



KEMENTERIAN KESIHATAN MALAYSIA

(MINISTRY OF HEALTH MALAYSIA)

PEJABAT TIMBALAN KETUA PENGARAH KESIHATAN (PERUBATAN)

(OFFICE OF THE DEPUTY DIRECTOR GENERAL OF HEALTH (MEDICAL) MALAYSIA)

ARAS 7, BLOK E1, PARCEL E, PRESINT 1,
PUSAT PENTADBIRAN KERAJAAN PERSEKUTUAN
62590 PUTRAJAYA

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Faks : 03-88831045

Ruj. Kami : KKM.600-28/2/1 JLD. 2 (30)
Tarikh : 17 April 2020

Pengarah Kesihatan Negeri

Jabatan Kesihatan Negeri _____

Pengarah

Hospital _____

YBhg. Dato' Seri/ Dato' Indera/Datuk/ Dato'/ Datin/ Tuan/ Puan,

**PEMANTAUAN BERTERUSAN PELAKSANAAN PENGENDALIAN PESAKIT
PATIENT UNDER INVESTIGATION (PUI) / COVID-19 DI FASILITI KEMENTERIAN
KESIHATAN MALAYSIA (KKM)**

Adalah saya dengan segala hormatnya merujuk kepada perkara di atas.

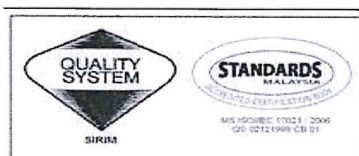
2. Buat makluman, Mesyuarat Kebangsaan *Crisis Preparedness Response Centre* (CPRC) yang dipengerusikan oleh Ketua Pengarah Kesihatan Malaysia telah memutuskan bahawa matlamat utama KKM dalam menangani pandemik COVID-19 ini adalah **to improve outcome** dan **to reduce mortality and morbidity** dikalangan pesakit COVID-19.

3. Secara ringkas, beberapa aspek yang perlu ditambahbaik telah dikenalpasti dan saranan pemantauan dalam memastikan kelestarian KKM dalam mengendalikan kes-kes COVID-19 adalah seperti berikut:

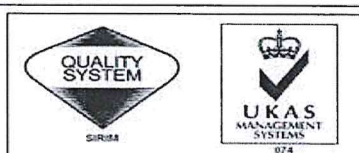
3.1 Pesakit yang bergejala tahap 4 & 5 lewat mendapatkan rawatan.

Saranan:

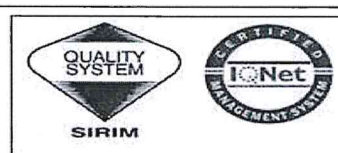
- Mengenalpasti punca kelewatan dan fasiliti yang merujuk pesakit - pesakit ini samada dari rumah (*home surveillance*), pusat kuarantin, Klinik Kesihatan atau fasiliti kesihatan swasta.
- Meningkatkan kesedaran pesakit dan orang awam berkenaan gejala COVID-19 terutamanya gejala tahap 3 dan ke atas.



CERTIFIED TO ISO 9001:2015
CERT. NO.: QMS 01897



CERTIFIED TO ISO 9001:2015
CERT. NO.: QMS 01897



CERTIFIED TO ISO 9001:2015
CERT. NO.: MY-QMS 01897

3.2 Keciciran maklumat penting semasa kemasukan pesakit ke wad.

Saranan:

- a) Menggunakan *Ministry of Health COVID-19 Admission Sheet* (Lampiran 1) bagi setiap pesakit COVID-19 yang dimasukkan ke wad.

3.3 Pemantauan dan rawatan pesakit diperkukuhkan.

Saranan:

- a) Menggunakan garis panduan pengurusan klinikal COVID-19 Versi 5/2020 serta carta alir *Clinical Management for COVID-19* dan *checklist* pemantauan harian daripada KKM yang telah dibangunkan bersama-sama Pakar Perubatan Penyakit Berjangkit (rujuk Lampiran 2 dan 3).

3.4 Rawatan pesakit tepat pada masa.

Saranan:

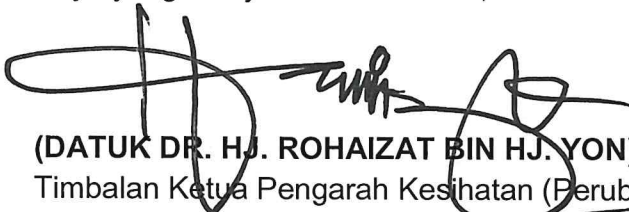
- a) Memastikan kerjasama baik dan komunikasi berkesan di antara pakar-pakar perubatan pelbagai disiplin dalam perawatan pesakit COVID-19.

4. Sehubungan itu, adalah diharapkan agar pihak YBhg. Dato' Seri/ Dato' Indera/Datuk/ Dato'/ Datin/ Tuan/ Puan dapat memantau pelaksanaan saranan ini secara berterusan dan sentiasa bersedia mengemukakan maklumbalas berkenaan perkara ini. Sebarang pertanyaan bolehlah berhubung dengan **Dr. Faizah** di talian 03-88831210/ 012-2507112 atau di alamat emel berikut: faizahmz@moh.gov.my. Segala kerjasama baik dan perhatian amatlah dihargai.

Sekian. Terima kasih.

'BERKHIDMAT UNTUK NEGARA'

Saya yang menjalankan amanah,



(DATUK DR. HJ. ROHAIZAT BIN HJ. YON) (MMC:26029)

Timbalan Ketua Pengarah Kesihatan (Perubatan)
Kementerian Kesihatan Malaysia

s.k.

Ketua Setiausaha
Kementerian Kesihatan Malaysia

Ketua Pengarah Kesihatan
Kementerian Kesihatan Malaysia

Timbalan Ketua Pengarah Kesihatan (Kesihatan Awam)
Kementerian Kesihatan Malaysia

Timbalan Ketua Pengarah Kesihatan (Penyelidikan & Sokongan Teknikal)
Kementerian Kesihatan Malaysia

Pengarah Kanan
Program Perkhidmatan Farmasi

Pengarah Kanan
Program Kesihatan Pergigian

Pengarah
Bahagian Perkembangan Perubatan

Pengarah
Bahagian Kawalan Penyakit

Pengarah
Bahagian Pembangunan Kesihatan Keluarga

Pengarah
Bahagian Perkembangan Kesihatan Awam

Pengarah
Institut Jantung Negara

Pengarah
Hospital Angkatan Tentera Tuanku Mizan

Pengarah
Hospital Angkatan Tentera TLDM Lumut

Pengarah
Hospital Angkatan Tentera Terendak

Pengarah
Pusat Perubatan Universiti Malaya

Pengarah
Hospital Canselor Tuanku Muhriz

Pengarah
Hospital Universiti Sains Malaysia

Pengarah
Hospital Pengajar Universiti Putra Malaysia

Pengarah
Pusat Kesihatan UiTM, Sungai Buloh

Semua Ketua Perkhidmatan Klinikal
Kementerian Kesihatan Malaysia

Setiausaha Sulit Kanan
Kepada YB Menteri Kesihatan
Pejabat Menteri Kesihatan

Setiausaha Sulit Kanan
Kepada YB Timbalan Menteri Kesihatan 1
Pejabat Timbalan Menteri Kesihatan 1

Setiausaha Sulit Kanan
Kepada YB Timbalan Menteri Kesihatan 2
Pejabat Timbalan Menteri Kesihatan 2

COVID-19 Admission Sheet

Ministry of Health Malaysia

*This form needs to be filled on admission of the suspected and confirmed COVID-19 patient

*This form needs to be attached with the BHT/ Patient's note at all time.

| | | | |
|--|---|---|---|
| Referred from: | | Date first seen by GP or KK (if applicable): | |
| Name: | | IC Number: | |
| Age: | | Phone number: | |
| Race: | | Gender: | Male / Female |
| Occupation: | | | |
| Epid. Link: | | Travel history: | Country: |
| Contact with Positive COVID19 patient? | Yes / No | Flight Number: | |
| | | Departure date: | Return date: |
| | | | |
| First day of symptom onset (Date): | | | |
| First symptom: | <input type="checkbox"/> Fever | <input type="checkbox"/> Cough | <input type="checkbox"/> SOB <input type="checkbox"/> Others: _____ |
| Symptom(s) at presentation: | | | |
| <input type="checkbox"/> Fever | <input type="checkbox"/> SOB | <input type="checkbox"/> Exertion SOB | |
| <input type="checkbox"/> Cough | <input type="checkbox"/> Sore throat | <input type="checkbox"/> Myalgia/ bodyache | |
| <input type="checkbox"/> Fatigue | <input type="checkbox"/> Chest pain / tightness | <input type="checkbox"/> Loss of smell (anosmia) | |
| <input type="checkbox"/> Nausea and vomiting | <input type="checkbox"/> Diarrhoea | <input type="checkbox"/> Others: _____ | |
| Temperature: | | Blood Pressure: | |
| Pulse rate: | | Respiratory rate: | |
| Oxygen saturation (SpO2): | | Use of accessory muscle: | Yes / No |
| Conscious level (AVPU): | <input type="checkbox"/> Alert | <input type="checkbox"/> Respond to Verbal | <input type="checkbox"/> Respond to Pain <input type="checkbox"/> Unconscious |
| Lung findings: | | | |
| Risk Factors: | | | |
| <input type="checkbox"/> Obesity | <input type="checkbox"/> Diabetes | <input type="checkbox"/> Pregnancy | <input type="checkbox"/> Smoker <input type="checkbox"/> Vaper |
| <input type="checkbox"/> Heart disease | <input type="checkbox"/> COPD | <input type="checkbox"/> Asthma | <input type="checkbox"/> Malignancy <input type="checkbox"/> HIV |
| <input type="checkbox"/> Chronic Kidney Disease | <input type="checkbox"/> Chronic Liver Disease | <input type="checkbox"/> Bed Bound | |
| <input type="checkbox"/> Others: _____ | | | |
| Blood Investigations | TWC: | Hb: | |
| | Lymphocyte count: | Platelet: | |
| Chest x-ray Findings: | | Medications (if any): | |
| Clinical Staging of Syndrome: | | | |
| <input type="checkbox"/> 1 - Asymptomatic | | | |
| <input type="checkbox"/> 2 - Symptomatic, no pneumonia | | | |
| <input type="checkbox"/> 3 - Symptomatic, pneumonia** | | | |
| <input type="checkbox"/> 4 - Symptomatic, pneumonia, requiring supplemental oxygen | | | |
| <input type="checkbox"/> 5 - Critically ill with multiorgan | | | |
| ** Stage 3 and above: please ALERT the specialist (ID/ Internal Medicine/ Anaesthetist) STAT. | | | |
| Form Filled by: | | | |
| Date: | | | |

Lampiran 2



KEMENTERIAN KESIHATAN
MALAYSIA

Clinical Management Protocol for COVID-19

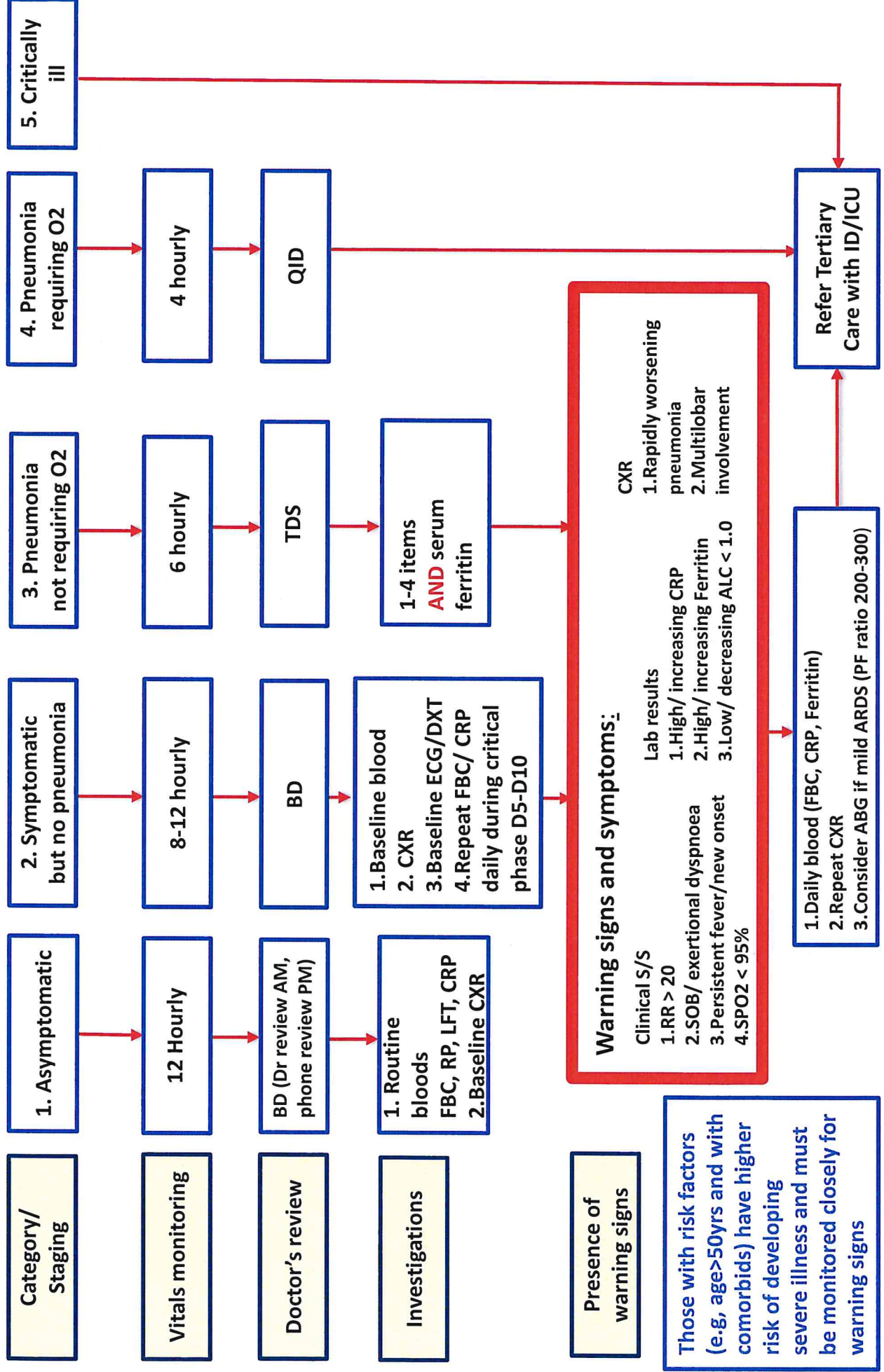
Medical Programme

Ministry of Health

17 April 2020



Clinical Management Protocol for COVID-19 Flow Chart



HYDROXYCHLOROQUINE (HCQ)

200mg Tablet



KEMENTERIAN KESIHATAN
MALAYSIA

***Category/Stage 2 and 3 patients may be started on Hydroxychloroquine (or chloroquine if HCQ is not available) if there is no contraindication.**

DOSE:

Loading dose 400mg BD x 1 day , then
200mg BD x 4-10days

ENTERAL ADMINISTRATION:

- Tablet can be crushed
- Taken with meals to decrease GI upset

PREGNANCY: Category C

LACTATION: Compatible

RENAL IMPAIRMENT:

Loading dose: No adjustment

Maintenance:

CrCl > 30mL/min: No adjustment

CrCl 15-30mL/min: 200mg OD

CrCl < 15mL/min: 200mg EOD

HD: 200mg EOD

CRRT: 200mg OD

ADVERSE EFFECT:

More common:

Abdominal pain, nausea, vomiting,
diarrhoea and headache

Others:

QT, PR and/or QRS interval
prolongation, blurring of vision, skin
rash, pruritus, hypoglycaemia,
blood disorders, hepatitis

PRECAUTIONS:

G6PD Deficiency

MONITORING:

ECG, blood glucose
(hypoglycaemia), CBC, LFT

CONTRAINDICATIONS:

Preexisting retinopathy or
maculopathy of eye

DRUG INTERACTION:

Consider therapy modification

Dapsone

Monitor Hb

Monitor therapy

**Antidiabetics, SSRI, MAOI,
Quinolone**

Monitor blood glucose

Amiodarone, Haloperidone

Monitor QT prolongation

Tamoxifen

Monitor for retinal toxicity

Beta-blockers

Monitor for bradycardia
(Exception: Atenolol)

Digoxin

Monitor digoxin toxicity

CHLOROQUINE

250mg Tablet (Chloroquine base 150mg)



KEMENTERIAN KESIHATAN
MALAYSIA

***Category/Stage 2 and 3 patients may be started on Hydroxychloroquine (or chloroquine if HCQ is not available) if there is no contraindication.**

DOSE:

500mg (300mg base) BD x 10 days

ENTERAL ADMINISTRATION:

- Tablet can be crushed
- Taken with meals to decrease GI upset

PREGNANCY: Category C

LACTATION: Compatible

RENAL IMPAIRMENT:

- CrCl > 10mL/min: No adjustment
- CrCl < 10mL/min: 250mg BD
- HD, PD: 250mg BD
- CRRT: No dosage adjustment

ADVERSE EFFECT:

More common:

Abdominal pain, nausea, vomiting, diarrhoea and headache

Others:

QT, PR and/or QRS interval prolongation, blurring of vision, skin rash, pruritus, hypoglycaemia, blood disorders, hepatitis

PRECAUTIONS:

- G6PD Deficiency
- Ototoxicity (discontinue if hearing defect)

MONITORING:

ECG, blood glucose (hypoglycaemia), CBC, LFT

CONTRAINDICATIONS:

Visual field changes

DRUG INTERACTION:

Consider therapy modification

Amiodarone, Azithromycin,

Quinolones

Monitor QT prolongation

Antacid

Separate administration by at least 4 hours

Monitor therapy

Antidiabetics, SSRI, MAOI,

Quinolones:

Monitor blood glucose

Beta-blocker:

Monitor for bradycardia

Tamoxifen:

Monitor retinal toxicity

Digoxin:

Monitor digoxin toxicity



KEMENTERIAN KESIHATAN MALAYSIA

DAILY MONITORING CHECKLIST FOR COVID-19 / PATIENT UNDER INVESTIGATION (PUI)

NAME: _____ IC: _____

DATE OF ONSET: _____ RN: _____

DAY OF ILLNESS: _____

A. VITAL SIGN

| DATE /TIME: | | | |
|-----------------------|--|--|--|
| Blood Pressure (BP) | | | |
| Pulse Rate (PR) | | | |
| Respiratory Rate (RR) | | | |
| Temperature | | | |
| SPO ₂ | | | |
| MEWS | | | |

B. INVESTIGATION

| DATE/TIME: | |
|-----------------------------|--|
| Full Blood Count: | |
| TWC | |
| HB | |
| PLT | |
| ANC/ALC | |
| CRP | |
| Sr Ferritin | |
| Renal Profile: | |
| Na | |
| K | |
| Urea | |
| Creatinine | |
| Liver Function Test: | |
| Total Bilirubin | |
| Albumin | |
| ALT | |
| ALP | |
| Others: | |
| | |
| | |
| | |

C. CXR REPORTING

| DATE/TIME: | |
|------------|--|
| Patchy | |
| Diffuse | |
| Normal | |

NAME:

SIGNATURE:

D. WARNING SIGN

| DATE /TIME: | YES | NO |
|--------------------------|-----|----|
| SOB / Lethargy | | |
| RR > 20 | | |
| ↑ MEWS > 3 | | |
| New / Persistent Temp | | |
| ↓ SPO ₂ < 95% | | |
| CRP ↑ | | |
| ↓ ALC < 1.0 | | |
| Ferritin ↑ | | |
| CXR Worsened | | |
| PF Ratio < 300 | | |

E. STAGING (Tick the appropriate stage)

| Stage 1 Asymptomatic | Vital Signs 12Hly | Dr review Daily/ Phone Review PM |
|--|--|------------------------------------|
| | FBC/ RP/LFT/RBS (or capillary blood sugar) at baseline | |
| | Repeat bloods as indicated | |
| | CXR at first presentation | |
| Stage 2 Symptomatic W/out Pneumonia | Vital Signs 8-12Hly | Dr review 12Hly |
| | FBC/ RP/LFT/CRP/ Blood sugar at baseline | |
| | FBC/CRP Biweekly | |
| Stage 3 Pneumonia Not Requiring Oxygen W/out Warning Signs | Risk Factor + FBC / CRP daily in critical phase day 5-10 | |
| | CXR at first presentation and as indicated | |
| | Baseline ECG and repeat if indicated | |
| | if Warning Signs present - repeat CXR and blood tests ASAP | |
| Stage 3 Pneumonia Not Requiring Oxygen with Warning Signs | Refer Tertiary Center with ICU Service | |
| | Vital signs 8Hly | Dr review 8Hly or earlier |
| | FBC/ RP/LFT/CRP/ Blood sugar at baseline | |
| | FBC/CRP/FERRITIN Daily | |
| | ABG to look at PF ratio | |
| | CXR at first presentation and as indicated | |
| | Baseline ECG and repeat if indicated | |
| Stage 4 Pneumonia Requiring Oxygen | Refer for ICU Care | |
| | Vital Signs 2-4Hly | Dr review 4Hly or earlier till ICU |
| | Daily FBC/ RP/LFT/CRP/FERRITIN | |
| | PROCALCITONIN if available | |
| | ABG to look at PF ratio | |
| | CXR at first presentation and as indicated | |
| | Baseline ECG and repeat if indicated | |
| Stage 5 Critically Ill | ICU Care | |