

HIV and COVID-19 no. 2



HTB supplement (2): 17 April 2020

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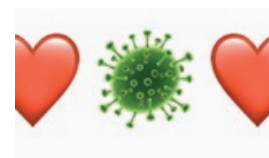
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 EDITORIAL

Given the extent of the broadening COVID-19 pandemic we again expand our section on coronavirus - and the impact for HIV care.


This includes some of the first reports with data on how HIV affects risks of COVID-19 coinfection.

We include several papers on early treatments for COVID-19, often showing little benefit, and report on other studies that are ongoing, including the phase 3 studies with remdesivir with many UK sites.

And while the compounds are still in these early stages, we review Andrew Hill's analysis for production costs, should they prove effective, showing that pipeline compounds could be widely accessible in all settings.

In reporting a blog from the BMJ we highlight the importance of including HIV status and testing if needed within the management of COVID-19 - especially as HIV positive people with COVID-19 might not be treated at their HIV hospital.

We also signpost to BASHH resources on COVID-19 including a member survey reporting on how services have already been restructured.

The community experience from HIV unfortunately overlaps with much of the COVID-19 response. Certainly the lack of early treatment, the scramble to repurpose older drugs, a wide diversity of study designs, questions of pricing and access. Also, perhaps, having to manage unexpected grief and loss on individual and community settings.

And much of the clinical response to COVID-19 is directly lead by many nurses, doctors and other health workers being redirected from HIV and sexual health to the coronavirus response.

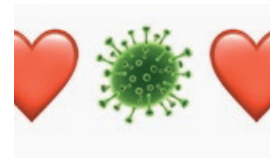
For all our colleagues and readers who are directly involved, we hope you are taking the best care you can, that you are resourced properly to protect your own health, and that you do this knowing we are very grateful.

HIV & COVID-19 COINFECTION

Why it is important to include HIV status and HIV testing in managing COVID-19

Simon Collins, HIV i-Base

The importance of HIV status being recorded for people diagnosed with pneumonia or other respiratory problems and who are hospitalised as part of the management of COVID-19 has been highlighted in a blog to the BMJ. [1]



There are several reasons for this.

Firstly, for those of us who are HIV positive, it will ensure that antiretroviral treatment (ART) is maintained during any period in hospital, including in intensive care. Interrupting ART will let viral load rebound which will increase immune inflammation at a time when this is one of the main difficulties in managing COVID-19. The lock down restrictions on physical movement means that HIV positive people with COVID-19 might be seen in a hospital with less HIV experience. We need to know HIV is considered in all settings.

Secondly, it will start to generate a dataset that will inform statements and guidelines about the impact of COVID-19 on people living with HIV. All the generally optimistic statements and guidelines have emphasised the lack of actual data and that they are based on expert opinion. [2]

Thirdly, HIV will be a complicating factor for COVID-19 in people who are not on ART, and by definition this includes people who have not yet been diagnosed. Even though NICE guidelines include HIV testing for anyone admitted to intensive care with pneumonia and respiratory failure, this really needs to be emphasised. [3] A recent dataset set of 290 people hospitalised for COVID-19 included 2 people who were HIV positive but 47 people where HIV status was unknown or not recorded. [4]

Finally, at a time when doctors, nurses and laboratories involved in HIV testing and sexual health services are being diverted to deal with coronavirus, this will provide another chance for HIV diagnoses in people not currently aware of their status.

It will also make sure that the skills and experience from HIV services are included in the response to COVID-19.

C O M M E N T

Although there were anecdotal reports of initial reluctance to include HIV at some COVID-19 centres, this has since been integrated by many hospitals.

It has resulted in earlier diagnosis of HIV-associated pneumonia and cases of HIV and COVID-19 coinfection.

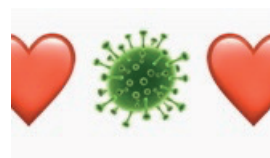
References

1. Geretti AM, Collins S, Kelly S, Waters L. COVID-19 and HIV: Calling attention to the importance of ensuring HIV status and testing is included in the management of COVID-19. BMJ web blog. (7 April 2020). <https://blogs.bmj.com/sti/2020/04/07/covid-19-and-hiv-calling-attention-to-the-importance-of-ensuring-hiv-status-and-testing-is-included-in-the-management-of-covid-19>
2. BHIVA statements on HIV and COVID-19. <https://www.bhiva.org/Coronavirus-COVID-19>
3. NICE. HIV testing: encouraging uptake. Quality standard [QS157] (07 September 2017). <https://www.nice.org.uk/guidance/qs157/chapter/Quality-statement-3-HIV-indicator-conditions>
4. International Severe Acute Respiratory and Emerging Infection Consortium (ISARIC). Online report. (accessed 5 April 2020). <https://isaric.tghn.org/covid-19-clinical-research-resources/>

COVID-19 symptoms in HIV positive people similar to general population in Wuhan

Simon Collins, HIV i-Base

The most substantial data to inform risk of HIV and COVID-19 coinfection so far is an analysis from China. However, this is based on self-reported symptoms and the paper is not yet peer reviewed – published only in draft form ahead of press in the Lancet.



Wuhan city in Hubei province has a population of about 9 million people which includes about 6000 people who are HIV positive.

During the coronavirus outbreak, and up to 2 March 2020, at least 49,300 people tested positive for CoV-2 and 2227 residents died from COVID-19.

This paper included a subset of 1178 HIV positive people in two central districts in Wuhan. All participants were prospectively contacted by telephone and those reporting symptoms tested by PCR for CoV-2 and by CT scan for COVID-19. Face-to-face contact was limited due to lock down restrictions. The two districts included approximately 1,800,000 residents and reported 9,000 cases of COVID-19.

Of the 12/1178 people who reported symptoms, 8/12 were confirmed as COVID-19 (6/8 by PCR, 2/8 by CT - and 4/12 were excluded). All eight had undetectable viral load (<20 copies/mL) and were taking NNRTI-based ART, 6/8 with CD4 counts >350 and 2/8 between 100 to 350 cells/mm³.

Of these 8 cases, 6/8 were mild, 1 was severe, and 1 was a critical case who died.

Of the 1162 HIV positive people without symptoms, nine were in close household contact with people who had confirmed COVID-19. Of these, only 1/9 was confirmed positive for CoV-2 by PCR. This person had only recently been diagnosed with a very low CD4 count (27 cells/mm³), had received ART for less than one month and was on chemotherapy for KS.

The cohort also included 41 people with CD4 counts <100 cells/mm³, with only one of these having reported possible symptoms. In the discussion, the paper suggested that a low CD4 count might not reflect lower CoV-2 incidence but masking of symptoms of COVID-19 (but clearly not for the case mentioned above).

Based on self-reported symptoms the rate of COVID-19 in people living with HIV was estimated as 0.68% (95%CI: 0.29% to 1.34%). This was slightly higher than reported for general population in Wuhan (~0.5%) but similar to the overall estimated population rate of 0.83% (75 thousand out of 9 million).

In multivariate analysis, including age, gender, CD4 counts, viral load, and type of ART, only older age was significantly associated with higher risk of COVID-19 (p=0.010). The median age of the eight people with COVID-19 was 57.0 years old (95%CI: 47.5 to 61.5) compared to 36.0 (95%CI: 30.0 to 51.0) of those without COVID-19 (n=1166).

The paper discussed the role of other antiretrovirals in COVID-19. Although no cases were reported among the 178 people taking lopinavir/r, the study was underpowered to comment on individual drugs. Any possible role (would be for antiviral activity in early stage infection rather than in later COVID-19 when organ damage is caused by inflammation).

This reason is given to support the Chinese guidelines (versions 1 to 6) to use corticosteroids to treat COVID-19 to suppress the inflammatory cytokine storm. Other experts, including WHO, disagree with this approach based on several meta-analyses that highlight risk of harm. [2, 3]

C O M M E N T

This study is welcome for providing some level of direct evidence that HIV positive people in Wuhan were not disproportionately affected by COVID-19. This is helpful in terms of concerns that incidence might be higher and outcomes might be worse.

The limitations from the study (other than lack of peer-review) is the reliance on self-reported symptoms and limiting testing to either those people who were symptomatic or at highest household risk. It doesn't therefore provide data on incidence and prevalence of CoV-2 which will need antibody testing.

Also, behavioural data on travel and risk was not available, including whether those with lowest CD4 counts were already self-isolating to minimise risk.

While these data are important, we still have much to learn.

It is therefore essential that all cases of COVID-19 in the UK have their HIV status recorded and that people without a recent negative result are routinely tested for HIV.

These two low-cost initiatives would improve the management of both HIV and COVID-19 care.

Recent studies of lopinavir/r have reported conflicting results but a recent UK study was announced also using dexamethasone. [3, 4, 5, 6]

References

1. Guo W et al. A survey for COVID-19 among HIV/AIDS patients in two districts of Wuhan China. Lancet. DOI: 10.2139/ssrn.3550029 (13 March 2020) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3550029
2. Russell CD et al. Clinical evidence does not support corticosteroid treatment for 2019-nCoV lung injury. The Lancet 2020. DOI: 10.1016/S0140-6736(20)30317-2. (7 February 2020). [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30317-2/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30317-2/fulltext)
3. Cao B et al. A trial of lopinavir-ritonavir in adults hospitalized with severe Covid-19. NEJM. DOI: 10.1056/NEJMoa2001282. (18 March 2020). <https://www.nejm.org/doi/full/10.1056/NEJMoa2001282>
4. Deng L et al. Arbidol combined with LPV/r versus LPV/r alone against Corona Virus Disease 2019: A retrospective cohort study. Journal of Infections. doi: 10.1016/j.jinf.2020.03.002. (11 Mar 2020). <https://www.ncbi.nlm.nih.gov/pubmed/32171872>

5. Li Y et al. An exploratory randomized, controlled study on the efficacy and safety of lopinavir/ritonavir or arbidol treating adult patients hospitalized with mild/moderate COVID-19 (ELACOI). MedRxiv. 23 March 2020.
<https://www.medrxiv.org/content/10.1101/2020.03.19.20038984v1>
6. Reuters Health News. UK begins trial of HIV medicine, steroid as possible COVID-19 treatments (23 March 2020).
<https://www.reuters.com/article/us-health-coronavirus-britain-tests/uk-begins-trial-of-hiv-medicine-steroid-as-possible-covid-19-treatments-idUSKBN21A2JO>

Case study of COVID-19 in HIV positive person with history of HCV

Simon Collins, HIV i-Base

With so few reports of outcomes of COVID-19 in HIV positive people yet available, case reports are important, in this case in someone with a history of HCV.

This was a 38-year-old Chinese gay man diagnosed with COVID-19 on 25 January who had travelled to Wuhan several weeks earlier. He had been diagnosed with HIV in 2016 with a CD4 count of 84 cells/mm³ and HCV coinfection.

The case included persistently negative SARS-CoV-2 RNA on specimen samplings but positive for plasma anti-SARS-CoV-2 antibody although these were delayed.

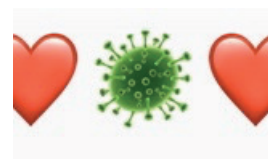
Ref: Zhao J et al. Early virus clearance and delayed antibody response in a case of COVID-19 with a history of co-infection with HIV-1 and HCV. Clinical Infectious Diseases, ciaa408, DOI: 10.1093/cid/ciaa408. (09 April 2020).

<https://academic.oup.com/cid/article/doi/10.1093/cid/ciaa408/5818121>

Case series of five HIV positive people diagnosed with COVID-19 in Spain

Simon Collins, HIV i-Base

A study reporting on the first 543 consecutive cases of COVID-19 admitted to the Hospital Clínic in Barcelona in the first two weeks of March 2020, included five people who were also HIV positive. Details of their management and outcomes have been published as a case series in Lancet HIV.



Overall, 62 (12%) were admitted to intensive care and 208 were discharged for supervised outpatient care.

The five HIV people (0.92%; 95%CI: 0.39 to 2.14) included three men, two were transgender and four identified as being gay men. Age ranged from 29 to 49. Community exposure risk included health work, sex work, time spent with someone diagnosed with COVID-19 and one reported a chemsex party six days earlier.

The four people on ART had undetectable viral load (two using boosted-darunavir-based and two using dolutegravir-based combinations) and CD4 counts >400 cells/mm³. One was treatment-naïve and was just diagnosed as a late presenter with a CD4 count of 11 cells/mm³.

Two patients had upper-respiratory tract infections, and three had viral pneumonia, including two requiring admission to the intensive care unit with invasive and non-invasive mechanical ventilation.

Experimental approaches to management of COVID-19 included switching ART for most patients to lopinavir/r plus TDF/FTC; azithromycin was given as 500 mg once a day, with a loading dose on the first day, and then 250 mg once a day for 4 days; hydroxychloroquine was given as 400 mg twice a day with a loading dose on the first day and then 200 mg twice a day for 4 days, and interferon beta-1b was given as 250 µg (8 million units) every 48 h.

All three patients who had pneumonia had antibacterials, corticosteroids were given to two patients and tocilizumab in one.

Four patients have since been discharged and one remains in the intensive care unit

For further details please see the open access paper.

Ref: Blanco JL et al. COVID-19 in patients with HIV: clinical case series. Lancet HIV. Correspondence. DOI: 10.1016/S2352-3018(20)30111-9. (15 April 2020).

[https://www.thelancet.com/journals/lanhiv/article/PIIS2352-3018\(20\)30111-9/fulltext](https://www.thelancet.com/journals/lanhiv/article/PIIS2352-3018(20)30111-9/fulltext)

COVID-19: TREATMENT

Evidence review for treatment: IDSA guidelines for COVID-19

Simon Collins, HIV i-Base

On 11 April 2020, the Infectious Diseases Society of America (IDSA) published an evidence review of the main compounds being studied for the management COVID-19. [1]



This document is planned in three parts. This first section deals with treatment and management. Part two on diagnostics, and part three on prevention, are due to be published shortly.

The guideline lists five investigational treatments of repurposed drugs for people who are hospitalised with COVID-19, all in the context of a clinical trial.

- Hydroxychloroquine/chloroquine.
- Hydroxychloroquine/chloroquine plus azithromycin.
- Lopinavir/ritonavir.
- Tocilizumab
- Convalescent plasma

Corticosteroids are not recommended in patients with COVID-19 pneumonia but are an option for COVID-19 that presents with other symptoms.

The detailed evidence review for each of these approaches is less than optimistic: none shows strong evidence for benefit and all include evidence of risk.

Additional compounds are also discussed.

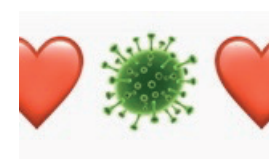
References

1. Bhimraj A et al. Infectious Diseases Society of America guidelines on the treatment and management of patients with COVID-19. (11 April 2020). <https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management>

Remdesivir for COVID-19: first results from compassionate access programme

Simon Collins, HIV i-Base

Some of the earliest studies of repurposed compounds and drugs for the new coronavirus (CoV-2) include a nucleotide inhibitor prodrug in development with Gilead called remdesivir. Remdesivir has in-vitro activity against a panel of viruses including Ebola, MERS, SARS-CoV-1 and SARS-CoV-2, although studies for Ebola were not successful.



Although a dozen studies are now ongoing for CoV-2 none of these studies has yet published efficacy or safety results. [1]

So while first results in have now been published as an open access paper in the new England Journal of Medicine, these are only preliminary data from the first compassionate use, rather than from a controlled clinical study. [2]

The report is based on 53 patients who received at least one dose of remdesivir from 25 January to 7 March 2020 and who had follow up data available. This is an international cohort including the US (n=22), Europe or Canada (n=22) and Japan (n=9). A further 8 participants received remdesivir but were not included in the analysis, mainly due to missing data.

Entry criteria included being hospitalised with confirmed COVID-19 and either an oxygen saturation of 94% or less while breathing ambient air or a need for oxygen support. Although there were no formal primary endpoints, all key clinical factors and drug safety were recorded.

Baseline characteristics included median age 64 years (IQR: 48 to 71; range: 23 to 82), 75% men and 36 (68%) had a significant comorbidity. Clinical features included 30 patients (57%) on mechanical ventilation and 4 (8%) receiving extracorporeal membrane oxygenation. Median duration of symptoms before remdesivir was 12 days (IQR: 9 to 15).

Participants were able to receive a 10-day course of remdesivir, given IV: 200 mg on day 1, and then 100 mg daily. Overall, 40/53 (75%) received the 10-day course, 10 (19%) received 5 to 9 days of treatment, and 3 (6%) fewer than 5 days of treatment.

During a median follow-up of 18 days (95%CI: 13 to 23), 36 of 53 patients (68%) showed an improvement in the category of oxygen support, with 8 of 53 patients (15%) worsening. At most recent follow-up, 25/53 participants (47%) had been discharged (24% receiving invasive ventilation [8/34] and 89% [17/19] receiving noninvasive oxygen support).

Seven of the 53 participants (13%) died after remdesivir treatment, including 6/34 patients (18%) on invasive ventilation and 1/19 (5%) receiving noninvasive oxygen support.

Adverse events were reported in 30/53 participants (60%) many of which overlap with symptoms of COVID-19. Serious events in two or more people were multiple organ dysfunction (n=2), septic shock (n=2), acute kidney injury (n=2) and hypotension (n=2).

At 28 days post treatment, clinical improvement based on a six-point scale was reported for 84% of participants. Sex, country, coexisting conditions, and duration of symptoms before remdesivir were not significantly associated with clinical improvement.

Viral load data was not collected in this programme.

Although the paper refers to safety data from approximately 500 participants in the Ebola development programme, the NEJM paper doesn't report on the remdesivir arm and the EMA document in only animal data. [3, 4]

C O M M E N T

The urgency of effective treatment for COVID-19 makes the results from clinical studies essential, and hopefully the first of these might become available within the next few weeks.

Gilead have already announced plans for rapid large scale manufacturing and an expanded compassionate access programme. [5]

References

1. [clinicaltrials.gov. Search results for remdesivir.](https://clinicaltrials.gov/ct2/results?cond=&term=remdesivir&cntry=&state=&city=&dist=)
<https://clinicaltrials.gov/ct2/results?cond=&term=remdesivir&cntry=&state=&city=&dist=>
2. Grein J et al. Compassionate use of remdesivir for patients with severe Covid-19. NEJM DOI: 10.1056/NEJMoa2007016. (10 April 2020).
<https://www.nejm.org/doi/full/10.1056/NEJMoa2007016>
3. Mulangu S et al. A randomized, controlled trial of Ebola virus disease therapeutics. N Engl J Med 2019;381:2293-2303. (12 December 2019).
<https://www.nejm.org/doi/full/10.1056/NEJMoa1910993>.
4. European Medicines Agency. Summary on compassionate use: remdesivir Gilead. (3 April 2020).
https://www.ema.europa.eu/en/documents/other/summary-compassionate-use-remdesivir-gilead_en.pdf. (PDF)
5. Gilead press statement. An Update on COVID-19 from our Chairman & CEO. (4 April 2020).
<https://www.gilead.com/stories/articles/an-update-on-covid-19-from-our-chairman-and-ceo>

No benefit of hydroxychloroquine and azithromycin in people hospitalised with COVID-19

Simon Collins, HIV i-Base

A prospective open label study of 11 people (7 men and 4 women) hospitalised with COVID-19 (10/11 with fever) at a single hospital in Paris, reported no benefits from using the antimalaria drug hydroxychloroquine with the antibiotic azithromycin. [1]

The results are important for challenging an earlier French study (from Gautret et al) that reported CoV-2 clearance in 6/26 people using this combination. It led to widespread speculation as an effective treatment that resulted in pharmacy stock-outs within 24 hours. [2, 3]

The new study was authored by Jean-Michel Molina and colleagues from Saint Louis Hospital, Paris and published ahead of print in the French journal Médecine et Maladies Infectieuses.

Baseline characteristics included mean age of 58 years (range: 20 to 77) and 8/11 had significant comorbidities associated with poor outcomes (obesity: 2; solid cancer: 3; hematological cancer: 2; HIV-infection: 1).

The treatment included hydroxychloroquine (600 mg/d for 10 days) and azithromycin (500 mg day 1 and 250 mg days 2 to 5).

After five days, CoV-2 remained detectable by qualitative PCR in throat swabs in all participants.

Within five days, one patient died and two were transferred to intensive care units. One participant discontinued treatment after four days due to QT prolongation (from 405 ms to 460 and 470 ms).

The paper by Molina et al references a recent randomised study from China that also reported no benefit from hydroxychloroquine and azithromycin in 30 participants, with similar rates of clearance to a control group. In this study, throat swabs were negative by PCR at day seven in 86% of the active vs 93% of the standard of care control groups, and with no differences in clinical outcomes. [3]

It also references other studies showing no impact in other indications and was published as an alert to counter the high publicity given to this combination.

Reference

1. Molina JM et al. No evidence of rapid antiviral clearance or clinical benefit with the combination of hydroxychloroquine and azithromycin in patients with severe COVID-19 infection. *Médecine et Maladies Infectieuses* (2020), doi: <https://doi.org/10.1016/j.medmal.2020.03.006>. <https://www.sciencedirect.com/science/article/pii/S0399077X20300858>
2. Gautret P et al. Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial. *International Journal of Antimicrobial Agents* 2020 (ahead of print). <https://www.sciencedirect.com/science/article/pii/S0924857920300996>
3. Yazdany J. Use of hydroxychloroquine and chloroquine during the COVID-19 pandemic: what every clinician should know. *Ann Intern Med.* 2020. DOI: 10.7326/M20-1334. <https://annals.org/aim/fullarticle/2764199/use-hydroxychloroquine-chloroquine-during-covid-19-pandemic-what-every-clinician>
4. Chen J et al. A pilot study of hydroxychloroquine in treatment of patients with common coronavirus disease-19 (COVID-19). *Journal of Zhejiang University (Medical Sciences)*. 2020;49(1). doi:10.3785/j.issn.1008-9292.2020.03.03. <http://www.zjujournals.com/med/EN/10.3785/j.issn.1008-9292.2020.03.03>

High-dose chloroquine study for COVID-19 stopped with worse outcomes: high risk of cardiovascular events

Simon Collins, HIV i-Base

A randomised, double-blind phase 2 study of chloroquine (CQ) to treat COVID-19 in Brazil has discontinued further treatment in a high dose arm following early reports of significantly worse outcomes.



As with many new papers on COVID-19, the results are reported before peer-review. The paper had approximately 50 co-authors.

The recommendation from the Data and Safety Monitoring Board (DSMB) was based on the results from the first 81 participants (out of a planned 440) who were randomised to either high dose CQ (600 mg CQ twice daily for 10 days; total dose 12 g) or low dose CQ (450mg for 5 days, twice daily only on the first days; total dose 2.7g). All patients also received ceftriaxone and azithromycin.

History of heart diseases was higher in the high-dose group and participants older than 75 years (n=5) were also only included in this arm.

The high dose arm resulted in more QTc >500 ms (25%), and a trend toward higher mortality (17%) than the lower dosage. Two patients in the high dose arm had ventricular tachycardia before they died, . severe arrhythmia associated when QTc is prolonged.

The mortality rate was 13.5% (95%CI: 6.9 to 23.0%) which overlaps with the CI of historical data from a meta-analysis of similar patients in two other studies not using CQ (95%CI: 14.5 to 19.2%). Two of the eleven deaths were in participants older than 75.

Many participants in this study were also taking oseltamivir (when seasonal influenza suspected) which can prong the QT interval.

The study also failed to show an antiviral effect of CQ with no evidence of viral clearance by day five, irrespective of dosage,

C O M M E N T

It is difficult to understand the rationale for either dose in this study. One likely to produce toxicity problems and the other being too low to see benefit.

The controversial study by Gautret et al used a dose of 600 mg/day and the high dose recommended in Chinese guidelines uses 10 mg/day.

It is shocking to see the mortality reported for oldest participants who were at highest both for COVID-19 and CG side effects.

References

1. Borba, M et al. Chloroquine diphosphate in two different dosages as adjunctive therapy of hospitalized patients with severe respiratory syndrome in the context of coronavirus (SARS-CoV-2) infection: Preliminary safety results of a randomized, double-blinded, phase IIb clinical trial (CloroCovid-19 Study). medRxiv doi: 10.1101/2020.04.07.20056424.
https://www.medrxiv.org/content/10.1101/2020.04.07.20056424v1
https://www.medrxiv.org/content/10.1101/2020.04.07.20056424v1.full.pdf (PDF)
2. Gautret P et al. Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial. International Journal of Antimicrobial Agents 2020 (ahead of print).
https://www.sciencedirect.com/science/article/pii/S0924857920300996

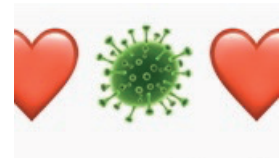
COVID-19: TREATMENT ACCESS

Potential treatments for COVID-19 could be manufactured for \$1 a day or less

Polly Clayden, HIV i-Base

If repurposed drugs, currently under investigation for COVID-19, show efficacy, they could be manufactured profitably at very low costs – according to an analysis published in the Journal of Virus Eradication on 8 April 2020. [1]

As the SARS-CoV-2 pandemic grows daily, clinical trials are underway worldwide looking at potential ways to prevent new infections, treat those already infected and reduce the severity of the disease.



Results from randomised controlled trials of repurposed drugs – ie those currently indicated for other diseases so shortening the drug discovery and development timeline – are expected between May and September of this year.

Andrew Hill and colleagues – whose group have previously reliably predicted the minimum costs of drugs for hepatitis C and other diseases – calculated the costs of new potential treatments for COVID-19.

The authors used established methods to make these calculations. They estimated the minimum costs of drug production by calculating the cost of active pharmaceutical ingredients (API), added to costs of excipients, formulation, packaging and a profit margin of 10%, to calculate the price of the final finished product (FFP) – the drug ready for use.

The selected treatments were: remdesivir (previously used unsuccessfully against Ebola); favipiravir (influenza), lopinavir/ritonavir (HIV), chloroquine and hydroxychloroquine (malaria) and sofosbuvir and daclatasvir (HCV), azithromycin (pneumonia), and pirlfenidone and tocilizumab (improve lung function and reduce inflammation).

Remdesivir

Remdesivir is given by IV infusion. A 10-day course of treatment is under investigation at a dose of 200 mg on the first day and 100 mg the following days.

The authors estimated the cost per treatment to be approximately \$9 per person – an estimated daily cost of \$0.93.

They note that costs for non-drug components associated with IV infusion were not included in this estimate: saline, equipment (syringe, sterile water and IV lines) and staff time.

Favipiravir

Favipiravir is an oral treatment dosed at 600 mg twice daily. A 14-day course is being evaluated. The estimated cost of production for this course is \$20 or \$1.45 per day.

The authors added that favipiravir was launched for sale in China in late February 2020 at a price of \$231 per 14-day course.

Lopinavir/ritonavir

The standard dose of lopinavir/ritonavir is 400/100 mg oral combined pill twice daily. A 14-day course is also being evaluated.

The estimated cost for this course is \$4 or \$0.28 per day.

So far there has been no clear evidence of efficacy for lopinavir/ritonavir against COVID-19.

Current list prices for a 14-day course range from \$503 in the US to \$15 in South Africa (and available through the Global Fund to low- middle-income countries for a medium of \$9).

Hydroxychloroquine and chloroquine

These old malaria treatments (since the 50's) were calculated at 400 mg and 155 mg daily doses for 14 days of hydroxychloroquine and chloroquine, respectively.

The estimated costs were \$1 per course or \$0.08 per day and \$0.3 or \$0.08 per day for the respective drugs.

Available list prices for a 14-day course of hydroxychloroquine ranged from \$19 in China to \$2 in India.

For chloroquine these prices ranged from \$93 in US to \$0.2 in Bangladesh for a course. The authors note that the Bangladesh price was lower than their estimate and the US one might be considered an outlier (by a considerable amount as the next most expensive price for a 14-day course, in the UK, was \$8).

Azithromycin

Used in small pilot studies with hydrochloroquine (and contradictory results) to prevent bacterial superinfection.

A 14-day course at a dose of 500 mg per day was calculated at \$1.40 or \$0.10 per day.

List prices for azithromycin range between \$63 per 14-day course in the US and \$5 in India and Bangladesh.

Sofosbuvir/daclatasvir

Under evaluation in Iran for people with moderate to severe COVID-19 symptoms at a daily dosage of sofosbuvir/daclatasvir 400/600 mg.

The estimated cost is \$5 per 14-day course or \$0.39 per day.

These drugs were launched by originator manufacturers for treatment of Hepatitis C at eye-watering prices, which have fallen significantly in recent years.

Earlier estimates of minimum price for generic production by Hill et al in 2016 were equivalent to \$7.8 per 14-day course, so the new estimates represent a 6.6-fold reduction since the group's original calculations.

Fourteen-day list prices range from \$18,610 in the US and \$7 in India or \$6 in Pakistan.

Pirfenidone

A dose of 801 mg three times a day for four weeks is being evaluated. The estimated cost for a 4-week course is \$31 or \$1.09 per day. List prices for a 4-week course range from \$9,606 in the US to \$124 in Bangladesh and \$100 in India for a generic version.

The authors explained that at \$100, the lowest list prices are still higher than their estimate.

Tocilizumab

This monoclonal antibody is dosed as an IV infusion. Doses are based on weight (8 mg/kg) with a maximum single dose of 800 mg every 12 hours.

The authors assumed an average bodyweight of 70 kg and a single dose of 560 mg.

There were no API data available for tocilizumab – so they were unable to estimate the minimum cost of production.

List prices for 560 mg single dose varied from \$3,383 in the US to \$510 in Pakistan.

Several biosimilars are currently under development but these have yet to be approved and launched.

Biosimilars can offer healthcare systems the potential to lower costs significantly. The UK is expected to save up to £200–300 million a year through the uptake of better-value biological medicines.

Conclusion

The authors emphasised that we do not know yet which or any of these drugs will show benefit. But this analysis shows that if that was the case they all could be manufactured for very low prices.

Repurposed drugs might be the only option to treat COVID-19 for the next 12–18 months, until effective vaccines can be developed and manufactured at scale.

Some of the treatments are already available as generic, with prices close to the cost of manufacture for low- and middle-income countries.

Treatments for HIV, TB and malaria are distributed worldwide by the Global Fund and PEPFAR at prices close the cost of manufacture. These prices allow generic companies to make acceptable profits. The authors recommend that a similar model of drug distribution be adopted for COVID-19.

They made four recommendations to ensure that anyone with COVID-19, in any country, would be able to access the treatment they need:

1. Treatments showing efficacy in well-powered clinical trials should be made available worldwide at prices close to the cost of manufacture.
2. There should be parallel manufacture by at least three different companies for each product, sourcing their API from different countries. Production of drugs in a range of countries will protect us from disruption or shortages in individual countries.
3. There should be no intellectual property barriers preventing mass production of these treatments worldwide. We need open 'technology transfer' so that the methods used to manufacture the key drugs can be shared with any country deciding to produce the drugs locally.
4. Results and databases from all COVID-19 clinical trials should be fully accessible so others can learn from them. To speed up access to these drugs, countries could rely on recognition of the review and approval of key treatments by regulatory authorities in the US or Europe, or other stringent regulatory authorities. There may not be time for the normal times of regulatory review by all individual countries.

C O M M E N T

The authors looked at costs of production for the main treatments currently being tested in clinical trials. These drugs could be mass produced for \$1 per day, often for a lot less, and distributed through mechanisms like those used for HIV, TB and malaria.

Even remdesivir, the new potential treatment from Gilead, could be mass produced for \$9 for a 10-day treatment course. The cost of the saline (and other non-drug components) would be higher than the remdesivir, when given by IV infusion.

Some of these treatments have US list prices 100 times higher than the cost of production. The Presidential-favourite untested COVID-19 candidate is over 10 times as much in US as the UK.

Anyone with COVID-19, in any country, should be able to access these new treatments if the prices can be kept close to production costs.

Previous minimum cost estimates by Hill et al have been invaluable to support price negotiations for treatments for other diseases. Among many others, MSF welcomed the COVID-19 estimates. [2] "Literally every single person on earth is susceptible to this pandemic – now is not the time for price gouging and pandemic profiteering" they wrote.

At the moment, countries are becoming insular, competing for limited supplies of drugs, ventilators and PPE, in bidding wars, rather than engaging in a collaborative system for resources to be prioritised for areas of greatest need.

References

1. Hill et al. Minimum costs to manufacture new treatments for COVID-19. Journal of Virus Eradication. Online 9 April 2020. http://viruseradication.com/journal-details/Minimum_costs_to_manufacture_new_treatments_for_COVID-19/
2. MSF press release. MSF response on COVID-19 drugs pricing study by Andrew Hill et al. 10 April 2020. <https://msfaccess.org/pt-br/node/56576?tid=9>

MSF calls for no patents or profiteering on COVID-19 drugs, tests, and vaccines in pandemic

MSF press release

On 27 March 2020, Médecins Sans Frontières/Doctors Without Borders (MSF) issued a press release calling for no patents or profiteering on drugs, tests, or vaccines used for the COVID-19 pandemic, and for governments to prepare to suspend and override patents and take other measures, such as price controls, to ensure availability, reduce prices and save more lives.



Already, Canada, Chile, Ecuador and Germany have taken steps to make it easier to override patents by issuing 'compulsory licenses' for COVID-19 medicines, vaccines and other medical tools. Similarly, the government of Israel issued a compulsory license for patents on a medicine they were investigating for use for COVID-19.

The press releases states: "MSF is deeply concerned about access to any forthcoming drugs, tests, and vaccines for COVID-19 in places where MSF works and in other countries affected by this pandemic, and is urging governments to prepare to suspend or override patents for COVID-19 medical tools by issuing compulsory licenses. Removing patents and other barriers is critical to help ensure that there are sufficient suppliers selling at prices everyone can afford."

Ref: MSF calls for no patents or profiteering on COVID-19 drugs, tests, and vaccines in pandemic (27 March 2020)

<https://msfaccess.org/msf-calls-no-patents-or-profiteering-covid-19-drugs-tests-and-vaccines-pandemic>

COVID-19: NEW RESEARCH

Gilead expand UK sites for two phase-3 studies of remdesivir to treat COVID-19

Simon Collins, HIV i-Base

On 1 April 2020, Gilead Sciences announced that two new studies of the investigational compound remdesivir were launched in the UK, in participants with moderate and severe COVID-19.



These are both part of large international phase 3 studies, announced in February, with more than 100 sites in the US and ten countries in Europe, China and South East Asia. [2]

The current listings state the studies will randomise 1000 participants overall to either a five-day or ten-day course of remdesivir (200 mg on day 1 and 100 mg on subsequent days), given as an infusion, or to placebo. The primary composite endpoint is improved clinical outcomes (reduced fever and oxygen normalisation). [3, 4]

However, these studies are now expected to enrol more than 4000 participants globally, including in the UK, and clinical outcome at 28 days is included in the primary endpoint. Both studies also include safety as secondary endpoints. [5]

The 15 UK sites include five London clinics and ten centres across the rest of the UK:

Royal Free London NHS Foundation Trust.
 London North West University Healthcare NHS Trust.
 University College London Hospitals NHS Foundation Trust.
 King's College Hospital NHS Foundation Trust.
 Imperial College Healthcare NHS Trust.
 Liverpool University Hospitals NHS Foundation Trust.
 Manchester Royal Infirmary.
 Sheffield Teaching Hospitals NHS Foundation Trust (adult services).
 Wythenshawe Hospital.
 Hull University Teaching Hospitals NHS Trust.
 The Pennine Acute Hospitals NHS Trust.
 Royal Lancaster Infirmary.
 Glasgow Queen Elizabeth University Hospital.
 Edinburgh Western General Hospital.
 University Hospitals Plymouth NHS Trust.

References

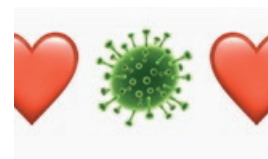
1. Gilead press statement. Gilead Sciences announces two phase 3 randomised studies to evaluate the safety and antiviral activity of remdesivir (GS-5734tm) in participants with moderate to severe COVID-19. (1 April 2020). Not posted online.
2. Gilead press statement. Gilead Sciences Initiates Two Phase 3 Studies of Investigational Antiviral Remdesivir for the Treatment of COVID-19. (26 February 2020).
<https://www.gilead.com/news-and-press/press-room/press-releases/2020/2/gilead-sciences-initiates-two-phase-3-studies-of-investigational-antiviral-remdesivir-for-the-treatment-of-covid-19>
3. ClinicalTrials.gov. GS-US-540-5773 (EudraCT Number: 2020-000841-15): A phase 3 randomized study to evaluate the safety, and antiviral activity of remdesivir (GS-5734) in participants with severe COVID-19.
<https://clinicaltrials.gov/ct2/show/NCT04292899>
4. ClinicalTrials.gov. GS-US-540-5774 (EudraCT Number: 2020-000842-32): A phase 3 randomized study to evaluate the safety, and antiviral activity of remdesivir (GS-5734) in participants with moderate COVID-19 Compared to Standard of Care Treatment
<https://clinicaltrials.gov/ct2/show/NCT04292730>
5. Gilead Sciences. Personal communication (6 April 2020).

Prospective cohorts to study COVID-19 including HIV

Simon Collins, HIV i-Base

New prospective study to understand the natural history, especially in special populations, for example with HIV are already underway.

These should be started as soon as possible and hopefully using similar or shared methodology that will enable data from multiple studies to be combined when larger power is needed to see smaller signals, for example for genetic markers.



These studies should be developed with the involvement of community advocates and should be listed on clinicaltrials.gov (where dozens already planned) or another clinical trials registry.

A few initiatives are listed below as reference for other researchers looking to start similar projects.

COVID-19 in UK general population

Queen Mary College London and collaborators are planning a prospective observational cohort of 12,000 participants in the UK general population aged 16 and over. The primary outcome is COVID-19 diagnosis with numerous clinical secondary outcomes.

This study is due to start in April 2020 and will run for five years.

Ref: clinicaltrials.gov. Longitudinal Population-based Observational Study of Coronavirus Disease in the UK Population (COVIDENCE). NCT04330599.

<https://clinicaltrials.gov/ct2/show/NCT04330599>

NEAT-ID develop COVID-19 dashboard for European data

The last issue of HTB included news that the NEAT ID network has developed a simple database dashboard to monitor the progress of COVID-19 in HIV positive people across Europe for researchers to contribute to.

Please see the report in the last issue for details and contact information.

<http://i-base.info/htb/37439>

COVID-19 and HIV: a prospective observational study in the US

The University of Missouri is running multi-centre prospective observational study in 500 participants coinfecting with HIV and COVID-19. [1, 2]

Their aim is to characterise the clinical presentation and clinical course of COVID-19 in people living with HIV.

The primary outcome is 30-day mortality with serious comorbidities are secondary outcomes.

The study opened in April and will run until October.

Additional info is also available at this link.

<https://drive.google.com/drive/folders/1qj9l8-JpCYzpOhe9C3cvdEBwpVDcTZGU>

Ref: clinicaltrials.gov. COVID-19 in Patients With HIV. NCT04333953.

<https://clinicaltrials.gov/ct2/show/NCT04333953>

HIV cure researchers in US launch HIV and COVID-19 coinfection database

An initiative in the US called Coronavirus Under Research Exclusion (CURE HIV-COVID) has launched an adult database to monitor and report on outcomes of COVID-19 occurring in HIV patients. [1]

They want US doctors to report all cases of COVID-19, regardless of severity and including asymptomatic patients detected through public health screening. Cases should be confirmed COVID-19 with at least seven days of follow-up. Each case is easy to report only and will take about five minutes. [2]

However, although the database only plans to use de-identified data, and does not count as human research requiring IRB approval, it is unclear how confidential patient information will be managed.

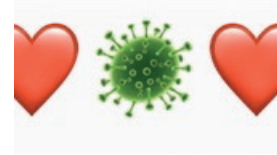
References

1. Coronavirus Under Research Exclusion (CURE HIV-COVID)
<https://hivcovid.org/>
2. Direct link to report a case.
<https://rs.igs.umaryland.edu/surveys/?s=KEKWYFATPM>

COVID-19 prophylaxis using TDF/FTC and low-dose hydroxychloroquine in Spanish health workers

Simon Collins, HIV i-Base

A large randomised phase 3 placebo-controlled study in Spain is using the HIV PrEP combination TDF/FTC and low-dose hydroxychloroquine (HCQ) as prophylaxis for COVID-19 in health workers. [1]



Although in-vitro data support potential antiviral activity of TDF/FTC against CoV-2, the rationale was also driven by anecdotal reports of fewer cases of severe COVID-19 in Spain in HIV positive people on ART.

The study plans to enroll 4000 participants who will be randomised to one of three active arms or an inactive placebo group. The active arms are TDF/FTC, hydroxychloroquine (200 mg daily) and a dual combination of TDF/FTC plus HCQ.

The study is due to start in April 2020 and will run until July.

C O M M E N T

The decision to investigate TDF/FTC for PrEP does not mean that there this will be effective.

Some HIV positive people are diagnosed with COVID-19 even though there are on TDF/FTC-containing ART.

Reference

clinicaltrials.gov. Randomized clinical trial for the prevention of SARS-CoV-2 infection (COVID-19) in healthcare personnel (EPICOS).
<https://clinicaltrials.gov/ct2/show/study/NCT04334928>

Community survey on impact of COVID-19 and chemsex

European Chemsex Forum

The community chemsex forum is carrying out an international online survey on the impact of COVID-19 in different cities and countries.

The survey is especially collecting information on drug users, sex workers, trans people, migrants and gay men.

Please send responses by Tuesday 21 April 2020.

<https://www.surveymonkey.co.uk/r/B6X7CMW>

European rapid community assessment reports for COVID-19

EATG

The European AIDS Treatment Group (EATG) have launched an online rapid assessment report for HIV positive people and organisations to report impact of COVID-19 on HIV care across Europe.

The group plans to compile results every two weeks.

This questionnaire will take about 15-30 minutes to complete.

<https://form.jotform.com/200852077808054>

COVID-19: PATHOGENESIS

A clinical-therapeutic staging proposal for COVID-19

Simon Collins, HIV i-Base

This short paper proposes a three-stage classification for COVID-19, with increasing severity that corresponds with distinct clinical findings, responses to therapy and clinical outcomes.



Stage I (mild) – early infection

The initial stage occurs at the time of inoculation and early establishment of disease. For most people, this involves an incubation period associated with mild and often non-specific symptoms such as malaise, fever and a dry cough.

Stage II (moderate) - pulmonary involvement (IIa) without and (IIb) with hypoxia:

In the second stage of established pulmonary disease, viral multiplication and localized inflammation in the lung is the norm. During this stage, patients develop a viral pneumonia, with cough, fever and possibly hypoxia (defined as a PaO₂/FiO₂ of <300 mmHg).

Stage III (severe) – systemic hyperinflammation:

A minority of COVID-19 patients will transition into the third and most severe stage of illness, which manifests as an extra-pulmonary systemic hyperinflammation syndrome. In this stage, markers of systemic inflammation appear to be elevated. COVID-19 infection results in a decrease in helper, suppressor and regulatory T cell counts.

References

Siddiqi HK et al. A clinical-therapeutic staging proposal COVID-19 illness in native and immunosuppressed states: a clinical-therapeutic staging proposal. *Journal of Heart and Lung Transplant*. DOI: 10.1016/j.healun.2020.03.012

[https://www.jhltonline.org/article/S1053-2498\(20\)31473-X/fulltext](https://www.jhltonline.org/article/S1053-2498(20)31473-X/fulltext)

[https://www.jhltonline.org/article/S1053-2498\(20\)31473-X/pdf](https://www.jhltonline.org/article/S1053-2498(20)31473-X/pdf) (PDF)

COVID-19: TRANSMISSION

Four papers on CoV-2 transmission

Simon Collins, HIV i-Base

These following four papers are interesting for different aspects relating to CoV-2 transmission



A paper in the *New England Journal of Medicine* from Zou et al reported similar levels of viral load in asymptomatic patients and symptomatic patients which suggests the transmission potential of people who are asymptomatic or minimally symptomatic. [1]

Two other papers are examples of CoV-2 failed to be transmitted even to people at high risk and might help reduce anxiety for contacts of people who are later diagnosed with COVID-19.

The first describes the first person-to-person transmission in the US between partners at home. However, 347 contacts of other cases including 152 community contacts and 195 health workers found no other transmissions. This included 43 people under special investigation who all tested negative for SARS-CoV-2. [2]

The second, also from the US, included a case of someone diagnosed with COVID-19 but with mild symptoms who continued to remain PCR positive for 18 days after diagnosis. However, there were no further transmissions to 16 contacts. Of these 11/16 (69%) had high-risk exposure, including 1 intimate contact, and 5 (31%) had medium-risk exposure. [3]

Lastly, a retrospective study, but before peer-review, of household transmission in Wuhan, after the city had been locked down, reported that each index case resulted in approximately three other infections. [4]

Of the 85 original cases, there were 155 close contacts overall. Of these, 104 contacts received PCR testing, with 47 (30%) positive cases and 57 (37%) negative cases. The other 51 (33%) cases were not tested because they were asymptomatic during the 2 weeks of quarantine. The infection rates were 38%, 50% and 31% for households with one, two and three contacts, respectively.

References

1. Zou et al SARS-CoV-2 viral load in upper respiratory specimens of infected patients. N Engl J Med 2020 382:1177-1179. DOI: 10.1056/NEJMc20017372020. (19 March 2020)
<https://www.nejm.org/doi/full/10.1056/NEJMc2001737>
2. Ghinai I et al. First known person-to-person transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in the USA. The Lancet. DOI:10.1016/S0140-6736(20)30607-3. (13 March 2020).
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30607-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30607-3/fulltext)
3. Scott SE et al. First mildly ill, non-hospitalized case of coronavirus disease 2019 (COVID-19) without viral transmission in the United States — Maricopa County, Arizona, 2020, Clinical Infectious Diseases, ciaa374, DOI: 10.1093/cid/ciaa374. (02 April 2020)
<https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa374/5815221>
4. Wang Z et al. Household transmission of SARS-CoV-2. J Infect. 2020, doi: 10.1016/j.jinf.2020.03.040.
<https://www.journalofinfection.com/retrieve/pii/S0163445320301699>

Studies stoke concern about coronavirus contagion through air via speech

Mark Mascolini, natap.org

Accumulating evidence indicates that simply speaking can emit coronavirus-containing particles that wafts through air for tens of meters, hover there, and possibly transmit SARS-CoV-2 to a person who inhales these virus-tainted aerosols.



“Based on the trend in the increase of [SARS-CoV-2] infections, and understanding the basic science of viral infection spread,” Australian and Chinese researchers write, “we strongly believe that the virus is likely to be spreading through the air”. [1]

They “plead that the international and national authorities acknowledge the reality that the virus spreads through air, and recommend that adequate control measures . . . be implemented to prevent further spread of the SARS-CoV-2 virus.”

Since the days after World War II, researchers recognised that merely speaking produces oral fluid droplets [2] that can carry infectious virus particles. Big droplets quickly fall to the ground, but small droplets can dehydrate and linger in the air as “droplet nuclei” [3] that “behave like an aerosol and thereby expand the spatial extent of emitted infectious particles” [4]

Researchers from the National Institutes of Health (NIH) and the University of Pennsylvania conducted a laser light-scattering experiment that visualised speech-generated droplets and determined how they spread and linger [4]. A researcher spoke through an opening in one side of a cardboard box painted black inside, repeating the words “stay healthy” at different volumes, without or with a damp washcloth over his mouth. An iPhone 11 Pro video camera positioned at the other end of the box aimed at a laser light sheet through which droplets passed. Ultrahigh-resolution recordings estimated the size of these droplets, represented by flashes of light.

The brightness of flashes reflected particle size and time present in a 16.7-msec video frame. The number of flashes in a single video frame ranged from 227 at low-volume speech to 347 at the highest volume. Flashes in a single frame reached their maximum with the tongue-on-teeth “th” sound in “healthy.” When the researcher spoke through a slightly damp washcloth, the flash count fell to the background level averaging 0.1 flashes.

The investigators note that droplets emitted during speaking in one study were smaller than those ejected during coughing or sneezing [4]. But some research found the same *number* of droplets during speaking and coughing [5]. The NIH-UPenn team did not assess the potential roles of speech-propelled droplets and aerosols in viral transmission.

Writing about this experiment, Harvard researcher Matthew Meselson explains that larger droplets and smaller aerosols take different routes if inhaled [6]. The bigger droplets settle in the upper respiratory tract, from which they can be removed in nasal secretions or ascend the “mucociliary escalator” and then be expelled or swallowed. But smaller aerosolized particles can descend deeply into the lung, nest in alveoli, and start infecting lung cells.

Merelson sites another recent study showing that aerosols containing SARS-CoV-2 remain infectious in tissue culture assays for three hours [7]. That finding suggests to Merelson that aerosols from infected people may “pose an inhalation threat even at considerable distances and in enclosed spaces, particularly if there is poor ventilation.” He suggests “wearing a suitable mask” when infected people may be nearby or providing adequate ventilation in enclosed spaces currently or recently inhabited by SARS-CoV-2-infected people.

Hand washing and 6-foot social distancing remain the primary measures for avoiding SARS-CoV-2 infection. But Australian and Chinese researchers Lidia Morawska and Junji Cao argue those strategies “do not prevent infection by

inhalation of small droplets exhaled by an infected person that can travel . . . meters or tens of meters in the air and carry their viral content". [1, 8]

Morawska and Cao remind readers that SARS-CoV-1 did spread in air, a route that explained transmission of this coronavirus in Hong Kong's Prince of Wales Hospital and in healthcare facilities in Toronto [1]. They cite studies demonstrating airborne transmission of Norwalk-like virus in school children and influenza A/H5N1 in ferrets. At a single choir practice near Seattle, Washington, speaking and singing apparently contributed to SARS-CoV-2 spreading to 45 of 60 choir members. [9]

Findings like these, Morawska and Cao say, mean "it is highly likely that the SARS-CoV-2 virus also spreads by air" [1].

Measures that can lower chances of indoor transmission, Morawska and Cao propose [1], include:

- Increased ventilation rate.
- Natural ventilation.
- Avoiding air recirculation.
- Avoiding staying in another person's direct air flow.
- Minimising the number of people sharing the same space.

Implementing measures like these depends on countries recognizing the risk of airborne transmission, but "currently, this is not the case anywhere in the world". [1]

References

1. Morawska L, Cao J. Airborne transmission of SARS-CoV-2: The world should face the reality. *Environ Int.* 2020;139:105730. doi: 10.1016/j.envint.2020.105730.
<https://www.sciencedirect.com/science/article/pii/S016041202031254X>
2. Duguid JP. The size and the duration of air-carriage of respiratory droplets and droplet-nuclei. *J Hyg (Lond).* 1946;44:471-479.
3. Marr LC et al. Mechanistic insights into the effect of humidity on airborne influenza virus survival, transmission and incidence. *J R Soc Interface* 2019;16(150).
4. Anfinrud P et al. Visualizing speech-generated oral fluid droplets with laser light scattering. *N Engl J Med.* April 15, 2020. doi: 10.1056/NEJMc2007800.
<https://www.nejm.org/doi/full/10.1056/NEJMc2007800>
5. Chao CYH et al. Characterization of expiration air jets and droplet size distributions immediately at the mouth opening. *J Aerosol Sci.* 2009;40:122-133.
6. Merelson M. Droplets and aerosols in the transmission of SARS-CoV-2. *N Engl J Med.* April 15, 2020. doi: 10.1056/NEJMc2009324.
<https://www.nejm.org/doi/full/10.1056/NEJMc2009324>
7. van Doremalen N et al. Aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1. *N Engl J Med.* doi: 10.1056/NEJMc2004973. April 16, 2020.
<https://www.nejm.org/doi/full/10.1056/nejmc2004973>
8. Morawska L, et al. Size distribution and sites of origin of droplets expelled from the human respiratory tract during expiratory activities. *J Aerosol Sci.* 2009;40:256-269.
<https://www.sciencedirect.com/science/article/pii/S0021850208002036>
9. Read R. A choir decided to go ahead with rehearsal. Now dozens of members have COVID-19 and two are dead. *Los Angeles Times.* March 29, 2020.
<https://www.latimes.com/world-nation/story/2020-03-29/coronavirus-choir-outbreak>

COVID-19: UK HEALTH SERVICES

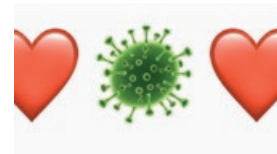
BASHH responses to impact of COVID-19 on sexual health services

Simon Collins, HIV i-Base

A rapid survey to members of BASHH about the UK response to COVID-19, reports that most sexual health services have already restructured many of their services.

The first results of the survey from 13-16 March 2020 included feedback from 44 members on local COVID-19 contingency plans and the importance of sharing of tips and advice.

BASHH have also already published several recommendations for managing sexual health services when clinic appointments are reduced.



These include policies on social distancing, treating gonorrhoea and a guide to services to support vulnerable people. [2, 3, 4, 5]

References

1. BASHH COVID-19 Contingency Planning Survey: Initial Results snapshot
<https://members.bashh.org/BASHH/Communities/CommunityLayouts/Other/COVID-19.aspx?iUniformKey=9cea4f6b-e9b8-4590-9616-34ad5b0d10f1>
<https://members.bashh.org/Documents/COVID-19/BASHH%20COVID-19%20Survey%20Snapshot%20-%202016.03.20.pdf> (PDF)
2. BASHH. Sex, Social Distancing and COVID-19 (Coronavirus) March 2020
<https://members.bashh.org/Documents/COVID-19/Sex%20Social%20Distancing%20%20COVID19%20-%20BASHH%20FAQs%20-%2020260320.pdf> (PDF)
 Advice from BASHH on sexual contact, accessing sexual health services, HIV testing and care and sexual assault services.
3. COVID-19 and treatment of gonorrhoea [update 02.04.2020]
<https://members.bashh.org/Documents/COVID-19/COVID BASHH GC.pdf> (PDF)
 Advice from the BASHH Guideline writing group on treating gonorrhoea with limited face to face services.
4. Guide to services that can assist and support vulnerable patients during COVID-19 pandemic in London [update 09.04.2020]
<https://members.bashh.org/Documents/COVID-19/Guide for vulnerable patients COVID 09042020.docx>
 A compendium of resources to help when you encounter a vulnerable patient who has any difficulty accessing food or medication, or is isolated without any support network (credit Indrajit Ghosh).
5. Updated COVID-19 guidance: provision of sexual health services to the community.
 zContingency planning for out-patient Genitourinary Medicine, Contraception and Sexual Health Services (including online) and HIV services

COVID-19: BLOOD DONATION

US COVID-19 crisis relaxes restrictions on gay men as blood donors

Simon Collins, HIV i-Base

On 2 April 2020, an indication of the impact of the COVID-19 health crisis in the US has been new FDA recommendations that reduces earlier restrictions on gay men (or straight partners of gay men) donating blood.

The 12-month period of abstinence has been reduced to not having had sex in the previous three months.

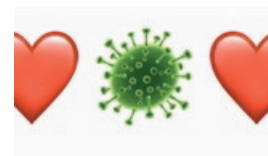
The guidelines notes that the urgent need for the crisis response doesn't allow time for public consultation, but that the recommendations are only to cover this COVID-19 crisis period.

Reference

FDA. Revised recommendations for reducing the risk of HIV transmission by blood and blood products (2 April 2020).

<https://www.fda.gov/regulatory-information/search-fda-guidance-documents/revised-recommendations-reducing-risk-human-immunodeficiency-virus-transmission-blood-and-blood>

<https://www.fda.gov/media/92490/download> (direct download)



CoV-2 identified in blood donations in China

Simon Collins, HIV i-Base

Concern over screening for blood donation services was raised by a report from China that identified CoV-2 in samples from asymptomatic donors and on the donation service response in contact tracing and testing.

The report details the screening measures that were started in blood centres in Wuhan from 25 January 2020 and are published as a research letter in the journal Emerging Infectious Diseases. [1]

The first PCR testing performed on pooled samples in real time and retrospectively found positive viral RNA from four donors, none of whom had symptoms of COVID-19. By 4 March, 2,430 samples had been prospectively screened (1656 platelets and 774 whole blood plasma).

Donors were contacted and quarantined until two consecutive throat swabs were confirmed negative.



Retrospective screening of 4,995 donations collected from 21 December to 22 January found two additional positive samples, none of which had been used. The donors were again contacted to be quarantined at home.

All donors for January and February were contacted by telephone and 33 people reporting fever since donating had their samples taken out of circulation.

Although the study notes limitation on the information about some donors and that finding CoV-2 RNA does not confirm infectivity and risk of transmission, this potential risk should not be ignored.

The service also emphasises screening prospective donors for symptoms and on the need to actively report fever and other symptoms if these occur after donating.

Reference

1. Chang L et al. Severe Acute Respiratory Syndrome Coronavirus 2 RNA Detected in Blood Donations. Research Letter. Emerg Infect Dis. 2020, 26(7) July 2020. DOI: 10.3201/eid2607.200839
https://wwwnc.cdc.gov/eid/article/26/7/20-0839_article

COVID-19: VACCINE RESEARCH

COVID-19 vaccine study opens for recruitment in UK

Simon Collins, HIV i-Base

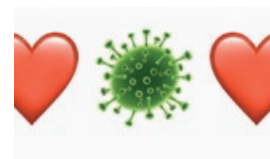
Researchers at University of Oxford working on a preventative COVID-19 vaccine have started screening healthy volunteers (aged 18-55).

This is for an upcoming ChAdOx1 nCoV-19 vaccine trial in the Thames Valley Region. The vaccine based on an adenovirus vaccine vector and the SARS-CoV-2 spike protein is already in production but will not be available for several weeks.

The study will enrol 510 participants who will receive the vaccine or a placebo.

Ref: Oxford COVID-19 vaccine programme opens for clinical trial recruitment. (27 March 2020).

<http://www.ox.ac.uk/news/2020-03-27-oxford-covid-19-vaccine-programme-opens-clinical-trial-recruitment#>



US NIH vaccine chief optimistic on prospects for SARS-CoV-2 vaccine

Mark Mascolini, natap.org

In a video by fivethirtyeight.com editor Anna Rothschild, the director of the Vaccine Research Center at the US National Institutes of Health, John Mascola, says, "I am quite hopeful that we will . . . find a vaccine that works [against SARS-CoV-2] in the time frames that people like Dr. Fauci have been talking about [within 18 months]. . . . I think the data we have from the laboratory side of things suggests that a vaccine should work against a coronavirus."



The Rothschild video, "How Close Are We to a COVID-19 Vaccine?", can be viewed online or assessed via the following slightly abbreviated and edited transcript.

These are the key points:

- A phase 1 trial of a SARS-CoV-2 vaccine has begun, the fastest a vaccine has ever entered clinical trials in the United States.
- The tested vaccine is an mRNA vaccine, and if licensed it would be the first mRNA vaccine against a human disease.
- mRNA vaccines are easy to design and make in quantities needed for human trials, but no facilities are set up to produce large quantities of an mRNA vaccine right now.
- The new coronavirus does mutate but not as fast as HIV mutates, for example. So Dr. Mascola does not expect that SARS-CoV-2 would mutate away from a vaccine within months or years.
- Preliminary reports have circulated about some recovered COVID-19 patients producing very low levels of antibodies. That might mean that some people could get COVID-19 more than once.

- Dr. Mascola said that should not affect prospects for coronavirus vaccine efficacy, because such a vaccine would be designed to promote a strong immune response.

Ref: How Close Are We to a COVID-19 Vaccine?

<https://fivethirtyeight.com/videos/how-close-are-we-to-a-covid-19-vaccine/>

Sanofi and GSK collaborate on COVID-19 vaccine

Company press release

On 14 April 2020, Sanofi and GSK announced they would be collaborating to develop an adjuvanted vaccine for COVID-19, using innovative technology from both companies.



Sanofi will contribute its S-protein COVID-19 antigen, which is based on recombinant DNA technology. This technology has produced an exact genetic match to proteins found on the surface of the virus, and the DNA sequence encoding this antigen has been combined into the DNA of the baculovirus expression platform, the basis of Sanofi's licensed recombinant influenza product in the US.

GSK will contribute its proven pandemic adjuvant technology to the collaboration. The use of an adjuvant can be of particular importance in a pandemic situation since it may reduce the amount of vaccine protein required per dose, allowing more vaccine doses to be produced and therefore contributing to protect more people.

Candidate vaccine expected to enter phase 1 trials in the second half of 2020 and, if successful, to be available in the second half of 2021

Ref: Sanofi and GSK to join forces in unprecedented vaccine collaboration to fight COVID-19 (14 April 2020).

<https://www.gsk.com/en-gb/media/press-releases/sanofi-and-gsk-to-join-forces-in-unprecedented-vaccine-collaboration-to-fight-covid-19>

Trial trackers for vaccine studies

Several organisations have already compiled listings of pipeline research for a CoV-2 vaccine.

AVAC: Ongoing studies for the treatment and prevention of the COVID-19 virus

<https://www.avac.org/resource/ongoing-studies-2019-ncov-prevention-and-treatment>

COVID-19: Projected Timeline for Treatment and Prevention, from SynBioBeta

<https://synbiobeta.com/covid19>

COVID-19 R&D Tracker, from the Global Health Technologies Coalition

<https://www.ghtcoalition.org/resources-item/covid-19-r-d-tracker>

COVID-19 Vaccine Tracker, from the Regulatory Affairs Professionals Society (RAPS)

<https://www.raps.org/news-and-articles/news-articles/2020/3/covid-19-vaccine-tracker>

COVID-19 diagnostic resources including pipeline & test tracker, from FIND

<https://www.finddx.org/covid-19/>

Every Vaccine and Treatment in Development for COVID-19, So Far, from the Visual Capitalist

<https://www.visualcapitalist.com/every-vaccine-treatment-covid-19-so-far/>

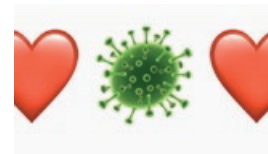


COVID-19: HEALTHCARE AND HUMAN RIGHTS

COVID-19 and threats to human rights: another HIV parallel

Simon Collins, HIV i-Base

Nearly all the early reports on the new coronavirus outbreak - whether in mainstream or scientific journals - tagged the coronavirus outbreak in relation to its location in Wuhan and/or China. Although this was soon changed to using the appropriate medical name of coronavirus-2 or SARS-CoV-2 - one outcome was to associate the early epidemic with racist reactions.



Even in late March 2020, global responses from the G20 virtual summit were hampered by US instance of referring to the Wuhan Virus.

In some Western countries, including the UK and the US, people stopped visiting Chinese restaurants (when restaurants were still open) and there were cases of individuals being assaulted.

The opening session of CROI 2020 - the leading US scientific HIV conference - noted the importance of bringing our shared experience from HIV to coronavirus.

Now that CoV-2 has been declared a global pandemic that has threatened healthcare services in every country the importance of equitable access to care also has similarities to the HIV response, with the urgency to make sure marginalised communities are not excluded.

The following articles include related statements and links.

UNAIDS condemns misuse and abuse of emergency powers

On 9 April 2020, UNAIDS issued a statement on countries using emergency powers or public health justifications to restrict rights related to personal autonomy, gender identity, freedom of speech and sexual and reproductive health and rights.

There have also been concerning reports of increases in criminal penalties in relation to HIV transmission, exposure and non-disclosure and the use of police powers to target, through arrests and brutality, vulnerable and criminalised groups, such as sex workers, people who use drugs, people living with HIV and lesbian, gay, bisexual, transgender and intersex (LGBTI) people.

For example:

- In Hungary, a new bill has been introduced to remove the right of people to change their gender and name on official documents in order to ensure conformity with their gender identity, in clear breach of international human rights to legal recognition of gender identity.
- In Poland, a fast-tracked amendment to the criminal law that increases the penalties for HIV exposure, non-disclosure and transmission to at least six months in prison and up to eight years in prison has been passed—a clear contravention of international human rights obligations to remove HIV-specific criminal laws.
- In Kenya, civil society organisations, prompted by concerns about actions being not consistent with a human-rights based epidemic response, released an advisory opinion calling for a human rights-based approach to be adopted in the COVID-19 response and have released a letter calling for a focus on community engagement and what works for prevention and treatment rather than disproportionate and coercive approaches.

Source: UNAIDS press statement. UNAIDS condemns misuse and abuse of emergency powers to target marginalized and vulnerable populations. (9 April 2020)

https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2020/april/20200409_laws-covid19

Statement from HIV Justice

On 25 March 2020, a coalition of HIV community advocacy groups published a joint statement on criminalisation related to COVID-19.

The organisations include AIDS Action Europe; AIDS and Rights Alliance for Southern Africa (ARASA); Canadian HIV/AIDS Legal Network; Global Network of People Living with HIV (GNP+); HIV Justice Network; International Community of Women Living with HIV (ICW); Positive Women's Network – USA; Sero Project; and Southern Africa Litigation Centre.

Source:

HIV Justice press statement. HIV justice worldwide steering committee statement on COVID-19 criminalisation. (25 March 2020).

<http://www.hivjustice.net/news/hiv-justice-worldwide-steering-committee-statement-on-covid-19-criminalisation/>

NAT statement on employment issues

NAT (National AIDS Trust) have updated their information on HIV and coronavirus (COVID-19).

This is especially for people who need to isolate themselves but have not yet had a conversation with their employer or others close to them about their HIV status.

Source:

NAT. Employers must support people living with HIV to follow guidance on coronavirus (COVID-19),

<https://loopedin.nat.org.uk/content-section/employers-must-support-people-living-with-hiv-to-follow-guidance-on-coronavirus-covid-19>

Sex workers must not be left behind in the response to COVID-19

NSWP and UNAIDS

On 8 April 2020, the Global Network of Sex Work Projects (NSWP) and UNAIDS issued a press statement about the particular hardships and concerns facing sex workers globally. It called on countries to ensure the respect, protection and fulfilment of sex workers' human rights.

The COVID-19 pandemic, as with other health crises, exposes existing inequalities and disproportionately affects people already criminalised, marginalized and living in financially precarious situations, often outside social protection mechanisms.

As a result of the COVID-19 pandemic, sex workers all over the world are experiencing hardship, a total loss of income and increased discrimination and harassment. The criminalization of various aspects of sex work in the majority of countries serves to magnify the already precarious situation of sex workers in the informal economy. As sex workers and their clients self-isolate, sex workers are left unprotected, increasingly vulnerable and unable to provide for themselves and their families.

Sex worker-led organizations from all regions are reporting a lack of access to national social protection schemes and exclusion from emergency social protection measures being put in place for other workers, particularly where sex work is criminalized. Whenever and wherever possible, sex workers are responsibly self-isolating in response to governments' calls. However, when they are excluded from COVID-19 social protection responses, sex workers are faced with putting their safety, their health and their lives at increased risk just to survive.

NSWP and UNAIDS are furthermore concerned at reports of punitive crackdowns against sex workers, resulting in the raiding of homes, compulsory COVID-19 testing, arrest and threatened deportation of migrant sex workers.

UNAIDS calls on countries to take immediate, critical action, grounded in human rights principles, to protect the health and rights of sex workers. Measures should include:

- Access to national social protection schemes for sex workers, including income support schemes.
- An immediate firewall between health services and immigration authorities in order to ensure that migrant sex workers can access health services.
- Emergency financial support for sex workers facing destitution, particularly migrants who are unable to access residency-based financial support.
- An immediate end to evictions and access to appropriate emergency housing for homeless sex workers.
- Stopping raids on sex workers' homes and sex work premises and ensuring that all measures to protect public health are proportionate.
- An immediate halt to arrests and prosecutions for sex work-related activity, moving away from punitive measures and criminalization towards reaching and serving those most in need.
- An immediate end to the use of criminal law to enforce COVID-19-related restrictions, including forced COVID-19 testing and related prosecutions.
- Automatic extensions on visas due to expire as travel restrictions tighten. Immigration detention systems must support detainees in safe accommodation.
- The engagement of sex worker communities in responses—the meaningful involvement of sex worker-led organizations in emergency public health planning groups.

UNAIDS, as ever, stands ready to support countries in the implementation of the above recommendations.

Harm reduction for people who inject drugs and for people in prison

Safer drug use during the COVID-19 outbreak: harm reduction tips

Some of these are easier to do than others, and some may seem impossible depending on your current situation. Do the best you can. Reach out to friends, harm reduction, syringe service providers (SSP), and other health or social service providers to plan for what to do to so you can stay safe and take care of one another.



<https://harmreduction.org/miscellaneous/covid-19-guidance-for-people-who-use-drugs-and-harm-reduction-programs/>

Providing care for people who inject drugs and for people in prison

Practical tips for harm reduction and OST clients and harm reduction/OST service providers is provided by UNODC .

<https://www.unodc.org/unodc/en/hiv-aids/new/covid-19-and-hiv.html>

Importance of harm reduction services during the COVID-19 crisis

A community statement from harm reduction networks include 12 demands for care of people who use drugs.

People Who Use Drugs (PWUDs) can be considered as a risk group in the COVID-19 epidemic. They often live in the margins of society with low or no access to housing, employment, financial resources, social and health care, and face systematic discrimination and criminalisation in majority of countries.

Many have multiple health problems that can increase the risk of a (fatal) COVID-19 infection (including long-term diseases such as COPD, HIV, TB, cancer, and other conditions which reduce the immune system).

Harm reduction services are often the one and only contact point for PWUDs to access the health service. They provide health and social services as well as other basic support, and function as an essential link to other live-saving services.

Ref: The position of Correlation-European Harm Reduction Network and the Eurasian Harm Reduction Association on the continuity of harm reduction services during the COVID-19 crisis (19 March 2020)

<https://www.correlation-net.org/harm-reduction-must-go-on>

<https://harmreductioneurasia.org/the-position-during-the-covid-19>

COVID-19: ON THE WEB

medRxiv and bioRxiv websites

This two websites, supported by Yale University and the British Medical Journal (BMJ) are holding platforms for draft manuscripts that have been submitted for publication but that have not yet been peer-reviewed.

All papers come with a cautious that results have not undergone this rigorous check,

As an indication of the volume of papers linked to COVID-19 SARS-CoV-2 there are already 1,687 articles online in PDF format (1,316 for medRxiv and 371 for bioRxiv).

<https://connect.medrxiv.org/relate/content/181>

Resources from WHO on COVID-19

WHO have published a wide range of important resources

Q&A on coronaviruses (COVID-19)

<https://www.who.int/news-room/q-a-detail/q-a-coronaviruses>

Q&A on COVID-19, HIV and antiretrovirals

<https://www.who.int/news-room/q-a-detail/q-a-on-covid-19-hiv-and-antiretrovirals>

Coronavirus myth busters

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters>

Includes:

Being in the sun or at high temperature does not protect against COVID-19.

Being able to hold your breath does not mean you are free from coronavirus.

Alcohol does not protect against COVID-19. Neither does garlic.

Cold weather and snow doesn't kill coronavirus and hot climates are still at high risk.

Coronavirus is not transmitted by mosquito bites.

Will pneumonia and flu vaccines help?

Q&A on COVID-19, pregnancy, childbirth and breastfeeding

<https://www.who.int/news-room/q-a-detail/q-a-on-covid-19-pregnancy-childbirth-and-breastfeeding>

Q&A: Similarities and differences – COVID-19 and influenza

<https://www.who.int/news-room/q-a-detail/q-a-similarities-and-differences-covid-19-and-influenza>

WHO guidance on severe acute respiratory infection when COVID-19 is suspected

This document is intended for doctors taking care of hospitalised adult and paediatric patients with severe acute respiratory infection (SARI) when a nCoV infection is suspected.

It is not meant to replace clinical judgment or specialist consultation but rather to strengthen clinical management of these patients and provide to up-to-date guidance.

Best practices for SARI including IPC and optimised supportive care for severely ill patients are essential.

Ref: WHO. WHO guidance on clinical management of severe acute respiratory infection when COVID-19 is suspected. (13 March 2020).

[https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected)

WHO daily situation reports

WHO now publishes daily updates on incidence and suspected routes of transmission in all countries and regions.

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

Comparing HIV/AIDS and COVID-19 pandemics

Articles that draw parallels between the COVID-19 health crisis and the response to HIV/AIDS.

How to survive yet another plague: I lived through the AIDS epidemic - here's how to live through coronavirus.

Mark Shoofs. (20 March 2020).

<https://www.buzzfeednews.com/article/markshoofs/how-to-survive-yet-another-plague>

Lessons the AIDS epidemic has for coronavirus

Brandon Tensley, CNN

<https://www.cnn.com/2020/04/05/politics/coronavirus-aids-hiv-sarah-schulman/index.html>

For HIV survivors, a feeling of weary déjà vu

Jacob Bernstein. (8 April 2020)

<https://www.nytimes.com/2020/04/08/style/coronavirus-hiv.html>

Lessons of Aids for Covid-19: Don't sacrifice science to expediency

Robin Gorna. (9 April 2020).

<https://www.dailymaverick.co.za/article/2020-04-09-lessons-of-aids-for-covid-19-dont-sacrifice-science-to-expediency>

COVID-19: The HIV research advocacy movement offers lessons

Stacey Hannah. (6 April 2020).

<https://www.avac.org/blog/covid-19-hiv-research-advocacy-movement-offers-lessons>

New COVID-19 webinars**Free online course on coronavirus**

Free online course on coronavirus that includes short lectures and presentations of various kinds (each lasts no more than six minutes). You take the course at your own pace, although they suggest four hours a week for three weeks.

The course is developed by Future Learn and the London School of Hygiene and Tropical Medicine.

Give the rapid developments in this field, the course will be updated in a few weeks.

<https://www.futurelearn.com/courses/covid19-novel-coronavirus>

AVAC COVID and HIV Webinars**The Impact of COVID-19 on Clinical Trials in Sub-Saharan Africa (9 April 2020)**

<https://www.avac.org/event/webinar-impact-covid-19-clinical-trials-sub-saharan-africa>

Talks with community engagement practitioners from trial site communities across Africa on how HIV clinical trials are being affected by the global response to COVID 19.

Pandemic Vaccine Development and Lessons for COVID-19 (2 April 2020)

<https://www.avac.org/event/webinar-pandemic-vaccine-development-and-lessons-covid-19>

Mark Feinberg of IAVI and Helen Rees of Wits RHI talk about lessons for COVID-19 from Ebola and HIV vaccine development.

Global Advocates' Teleconference: COVID-19 & HIV update (23 March 2020)

<https://www.youtube.com/watch?v=DgUkiivCrRQ&feature=youtu.be>

Carl Dieffenbach, NIH's Director of the Division of AIDS (DAIDS) talks about how the response to HIV and COVID-19 impact each other. Also covers an advocacy agenda for COVID-19 in sub-Saharan Africa.

COVID-19: RESCHEDULED MEETINGS

The following listing covers selected upcoming HIV-related meetings and workshops. Registration details, including for community and community press are included on the relevant websites.



Due to the new coronavirus health crisis, most meetings are either being cancelled or rescheduled (ie BHIVA, INTEREST, IAS AIDS 2020 and PK and paediatrics workshops).

Community Reclaiming the Global Response (HIV 2020)

CANCELLED (was 5 – 7 July 2020, Mexico City)

<https://www.hiv2020.org/registration>

23rd International AIDS Conference (AIDS 2020)

6 – 10 July 2020 (NOW VIRTUAL ONLY)

www.aids2020.org

23rd International Workshop on Co-morbidities and Adverse Drug Reactions in HIV (2020)

12 – 13 September 2020, New York

<https://www.intmedpress.com/comorbidities/default.cfm?itemtypeid=1&title=The%20Workshop>

21st International Workshop on Clinical Pharmacology of HIV, hepatitis, and other antiviral drugs

28 – 30 September, New York (rescheduled from May)

www.virology-education.com

11th International Workshop on HIV & Ageing (2020)

1 – 2 October 2020, NYC

<https://www.virology-education.com>

HIV Glasgow Congress 2020

4 – 7 October 2020, Glasgow (expects to continue)

www.hivglasgow.org

HIV Research for Prevention (HIV R4P 2020)

11 – 15 October 2020, Cape Town

<https://www.hivr4p.org>

International Workshop on HIV Paediatrics 2020

16 - 17 November 2020, San Francisco, USA.

www.virology-education.com

26th Annual BHIVA Conference (BHIVA 2020)

22–24 November 2020, Harrogate (rescheduled from April)

www.bhiva.org

International Conference on HIV Treatment, Pathogenesis, and Prevention Research in Resource-Limited Settings (INTEREST) 2020

1 – 4th December, Windhoek, Namibia (rescheduled from May)

<https://virology.eventsair.com/interest-2020/registration/Site/Register>

expected: planned follow-up to continue to two years. HTB (1 December

PUBLICATIONS & SERVICES FROM i-BASE

i-Base website

All i-Base publications are available online, including editions of the treatment guides.

<http://www.i-Base.info>

The site gives details about services including the UK Community Advisory Board (UK-CAB), our phone service and Q&A service, access to our archives and an extensive range of translated resources and links.

Publications and regular subscriptions can be ordered online.

The Q&A web pages enable people to ask questions about their own treatment:

<http://www.i-base.info/qa>

i-Base treatment guides

i-Base produces six booklets that comprehensively cover important aspects of treatment. Each guide is written in clear non-technical language. All guides are free to order individually or in bulk for use in clinics and are available online in web-page and PDF format.

<http://www.i-base.info/guides>

- Introduction to ART (May 2018)
- HIV & quality of life: side effects & long-term health (Sept 2016)
- Guide to PrEP in the UK (March 2019)
- HIV testing and risks of sexual transmission (June 2016)
- Guide to changing treatment and drug resistance (Jan 2018)
- Guide to HIV, pregnancy & women's health (April 2019)

Pocket guides

A series of pocket-size concertina folding leaflets that is designed to be a very simple and direct introduction to HIV treatment.

The five pocket leaflets are: Introduction to ART, HIV and pregnancy, ART and quality of life, UK guide to PrEP and HCV/HIV coinfection.

The leaflets use simple statements and quotes about ART, with short URL links to web pages that have additional information in a similar easy format.

U=U resources for UK clinics: free posters, postcards and factsheets

i-Base have produced a new series of posters, postcards and leaflets to help raise awareness about U=U in clinics.

This project was developed with the Kobler Centre in London.

As with all i-Base material, these resources are all free to UK clinics.

Until our online order form is updated to include the U=U resources, more copies can be ordered by email or fax.

email: subscriptions@i-base.org.uk

Customise U=U posters for your clinic

i-Base can customise U=U posters to include pictures of doctors, nurses, pharmacists, peer advocates or any other staff that would like to help publicise U=U.

Personalising these for your clinic is cheap and easy and might be an especially nice way to highlight the good news.

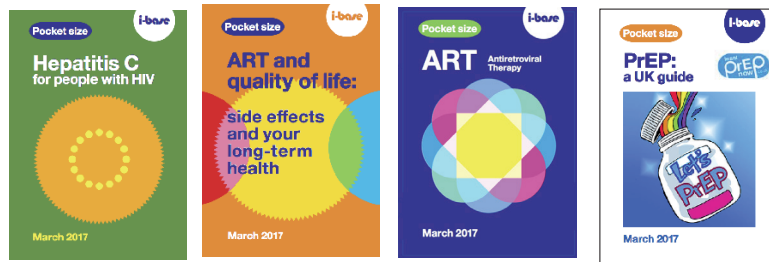
For further information please contact Roy Trelvelon at i-Base:

roy.trelvelon@i-Base.org.uk

Order publications and subscribe online

All publications can be ordered online for individual or bulk copies. All publications are free. Unfortunately bulk orders are only available free in the UK. <http://i-base.info/order>





h-tb

HIV TREATMENT BULLETIN

HTB is published in electronic format by HIV i-Base. As with all i-Base publications, subscriptions are free and can be ordered using the form on the back page or directly from the i-Base website:

<http://www.i-Base.info>

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HIV i-Base receives unconditional educational grants from charitable trusts, individual donors and pharmaceutical companies. All editorial policies are strictly independent of funding sources.

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