Government of Punjab
Department of Health and Family Welfare

No. COVID/NHM/Pb/20/ 7790-7833 **Dated:-** 24/12/2020

To,

1. All the Deputy Commissioners in the State of Punjab.
2. All the Civil Surgeons in the State of Punjab.

Subject: **Advisory regarding Level-2 facilities in the treatment of COVID-19 patients.**

With reference to the above mentioned subject, the following guidelines should be made mandatory in Level-2 facilities of your district:-

1. **Guidelines to follow at arrival at Level-2 facility:**

   (i) To note down the vitals
   (ii) To collect blood sample within 1 hour for routine investigations and special investigations of COVID-19 (LDH, Ferretin, D-Dimer, CRP).

2. **Categorize the patient whether to be put in Level 2 or level 3 facility (Annexure-A).** This must be **displayed at each Nursing Station and all other appropriate sites.**

   If the patient is to be referred to L3 facility (after consulting the doctor on duty):-
   (i) Fill the referral proforma, give a brief about the patient's condition to the doctor on duty where the patient is being referred.
   (ii) Regular feedback should be taken about the referred patient from the doctor concerned.

3. **A poster of " Screening of hyperglycemia in every patient hospitalized with COVID-19 (at admission and on starting steroids)"** as **Annexure- "B"** should be **displayed at each Nursing Station and all other appropriate sites** at Level-2 Isolation facilities. Kindly ensure the stream lined monitoring and management of patients according to the protocol.

4. **If the patient is admitted at L2, the following proformas should be filled on daily basis:**

   (i) **"Daily patient proforma (COVID-19)"** as **Annexure- "C"** is for daily monitoring/record of vitals and COVID-19 specific investigations of all COVID-19patients admitted in Level-2 Isolation facilities. This proforma is for recording of vitals and investigations for consecutive two days and to be filled by doctor on duty.

   (ii) **"COVID-19 patient update sheet" for patient file** as **Annexure- "D"** is for daily monitoring/record of vitals of each COVID-19patient admitted in Level-2 Isolation facilities. This proforma is to be filled on daily basis by staff on duty.

   (iii)**"Patient Clinical chart for patient file"** as **Annexure- "E"** is to be filled **for patients who are diabetic or having hyperglycemia at the time of admission** for proper management and monitoring of COVID-19 patients with Diabetes Mellitus at Level-2 facilities. This proforma is to be filled on daily basis by doctor on duty.

5. **Management should be done as per the guidelines (Annexure-A).** If the patient has taken Ivermectin and Doxycycline at home, don't repeat.

6. **As the co-morbidities are high, suitable diet as per the clinical conditions should be available.** E.g. For a diabetic patient, a diabetic diet should be arranged, similarly for other high risk factors like kidney disease, hypertension etc.

7. The printed patient file (along with annexures) is being sent by 26.12.2020. Filling these for each COVID-19 patient must be mandatorily done.

8. Training of all these aspects will be done on 30.11.2020 at 1:00 p.m. to 2:00 p.m. All MO's/ Medical Specialists and incharges of Level 2/ Level 3 along with SMO's and Civil Surgeons must attend the said training. Details / Link of the same will be shared subsequently.

This is for urgent compliance and compliance report should be submitted to the O/o undersigned.

(Hussan Lal), IAS
Principal Secretary to Govt. of Punjab
Dept. of Health and Family Welfare Punjab

Endst. No. COVID/NHM/Pb/20/7834-38 **Dated:-** 24/12/2020

1. Mission Director National Health Mission,Punjab.
2. Managing Director, PHSC,Punjab.
3. Director, Health and Family Welfare, Punjab.
4. Director, Family Welfare, Punjab.
5. State Consultant/Convener, Mortality Audit Committee (COVID-19) Punjab

(Hussan Lal), IAS
Principal Secretary to Govt. of Punjab
Dept. of Health and Family Welfare Punjab

Clinical Guidance for Management of Covid-19 Cases

Mild
(Fever / Upper Respiratory Tract Infection)

Moderate
Pneumonia with no signs of severe disease
RR ≥24 / min. SPO_2 <94% on room air

Severe
Respiratory distress
RR ≥30 / min, SPO_2 < 90% on room air

Home isolation as per Govt. policy (L-1)

- Contact and droplet precautions
- Strict hand hygiene
- Symptomatic management (adequate nutrition & hydration, Paracetamol, Antitussives, Vitamin C Vitamin D & Zinc Tab)
- *Ivermectin 12 mg OD x 3 days + Doxycycline 100 mg BD x 5 days
- Pulse oximeter monitoring with 1-minute sit up/sit down test – twice daily (fall in saturation <94)
- Self-monitoring of vitals (Annexure 2)

Warning symptoms/signs for HOME isolation patients (Annexure 1):

- Difficulty in breathing
- Persistent pain/ pressure in the chest
- Mental confusion/ inability to arouse
- Bluish discoloration of lips / face
- Decreased urine output

Patients are advised to be in touch with their medical teams/personal physician

For patients with High Risk Factors (Age > 60 years, immunocompromised, CVD, diabetes, chronic lung/liver/kidney disease, cerebrovascular disease, obesity, pregnant women):

- Consider admission to COVID Care Centre (CCC)
- RBS, CBC, ECG, Chest X-ray (symptomatic), CRP, D-Dimer, RFT (HTN).
- AVOID IL-6 & CT CHEST in proven cases

Dedicated COVID Health Centre (DCHC) (L-2)

- ECG, RBS, CBC, LFT, RFT
- CRP, D-Dimer every 48-72 hourly
- LDH, Ferritin, IL-6, CT chest (if needed)

Oxygen Support

- Target SpO_2:92-96% (88-92% in patients with COPD)
- Preferred device for oxygenation: Non- rebreathing face mask (if HFNC or simple nasal cannula is used, N95 mask should be applied over it)
- Active awake proning

Medical Management

- Remdesivir 200 mg IV f/b 100 mg IV daily for 4 days (total 5 days)
- Intravenous dexamethasone: 6mg OD x upto 10 days*
- Antibiotics if required
- Prophylactic dose of UFH or LMWHZ (e.g. Enoxaparin SC 40mg OD for <100 kg, BD >100 kg)

Shift to DCH/ICU (L3) if:

- Increased Work of breathing (use of accessary muscles)
- Hemodynamic instability
- Increase in oxygen requirement

* Duration and tapering should be done as per patient condition.
Close monitoring for hyperglycemia & infections including fungal

Investigational Therapies
Plasma therapy (PLACID Trial)

Dedicated COVID Hospital (DCH) (L-3)

- Cautious trial of CPAP with oro-nasal mask/ NIV with helmet interface/HFNC, if work of breathing is low
- Maintain euvolemia
- Continue dexamethasone or shift to IV methylprednisolone 1 to 2 mg/kg per day for 5-7 days (in 2 divided doses) as per physician preference.
- Therapeutic dose of UFH or LMWH for patients at high risk of thrombotic complications* (e.g. Enoxaparin SC 1mg/kg BD)
- Consider intubation if work of breathing is high/ not tolerating NIV

Ventilator management

- Use conventional ARDS net protocol (LTV, proning, etc,)
- If sepsis/ septic shock: Manage as per existing protocol and local antibiogram
- Use sedation and nutrition therapy as per existing guideline

*Use Validated score for assessing bleeding risk (eg HAS-BLED score)
*Use D-Dimer & SIC score for further risk stratification (SIC>4 portends higher thrombotic risk)

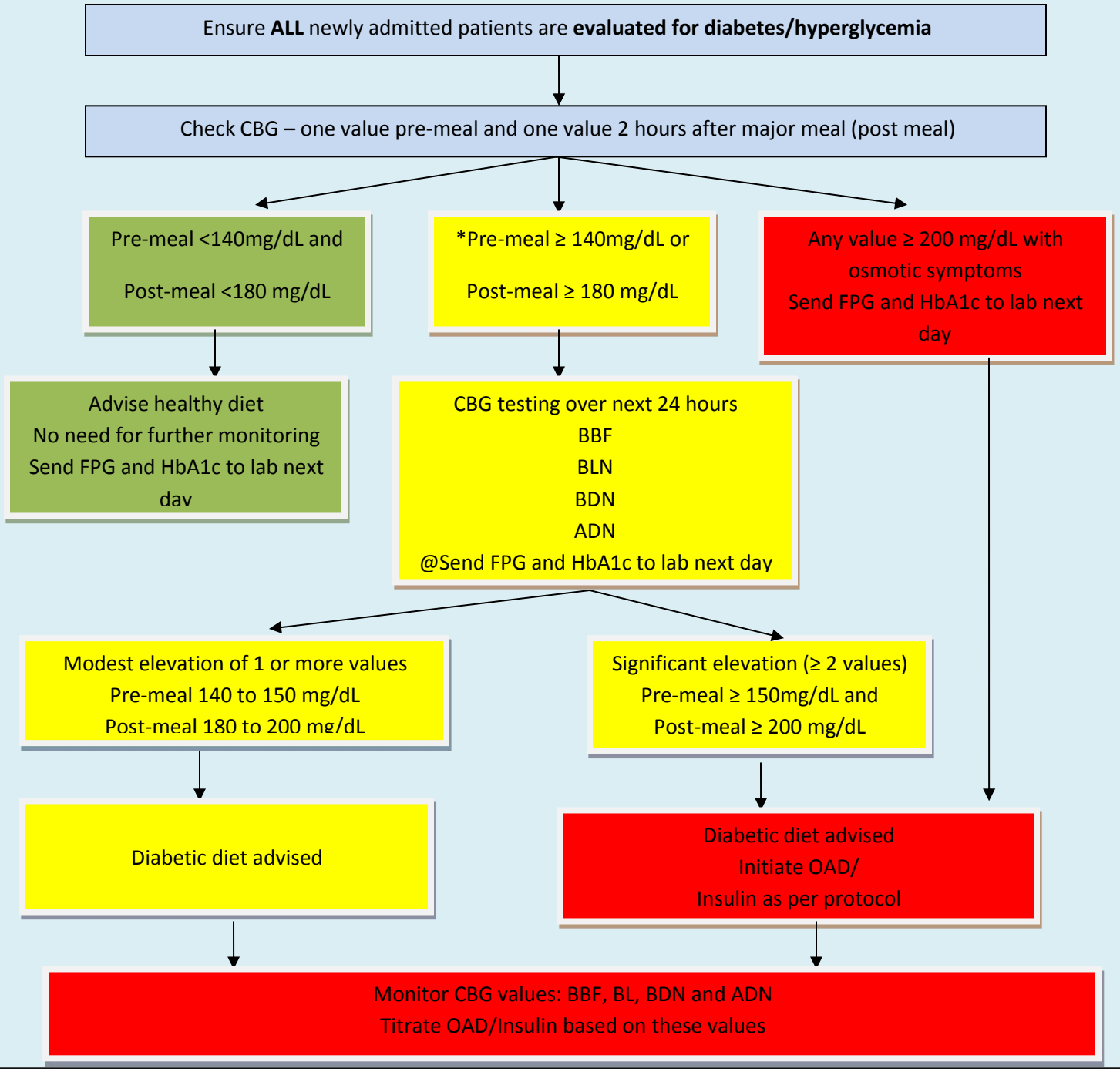
Investigational Therapies
Consider single dose of Inj. Tocilizumab for cytokine storm (after team meeting)

Consider HCQ prophylaxis for High Risk contacts & Frontline Healthcare workers

Mental Hea0lth issue should be managed in consultation with psychiatrist /psychologist / voluntary organization

*** Current evidence supporting the use of ivermectin/doxycycline is limited. Few preliminary studies have shown clinical benefit.**

SCREENING OF HYPERGLYCEMIA IN EVERY PATIENT HOSPITALIZED WITH COVID-19
(at admission and on starting steroids#)



Even if initial blood glucose monitoring was normal, repeat monitoring should be considered if: a) steroids or drugs with a potential to affect glycemic status are initiated and b) there is an increase in severity of COVID-19 (to account for stress hyperglycemia)

*If BG level is ≥ 250 mg/dL, check urine/blood ketone levels ⟶ if positive, immediately consult Medical Specialist
*If Pre-meal BG level ≥ 300 mg/dL and/or post-meal BG level ≥ 400 mg/dL ⟶ immediately consult Medical Specialist irrespective of ketone levels (start insulin)
@FPG ≥ 126 mg/dL and/or HbA1c ≥ 6.5% (Lab values) are diagnostic of Diabetes Mellitus

Abbreviations: ADN: After dinner, BBF: Before breakfast, BDN: Before dinner, BL: Before lunch, CBG: Capillary blood glucose, FPG: Fasting plasma glucose, HbA1c: Hemoglobin, OAD: Oral antihyperglycemic drug

Daily Patient Proforma (COVID-19)

Name: Age: Sex:

UHID No: Ward/Bed no:

Date of admission:

Height: Weight: BMI(kg/m^2):

History:

GPE: Pallor/Cyanosis/Icterus/Clubbing/Pedal edema/lymphadenopathy

Chest auscultation: Wheeze/Crepts/Pleural rub/diminished breath sound/heart sounds/cardiac murmur

Any other systemic significant finding:

Examination:

	Date / Time ⟶	Day 1_____			Day 2_____		
		Morning	Evening	Night	Morning	Evening	Night
1)	Respiratory rate						
2)	SpO_2 (Pulse Oxymetry)						
3)	Pulse						
4)	Blood Pressure						
5)	Urine Output (6hrly)						
6)	Sensorium						
7)	Temperature						

Lab investigations:

Date / Time ⟶	Day 1_____	Day 2_____
Blood glucose		
Hemogram		
Neutrophil/Lymphocyte ratio		
CRP		
RFT (Renal function Test)		
LFT (Liver function Test)		
Others (case based)		

Others:

Chest X-Ray

ECG (Case based)

Any other:-

Signature

REFERRAL GUIDELINES

		COVID CARE CENTRE		ICU
	Risk Stratification →	**MILD** (1° Care)	**MODERATE** (2° Care)	**SEVERE** (3° Care)
	Monitoring Frequency →	6-8 hourly	4 hourly	1 hourly
1)	**Respiratory rate**	14-20/min	20-30/min	>30/min (Distress/accessory muscles)
2)	**SpO_2 (Pulse Oxymetry)**	>93% on Room Air	<93 % on Room Air	SPO2 <93% on face mask @5-6L/min
3)	**Pulse**	<100/min	100-120/min	>120/min, Weak
4)	**Blood Pressure**			<90/60 mmHg
5)	**Urine Output (6hrly)**	>250ml		<150ml
6)	**Sensorium**	Alert, cooperative		Confused, Drowsy
7)	**Temperature**			Persistent High Grade
8)	**Haemogram**			Neutrophil/Lymphocyte > 3.5

HIGH RISK FACTORS

Any 2 of the following	***Any 1 of the following***
Age>60 yrs	COPD/ Asthma
Hypertension	Immunocompromised
Diabetes Mellitus	Coronary artery disease
Obesity (BMI>25)	Severe Hepatic/Renal Disease

Then shift to higher category

SEVERE / MODERATE WITH HIGH RISK FACTOR + to be shifted to Tertiary care centre/ICU immediately in dedicated COVID Ambulance

COVID-19 patient update sheet

Patient Name:				**Age/Gender:**	
Father's Name:				**ISO. No.**	
DOA:					
Day/Date		____/_____	____/_____	____/_____	____/_____
Pulse	9 am				
	12 noon				
	3 pm				
	6 pm				
	9 pm				
	6 am				
BP	9 am				
	12 noon				
	3 pm				
	6 pm				
	9 pm				
	6 am				
RR	9 am				
	12 noon				
	3 pm				
	6 pm				
	9 pm				
	6 am				

Day/Date		____ /_____	____ /_____	____ /_____	____ /_____
Temperature	9 am				
	12 noon				
	3 pm				
	6 pm				
	9 pm				
	6 am				
Mode of Respiratory Support	9 am				
	12 noon				
	3 pm				
	6 pm				
	9 pm				
	6 am				
Spo2	9 am				
	12 noon				
	3 pm				
	6 pm				
	9 pm				
	6 am				
Blood Sugar (If sugar>300 mg/dl; must do urine for ketones and inform Medical Specialist)	Early Morning (Fasting)				
	After Breakfast				
	Before Lunch				
	After Lunch				
	Before Dinner				
	After Dinner				

Any other:-

Patient Clinical Chart for Patient File

(For Diabetic Patient)

Patient Name:		**Father's Name:**	
Age/Gender:_____/_____	**Height/Weight_____/_____**		**BMI(kg/m$^{2)}$_____**
UHID No.		**Ward No./ Bed no.**	**_____/_____**

Lab Investigations						
Date						
Urine routine						
CBC						
RFT (As advised by Physician)						
LFT (As advised by Physician)						
HbA1C (Once at the time of admission for diabetic patients)						
CRP						
LDH						
D-Dimer						
Ferritin						
Blood Sugar (If sugar>300 mg/dl; must do urine for ketones)						
Date						
Early Morning (Fasting)						
After Breakfast						
Before Lunch						
After Lunch						
Before Dinner						
After Dinner						
Investigations						
CXR						
ECG						
CT Scan (If done, as advised)						

Any other:-