LOMA LINDA HOSPITALISTS

SAPIENTIAE•BONITATIS•EXCELLENTIA

Agenda

1. Current county data
2. PPE
3. Logistics
4. COVID management
5. Open Mic

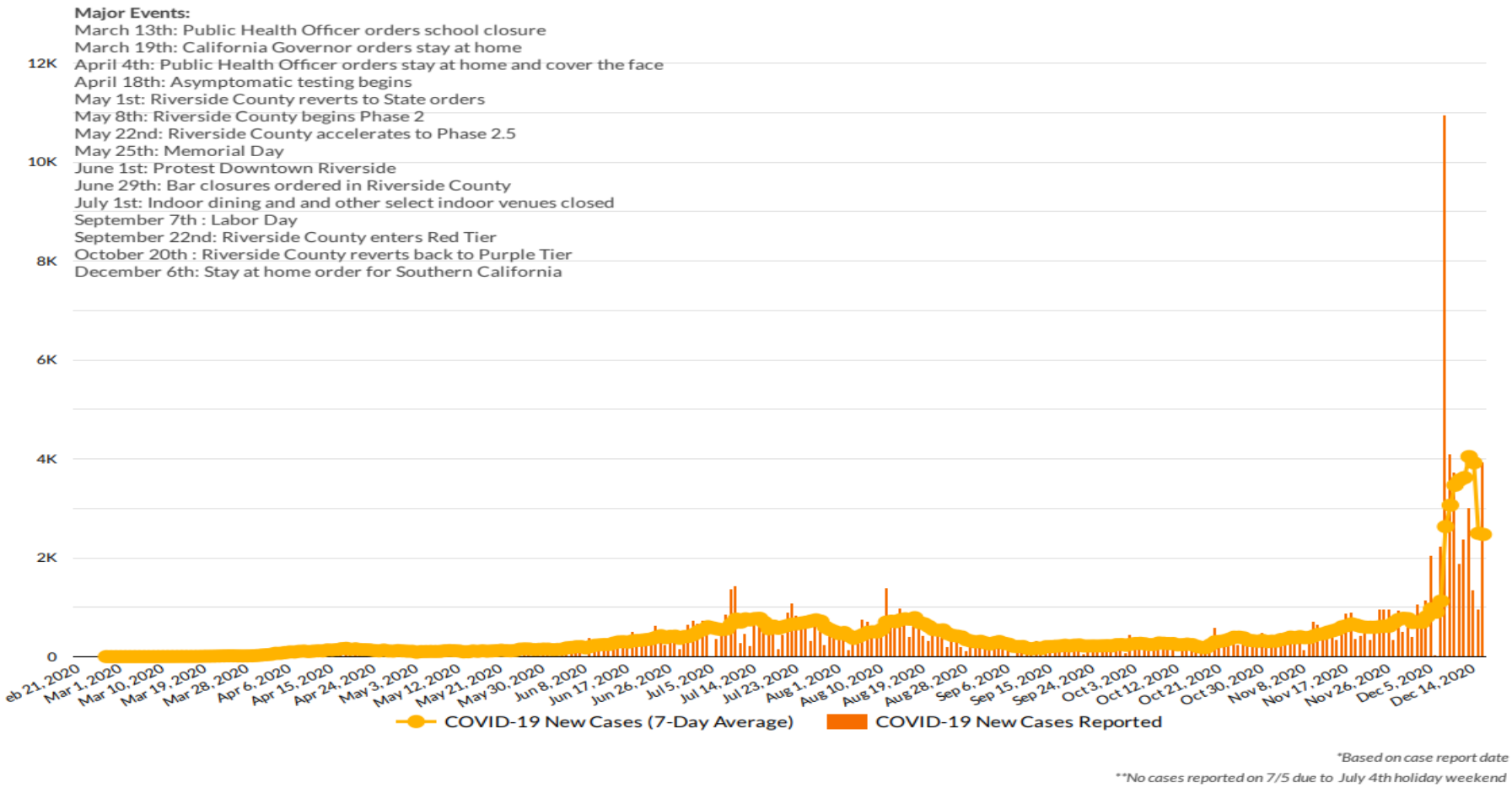
LLUH COVID-19 COMMAND CENTER ICU and ACUTE CARE

12/17/2020

In-Patient (12/29/2020)

Hospital IP Locations	Suspected	Positive	Total SUSPECT + POSITIVE	24 hour change	Patient Death last 24 hr	Patient DC last 24 hr
Medical Center	0	209 (1 OB)	209 (1 OB)	-4	7	32
Murrieta	0	84 (0 OB)	84 (0 OB)	-10	3	14 (8 floor, 6 IP ED)
Children's Hospital	2 (2-3700)	23 (8 OB)	25 (9 OB)	-3	0	6 (4 peds, 2 ob)
East Campus	0	0	0	0	0	0
Surgical Hospital	0	0	0	0	0	0
BMC	0	0	0	0	0	0
Total	**2**	**316**	**318**	**-18**	**10**	**52**

Riverside County



*Based on case report date

**No cases reported on 7/5 due to July 4th holiday weekend

COVID-19 Surge Update

Rapid increase in cases - we are in phase 7 of 12?

DHS61 (COVID1)

DHS62 (COVID2)

DHS63 (COVID3)

DHS82 (COVID4)

DHS92 (COVID5)

DHS93 (COVID6)

Cardiology 7300 (COVID7)

4700 is full of vented COVID patients

7200 and 9100 have >20 ICU COVIDs (as of noon on 12/29)

MOD43 -> 4300

MOD62 -> MOD ED/4800

MOD63 -> 8300

COVID Wards

Acute Care

6100-6200-6300-8200-9200-9300 staffed by DHS

7300 opened on 12/28 staffed by Cardiology

ICU

4700 is full

7200 has 20 patients (15 COVIDs)

9100 is filling up

PPE

All PPE is on each respective ward

1. **N95 / face shield / bouffant - use one for rounds**
   - Try and not touch your head
2. **Gloves and gown change in between every patient**

Each person will have a brown bag to place your face shield

- alcohol clean it and label bag
- one facemask / person / day

Rounding structure

This is different than typical “Surgery Rounds” in that the attending / hospitalist does all their own work

- Sees the patient
- Writes orders
- Write progress notes
- Call consults
- Updates nurse / RT / PT / CM / SW
- Runs the family meeting
- Discharges the patients (DC summary / orders / medications and follow up)

Rounding structure

The shifts are 7am - 7pm meaning you are responsible to address any need of your patients in that time

At 7pm the nurses “LLEAP message” the Hospitalist cross covering physician to address any new issues.

You “round” ie see your patient, assess need for consults, status on oxygen requirement between 7-10:30

10:30-11:30 you meet with nursing for SIBR and make sure everyone knows the plans, all quality issues are addressed and nurses are happy

Rounding structure

For 9200 consider

1. Senior Surgical Resident see rooms 1-6
2. Senior Medical Resident see rooms 7-12
3. Attending needs to see/examine them all

Notes can be split amongst the team - but be aware the Medical Resident is only seeing ~10 of patients on the ward

Also important: 9200 cannot take high flow so acuity will be capped

COVID 9200 Medicine + Surgery

Per Dr. Solomon

1. The Surgery Department will be working on 9200 starting 12/31/2020

9200 is full of non ICU COVID patients currently run by a Hospitalist and one senior medical resident. No Intern.

2. A Surgery attending (Yung?) / resident will start working on unit on 12/31 the medicine attending (Alan Wei) is physically present to help guide (for the first few days)

3. There are medicine attendings on other units to help as needed as well

4. Pulmonology consult is also available

ACUTE CARE				
PHASE	BEDS	UNIT	Physician team	Nursing team
1	26	6100	HOSP #1	61 ACUTE CARE*
2	26	6200	HOSP#2	62 ACUTE CARE*
3	26	6300	HOSP#3	63 ACUTE CARE*
4	26	8200	HOSP#4	82 ACUTE CARE*
5	26	9300	Hosp#5	93 ACUTE CARE*
6	15	9200	SURG #1	92 ACUTE CARE*
7	26	7300	CARD #1	83 ACUTE CARE*
8	26	8300	HOSP #6	73 ACUTE CARE*
9	20	4300	CARD#2	43 ACUTE CARE*
10	26	5100	HOSP #7	CH nursing
11	26	4200	SURG #2	CH nursing
12	TBD	TBD	SURG #3	
	269			

Setting The Ground Rules for Success

- The teams will consist of a core of the following
  - **Surgery Attending**
  - **Medicine Senior Resident (covers 10-12 pts)**
  - **Surgery Junior Resident (covers 10-12 pts)**
  - If additional faculty or residents wish to come and help out, feel free to join and the team will work to best utilize you
    - Additional help in the long term is useful, as we will be called to run other COVID units as the phases of care progress forward.
- The ideal plan is to have a consistent Surgery Attending Mon-Sunday
  - This may not always be possible so efforts will be made to keep a member of the team consistent during the week for appropriate/safe patient care
- The Surgery Attending will be freed from other duties (operating, other call duties)
  - Clinics must either be covered by a colleague who is not on the COVID unit, or set to run in the afternoon and may need to be split over a few days (work with your clinic staff to organize this) if coverage cannot be found.

COVID-19 Treatment Updates

Mainstay of Treatment

1. **Supplemental Oxygen**
2. **Decadron**
3. **Proning**
4. Remdesivir (note the conflicting studies)
5. MDI (Usually albuterol Q4)
6. Evaluate for risk of thrombosis
7. Evaluate for superimposed Community acquire pneumonia
   - If so add empiric Azithromycin / Ceftriaxone

COVID-19 Treatment Updates

Note: discuss inflammatory pattern

Note: trend of CRP in mild-moderately ill COVID patients

Note: For many non ICU patients CRP highly correlates to progression of inflammation

Bipap: minimal use / benefit for tired COVID patients

COVID-19 Treatment Updates

How I explain what we are doing to patients

1. COVID-19 causes a severe, acute inflammation - usually in the lungs
2. We give you steroids (decadron) to reduce that inflammation
3. We give you Remdesivir to lower viral load, to reduce inflammation
4. MDI to open up your lungs
5. We are simply FORCING oxygen through your inflamed lungs
6. We are monitoring your blood for level of inflammation (ESR/ ferritin/CRP) as well as risk of blot clots (D/dimer / Soluble fibrin)

Note:

For most non ICU patients CRP highly correlates to progression of inflammation

COVID-19 Treatment Updates

Thoughts on when to discharge:

1. Clinically improving (ie patients report they are breathing easier)
2. CRP is down trending (for those who did NOT require MICU)
3. Supplemental oxygen is down **to 2-3 liters**
4. Consider sending almost everyone home with home oxygen

- They progressively exert themselves at home and will need that O2 support

- When I call patients for follow up I hear this repeatedly

Note: for “soft” admits” ie 0-2 liters supplemental oxygen. Strongly consider observation for those with DM/obesity/risk factors as they can worsen on day 2. If their respiratory status remains stable and CRP downtrends - discharge at 24 hours

COVID-19 Treatment Updates

(1) Supplemental Oxygen

1. Nasal Cannula -> oxymizer -> high flow -> ~~+/- bipap~~ -> intubation

2. Many of our sicker patients NEED the PEEP created with high flow

3. Keep oxygen saturation 88-92% (not 100%)

4. Ask for home oxygen on all patients requiring 5 liters or more **on day 1 of admission**

COVID-19 Treatment Updates

(2) Decadron

Ideally 10 days (once daily for 10 days)

First dose: Given in the ED

Then 6 mg IV daily for 9 additional days

Convert to PO on discharge to complete course

NOTE: for brittle diabetics, it seems to be better to shorten the course ON discharge to 5-7 days if they have severe hyperglycemia (300s+). You are only discharging as they are clinically improving so the argument is the risk of hyperglycemia is worse than the benefit of the last ~3-5 days of steroid

COVID-19 Treatment Updates

(3) Proning

This means having the patient prone on their belly, up to 8 hours if possible

Many patient's habitus make this near impossible

We then have them alternate laterally as much as possible

I inform the patient this is the one thing THEY can do

COVID-19 Treatment Updates

(4) Remdesivir

Inclusion: on oxygen due to COVID PNA

Exclusion: AKI/ESRD or LFTs >10x upper limit, symptoms more than 12 days

Dosing: it is a linked order

200mg x1, followed by 100mg daily for 4 additional doses

In the order write “Guerrero” you do not have to call her, simply place an ID consult with the word “Remdesivir” (completed in the orderset)

Must have a daily CMP

COVID-19 Treatment Updates

(5) MDI

We are minimizing nebulizers to avoid aerosolization and risk exposure to our RTs

Either albuterol or ipratropium Q4 (~30 per unit)

Avoid Combivent its ~$300 per unit

COVID-19 Treatment Updates

(6) Risk of DVT / PE

Part of daily COVID labs is coaguloapthy panel

1. Monitor for ACUTE rise in D dimer (3 to greater than 21)
    - I will initiate heparin gtt on these patients
2. Continued evaluation for need for lower extremity Doppler ultrasound and CTPA
3. All patients on Lovenox 40 SQ daily (or Heparin 500 0Q8 with AKI/ESRD)

4. If D dimer <3 and or Soluble fibrin <10 only prophylactic dosing
    - Lovenox 30/40 SQ daily or Heparin SQ 5000 SQ Q8
5. If D dimer is >5 (especially 7)
    - consider Lovenox 1mg/kg IV Q12 or heparin gtt

This is the most nuanced aspect of COVID management and we often discuss this with each other

COVID-19 Treatment Updates

(7) Risk of superimposed Community acquired bacterial pnuemonia

Consider empiric Azithromycin + Ceftriaxone (for 5 days)

IF

1. Elevated procalcitonin
2. CXR shows clear focal consolidation
3. Patient is fairly sick

Literature suggests (from the past 6 months) COVID + bacterial co infection is ~6% at most)

COVID-19 Treatment Updates

We have a COMPLETE orderset from admission
(COVID Gen Med Acute Intermediate Orders - ADULT)

1. All medications
2. All labs
3. All prn
4. All nursing cares

What you need to assess

+/- Remdesivir

+/- antibiotics for CAP

Insulin sliding scale

The patients home medications

COVID-19 Treatment Updates

Regarding home oxygen -

To Do

1. Case Management consult: “home 02”
2. Misc supply order: “52M with respiratory failure due to COVID pneumonia. Oxyenation on room air <88%. Oxygenation is 92% with 2 liters, request home oxygen, concentrator and portable tank to beside. Pager:4598”

With the above CM has been able to process home oxygen rapidly

COVID + Disposition

1. Home with home health
2. SNF with COVID isolation
3. NOT Acute Rehab
4. Not BMC
5. Outpatient hemodialysis units are now accepting the 20 days “cleared” even if PCR+

One continued barrier is COVID+ transport. If you have a pending discharge check the day PRIOR how are they leaving - I have been burned on this as only a few transport companies take COVID. Some families refuse

The Medical Center is also changing isolation from 20 to 10 days for ASYMPTOMATIC COVID patients.

Open Mic

Baby Announcements
Nandi
Born on: 9/20/2020
Per Deepak both Puja and baby are well

2019 Babies
- Chea
- Pham
- Matus
- Cruz
- Nguyen
- Emrani
- Noureddine
- Chandrasekar

2020 Babies
- Jordan, March 24 2020
- Olson, June 2 2020
- Gupta, Sept 20