MINISTRY OF HEALTH

KENYA PROGRESSIVE NURSES ASSOCIATION

WEBINAR

TOPIC: Management of COVID 19 in Clients with HIV/AIDS **PART II**

Loice Josephat
Senior Nursing Officer
Mariakani Sub County Hospital
KPNA Branch Secretary
Moderator

Dr James Wagude
Physician, Siaya County Referral Hospital
Chair, NYAWEST Reginal HIV Clinical TWG
Panelist

Dr Mike Ekisa MBChB MPH
County HIV Program Manager
Kakamega County
Chair Council of County HIV Program Managers Kenya
Panelist

10th November 7:00 to 9:00 PM EAT.

Harmony In Nursing The Professional Cure

MANAGEMENT OF COVID-19 IN CLIENTS WITH HIV

DR JAMES WAGUDE

PHYSICIAN – SIAYA COUNTY REFERRAL HOSPITAL

CO-CHAIR – NYAWEST HIV CLINICAL TWG

Outline

- Introduction
- Coronavirus background
- COVID-19 epidemiology and clinical features
- Management of COVID 19
- HIV and COVID 19
- PLHIV Update and FAQs
- Frontline Lessons Learnt
- Key Take-home messages

Introduction

- COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019.
- Has now become a global pandemic with high death rates in patients with co-morbidities
- The diseases and control measures will impact PLHIV in deleterious fashion and these need to be planned for ahead of time

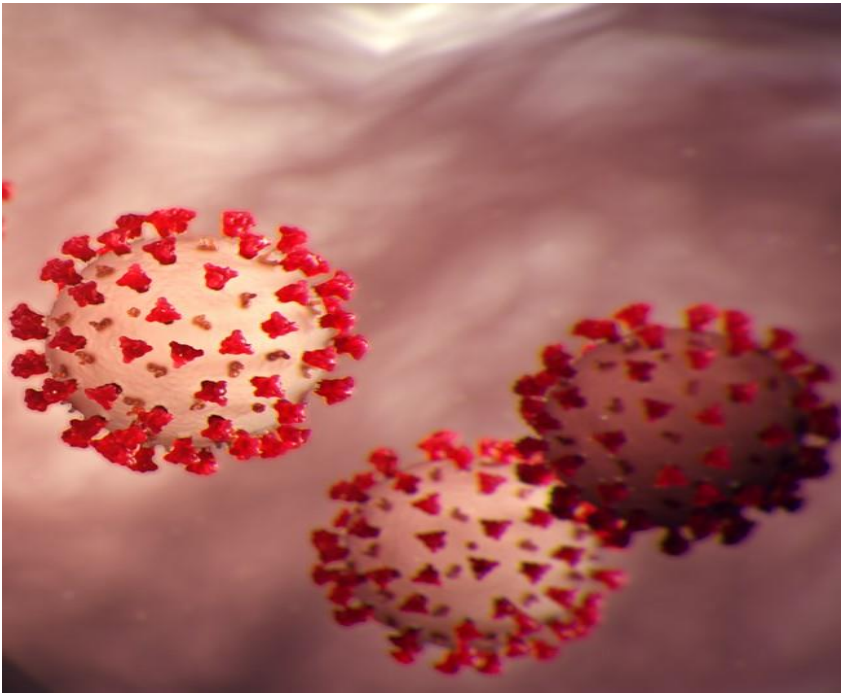
Introduction

- Pandemics refer to:
  - Large-scale outbreaks of infectious disease that can greatly increase morbidity and mortality over a wide geographic area
  - Cause significant economic, social, and political disruption.
- Examples:
  - Bubonic plague
  - Spanish flu influenza
  - HIV/AIDS
- Increased likelihood due to global travel, urbanization and exploitation of the natural environment

Emerging respiratory viruses

- Viruses continue to emerge and pose challenges to public health
- Some examples of emerging respiratory viruses include:
  - **2002: Severe Acute Respiratory Syndrome coronavirus** (SARS-CoV): 8,098 cases, 774 deaths (9.5% CFR)
  - **2009: H1N1 influenza**: 1,632,710 cases, 18,449 deaths
  - **2012: Middle East Respiratory Syndrome coronavirus** (MERS-CoV): 2519 cases, 866 deaths (35% CFR)
  - **2019: Novel coronavirus**
    - **COVID-19** = **CO**rona**VI**rus **D**isease 20**19** (i.e., name of the disease)
    - **SARS-CoV-2** = name of the virus, or "nCoV" or "2019-nCoV"

Introduction: What is coronavirus?



- Coronaviruses are a large family of viruses that include SARS-CoV, MERS-CoV, and COVID-19
- In humans they cause a range of diseases:
  - Mild to Moderate – cold or flu-like disease
  - Moderate to Severe – generally respiratory, can be life threatening:
    - MERS, SARS, and COVID-19
    - **Pneumonia**: viral or secondary bacterial
- Animal coronaviruses can sometimes infect humans (zoonotic diseases)
  - Carried in the respiratory and gastrointestinal tract of animals
  - Possible that COVID-19 is a zoonotic disease

Novel Coronavirus COVID-19 Outbreak Situation in Numbers

as of 9th November 2020

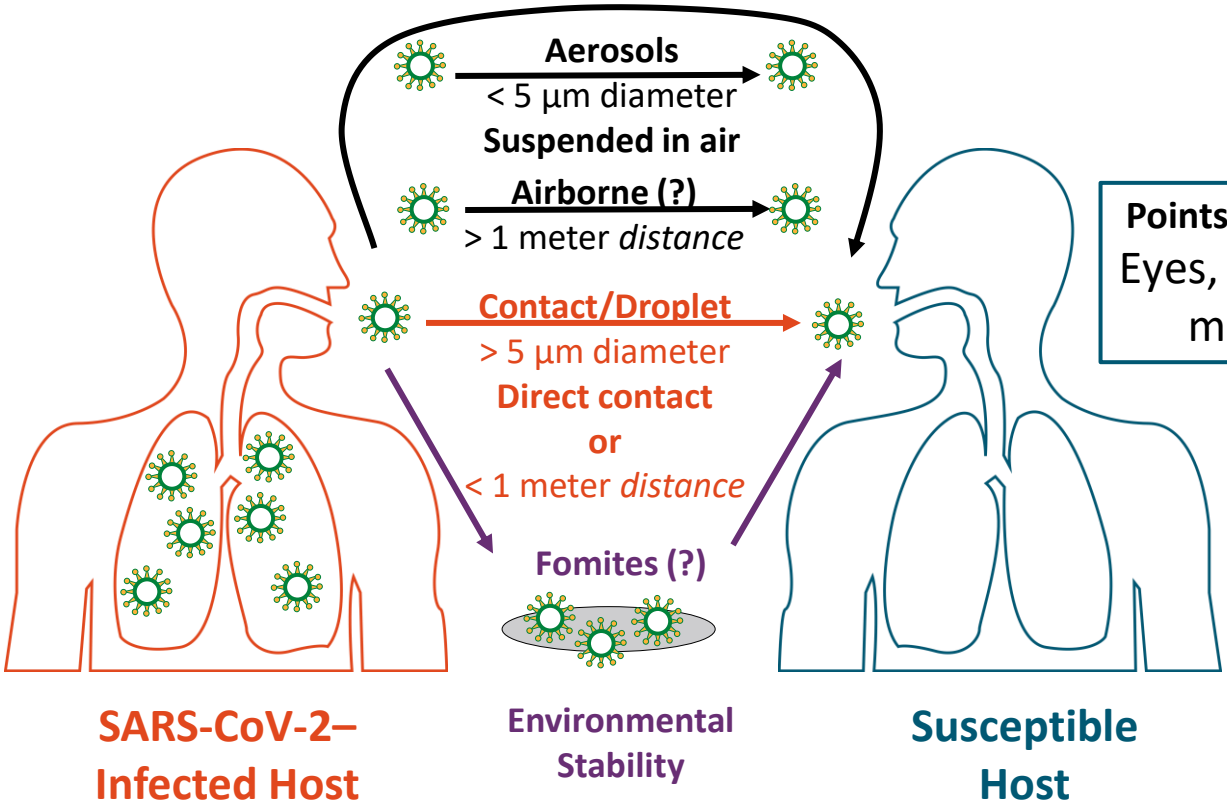
- **Globally**
  - 50,266,033 confirmed (677,806 new)
  - 1,254,567 deaths (8,311 new; 2.5% CFR)
- **China**
  - 92,242 confirmed (47 new)
  - 4,748 deaths (0 new)
- **USA**
  - 9,763,730 confirmed
  - 235,562 deaths
- **Kenya**
  - **63, 244 confirmed** (756 new)
  - **1,130 deaths** (19 new) – 10 Nov 2020

- **Case burden – shifted <u>out</u> of China**
  - Europe (**Italy** >> Spain > France >UK > Germany)
  - Americas (**USA, Mexico, Brazil**)
  - Middle East (Iran)
  - **Kenya – clusters of cases**
- **WHO RISK ASSESSMENT**
  - Global Level - Very High
- https://www.who.int/emergencies/diseases/ novel-coronavirus 2019/situation-reports

Risk Factors for COVID-19 in Kenya

- Trade/interaction with other countries
  - 75 000 passengers from China through JKIA annually
  - Other transmissions came through Europe and Americas
- Socio-cultural practices
  - Handshaking norm
  - Funeral/wedding/political gatherings
  - Poor health seeking behavior
  - Poor hygiene and sanitation
- High disease burden
  - HIV/TB
  - NCDs – HTN, DM, CVD, cancer (emerging)

Proposed Routes of SARS-CoV-2 Transmission



Urine/feces: RNA found in both; live virus cultivated from few specimens

Points of entry: Eyes, nose, or mouth

Galbadage. Front Public Health. 2020;8:163. WHO. Scientific Brief. July 9, 2020.

Slide credit: clinicaloptions.com

SARS-CoV-2 Transmission in Various Settings

- Crowded enclosed spaces facilitate SARS-CoV-2 transmission
- Transmission rates in enclosed spaces appear to be correlated with duration of exposure
  - Longer duration → greater risk of transmission
- Airborne transmission hypothesized
  - Biologically plausible → aerosol generated with greater than normal force or if air current moves aerosol > 1 meter and droplets remain intact
- Continued observational study and sentinel animal study required to better understand airborne transmission potential

Slide credit: clinicaloptions.com

Efficacy of Face Coverings in Prevention of SARS-CoV-2 Transmission

- Systematic review and meta-analysis of data from 172 studies investigating the spread of SARS-CoV-2, SARS, and MERS (n = 2647)[1]
  - Face mask use (surgical, N95, or cotton mask) resulted **in large reduction in infection (OR: 0.15; 95% CI: 0.07-0.34)**
  - Association was stronger for N95 or respirators vs disposable or 12-16 layer cotton masks ($P_{interaction}$ = 0.090)
- Study of human coronaviruses in exhaled breath of children and adults with acute respiratory illnesses wearing surgical face masks vs no mask (N = 246)[2]
  - Virus detected in **respiratory droplets** in 3 of 10 samples collected without face masks vs **0 of 11 samples with a mask (*P* = .07)**
  - Virus detected in **aerosols** in 4 of 10 samples collected without face masks vs **0 of 11 samples with a mask (*P* = .02)**

1. Chu. Lancet. 2020;395:1973. 2. Leung. Nature Medicine. 2020;26:676.

Slide credit: clinicaloptions.com

Preventing SARS CoV2 Transmission Based on the Evidence

- Personal protection
  - Physical distancing > 1 meter
  - Handwashing to prevent fomite transmission from contaminated surfaces
  - Personal protective equipment (PPE) for health workers
- Protecting others with covering of nose and mouth when physical distancing not possible
  - Carers of elderly and those with comorbidities
  - Confined spaces (buses, cars, other confined spaces with poor ventilation)

WHO Advice for the Public. Updated 19 June 2020.
https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

Slide credit: clinicaloptions.com

WHO: Suspect Case Definition

Acute onset of fever and cough OR ≥ 3 of the following: fever, cough, general weakness/fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia/nausea/vomiting, diarrhea, altered mental status

And 1 of the following within 14 days of symptom onset:

- Residing or working in an area with high risk of transmission*
- Residing or travel to an area with community transmission
- Working in a healthcare setting

OR:

Patient with severe acute respiratory illness (acute respiratory infection with history of fever or measured fever ≥ 38°C and a cough; onset within last 20 days; requires hospitalization)

*Closed residential settings, humanitarian settings such as camp and camp-like settings for displaced persons.

WHO COVID-19 Case Definition. Updated August 7, 2020. https://www.who.int/publications/i/item/WHO-2019-nCoV-Surveillance_Case_Definition-2020.1

WHO: Probable Case Definition

Acute onset of fever and cough OR ≥ 3 of the following: fever, cough, general weakness/fatigue, headache, myalgia, sore throat, coryza, dyspnea, anorexia/nausea/vomiting, diarrhea, altered mental status

AND:

Contact of probable or confirmed case or epidemiologically linked to a cluster with at least 1 confirmed case

OR:

Suspect case with chest imaging showing findings suggestive of COVID-19 disease*

OR:

Recent onset of loss of smell or taste in the absence of any other identified cause

OR:

Unexplained death in an adult with respiratory distress who was a contact of a probable or confirmed case or epidemiologically linked to a cluster with at least 1 confirmed case

*Hazy opacities with peripheral and lower lung distribution on chest radiography; multiple bilateral ground glass opacities with peripheral and lower lung distribution on chest CT; or thickened pleural lines, B lines, or consolidative patterns on lung ultrasound.

WHO COVID-19 Case Definition. Updated August 7, 2020. https://www.who.int/publications/i/item/WHO-2019-nCoV-Surveillance_Case_Definition-2020.1

Clinical features of COVID-19

- Incubation period: range 2-14 days
  - mean 5.1 days; symptom onset by Day 11.5 of infection (in 97.5%)
- Clinical range: asymptomatic to critical
  - **Mild to Moderate – 81%**
  - Severe disease – 14%
  - Critical disease – **5%**
- Symptoms/signs
  - Onset: Fever (77-98%), dry cough (46-82%), myalgia or fatigue (11-52%), shortness of breath (3-31%), new loss of taste or smell
    - Others: sore throat, headache, productive cough (sputum or hemoptysis)
  - Gastrointestinal (1/4 – 1/3 of patients)
  - Severe: dyspnea, worsening cough, hypoxia, ARDS, hypotension/shock

WHO: Interim Guidance on Diagnostic Testing for SARS-CoV-2

- Routine confirmation of SARS-CoV-2 infection is based on the detection of unique sequences of RNA by nucleic acid amplification tests such as RT-PCR via nasopharyngeal or oropharyngeal swabs
- 1 or more negative results do not rule out the possibility of SARS-CoV-2 infection

Factors Potentially Leading to Negative Result in an Infected Individual
Poor specimen quality
Timing or location of specimen collection (late in infection or in compartment without virus)
Specimen was not handled appropriately
Technical reasons inherent in test (virus mutation or PCR inhibition)

https://www.who.int/publications/i/item/diagnostic-testing-for-sars-cov-2

Slide credit: clinicaloptions.com

Current Non-Therapeutic Management and Supportive Care

Non-Therapeutic Management of Mild COVID-19

WHO[1]
▪ Isolate suspected/confirmed cases to contain SARS-CoV-2 transmission; isolation can occur at home, in a designated COVID-19 health or community facility
▪ Treat symptoms (eg, antipyretics for fever, adequate nutrition, appropriate rehydration)
▪ Educate patients on signs/symptoms of complications that, if developed, should prompt pursuit of urgent care

NIH (UK)[2,3]
▪ Majority of cases managed in ambulatory setting or at home (eg, by telemedicine)
▪ Close monitoring advised for symptomatic patients with risk factors for severe disease; rapid progression possible
▪ No specific lab tests indicated if otherwise healthy
▪ In non-hospitalized patients, do not initiate anticoagulants or antiplatelet therapy to prevent VTE or arterial thrombosis unless other indications exist

1. WHO Interim Guidance. Clinical management of COVID-19. May 27, 2020.
2. NIH COVID-19 Treatment Guidelines. Management of persons with COVID-19. Last updated June 11, 2020.
3. NIH COVID-19 Treatment Guidelines. Antithrombotic therapy in patients with COVID-19. Last updated May 12, 2020.

Non-Therapeutic Management of Moderate COVID-19

Management[1]

- Monitor closely, as pulmonary disease can rapidly progress
- Administer empiric antibiotics if bacterial pneumonia/sepsis strongly suspected; re-evaluate daily and de-escalate/stop treatment if no evidence of infection
- Use hospital infection prevention and control measures; limit number of individuals/providers entering patient room
- Use AIIRs for aerosol-generating procedures; staff should wear N95 respirators or PAPRs vs surgical masks

Isolation (Home vs Healthcare Facility)[2]

- Dependent on clinical presentation, requirement for supportive care, presence of vulnerable household contacts; if high risk of deterioration, hospitalization preferred

Initial Evaluation[1]

- May include chest x-ray, ultrasound, or CT
- Perform ECG if indicated
- Obtain CBC with differential and metabolic profile including liver/renal function
- Inflammatory markers (eg, CRP, D-dimer, ferritin) may be prognostically valuable

1. NIH COVID-19 Treatment Guidelines. Management of persons with COVID-19. Last updated June 11, 2020.
2. WHO Interim Guidance. Clinical management of COVID-19. May 27, 2020.

Non-Therapeutic Management of Severe COVID-19

Severe Pneumonia Treatment[1]

- Equip patient care areas with pulse oximeters, functioning oxygen systems, and disposable, single-use, oxygen-delivering interfaces
- Provide immediate supplemental oxygen to patients with emergency signs (eg, obstructed/absent breathing, severe respiratory distress, central cyanosis, shock, coma, or convulsions) and anyone with $SpO_2 < 90\%$
- Monitor for clinical deterioration (eg, rapidly progressive respiratory failure, shock); provide immediate supportive care
- Practice cautious fluid management in patients without tissue hypoperfusion and fluid responsiveness

Acute Coinfection Treatment[1]

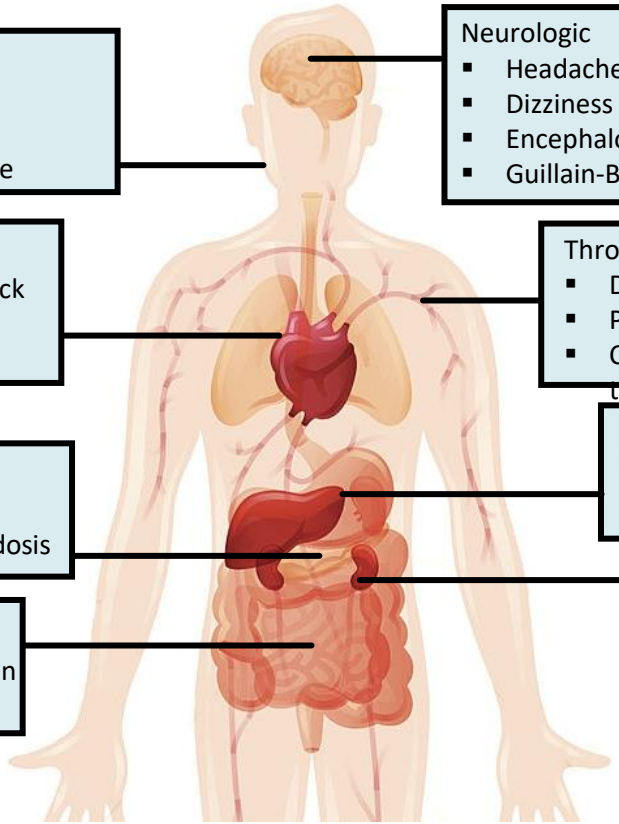
- Administer empiric antimicrobials within 1 hr of initial assessment based on clinical judgment, patient host factors, and local epidemiology; knowledge of blood cultures before antimicrobial administration ideal
- Assess daily for antimicrobial de-escalation

Evaluation[2]

- Perform evaluations outlined for **moderate** disease

1. WHO Interim Guidance. Clinical management of COVID-19. May 27, 2020.
2. NIH COVID-19 Treatment Guidelines. Management of persons with COVID-19. Last updated June 11, 2020.

Extrapulmonary Manifestations



Dermatologic
- Petechaie
- Livedo reticularis
- Erythematous rash
- Urticaria
- Vesicles
- Pernio-like lesions

Neurologic
- Headaches
- Dizziness
- Encephalopathy
- Guillain-Barré
- Ageusia
- Myalgia
- Anosmia
- Stroke

Cardiac
- Takotsubo cardiomyopathy
- Myocardial injury/myocarditis
- Cardiac arrhythmias
- Cardiogenic shock
- Myocardial ischemia
- Acute cor pulmonale

Thromboembolism
- Deep vein thrombosis
- Pulmonary embolism
- Catheter-related thrombosis

Endocrine
- Hyperglycemia
- Diabetic ketoacidosis

Hepatic
- Elevated ALT/AST
- Elevated bilirubin

Gastrointestinal
- Diarrhea
- Nausea/vomiting
- Abdominal pain
- Anorexia

Renal
- Acute kidney injury
- Proteinuria
- Hematuria

Gupta. Nat Med. 2020;26:1017.

Discontinuation of Transmission-Based Precautions for Patients With Confirmed SARS-CoV-2

Symptom-Based Strategy

≥ 24 hrs since resolution of fever, last antipyretics

And

Improvement in symptoms (eg, cough, shortness of breath)

And

≥ 10 days since symptom onset for mild to moderate illness, 10-20 days for severe to critical illness or those severely immunocompromised

- *"A test-based strategy is no longer recommended [except for rare situations] because, in the majority of cases, it results in prolonged isolation of patients who continue to shed detectable SARS-CoV-2 RNA but are no longer infectious."*

https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-hospitalized-patients.html

Slide credit: clinicaloptions.com

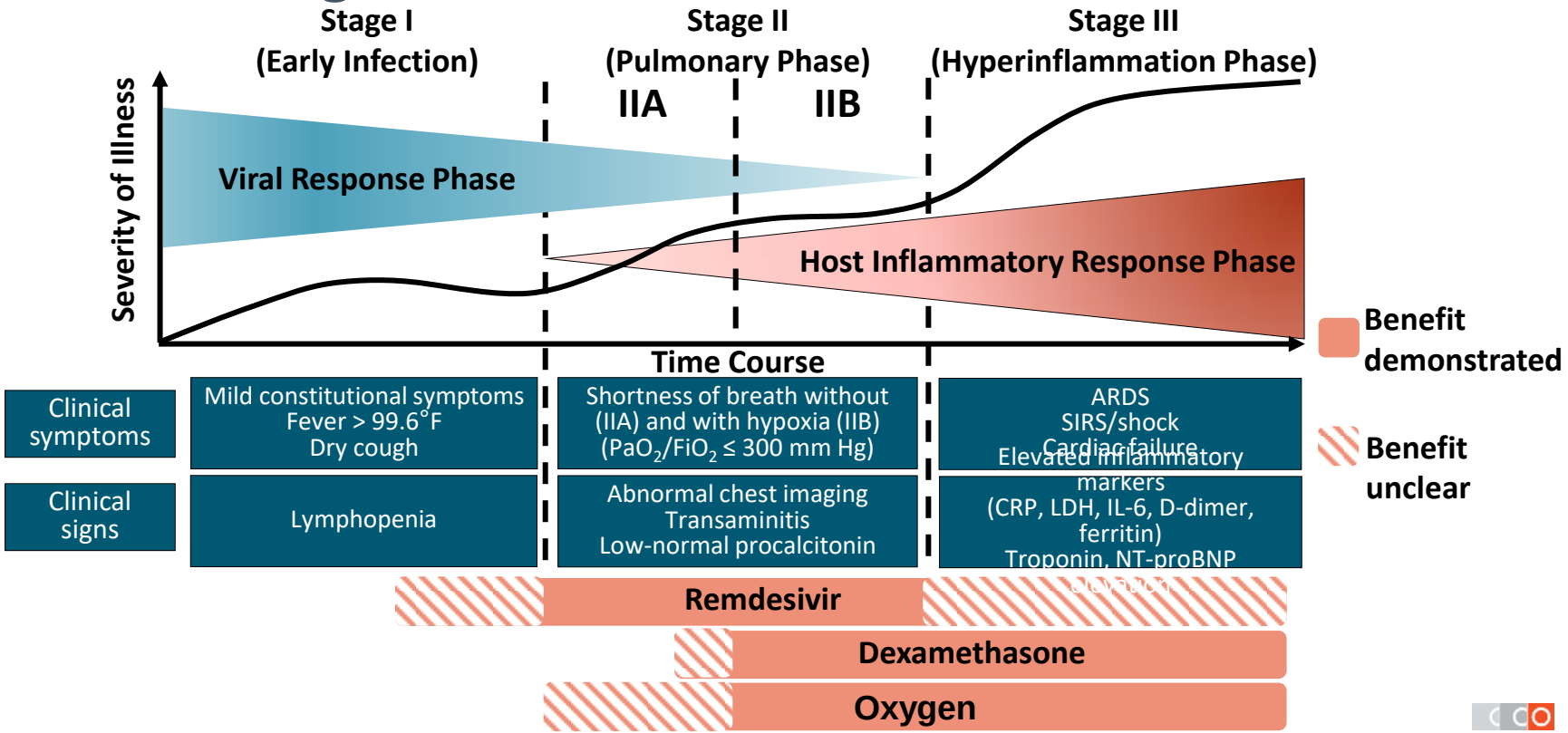
Therapeutic Management

Key Therapeutic Classes Under Investigation for Treatment of COVID-19

Antivirals	Immunomodulators
Baloxivir	**Corticosteroids (eg, dexamethasone)**
Convalescent plasma	IL-1 inhibitors (eg, anakinra)
Favipiravir	IL-6 inhibitors (eg, tocilizumab)
(Hydroxy)chloroquine	Intravenous immunoglobulin
Interferon	JAK inhibitors (eg, baricitinib)
Lopinavir/ritonavir	
Nitazoxanide	
Oseltamivir	
Remdesivir	
Ribavirin	

Barlow. Pharmacotherapy. 2020;40:416. McCreary. Open Forum Infect Dis. 2020;7:ofaa105. Sanders. JAMA. 2020;323:1824.

COVID-19 Therapies Predicted to Provide Benefit at Different Stages



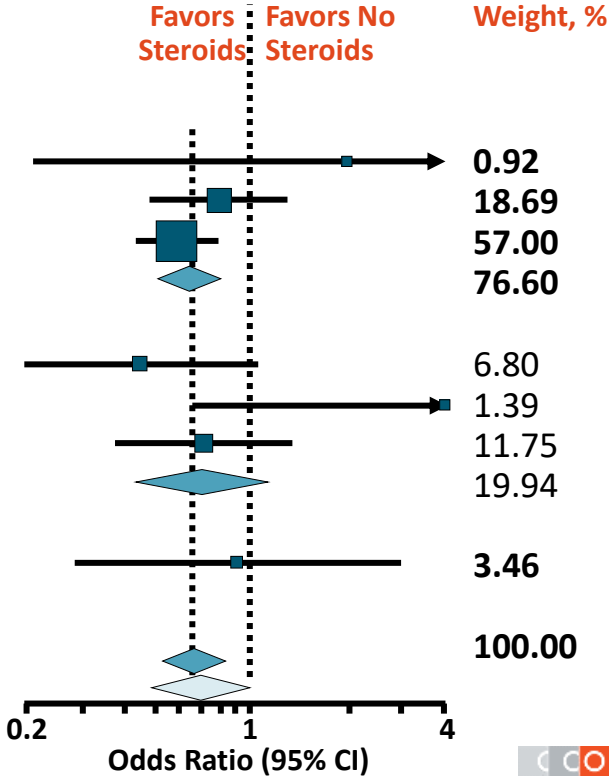
Siddiqi. J Heart Lung Transplant. 2020;39:405.

Slide credit: clinicaloptions.com

Systemic Corticosteroids and 28-Day All-Cause Mortality in Critically Ill Patients With COVID-19

Drug/Trial	Initial Dose	Deaths/n		Odds Ratio (95% CI)	*P* Value
		Steroids	No Steroids		
Dexamethasone					
DEXA-COVID 19	High: 20 mg/day IV	2/7	2/12	2.00 (0.21-18.69)	
CoDEX	High: 20 mg/day IV	69/128	76/128	0.80 (0.49-1.31)	
RECOVERY	Low: 6 mg/day PO or IV	95/324	283/683	0.59 (0.44-0.78)	
Subgroup fixed effect		166/459	361/823	0.64 (0.50-0.82)	< .001
Hydrocortisone					
CAPE COVID	Low: 200 mg/day IV	11/75	20/73		
COVID STEROID	Low: 200 mg/day IV	6/15	2/14		
REMAP-COVID	Low: 50 mg every 6 hrs IV	26/105	29/92		
Subgroup fixed effect		43/195	51/179	0.69 (0.43-1.12)	.13
Methylprednisolone					
Steroids-SARI	High: 40 mg every 12 hrs IV	13/24	13/23	0.91 (0.29-2.87)	.87
Overall*					
Overall (fixed effects)		222/678	425/1025	0.66 (0.53-0.82)	< .001
Overall (random effects)		222/678	425/1025	0.70 (0.48-1.01)	.053

**P* = .31 for heterogeneity; I^2 = 15.6%.



WHO REACT Working Group. JAMA. 2020;[Epub].

Slide credit: clinicaloptions.com

WHO Living Guidance: Corticosteroids for COVID-19

Categories of Illness	Definition	Recommendation
Critical COVID-19	▪ ARDS, sepsis, septic shock ▪ Other conditions that would normally require life-sustaining therapies (mechanical ventilation) or vasopressor therapy	▪ Recommend systemic corticosteroids rather than no systemic corticosteroids
Severe COVID-19	Any of the following: ▪ 0_2 < 90% on room air* ▪ RR > 30 breaths/min in adults and children aged > 5 yrs; RR ≥ 40 in children aged 1-5 yrs; RR ≥ 50 in children aged 2-11 mos ▪ Signs of respiratory distress (accessory muscle use, inability to complete full sentences; in children very severe chest wall indrawing, grunting, central cyanosis, etc)	▪ Recommend systemic corticosteroids rather than no systemic corticosteroids
Non-severe COVID-19	▪ Absence of any signs of severe or critical COVID-19	▪ Suggest no corticosteroids

*Note that this threshold to define severe COVID-19 is arbitrary and should be interpreted cautiously when used for determining which patients should be offered systemic corticosteroids. Clinicians must use their judgement, and the panel suggests erring on the side of considering the illness as severe if there is any doubt.

WHO Living Guidance. Corticosteroids for COVID-19. September 2, 2020.

Slide credit: clinicaloptions.com

NIH/ISDA: Dexamethasone for Severe COVID-19

NIH[1]*

- The Panel recommends using dexamethasone (6 mg per day for up to 10 days or until discharge, whichever comes first) in patients with COVID-19 who are mechanically ventilated (AI) or who require supplemental oxygen but who are not mechanically ventilated (BI)
- The Panel recommends against using dexamethasone in patients with COVID-19 who do not require supplemental oxygen (AI)

IDSA[2]

- For hospitalized patients with critical† COVID-19, the Panel recommends dexamethasone rather than no dexamethasone (Strong recommendation, Moderate certainty of evidence)
- For hospitalized patients with severe‡ COVID-19, the Panel suggests dexamethasone rather than no dexamethasone (Conditional recommendation, Moderate certainty of evidence)
- Dose: Dexamethasone 6 mg IV or PO for 10 days (or until discharge) or equivalent glucocorticoid dose (eg, methylprednisolone 32 mg, prednisone 40 mg) may be substituted if dexamethasone unavailable

*Recommendation rating: A = Strong; B = Moderate; C = Optional. Evidence rating: I = ≥ 1 randomized trials with clinical outcomes and/or validated lab endpoints; II = ≥ 1 well-designed, nonrandomized trials or observational cohort studies; III = Expert opinion.
†Mechanical ventilation or ECMO. ‡Patients with SpO_2 ≤ 94% on room air, including those who require supplemental oxygen.

1. NIH COVID-19 Treatment Guidelines. Immunomodulators under evaluation for the treatment of COVID-19. Last updated August 27, 2020.
2. IDSA. COVID-19 Guideline, Part 1: Treatment and Management. Version 3.3.0.

SOLIDARITY Trial

- **WHO launched** the **SOLIDARITY** trial on **18 March 2020**
- The trial spanned > 30 countries and entailed:
  – an experimental antiviral compound called **remdesivir**; the malaria medications **chloroquine and hydroxychloroquine**; a combination of **two HIV drugs**, **lopinavir** and **ritonavir** and plus **interferon-beta**.
- Preliminary results indicate that ***remdesivir, hydroxychloroquine, lopinavir/ritonavir and interferon regimens appeared to have little or no effect on 28-day mortality or the in-hospital course of COVID-19 among hospitalized patients.***

Burden of Thrombosis in Patients With COVID-19

Study Country	Design	Population	N	Thromboprophylaxis	Screening	VTE Rate, %
China[1]	Retrospective	ICU	81	No	No	25.0
France[2]	Prospective	ICU	150	Yes	No	11.7*
France[3]	Retrospective	ICU	26	Yes	Yes	69.0
France[4]	Retrospective	ICU	107	Yes	No	20.6†
The Netherlands[5]	Retrospective	ICU	184	Yes	No	27.0
Italy[6]	Retrospective	Inpatient	388	Yes	No	21.0
United Kingdom[7]	Retrospective	ICU	63	Yes	No	27.0

*Pulmonary embolisms in COVID-19 ARDS vs 2.1% in matched non-COVID-19 ARDS. †Pulmonary embolism vs 6.1% in non–COVID-19 ICU patients.

1. Cui. J Thromb Haemost. 2020;18:1421. 2. Helms. Intesive Care Med. 2020;46:1089. 3. Llitjos. J Thromb Haemost. 2020;18:1743. 4. Poissy. Circulation. 2020;142:184. 5. Klok. Throm Res. 2020;191:145. 6. Lodigiani. Thromb Res. 2020;191:9. 7. Thomas. Thromb Res. 2020;191:76.

Guidance on Thromboprophylaxis

Recommending Organization*

NIH[1]	ASH[2]
▪ Hospitalized adults with COVID-19 should receive VTE prophylaxis per the SoC for other hospitalized adults ▪ Anticoagulant or antiplatelet therapy should not be used to prevent arterial thrombosis outside of the usual SoC for patients without COVID-19 ▪ Currently insufficient data to recommend for or against the use of thrombolytics or increasing anticoagulant doses for VTE prophylaxis in hospitalized COVID-19 patients outside of clinical trial ▪ Hospitalized patients should not be routinely discharged on VTE prophylaxis (extended VTE prophylaxis can be considered in patients with low bleeding risk and high VTE risk)	▪ All hospitalized adults with COVID-19 should receive thromboprophylaxis with low-molecular-weight heparin over unfractionated heparin, unless bleeding risk outweighs thrombosis risk ▪ Fondaparinux is recommended in the setting of heparin-induced thrombocytopenia ▪ In patients in whom anticoagulants are contraindicated or unavailable, use mechanical thromboprophylaxis (eg, pneumatic compression devices) ▪ Encourage participation on clinical trials rather than empiric use of therapeutic-dose heparin in COVID-19 patients with no other indication for therapeutic dose anticoagulation

1. NIH. COVID-19 Treatment Guidelines. Updated: May 12, 2020. 2. American Society of Hematology. COVID-19 and VTE/ Anticoagulation: Frequently Asked Questions. 3. Spyropoulos. J Thromb Haemost. 2020;18:1859. 4. Moores. Chest. 2020;158:1143.

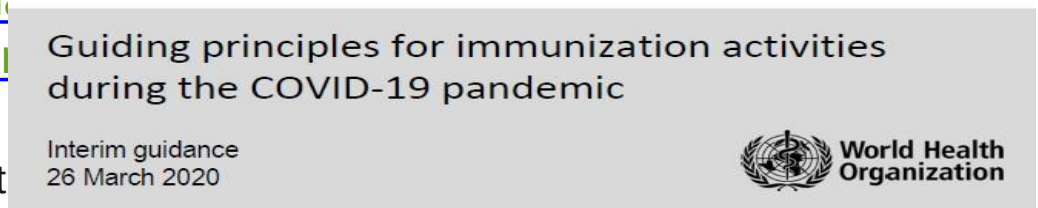
Slide credit: clinicaloptions.com

Maintaining Essential Health Services

Maintaining Essential Health Services

https://www.who.int/publications-detail/covid-19-operation
health-ser

When healt
an outbrea
treatable c
make difficu
directly to C
planning an
service deli
document
the *Operati


Guiding principles for immunization activities during the COVID-19 pandemic

Interim guidance
26 March 2020

World Health Organization

As the COVID-19 pandemic evolves, this document and accompanying FAQ will be revised as necessary.

Due to the global circulation of the virus causing COVID-19 and the current pandemic, there is risk of disruption to routine immunization activities due to both COVID-19 related burden on the health system and decreased demand for vaccination because of physical distancing requirements or community reluctance. Disruption of immunization services, even for brief periods, will result in increased numbers of susceptible individuals and raise the likelihood of outbreak-prone vaccine preventable diseases (VPDs) such as measles.[1] Such VPD outbreaks may result in increased morbidity and mortality predominantly in young infants and other vulnerable groups, which can cause greater burden on health systems already strained by the COVID-19 response. The high potential for VPD outbreaks makes it imperative for countries to maintain continuity of immunization services wherever services can be conducted under safe conditions. Prior disease outbreaks and humanitarian emergencies have underscored the importance of maintaining essential health services such as immunization, and effectively engaging communities in planning and service delivery.[2,3] Yet the complexity and global reach of the COVID-19 response with respect to mandatory physical distancing (also referred to as social distancing) and economic impact on households is unprecedented for public health.

***preparedness and response*, and provides guidance on a set of targeted immediate actions that countries should consider at national, regional, and local level to reorganize and maintain**

Maintaining Essential HIV Services

- Learning from Ebola in West Africa: increased unplanned and teenage pregnancies during emergency response → unsafe abortions and AGYW morbidly
  - **Prioritize continuation of contraception services**
- Many HIV prevention activities likely to be paused or scaled down eg VMMC, community outreach activities.
- But **condoms, harm reduction and methadone programs** need to continue with modifications
  - Pharmacy delivery with social distancing
  - Larger supplies for longer time periods
- **Continue to support HIV testing** including through expanding access to self-testing

World Health Organization

CONDOM SHORTAGE LOOMS AFTER CORONAVIRUS LOCKDOWN SHUTS WORLD'S TOP PRODUCER

Malaysia's Karex Bhd makes one in every five condoms globally. It has not produced a single condom from its three Malaysian factories for more than a week due to a lockdown imposed by the government.

Condoms "not essential" – purchase banned in a supermarket in South Africa

Differentiated HIV testing services (HTS) in COVID-19 Context

- **It is important to support undiagnosed PLHIV to get tested and linked to ART**
  - PLHIV, who do not know their status and are not on ART and those with known risk factors (e.g. diabetes), who acquire a COVID-19 infection may be at risk of COCID-19 complications
- **Safety of HTS providers needs to be ensured** during testing procedures
  - practices including PPE, hand hygiene, respiratory hygiene, and physical distancing.
  - adaptations such as increased use of phone calls, digital tools (e.g. videos, websites, social media, text messages) and approaches like self-testing

Considerations for HIV Self Testing

- HIVST may be an acceptable alternative to maintain services while adhering to physical distancing. It is important to strategically implement HIVST **prioritizing areas and populations** with the greatest needs and gaps in testing coverage.
- **HIVST approaches include:**
  - distribution for personal use and/or sexual and/or drug injecting partners of PLHIV and social contacts of key populations
  - In high HIV burden settings, pregnant women may also provide HIVST kits to their male partners.
- **Priority settings to consider**
  - Pick up at facilities or community sites
  - Online platforms (e.g. websites, social media, digital platforms) and distribution through mail
  - Pharmacies, retail vendors, vending machines

Supporting DSD for clinically stable clients during COVID-19

WHEN

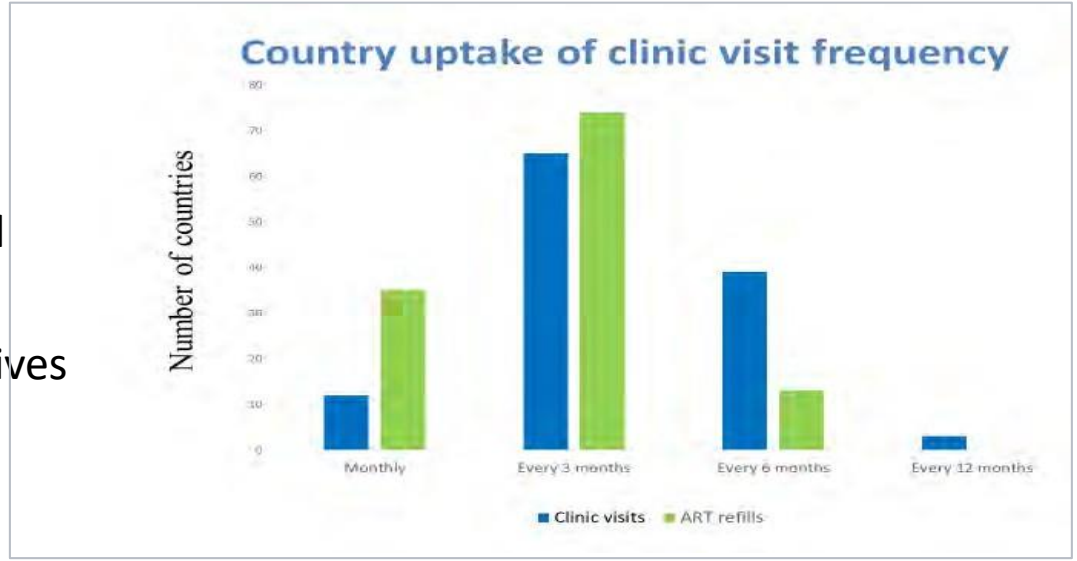
- 3-6 monthly ART refills
- 3-6 monthly clinic visits

WHERE

- ART maintenance at community level

WHO

- Trained non-physicians/nurses/midwives can initiate and maintain ART
- Trained/supervised lay providers can distribute ART
- Trained/supervised CHWs can dispense ART between clinic visits



World Health Organization

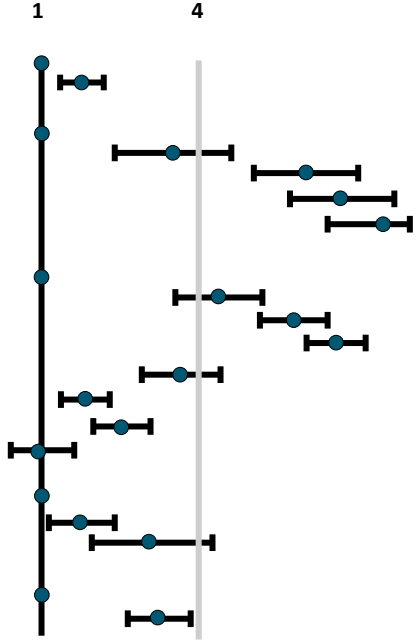
NASCOP COVID-19 Guidance

1. Triage – symptom screening, avoiding crowding, health education and IPC for possible cases
2. HTS – emphasis for priority groups with contact tracing for aPN and HIVST in the community
3. ART – extend dispensing to 3 months to all PLHIV regardless of age and viral load status, routine care for PMTCT and use of DSD
4. Laboratory – reduce volume of specimens handle with IPC maintained; continue viral load monitoring
5. Commodity management – submit reports on time and closely monitor stocks and appointments
6. Medication Assisted Therapy – to continue with PEP use, long appointments and physical distancing guidelines to be practiced

COVID-19 and HIV: Routine Public Sector Data in Western Cape, South Africa

- Evaluated factors among all adult public sector patients (3.5 million “active” patients)

Patient Characteristics	Adjusted HR	95% CI
Sex		
Female	1.00	
Male	1.40	1.16-1.70
Age		
< 40 yrs	1.00	
40-49 yrs	3.12	1.88-5.17
50-59 yrs	9.92	6.34-15.54
60-69 yrs	13.55	8.55-21.48
≥ 70 yrs	19.53	12.20-31.26
Noncommunicable diseases		
None	1.00	
Diabetes well controlled (A1C < 7%)	4.65	3.19-6.79
Diabetes poorly controlled (A1C 7-9%)	8.99	6.65-12.14
Diabetes uncontrolled (A1C ≥ 9%)	13.02	10.06-16.87
Diabetes, no measure of control	3.34	2.39-4.68
Hypertension	1.46	1.18-1.81
Chronic kidney disease	2.02	1.55-2.62
Chronic pulmonary disease	0.98	0.75-1.30
Tuberculosis		
Never tuberculosis	1.00	
Previous tuberculosis	1.41	1.05-1.90
Current tuberculosis	2.58	1.53-4.37
HIV		
Negative	1.00	
Positive	2.75	2.09-3.61



Standard mortality ratio for COVID-19 death with vs without HIV: 2.33 (95% CI: 1.83-2.91)

Davies, Western Cape DOH, South Africa. June 9, 2020. https://storage.googleapis.com/stateless-bhekisisa-website/wordpress-uploads/2020/06/94d3ea42-covid_update_bhekisisa_wc_3.pdf. Note: this study has not been published.

Slide credit: clinicaloptions.com

PLHIV FAQs…

Some issues:

- Questions about the situation and risks related to their HIV status
- Anxiety
- Drug delivery
- Lost to follow-up

Other issues :

- Voluntary counselling and testing (VCT)
- Post Exposure Prophylaxis (PEP)

PLHIV Reaction to COVID-19

“People living with HIV faced double pressures. They were more scared than the general population because they felt more vulnerable and those not on treatment or not virally suppressed may have a compromised immune system.”

- Dr Ke Liang, Wuhan Province, China

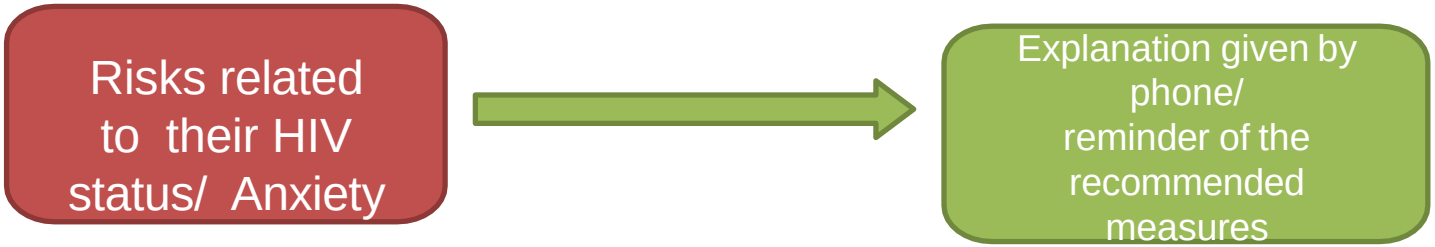
PLHIV COVID-19 Survey

Survey for PLWH (1014 answered questionnaire) in Hubei and other region (Feb 2020):

- 32% of all respondents were not carrying sufficient antiretroviral medicines (ARVs) to meet the needs under traffic and travel restrictions, and some could face stock-outs in the coming months.
- In Hubei province 64% reported difficulties accessing ARV due to the “restriction".
- 28% respondents were in need of socio-psychological support

Guo W et al. 2020 Mar 30;41(5):663-667 (Abstract: article in

Lessons Learnt - 1/5



All patients are contacted by phone. No medical consultations were cancelled

Lessons Learnt - 2/5

Risk of lost to follow-up

Blood sample done

Exception: patient decision and vulnerable people if routine test

Favor telemedicine for results and consultation

At least a phone call for all patients scheduled

Lessons Learnt - 3/5

Risk of treatment interruption

Check prescriptions and last drug supply

Call patients (especially those who are nearly out of stock and all vulnerable patients)

Medication for at least three months

Home medication delivery whenever possible

Prescription to neighborhood pharmacy

Lessons Learnt - 4/5

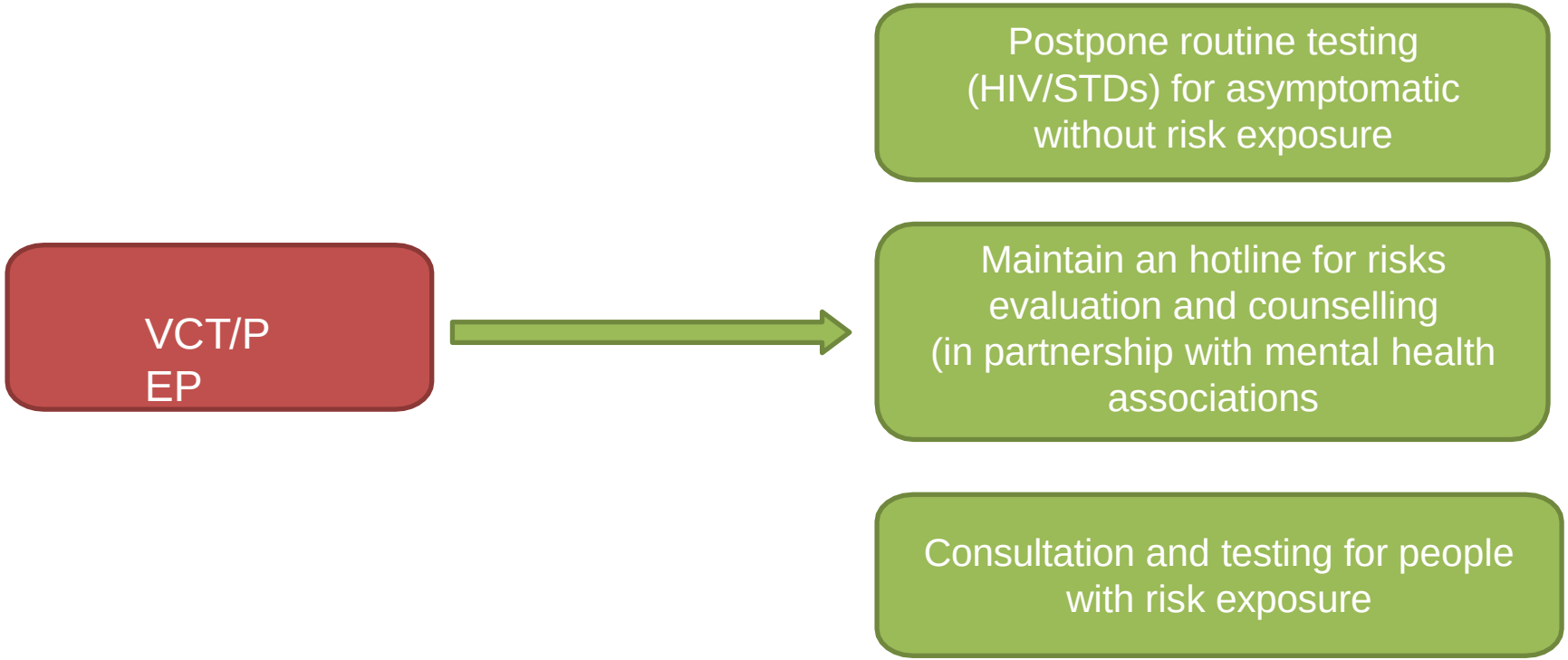
To protect vulnerable people

Postpone routine follow-up for vulnerable people but keep phone contacts

Favor telemedicine

Home medication delivery

Lessons Learnt - 5/5



Drug Interactions

Drug interactions:

All interactions with COVID-19 experimental treatments can be checked on :

- https://www.hiv-druginteractions.org
- https://www.covid19-druginteractions.org

Key messages

- COVID-19 is a highly dynamic and evolving pandemic.
- Clear learning from HIV approach to contact tracing
- No higher infection or complication rate noted in PLHIV compared to HIV negative infected by COVID-19
- WHO and local guidelines emphasize the maintenance of essentiual health services to PLHIV while practicing hand washing and public distancing
- Large role for telemedicine, HIVST and DSD scale up
- Address mental health issues and ARV supply proactively

Asante!!!

Acknowledgements:

1. NASCOP
2. WHO COVID-19 Information centre
3. International AIDS Society
4. UpToDate COVID reference website
5. Clinical Care Options