not required to see patients for the purpose of conserving PPE during the COVID Pandemic. They should still be writing notes with recommendations on patients they do not examine.

What if I get paged?

- "Priority Structured Paging" for pages from nurses
- Pages from other teams will have a similar structure to what was previously discussed

  (e.g. 84769*2106)

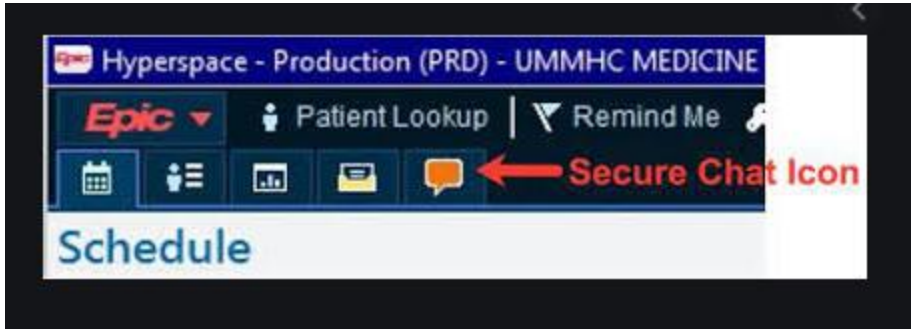




Code Blue: Cardiac/Respiratory Arrest

- **Code Blue** is called whenever a patient is experiencing cardiac or respiratory arrest. For example, **Code Blue** is called when a patient has stopped breathing.

May receive a text page or “Secure Chat” message from the nurse or Triagist with admissions



Who is the Triagist?

- Division of Hospital Medicine (DHM) Advanced Practice Provider (APP) who assigns ED admissions, outside hospital transfers, and direct admissions to the medicine teams
- They review the chart and determine if the admission seems appropriate and what team they should be assigned to (Oncology, ACE, HMS, general medicine wards)
- They will let you know the patient, MRN, and call back number to discuss the patient with the ED or Clinic Provider

UCH Level of Care Considerations

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Contents (click to follow):

This content is intended to be used as a tool to assist when determining appropriate level of care (Medical-Surgical, Progressive Care or Intensive Care) unit placement upon admission or transfer.

It does not provide strict exclusion criteria and should not be used in isolation to decide care placement. These criteria should be used to trigger a collaborative discussion between sending and receiving charge nurses, hospital managers, and primary provider services in both the ED and Inpatient Services.

Level of Care:	Med-Surg / Floor 4+ patients: 1RN	Progressive Care Unit 3+ patients: 1RN	Intensive Care Unit 2 patients : 1 RN / 1 patient : 1 RN / 1 patient : 2 RNs
Hemodynamic *"Adult Continuous IV Infusion Table"* Policy and *"Adult IV Push/Intermittent Infusion"* Policy	• Stable hemodynamics **(within 20% of baseline)** • Elevated blood pressure without evidence of end organ damage and anticipation that BP will be controlled w/oral gents and no more than 3 doses of IV push meds • Hemodynamically stable GI bleed or hemoptysis with no visible bleeding • Brief (≤ 2L) fluid resuscitation for hemodynamic instability	• Minor hemodynamic instability • Thrombolytic infusion in hemodynamically stable patient unlikely to decompensate (i.e., elective admissions). EKOS to be cared for in MICU • Hemoptysis or GI bleed with minor • Sus her • Rec of to	• Hemodynamic instability • Require frequent titration of IV medications, fluids or blood products to maintain hemodynamic stability • EKOS system to be cared for in ICU
Vital Signs Frequency *Refer to MET Policy*	• VS Q4H; May be ordered more frequently for up to 6 hours (i.e. recovery from sedation).	• VS for up to 6 hours (i.e. recovery from sedation)	

If you are concerned that the patient may not be floor appropriate, you can use this tool to help facilitate conversations with the ED and/or MICU Provider. This tool can be found on the "EPIC Dashboard."

Etc…

General Order Writing

- Include parameters for when medications should be held where appropriate (e.g. hold labetalol for SBP < 120 or HR < 60)
- Include end dates for antibiotics
- Be careful with writing too many PRN medications
- Utilize admission **order sets** if applicable
    - Geriatric
    - Pneumonia
    - CHF, etc…

* See "Intern Survival Guide" on Epic Dashboard

* See "Order Sets" in Epic Order Entry

Electrolyte Repletion

Rough goals for lytes replacement (especially in cardiac patients or anyone with a history of arrhythmia) are K = 4.0, Mg = 2.0, Phos = 3.0.
Be very, very careful replacing lytes in a renal patient with poor ability to process them.

Potassium: Can be given PO (very effective, a little hard on the stomach at doses above 40 meq) or IV (should be given with lidocaine as it burns going in).
Expect a result as follows:

K = 3.5 – 4.0……..to raise the level by 0.1 will take 10 meq
K = 3.0 – 3.4……..to raise the level by 0.1 will take 20 meq
K = 2.5 – 3.0……..to raise the level by 0.1 will take 30 meq
K = 2.0 – 2.4……..to raise the level by 0.1 will take 40 meq

Never give more than 10 meq IV per hour as it can cause arrhythmias/death.

Give via PO route whenever possible, by both routes if the K is less than 2.5 and there is a high risk for the hypokalemia causing an arrhythmia or if multiple PVC's are noted on telemetry.
If hypomagnesemia is present as well, this must also be corrected. Low magnesium levels can cause patients to be refractory to potassium repletion.

Electrolyte Repletion

* See "Electrolyte Repletion Protocol" under order sets

* See "Intern Survival Guide" on Epic Dashboard

Magnesium: Can be given PO (also a little hard on the stomach, may cause diarrhea) 500-1000 mg per dose, up to TID or IV 1-4 g per dose. Expect approximately a 0.1 increase in Mg levels for every gram given IV. The max you can give in a single IV dose is 4g if the Mg is < 1.5.

Phosphorus: Can be given via PO or IV routes, equally effective. A great way to raise the phos in a patient who can eat is to add 1-2 containers of skim milk to each meal. PO dosing is 500 mg BID – TID, IV dose is 10 mmol IV x 1, repeat as needed.

Phosphorus IV comes in two flavors: NaPhos and KPhos. Both contain fairly negligible (7 meq) of their respective carriers but avoid KPhos if the K is high and NaPhos if the Na is high.

Never attempt to use KPhos to replete the K.

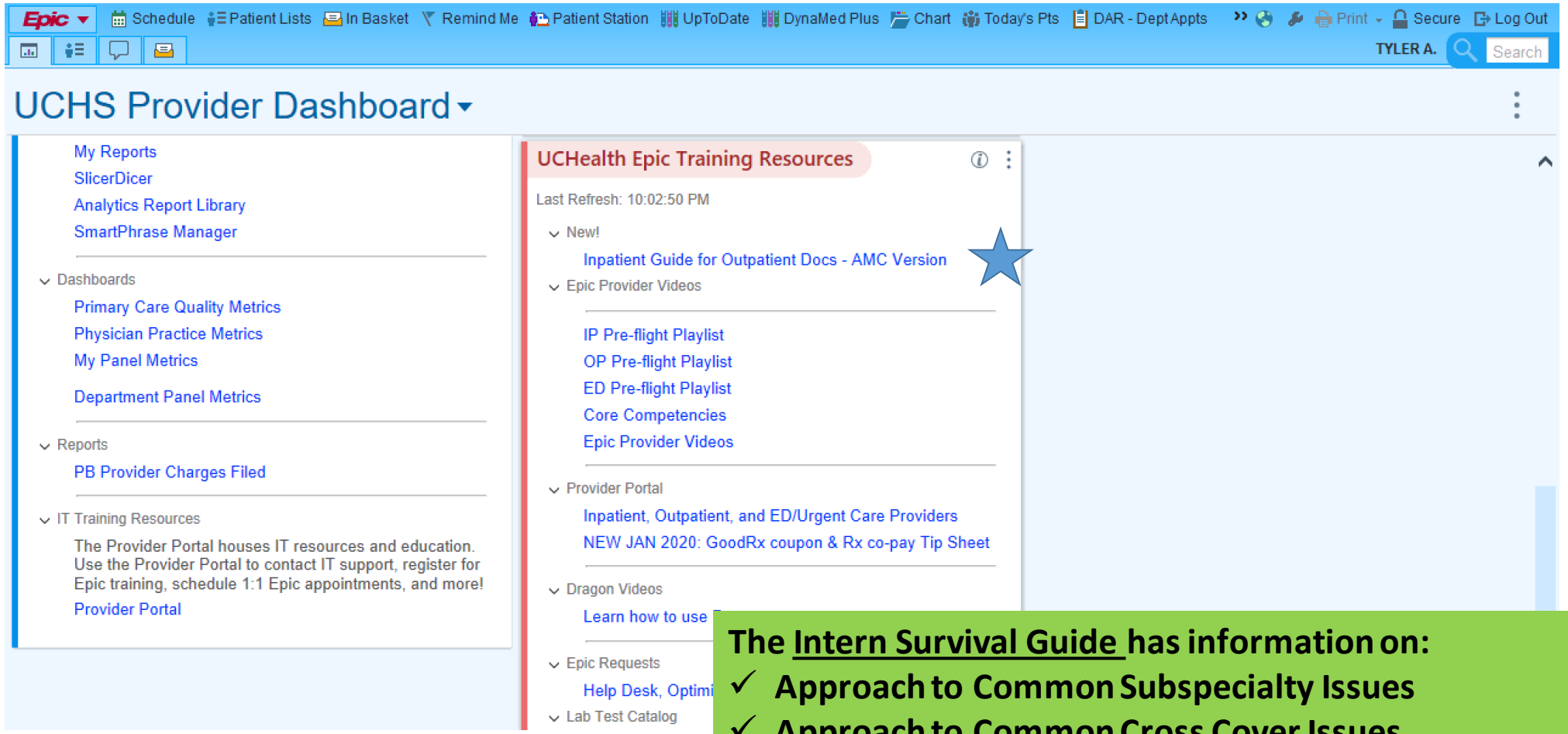
Calcium: Remember that calcium needs to be corrected for the patient's albumin based on the following formula prior to replacing it:

Ca = serum Ca + 0.8 mg/dL for every 1 g/dL of albumin < 4.0

If you are still unsure of the true Ca level or want to check more accurately, you can order an ionized calcium prior to replacement.

Things to consider when ordering electrolyte repletion:

- ✓ **Can the patient tolerate PO?**
- ✓ **What is their renal function?**
- ✓ **How quickly do I need to replete their electrolytes?**
- ✓ **Do I need to get and EKG or place the patient on tele?**



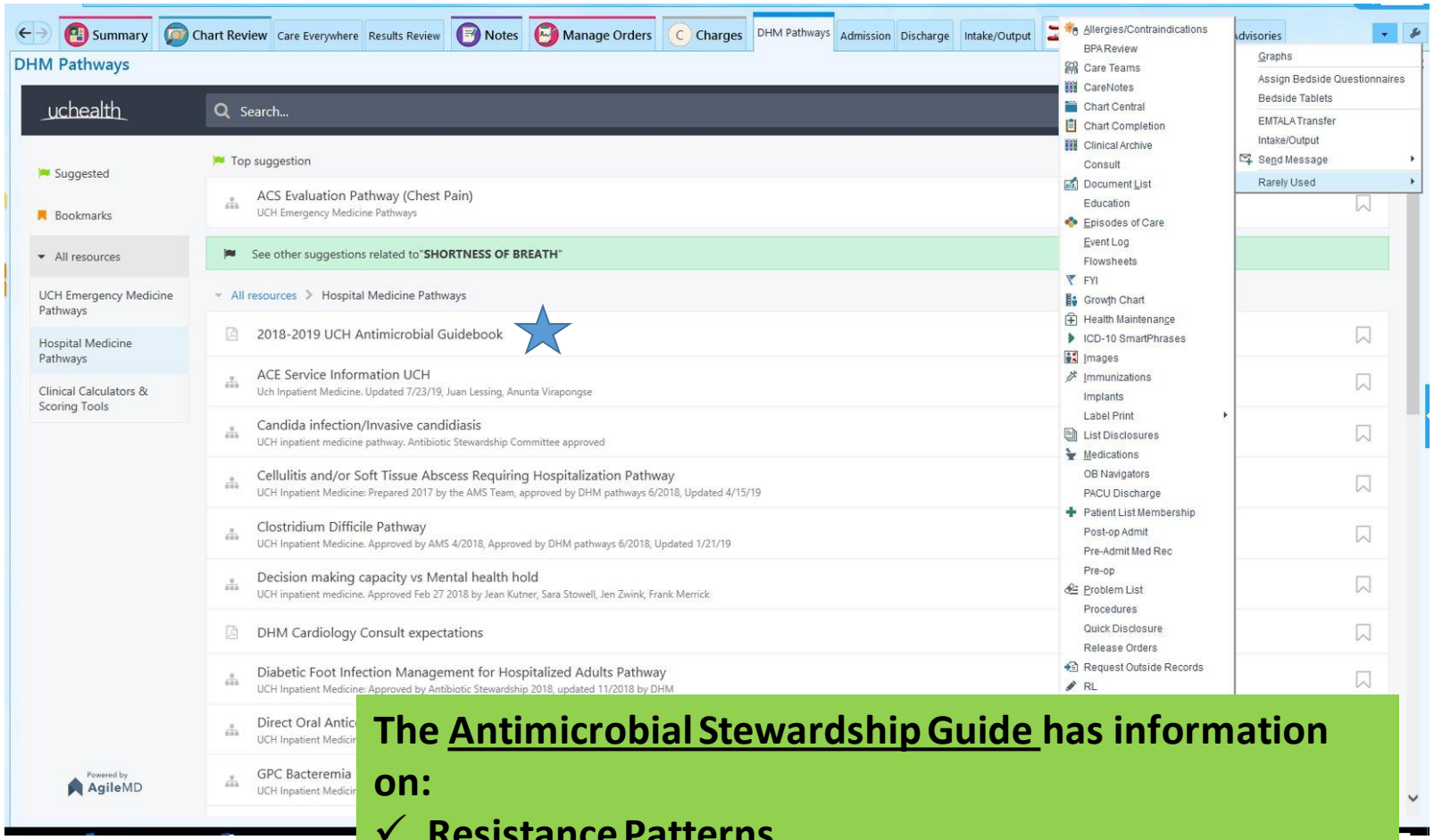
The Intern Survival Guide has information on:

- ✓ **Approach to Common Subspecialty Issues**
- ✓ **Approach to Common Cross Cover Issues**
- ✓ **Approach to Procedures**
- ✓ **And much, much more!**

Antibiotics

* See "Antimicrobial Stewardship Guide" under DHM Pathways

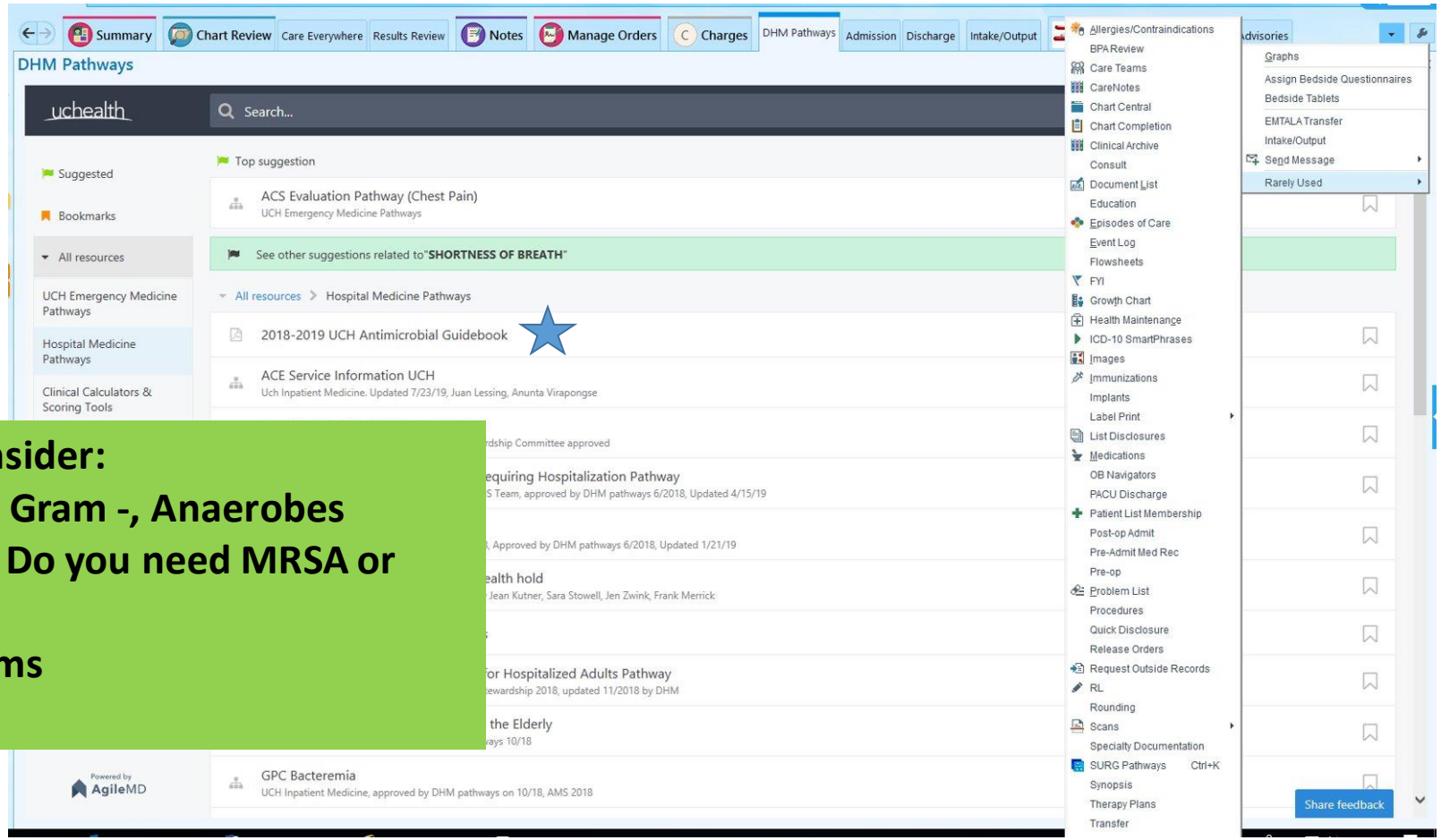
* See "Discharge Order Sets" under Orders



The Antimicrobial Stewardship Guide has information on:

- ✓ **Resistance Patterns**
- ✓ **Antibiotic recommendations based on location of infection**
- ✓ **Recommended duration of antibiotics**

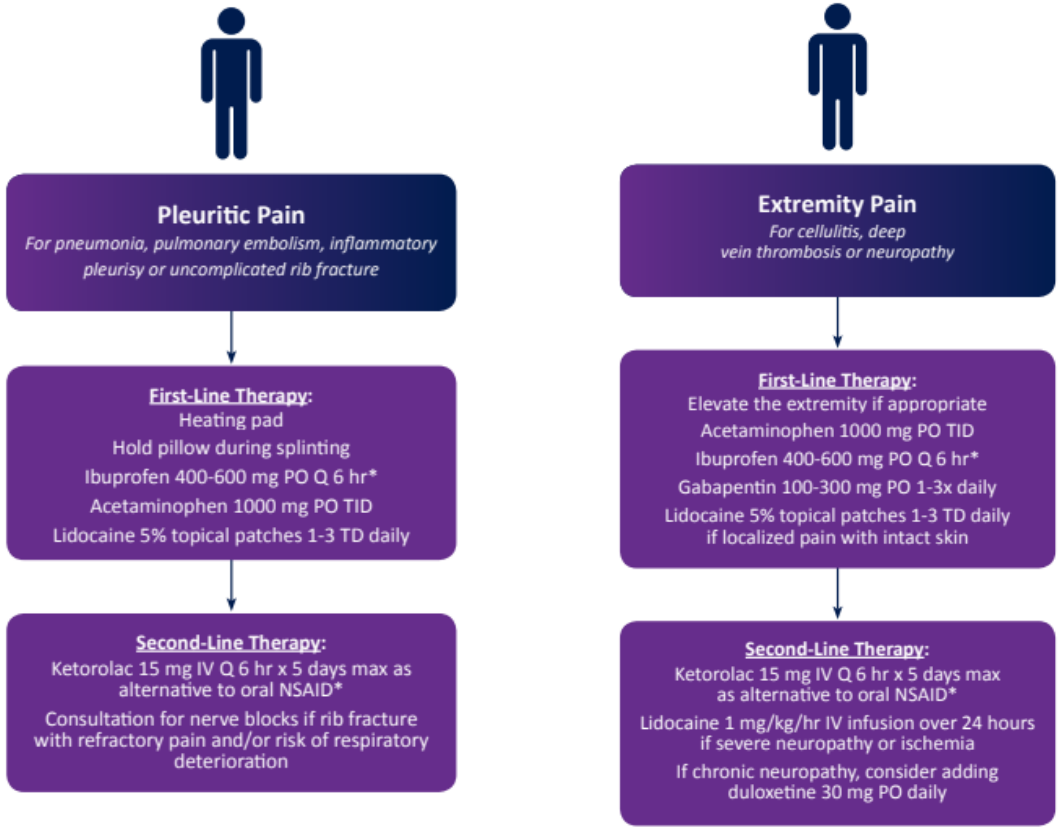
Antibiotics

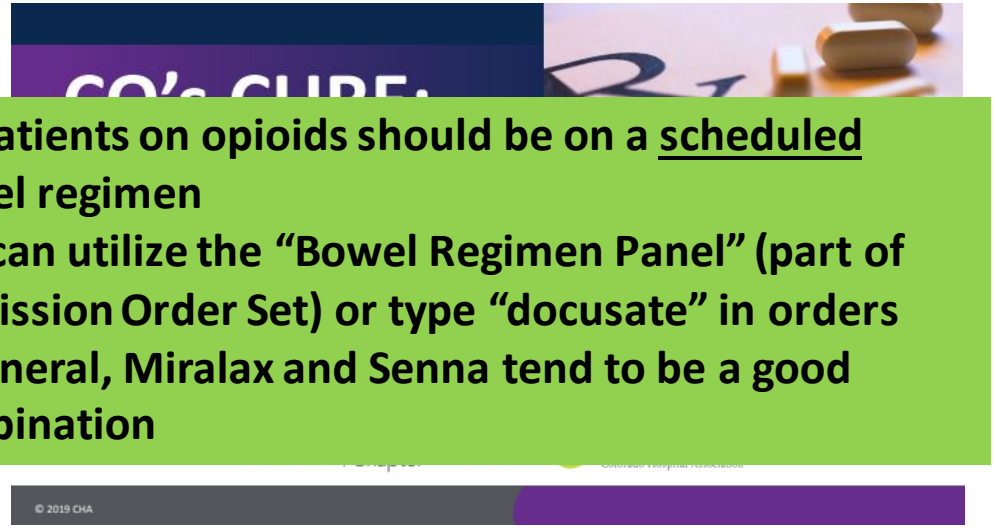


When ordering antibiotics, consider:

- ✓ **Coverage needed – Gram +, Gram -, Anaerobes**
- ✓ **Risk factors for resistance – Do you need MRSA or Pseudomonal Coverage?**
- ✓ **History of resistant organisms**
- ✓ **Oral antibiotic choices**

Pain Management -iALTO

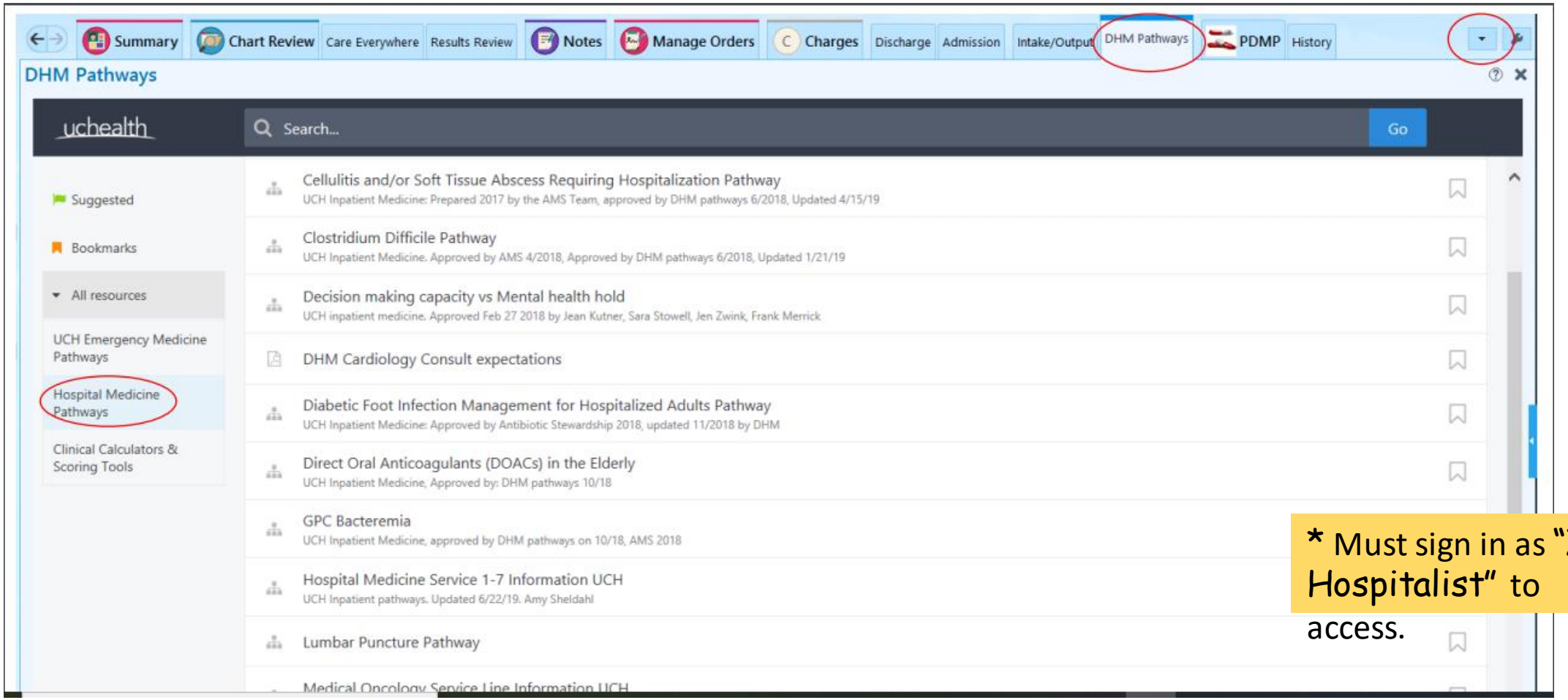




- ✓ **All patients on opioids should be on a <u>scheduled</u> bowel regimen**
- ✓ **You can utilize the "Bowel Regimen Panel" (part of Admission Order Set) or type "docusate" in orders**
- ✓ **In general, Miralax and Senna tend to be a good combination**

* See "DHM Pathways"

DHM Pathways

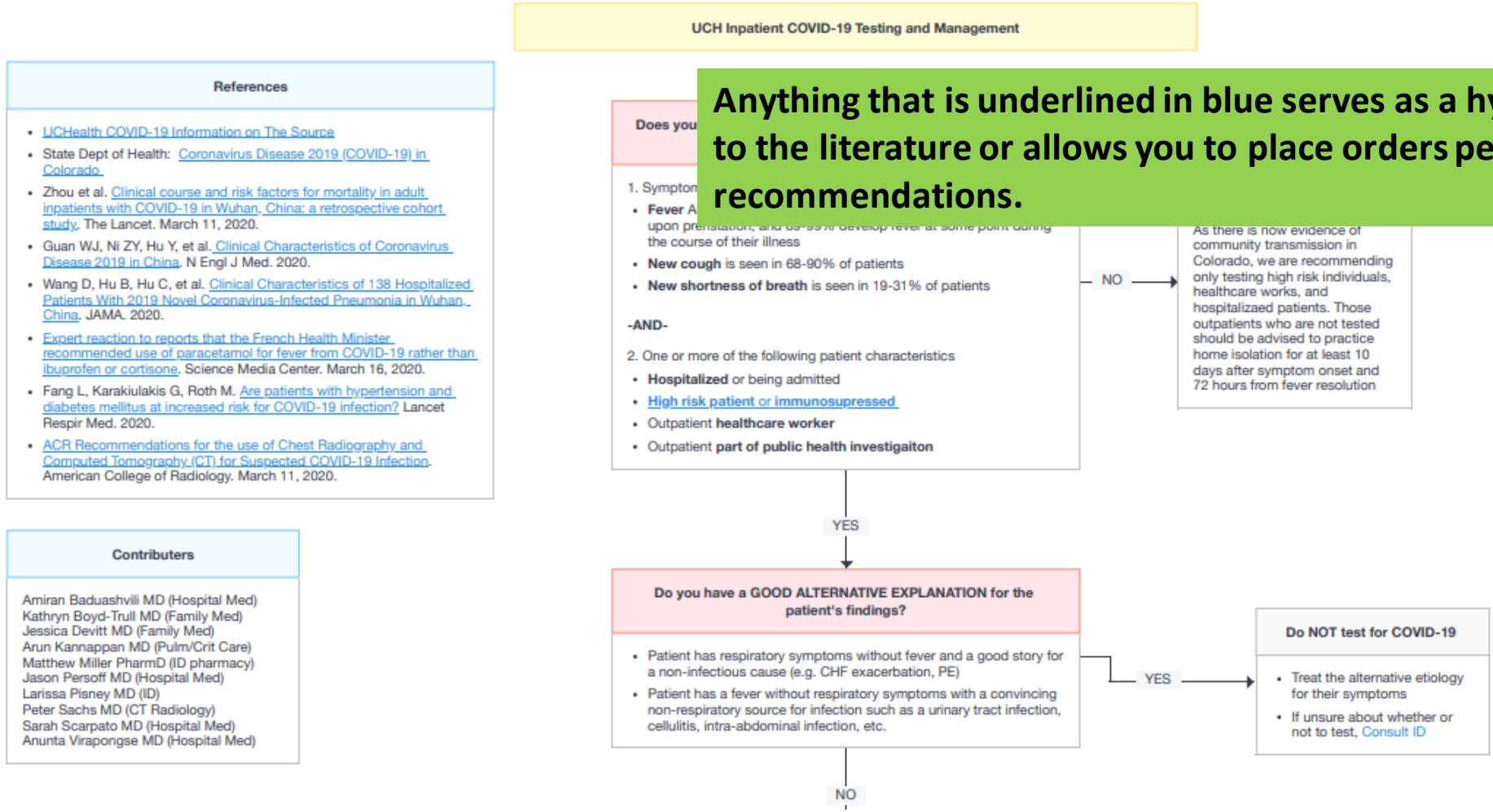


* Must sign in as "ZZ Hospitalist" to access.

Pathway Example

Printed 3/18/2020 10:02:19 AM by Anunta Virapongse

Anything that is underlined in blue serves as a hyperlink to the literature or allows you to place orders per the recommendations.



DVT Prophylaxis

- Recommendations based off of Padua Score
- Built into Admission Order Set
- Allows you to order heparin Sub Q or LMWH for DVT Prophylaxis
- Not all patients need to be on chemical DVT Prophylaxis (low Padua Score, ambulatory, s admission)
- Consider any contraindications to chemical DVT Prophylaxis when ordering and document

Risk factor	Points
Active cancer[c]	3
Previous VTE (with the exclusion of superficial vein thrombosis)	3
Reduced mobility[d]	3
Already known thrombophilic condition[e]	3
Recent (≤1 mo) trauma and/or surgery	2
Elderly age (≥70 y)	1
Heart and/or respiratory failure	1
Acute myocardial infarction or ischemic stroke	1
Acute infection and/or rheumatologic disorder	1
Obesity (BMI ≥30)	1
Ongoing hormonal treatment	1

[a]BMI = body mass index; VTE = venous thromboembolism.
[b]In the Padua Prediction Score risk assessment model, high risk of VTE is defined by a cumulative score of ≥4 points.
[c]Patients with local or distant metastases and/or in whom chemotherapy or radiotherapy had been performed in the previous 6 mo.
[d]Anticipated bed rest with bathroom privileges (either because of patient's limitations or on physician's order) for at least 3 d.
[e]Carriage of defects of antithrombin, protein C or S, factor V

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Care Coordination-
Patient Resident Liaison (PRL)

- Can request records from outside facilities
- Help schedule follow-up appointments
- Help with Durable Medical Equipment (DME)

* See "Care Management Inpatient" on Amion

Care Coordination – **Case Management and Social Work**

- Assist with discharge planning starting at time of admission
- Please make sure PT/OT have been consulted for patients who may need to discharge to a rehab facility or may need additional Home Health Services
- Make sure you fill out the appropriate discharge orders to resume Home Health Services

Diabetes Management and Educator

- Consult services available to help with titration of DM medications as an inpatient – place consult order in computer
- Can help give recommendations about DM medications on discharge
- Provide patient and caregiver education

Things to remember for inpatient management of DM:

- ✓ **In general, we tend to hold oral DM meds given uncertainty about procedures and NPO status**
- ✓ **Most patients require some form of basal insulin to account for holding their oral medications**
- ✓ **Goal blood sugar is < 180**

IV insulin on the floor: not so scary ...
todayshospitalist.com

Addiction Medicine Team

- Will meet with patients with substance use disorders – **place consult order in computer**
- Will give recommendations on inpatient and outpatient treatment options, including inpatient management of withdrawal symptoms
- Provide patients with outpatient resources

Pharmacists

- Pharmacy Admission Specialist (PAS) - can help complete medicine reconciliations on patients
- Anticoagulation Pharmacist – can consult if you need help managing a patient's anticoagulation, including med teaching with patients and caregivers
- Unit Pharmacist – available to give recommendations on medications, including dosing; will also review med lists in setting of inpatient falls
- Transitions of Care (TOC) Pharmacist – will review medications with patients and caregivers prior to discharge

Nurses

- Review nursing notes from overnight as they often contain information that was not reported to Cross Cover
- Please try to round with the nurses as they contribute significantly to the care plan for the day
- If a nurse is worried about a patient, you should be worried…go see the patient!

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Rounding with Residents

- Learners
- Quick teaching points best for efficiency
- Save "chalk talks" for the afternoon if there is time
- Run list after rounds and before sign out
- Review orders, including discharge orders and After Visit Summary (AVS)

Rounding with Residents during COVID

- Everyone is required to wear a surgical mask in patient care areas
- Round outside of rooms – the resident will not have seen the patient prior to rounds
- If additional PPE is needed (gown, gloves, etc.), only one person should go in and examine the patient (can be you or the resident)
- Should try to physically see newly admitted patients
- Utilize the appropriate .phrases for attestations to notes

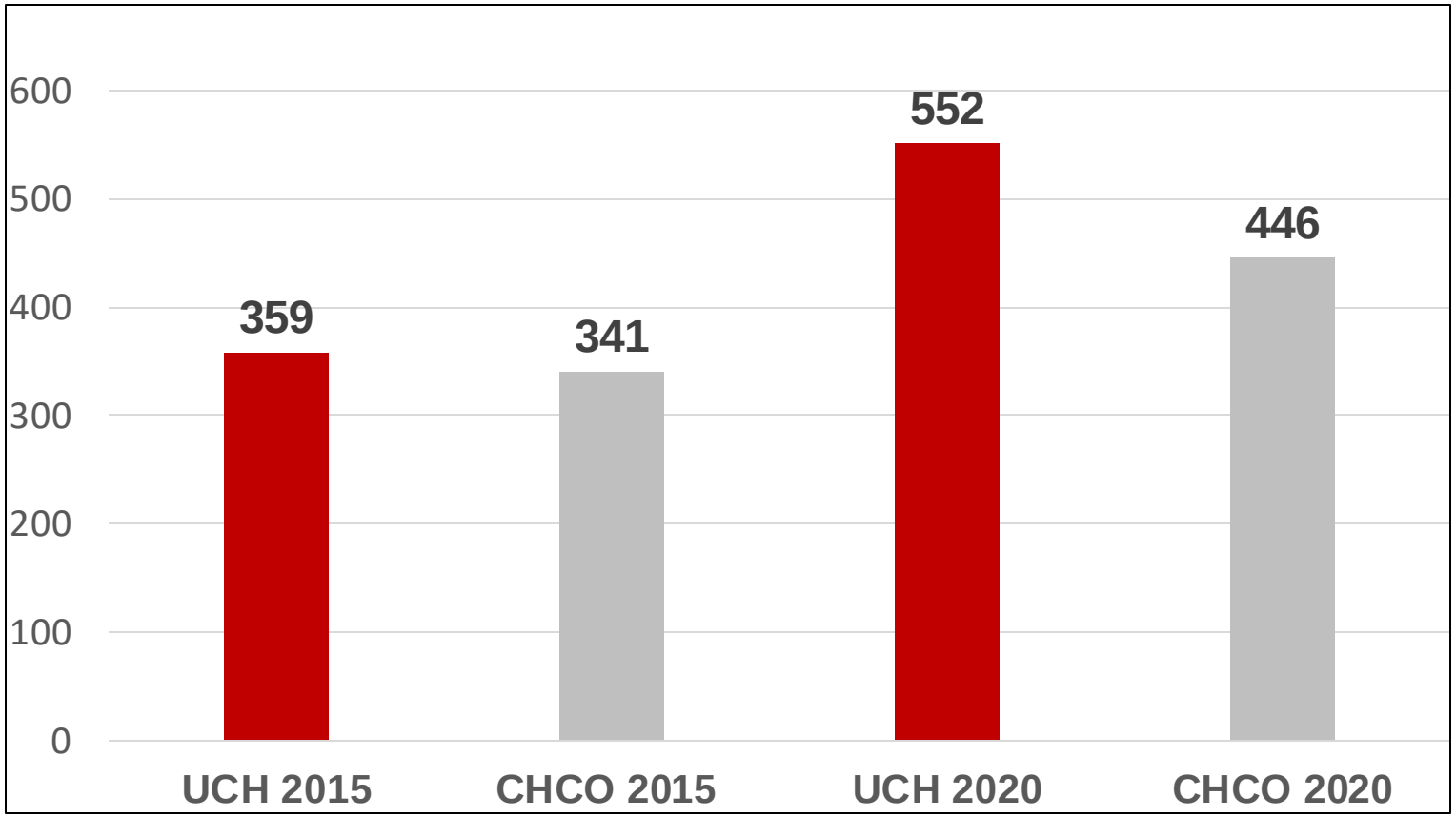
* See ".UPIEVAL" and ".UPIDISCHARGE" for general tie-in statement used to cosign notes

	Documentation requirements	Codes Billed		Compliance/Epic Process
Telehealth A visit with a provider that uses telecommunication systems between a provider and a patient at a distant site. Example: Provider at home; patient in hospital	Document as normal if you can: CC, HPI, ROS, Exam (e.g. mention audible wheezing, rash or location of pain, data, A/P Include in documentation of where the provider and where the patient was for the visit	Bill as you would normally unless >50% of time is spent in counseling and coordination, then bill on time«. See codes (time in mins) below		• If working with residents use **.telesupervision** • **Add smartphrase .IPTELEHEALTH (The patient was over live interactive videoconferencing. Location of patient: ***, Location of provider: ***)** • **Select from the telehealth section on charge capture**
		99221: 30' 99222: 50' 99223: 70'	99231: 15 ' 99232: 25' 99233: 35'	
Non-virtual visit Visit with provider in the same location as the patient with the provider not in the patient room Example: Provider in hospital, patient in hospital room	Include in documentation of where the provider and where the patient was for the visit	Bill as you would normally unless >50% of time is spent in counseling and coordination, then bill on time«. See codes (time in mins) below		• If working with residents use **.telesupervision** • Add smartphrase **.IPNONVIRTUAL (During the COVID-19 public health emergency, the patient was seen via window or video and audio for this visits.)** • **Select from the regular section on charge capture**
		99221: 30' 99222: 50' 99223: 70'	99231: 15 ' 99232: 25' 99233: 35'	
Telephone Only Encounters	Document medical discussion, individual you spoke with and time spent on phone only	99441(5-10 mins) 99442(11-20 mins) 99443(21 – 30 mins)		
Post-op VIDEO or TELEPHONE visit	Brief documentation of patient status	99024 (from normal charge capture)		No consent required

«Time=time spent F2F/Floor time on audio and video with patient (does not count time spent in documenting outside of visit, does not count staff time or resident time, does not count time to address technology malfunction)

Working with Inpatient APPs

APP Growth



- Increased post-graduate specialty training
- Increased leadership roles/responsibilities
- Increased participation in quality improvement and research initiatives

What do we like to be called?

Preferred	Less Desirable
• Nurse Practitioner (NP) • Physician Assistant (PA) • Advance Practice Provider (APPs)	• Mid-level • Non-physician provider (NPP) • Physician Extender • Helper

Collaborative Approach to Patient Care

Goal:
Provide high-quality, high-value patient care in an efficient, cost-conscious, and rewarding manner.

Utilize All Members of the Team to:

- Increase time at bedside
- Improve discharge times
- Focus on Quality Metrics
- Provide Efficient Care Delivery
- Ensure Patient/Provider Satisfaction

* See ".UPIEVAL" and ".UPIDISCHARGE" for general tie-in statement used to cosign notes

	Documentation requirements	Codes Billed		Compliance/Epic Process
Telehealth A visit with a provider that uses telecommunication systems between a provider and a patient at a distant site. Example: Provider at home; patient in hospital	Document as normal if you can: CC, HPI, ROS, Exam (e.g. mention audible wheezing, rash or location of pain, data, A/P Include in documentation of where the provider and where the patient was for the visit	Bill as you would normally unless >50% of time is spent in counseling and coordination, then bill on time». See codes (time in mins) below		• If working with residents use .telesupervision • Add smartphrase .IPTELEHEALTH (The patient was over live interactive videoconferencing. Location of patient: ***, Location of provider: ***) • Select from the telehealth section on charge capture
		99221: 30' 99222: 50' 99223: 70'	99231: 15 ' 99232: 25' 99233: 35'	
Non-virtual visit Visit with provider in the same location as the patient with the provider not in the patient room Example: Provider in hospital, patient in hospital room	Include in documentation of where the provider and where the patient was for the visit	Bill as you would normally unless >50% of time is spent in counseling and coordination, then bill on time». See codes (time in mins) below		• If working with residents use .telesupervision • Add smartphrase .IPNONVIRTUAL (During the COVID-19 public health emergency, the patient was seen via window or video and audio for this visits.) • Select from the regular section on charge capture
		99221: 30' 99222: 50' 99223: 70'	99231: 15 ' 99232: 25' 99233: 35'	
		s) ns) nins)		
		rmal charge		No consent required

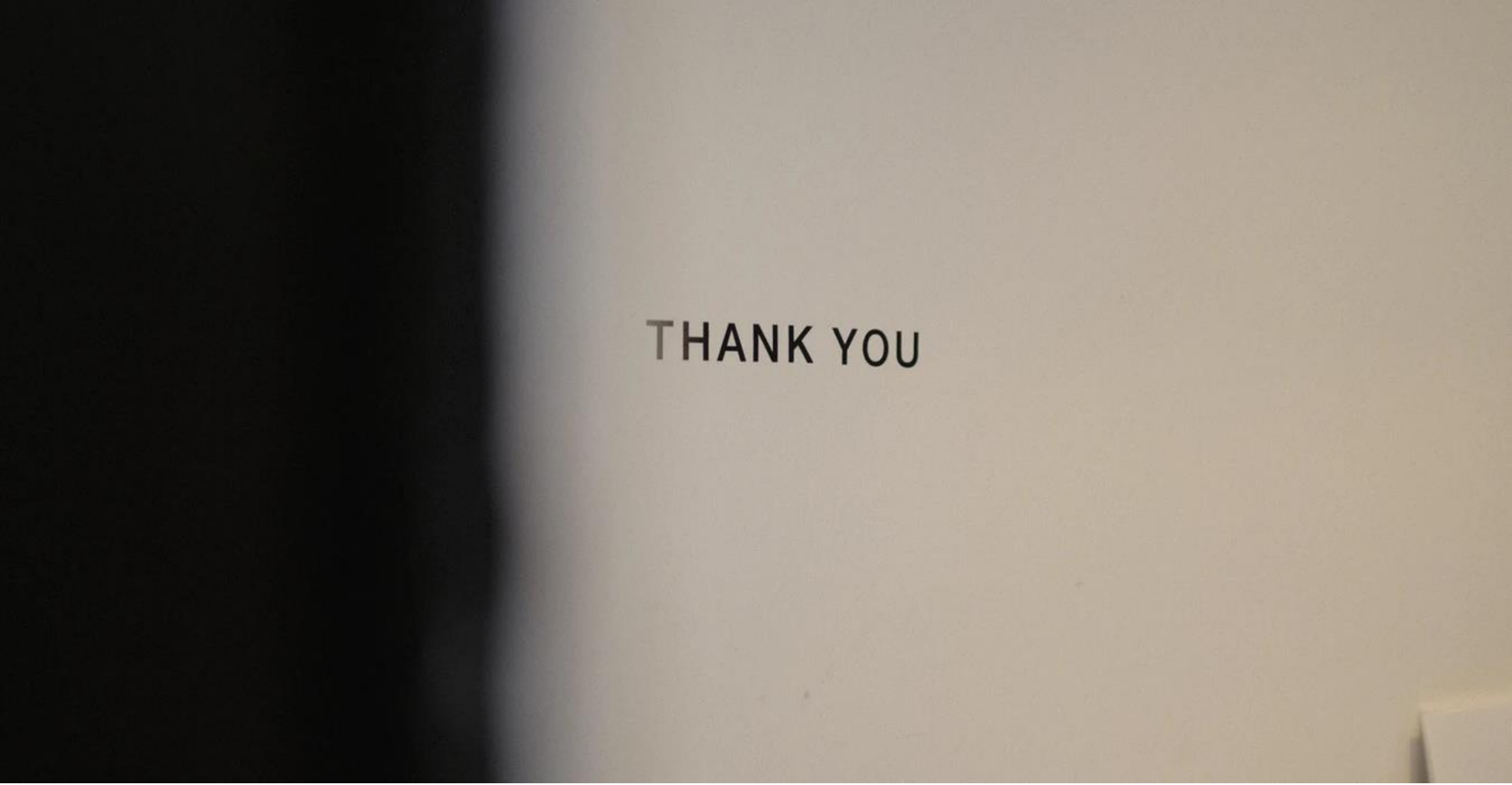
not count time spent in documenting outside of visit, does
nology malfunction)

Billing is done as shared service (can bill for your time + APP time). You can also use the same tie-in statements above for attesting APP notes. In addition, include:

- ✓ **One-liner with subjective information**
- ✓ **One-liner with pertinent exam findings**
- ✓ **Plan for the day**

University of Colorado
Anschutz Medical Campus

uchealth


THANK YOU