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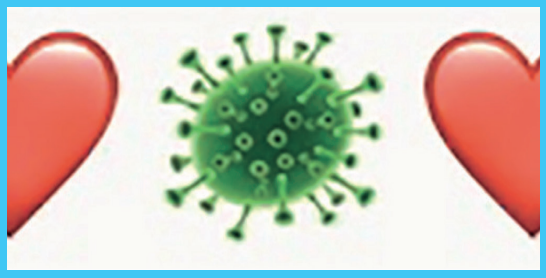
hiv treatment bulletin (e)



Dolutegravir for kids & COVID-19 vaccines (9 December 2020)

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Published by HIV i-Base

HTB no.13/14 – HIV and COVID-19 supplement ISSUE 10

Contents continued...

i-Base 2020 appeal

Please support i-Base with £5 or £10 a month...

This year we are continuing a funding appeal to help i-Base continue to provide free publications and services during 2020.

i-Base now recieve more than 12,000 questions each year and the website has more than 500,000 view each month. We also distribute more than 80,000 booklets and leaflets free to UK clinics every year.

If 1000 people support us with £5 a month we will be on course to meet our funding shortfall. All help is appreciated.

http://i-base.info/i-base-appeal-we-need-your-help

Plus a BIG thank you all all supporters over the years including in the recent Solidarity2020 campaign.

More than 70 people bought one or more posters curated by Wolfgang Tillmans and the Between Bridges Foundation, to who we are also really grateful :)

EDITORIAL


World AIDS Day 2020

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World AIDS Day 2020: selected events

The London Patient: celebrating optimism for a widely accessible and easier HIV cure

BHIVA launch Health and HIV news production with ITN

Published by HIV i-Base

This last issue of HTB for 2020 just catches news of the first approvals for the Pfizer/BioNTech vaccine against COVID-19 (BNT162b2) - in the UK, then Bahrain, Canada and now in the US.

The results – available in detail in the 50-odd page FDA briefing document and also just published in the NEJM – were far better than experts hoped for, even while we still need further data on the duration of protection (against COVID-19) and whether there is even efficacy against transmission (of SARS-CoV-2). [1, 2]

The FDA hearing for the Moderna/NIH vaccine - also using mRNA - is due on 17 December with approval also expected. [3] Although more difficult to interpret, this issue of HTB includes results from the Oxford/ Astra-Zeneca ChAdOx.1 vaccine just published in the Lancet (where transmission is at least a secondary endpoint in the UK study).

Reports will now increasingly move to vaccine manufacturing, delivery and equity of access. So although vaccinations have already started in the UK - and this issue includes BHIVA guidance for people living with HIV - universal access globally might still take several years - showing the continued importance of also finding effective treatment.

We unfortunately report disappointing news from the WHO SOLIDARITY study that found no impact on mortality from any of the four treatments and the Barcelona PEP study showing no impact of hydroxychloroquine (HCQ) as PEP before infection is established (confirming other studies). This questions the likelihood of any benefit in mild infection even though both HCQ and lopinavir/r are the two treatments currently proposed for a new 13-country study in Africa.

HIV news is still just as important. This issue includes reports on approvals and essential access to new paediatric formulations of dolutegravir – these developments are some of the rare good news stories from 2020.

Reports from HIV virtual conferences are also included - and these will be expanded in the next issue as those meetings enable open access to their talks and presentations.

And finally, this double issue of HTB includes a short supplement on events from World AIDS Day 2020.

We produced a short compilation of projects from 1 December this year, so that as we move forward into what will hopefully be an easier and safer 2021 we also remember the people whose memory keeps us focused on a better New Year ahead.

As always, we would like to thank our readers and supporters and wish you best seasons greetings for a safe and happy 2021.

References

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3. Vaccines and related biological products advisory committee: December 17, 2020 meeting announcement. https://www.fda.gov/advisory-committees/advisory-committee-calendar/vaccines-and-related-biological-products-advisory-committee-december-17-2020-meeting-announcement#event-information

CONFERENCE REPORTS

BHIVA 2020 virtual conference

22-24 November 2020.

Introduction

Simon Collins, HIV i-Base

This year the BHIVA conference was held as a virtual meeting.

The programme and the abstract book are already online and webcasts from all oral presentations and PDF files for posters with become open access on the BHIVA website, four weeks after the meeting.

https://www.bhiva.org/VirtualConference2020

Further reports will be covered in the next issue of HTB.

Reports in this issue are:

- Worryingly low HIV knowledge among health workers at London hospital: 80% unaware of U=U, 36% worried about their risk from patients

Worryingly low HIV knowledge among health workers at London hospital: 80% unaware of U=U, 36% worried about their risk from patients

Simon Collins, HIV i-Base

An oral presentation at BHIVA 2020 from Moses Shongwe from Barts Health NHS Trust showed disturbing low levels of HIV awareness from a recent survey of over 400 health workers at this major London hospital that provides expert HIV care.

The single-side 10-question paper survey was distributed to staff on adult medical, surgical and critical care wards, A&E and theatres at Barts NHS Trust on three days during December 2019 and January 2020.

The questions asked about confidence in treating people living with HIV, potential risks for health workers, and awareness of transmission, PEP, PrEP and U=U.

Overall, 411 surveys were returned from a wide range of professions: nurses (57%), Health assistants (19%), doctors (12%) but also including pharmacists, students and other workers. Approximately one-third were age 18-29, 30% were 30-39, 21% were 40-49 and the remainder >50 years old. Other demographics included 36% white, 29% black and 27% Asian, with 91% heterosexual.

The results in 2020 would actually have been alarming twenty years ago, especially coming from such a high incidence and high prevalence London borough.

Four in five people (80%) had not heard about U=U and almost half thought that a needlestick injury would be a risk from a patient with undetectable viral load. 35% still thought mother to child transmission was still a high risk with undetectable viral load.

Overall, 38% said they felt at risk when treating people living with HIV, 25% thought HIV positive patients should be isolated in side rooms, and 52% thought that HIV positive people should be placed at the end of operating lists

More than 3 in 5 (62%) had not heard of PEP or PrEP although 45% thought PrEP could be used after a needlestick injury and 76% were not confident at talking to patients about HIV.

The only positive results from the survey was that 82% of replies also asked for further information and training on HIV.

C O M M E N T

This short study showed such low levels of HIV awareness that it is difficult to know how to respond to the disturbing results.

Most people involved in HIV care hoped that the recent high profile given to PrEP and U=U would have reached the wider general public and certainly health workers in other fields.

This survey, especially if repeated in other trusts, shows such a low awareness that people living with HIV would very likely to receive suboptimal care. It also questions the recommendations for broad HIV disclosure to health workers outside of HIV.

They also highlight the real challenge for the ongoing Fast Track City to end HIV stigma in London.

References
1. Shongwe M et al. Measuring health care HIV knowledge within our NHS trust. BHIVA 2020 virtual conference, 22-24 November 2020. Oral abstract O6.
https://onlinelibrary.wiley.com/toc/14681293/2020/21/S4

CONFERENCE REPORTS

12th International Workshop on HIVpaediatrics

16–17 November 2020, virtual meeting

Introduction

Polly Clayden, HIV i-Base

The 12th International Workshop on HIV Paediatrics was held virtually 16–17 November 2020.

An annual fixture from Virology Education since 2009, the paediatrics workshop is the only HIV meeting devoted to research in prevention and treatment for infants, children and adolescents.

Presentations and webcasts (provided speaker's consent) are now available on the website:

https://academicmedicaleducation.com/hiv-pediatrics-2020

Articles in this issue are:

- Dolutegravir dosing for infants and young children

Dolutegravir dosing for infants and young children

Polly Clayden, HIV i-Base

Dolutegravir (DTG) appears safe and effective in infants and children 4 weeks to 6 years old receiving 5 mg dispersible tablets (DGT-DT) in IMPAACT P1093 at week 24. [1] Recent DTG paediatric approvals for this age group were informed by the Population PK (PopPK) developed with combined datasets from P1093 and ODYSSEY (PENTA 20). [2, 3, 4]

Findings from these two studies were presented at the virtual 12th International Workshop on HIV Pediatrics, 16–17 November 2020.

IMPAACT P1093

P1093 is an ongoing phase 1/2, non-comparative pharmacokinetic (PK) and safety study in children 4 weeks to 18 years of age. The data presented were from the 4 weeks to 6 years age group enrolled in three age cohorts: 4 weeks to 6 months; 6 months to 2 years; and 2 to 6 years of age. Children were treatment naive or failing therapy with viral load at least 1000 copies/mL.

After initial 4-week dose evaluation, in an intensive PK cohort, additional children were enrolled to assess long-term outcomes at proposed doses.

DTG-DT was dosed with 5 mg dispersible tablets according to age and WHO weight-band (see table 1) and given with a genotype-guided background regimen with at least one active agent.

Table 1: DTG dispersible tablet dosing by age and WHO weight band

Age	Weight band kg	DTG-DT dose mg (tablets)
≥4 weeks to <6 months	3 to <6	5 (1)
	6 to<10	10 (2)
≥6 months	6 to <10	15 (3)
	10 to <14	20 (4)
	14 to <20	25 (5)

The investigators performed clinical and laboratory assessments between day 5 and 13 and at weeks 4, 8, 12, 16 and 24 (+/- 3 days). Safety analysis included data to 30 April 2019.

Of 51 children enrolled from 9 countries (70% from African countries, 55% girls), baseline median viral load was 4.3 log10 copies/mL (IQR 3.3 to 5.8), CD4 count was 1866 cells/mm3 (IQR 1189 to 2384) and CD4 per cent was 24.2% (IQR 20.0 to 31.0). The majority (86%) were ART-experienced.

Thirty-four children (67%) had viral load results available at week 24. The proportion with <400 copies/mL at 24 weeks was: 29/34, 85% (95% CI 69 to 95). The proportion with <50 copies/mL was: 18/34, 53% (95% CI 35 to 70).

Stratified by age group, the proportions with <400 copies/mL were: 88% (95% CI 64 to 99) for 4 weeks to <6 months (n=17), 89% (95% CI 52 to 100) for 6 months to <2 years (n= 9), and 75% (95% CI 35 to 97) 2 years to <6 years (n=8).

For <50 copies/mL the respective proportions were: 41% (95% CI 18 to 67), 67% (95% CI 30 to 93), and 63% (95% CI 25 to 92).

CD4 changes were variable. Presenting author Theodore Ruel suggested these likely reflected multiple factors, including recovery and age-related normal changes.

No grade 3 or 4 adverse events were considered to be DTG related and none led to permanent discontinuation.

DTG-DT palatability was rated average, good, or very good for the majority (98%) of respondents.

Population PK: IMPAACT P1093 and ODYSSEY (PENTA20)

The recent DTG paediatric approvals use WHO weight-band based recommendations for once-daily dosing in children 4 weeks of age and above derived from combined datasets from IMPAACT P1093 and ODYSSEY (PENTA20). These doses were informed by the PopPK analysis.

ODYSSEY is a non-inferiority, phase 2/3 study comparing the efficacy and toxicity of DTG plus 2 NRTIs vs standard of care in infants and children.

Intensive and sparse PK samples following dosing with DTG film coated tablets (DTG-FCT), granules and DTG-DT formulations in the fasted state and without food restrictions were collected in P1093; intensive PK samples using DTG-FCT and DTG-DT in fasted state were collected in ODYSSEY.

Of 239 participants included, baseline age ranged from 0.17 to 17.5 years and weight from 3.9 to 91 kg, 50% were girls and 80% were black.

A PopPK model was developed with data from P1093 (1711 concentrations from 151 participants) and ODYSSEY (939 concentrations from 88 participants) to characterise PK, covariates and associated variability.

The final PopPK model simulated exposures across weight bands, doses, and formulations which were compared with adult reference data.

The model described study data and associated variability well with estimated mean (interindividual variability) CL/F=1.03L/h (29%) and V/F=13.6 L (107%).

Based on observed and simulated data, the investigators proposed dose stratification by age (<6 months and ≥6 months) in the 6 to <10 kg weight band (10 and 15 mg DTG-DT, respectively) to account for metabolic enzyme maturation.

The proposed doses for DTG-DT were as described above with 30 mg DTG-DT or 50 mg DTG-FCT in the >20 kg weight band.

At these doses, the simulated 24 hour concentration (C24h) was consistent across weight bands, similar to observed data, and met the minimum target concentrations of 0.697 ug/mL.

Also, simulated 24-hour area-under-the-curve (AUC24h) met the minimum target (46 h*ug/mL) across weight bands.

Simulated maximum concentration (Cmax) results were 0.96- to 1.79- fold those seen in adults at the approved dose of DTG 50 mg twice daily (4.15 ug/mL).

PK variability was higher in this paediatric population and no additional safety concerns were observed.

C O M M E N T

Amid all the bad news, 2020 has been quite a year for paediatric HIV treatment. As described in this issue, [5] the 10 mg scored generic formulation of DTG – dosed according to WHO weight bands – will soon be available in many low- and middle-income countries.

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https://i-base.info/htb/39465

ANTIRETROVIRALS

EU approves dolutegravir 5 mg dispersible for children older than four weeks

Polly Clayden, HIV i-Base

On 12 November, the Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) gave a positive opinion recommending marketing authorisation for dolutegravir 5 mg dispersible tablets for young children with HIV.

This formulation can be used as part of an ART combination to treating children aged at least four weeks and weighing at least 3 kg.

CHMP's opinion follows the US Food and Drug Administration (FDA) paediatric approval earlier this year.

The positive opinion also supports the updated dosing recommendations for dolutegravir film-coated tablets for children aged 6 years and above and weighing at least 14 kg, including the adult 50 mg tablet for children weighing at least 20 kg.

Full EMA approval is expected in January 2021.

Reference

EMA. Summary of opinion: Tivacay (dolutegravir). 12 November 2020.

https://www.ema.europa.eu/en/medicines/human/summaries-opinion/tivicay

New formulation of dolutegravir will make modern ART available for babies and young children at less than $120 a year

Polly Clayden, HIV i-Base

The much-anticipated 10 mg, dispersible, scored, strawberry-flavoured, paediatric formulation of dolutegravir will soon be available to low- and middle-income countries, through a price agreement from Unitaid and CHAI with generic manufacturers Viatris and Macleods. [1, 2]

As well as providing greatly-improved HIV treatment this will significantly reduce the annual lower cost for paediatric ART from over $480 per child to under $120 per child.

The pricing agreement means the new dolutegravir formulation will be launched at a yearly cost of $36 per child, reduced from about $400.

This partnership between Unitaid, CHAI and ViiV Healthcare, together with Mylan (now a subsidiary of the newly-formed Viatris), has led to the fastest regulatory approval under the US FDA PEPFAR programme of a generic paediatric HIV drug to date.

CHAI also estimates that the agreement will result in significant savings for health budgets – in the region of US $60–260 million over five years.

The first FDA tentative approval of paediatric dispersible DTG product from Viatris was 19 November 2020. [3] Tentative approval for Macleods' product is anticipated in early 2021.

The product will initially be made available in Benin, Kenya, Malawi, Nigeria, Uganda and Zimbabwe in the first half of 2021, with plans for rapid scale-up across a number of countries.

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HIV PREVENTION

Innovation benefits from cabotegravir LA injections as HIV PrEP will enable closer FDA review

Simon Collins, HIV i-Base

On 17 November 2020, ViiV Healthcare issued a press release noting that the US FDA had given cabotegravir LA injections a 'breakthrough therapy' designation for use as HIV PrEP, due to offering at least one significant benefit over existing treatment options. [1]

This was based on early results from the HPTN 083 study in gay men and transgender women that were presented at the IAS virtual conference in July. The injectable formulation showed greater coverage with fewer problems linked to low adherence compared to oral PrEP.

More recently, results from the HPTN 084 study reported similar efficacy in heterosexual women in seven sub-Saharan African countries. [2]

Importantly, the press release refers to including both studies in regulatory submissions in the hope that any approval simultaneously covers all populations.

References

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2. Two-monthly cabotegravir injections prevent HIV infection in African women: HPTN 084 study recommends early unblinding. HTB (11 November 2020).
   https://i-base.info/htb/39327

Once-monthly oral pill as PrEP against HIV: islatravir study to start in 2021

Simon Collins, HIV i-Base

On 16 November 2020, Merck (MSD outside the US) announced details of a new phase 3 study for oral PrEP with the investigation HIV drug islatravir, that if successful, would involve taking only one pill a month. [1]

The proposed islatravir study, named IMPOWER22, will randomise approximately 4,500 cisgender women and adolescent girls aged 16 to 45 to either once-monthly islatravir or daily TDF/FTC plus matched placebo that will involve all participant taking daily pills throughout the study.

The study is being funded by the Bill & Melinda Gates Foundation for sites in countries in southern Africa, with Merck supplying the study drug and covering costs for US trial sites.

Other studies are planned for gay men and transgender women.

C O M M E N T

Although these are exciting plans, the timing of the announcement suggests marketing than any urgency of medical news.

The islatravir study is not due to start until early 2021 and details have not yet been posted to the trial registry clinicaltrials.gov.

However, on 9 November 2020, the HPTN 084 study reported early news that cabotegravir LA injections for PrEP were effective at preventing HIV transmission and that the study could end its blinded phase earlier than expected and offer injections to all trial participants. [2]

Islatravir is still in research studies for use as a treatment for HIV and these are exciting plans for PrEP.

The monthly pill also has the potential for a single pill to be used as post-exposure prophylaxis (PEP) similar to a morning after pill, based on early results in animal studies. [3]

If these studies are effective, and access to islatravir is easy and affordable - both significant challenges - then the impact on achieving the 2030 target for eliminating HIV transmission globally will be very exciting.

References

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3. Monthly islatravir for PEP and PrEP: 12 pills a year could cover unmet need for HIV prevention in billions of people globally. HTB (12 March 2020).
   https://i-base.info/htb/37332

HIV DRUG RESISTANCE

High rates of drug resistance and virological failure among adults with HIV admitted to hospital in Malawi

Polly Clayden, HIV i-Base

Thirty-two per cent of participants at the Malawi site of the STAMP trial had virological failure with high levels of resistance to at least two first-line antiretrovirals – according to data published online 1 September 2020 in The Lancet HIV.

This evaluation was from an observational cohort study nested in the rapid urine-based screening for tuberculosis (TB) to reduce AIDS-related mortality in hospitalised patients in Africa (STAMP) trial. It enrolled unselected adults with HIV, admitted to hospital, and the nested study looked at ART failure, drug resistance, and early mortality.

Exclusion criteria were TB treatment within 12 months, TB preventative therapy within 6 months, or being unable or unwilling to provide informed consent.

Participants were included in the nested cohort study if they were enrolled at the Malawi site (Zomba Central Hospital) and had been taking ART for at least 6 months at admission. Management of HIV was according to Malawian national guidelines.

Participants who met inclusion criteria had frozen plasma samples tested for viral load. Virological failure was defined as viral load 1000 copies/mL and above. Those with virological failure were tested for drug resistance by ultra-deep sequencing (results defined as intermediate or high-level resistance according to the Stanford HIVDR programme).

The investigators calculated mortality risk at 56 days from enrolment. Participants were censored at death, at 56 days, or at last contact if lost to follow-up.

They modelled the causal association between HIV multidrug resistance and mortality, excluding cofactors, most notably: CD4 cell count, advanced HIV, and poor functional and nutritional status.

Of 1316 participants with HIV enrolled in the STAMP trial at the Malawi site between 26 October 2015 and 19 September 2017, 786 had taken ART for at least 6 months. And, 252 (32%) of 786 participants had virological failure.

Mean age was 41·5 years and 528 of 786 (67%) were women; 770 (98%) were on first-line ART, and median time on ART was 4·7 years; 606 (77%) had advanced HIV.

Of 237 patients with HIV drug resistance results available, 195 (82%) had resistance to 3TC, 128 (54%) to tenofovir, and 219 (92%) to efavirenz. Resistance to at least two drugs was common (196, 83%).

Analyses adjusted by STAMP trial arm only revealed that age, sex, time on ART, advanced HIV, BMI, Karnofsky score, CD4 count, haemoglobin, WHO danger signs, TB treatment, and virological failure were all strongly associated with increased mortality.

Multidrug resistance was associated with increased mortality: aHR 1·7 (95% CI 1·2 to 2·4), p=0·0042. Mortality in this cohort was high: 20% by day 56.

COMMENT

Few data exist on people taking ART but admitted to hospital, so these findings and recommendations are very useful. Many people in ART programmes are not accessing viral load testing (particularly now COVID-19 is disrupting HIV care) and these results reinforce the need for this for hospital inpatients – ideally using rapid tests.

Besides rapid viral load testing, the investigators recommend that these patients should be switched to alterative ART. They note that dolutegravir will likely overcome the high levels of NNRTI resistance but there are still questions about dolutegravir-based ART and the effect of high viral load and multidrug resistance.

The results support development of low-cost, point of care resistance tests, (which are in the pipeline).

"Differentiated ART clinic care to support adherence and detect ART failure in advanced HIV, testing and screening for opportunistic infections, and improved care post discharge could improve outcomes, although further evidence for such interventions will be needed" they write.

References

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OTHER NEWS

World AIDS Day 2020 - selected events

Simon Collins, HIV i-Base

This year many organisations developed projects and events on 1 December to remember friends whose lives are still affected by HIV and to focus on ways to move forwards in overcoming HIV in the future.

A few selected events and publications are included below.

Download PDF version (900 Kb):

https://i-base.info/htb/wp-content/uploads/2020/12/HIV-WAD-1-Dec-2020.pdf (PDF)

The London Patient: celebrating optimism for a widely accessible and easier HIV cure

This has been such a difficult year that the UK-CAB and HIV i-Base are highlighting the optimistic case of the London Patient.

Interview posted on UK-CAB youtube channel:

https://youtu.be/wmjmPV9Gz8I

To mark World AIDS Day, we are happy to post an interview from a UK-CAB meeting earlier in the year.

This was the first time that the London Patient – Adam Castillejo – had spoken publicly - and we are very proud that he worked with the UK-CAB to share his incredible story.

Now, after more than three years, he feels ever more determined to share his message of hope and resilience.

This has been such a difficult year that the UK-CAB and HIV i-Base are highlighting the optimistic case of the London Patient.

To mark World AIDS Day, we are happy to post an interview from a UK-CAB meeting earlier in the year.

This was the first time that the London Patient – Adam Castillejo – had spoken publicly to an HIV Forum - and we are very proud that he worked with the UK-CAB to share his incredible story.

Now, after more than three years, the London Patient feels ever more determined to share his message of hope and resilience.

"I am a strong believer that we will be able to find an accessible CURE for everyone over the next decade. Now it is even more important to keep the effort and the conversation going during these unsettling times. Never give up on hope; I never did...!" – Adam Castillejo, the London Patient

BHIVA launch Health and HIV news production with ITN

https://www.bhiva.org/World-AIDS-Day-2020

The British HIV Association (BHIVA) partners with ITN Productions in a production for World Aids Day 2020 and beyond, anchored by Alice Beer.

The programme includes community activists Susan Cole, Mercy Shibemba, Jo Josh, Bakita Kasadha and others.

Dr Laura Waters, Chair of the British HIV Association, joins the programme to talk about life expectancy, treatment developments, testing and prevention, and also how COVID-19 has affected people living with HIV.

The programme also discusses the negative impact of HIV stigma, and the need for positive messaging in any future public health campaigns.

Treatment access: New formulation of dolutegravir will make modern ART available for babies and young children at less than $120 a year

https://i-base.info/htb/39465

Good news in this article from the i-Base HIV Treatment Bulletin.

The much-anticipated 10 mg, dispersible, scored, strawberry-flavoured, paediatric formulation of dolutegravir will soon be available to low- and middle-income countries, through a price agreement from Unitaid and CHAI with generic manufacturers Viatris and Macleods. [1, 2]

As well as providing greatly-improved HIV treatment this will significantly reduce the annual lower cost for paediatric ART from over $480 per child to under $120 per child, with dolutegravir reduced from about $400 to $36 per child.

Speech by Adeeba Kamarulzaman, President International AIDS Society, at WHO virtual event

https://www.iasociety.org/The-latest/Blog/ArticleID/259/Adeeba-Kamarulzaman-Innovations-in-HIV-care-for-continuity-and-expansion

"While this focus is necessary to save lives and stop the spread of COVID-19, it also interrupts access to vital HIV treatment and prevention services. A recent survey of programmes in 106 countries found that COVID-19 disruptions have affected 85% of HIV programmes."

Towards an HIV cure: Lancet report

This World AIDS Day, leading HIIV researchers have published a review and viewpoint in The Lancet HIV to advance the HIV cure agenda and plan for the delivery of an HIV cure in high burden countries.

https://www.thelancet.com/journals/lanhiv/article/PIIS2352-3018(20)30234-4/fulltext

The HIV Commission final report & recommendations: How England will end new cases of HIV

Launch of report from an extended programme coordinated to coordinate community perspectives on the best approaches to end continued HIV transmission by 2030.

It is also, importantly, to ensure all HIV positive people have access to effective treatment and to end HIV-related stigma.

Guest speakers included in the launch on 1st December included Sir Elton John, Dame Inga Beale, Mercy Shibemba, Ian Green, Deborah Gold, Anne Aslett, Dame Alison Saunders, Dr Rob Berkeley, and others.

Read and download the commission report:

https://www.hivcommission.org.uk/2020/11/30/final-report-and-recommendations-out-now

Watch commission launch event:

https://www.hivcommission.org.uk/2020/12/02/watch-our-report-and-recommendations-launch-event

Blog from UK activist Ant Babajee

A personal journey from being diagnosed in 2007 to working with many important and diverse community projects (including the UK-CAB**,** Catwalk 4 Power**,** Positive Voices**,** The Undetectables video (for GMFA) and NAT**(hosting the Blog).**

https://www.nat.org.uk/blog/nothing-about-us-without-us

Remembering Timothy Ray Brown

Timothy Ray Brown: The Serendipitous Hero of HIV Cure Research

Four researchers (Thomas Hope, Nichole Klatt, Jonah Sacha, and Paula. Cannon) remember Timothy Ray Brown, the Berlin Patient, who sfter a long fight, lost his battle with cancer earlier this year.

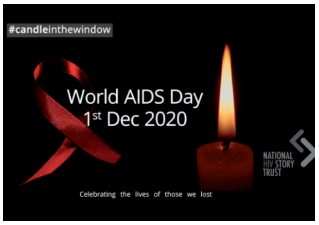
https://www.liebertpub.com/doi/10.1089/aid.2020.0253

The i-Base tribute is also online:

https://i-base.info/htb/39020

National HIV Story Trust virtual candlelight vigil

https://www.nhst.org.uk/world-aids-day-2020



The National HIV Story Trust is marking World AIDS Day 2020 by hosting a virtual candlelight vigil.

Virtual candles in our windows at home will be displayed from 6.00pm on December 1st.

"Whilst we are fighting another pandemic, a virtual candle vigil is the safest way for us all to remember those who died due to the AIDS/HIV pandemic, and to honour all those who helped and are continuing to help in the fight against the virus. This year we particularly want to honour the HIV specialists and all NHS staff who do such a wonderful job in caring and treating those with HIV in what is a particularly difficult year."

HTB SUPPLEMENT ON COVID-19: Issue 9

COVID-19: HIV and COVID-19 COINFECTION

Recent studies on HIV and COVID-19 coinfection

Simon Collins, HIV i-Base

The following papers have been published that include clinical outcomes on HIV positive people who were diagnosed with COVID-19, with brief summaries from the abstract.

Virologic and immunologic outcomes for HIV patients with coronavirus disease 2019

Hu R et al. JAIDS. doi: 10.1097/QAI.0000000000002540. (15 October 2020).

https://journals.lww.com/jaids/Abstract/9000/Virologic_and_immunologic_outcomes_for_HIV.96050.aspx

Results from 35 HIV positive people showing higher viral load after recovery from COVID-19.

"Twenty of the 35 co-infected patients were identified as asymptomatic/mild/moderate COVID-19 (non-severe group) and 15 were identified as severe/critical (severe group). The severe and non-severe group had no differences in demographics, HIV baseline status, the intervals between last tests and follow-up tests for CD4 cell count and HIV

viral load (all p>0.05). Overall, there was a significantly increased number of co-infected patients with HIV-1 viral load ≥20 copies/mL after recovery (p=0.008). The median viral load increased significantly after recovery in severe group (p=0.034) while no significant change of HIV viral load was observed in non-severe group. Limited change of CD4 cell count was found (all p>0.05)."

AIDS October 2020: Special selection on HIV and COVID-19

The following articles are included in the 1 October edition of AIDS. This issue of HTB include links to both editorial comment and clinical studies from this edition.

Editorial introduction. Michael Saag. AIDS. 34(12):1755-1756, October 1, 2020.

https://journals.lww.com/aidsonline/Fulltext/2020/10010/Special_section__COVID_19_among_people_living_with.6.aspx

What one pandemic can teach us in facing another

Wafaa El-Sadr, AIDS. 34(12):1757-1759, October 1, 2020.

https://journals.lww.com/aidsonline/Fulltext/2020/10010/What_one_pandemic_can_teach_us_in_facing_another.7.aspx

Preserving 2 decades of healthcare gains for Africa in the coronavirus disease 2019 era

Sonak Pastakia et al. AIDS. 34(12):1761-1763, October 1, 2020.

https://journals.lww.com/aidsonline/Fulltext/2020/10010/Preserving_2_decades_of_healthcare_gains_for.8.aspx

Coronavirus disease 2019 attack rate in HIV-infected patients and in preexposure prophylaxis users

Charre, C et al. AIDS. 34(12):1765-1770, October 1, 2020.

https://journals.lww.com/aidsonline/Fulltext/2020/10010/Coronavirus_disease_2019_attack_rate_in.9.aspx

Retrospective database analysis, with very small numbers of HIV positive and PrEP users that reported similar incidence in all groups.

"From March to April 2020, of 24,860 samples from 19,113 patients (HIV positive 77, PrEP users 27, others 19,009) were assessed for SARS-CoV-2 PCR assay. The positivity rate appeared similar in HIV positive patients (15.6%), PrEP users (14.8%) and other patients (19.1%). The crude/corrected COVID-19 attack rate appeared similar in HIV positive patients (0.31/0.38%) and in PrEP users (0.38/0.42%), and of the same order as the estimated attack rate in the general population (0.24%)."

HIV infection and COVID-19 risk factors for severe disease

Etienne N et al. Research letter, AIDS:;34(12):1771-1774. doi: 10.1097/QAD.0000000000002651. (1 October 2020).

https://journals.lww.com/aidsonline/Fulltext/2020/10010/HIV_infection_and_COVID_19__risk_factors_for.10.aspx

"We performed an observational prospective monocentric study in patients living with HIV diagnosed with COVID-19. Fifty four HIV positive people developed COVID-19 with respectively 14 severe (25.9%) and 5 critical cases (9.3%). By multivariate analysis, age, male gender, ethnic origin from Sub Saharan Africa, and metabolic disorder, were associated with severe or critical forms of COVID-19. Prior CD4 cell counts did not differ between groups. No protective effect of a particular antiretroviral class was observed."

Clinical characteristics, risk factors, and incidence of symptomatic coronavirus disease 2019 in a large cohort of adults living with HIV: a single-center, prospective observational study

Inciarte A et al. AIDS: October 1, 2020 - Volume 34 - Issue 12 - p 1775-1780. doi: 10.1097/QAD.0000000000002643.

https://journals.lww.com/aidsonline/Fulltext/2020/10010/Clinical_characteristics,_risk_factors,_and.11.aspx

Prospective observational study of 53 HIV positive people diagnosed with COVID-19.

"From 1 March 2020 to 10 May 2020, 53 out of 5683 (0.9% confidence interval 0.7–1.2%) people living with HIV were diagnosed with COVID-19. Median age was 44 years, CD4 count was 618 cells/mm³ and CD4/CD8 was 0.90. All but two individuals were virologically suppressed. Cough (87%) and fever (82%) were the most common symptoms. Twenty-six (49%) were admitted, six (14%) had severe disease, four (8%) required ICU admission, and two (4%) died. Several laboratory markers (lower O_2 saturation and platelets, and higher leukocytes, creatinine, lactate dehydrogenase, C reactive protein, procalcitonin, and ferritin) were associated with COVID-19 severity. No HIV *or ARV-related factors were associated with COVID-19 diagnosis or severity. Standardised incidence rate ratios of confirmed or confirmed/probable COVID-19 in HIV positive people were 38% (95%CI: 27 to 52%, p<0.0001) and 33% (95% CI: 21 to 50%, p< 0.0001), respectively relative to the general population."*

Disproportionate burden of coronavirus disease 2019 among racial minorities and those in congregate settings among a large cohort of people with HIV

Meyerowitz EA et al. **AIDS.** 34(12):1781-1787, October 1, 2020.

https://journals.lww.com/aidsonline/Fulltext/2020/10010/Disproportionate_burden_of_coronavirus_disease.12.aspx

US report on 26 HIV positive people diagnosed with COVID-19 during March - April 2020 in Massachusetts and impact of non-HIV risk factors and racial disparities.

"We describe a cohort of 36 HIV positive people with confirmed COVID-19 and another 11 patients with probable COVID-19. Almost 85% of HIV positive with confirmed COVID-19 had a comorbidity associated with severe disease, including obesity, cardiovascular disease, or hypertension. Approximately 77% of HIV positive with COVID-19 were non-Hispanic Black or Latinx whereas only 40% of the HIV positive people in our clinic were Black or Latinx. Nearly half of HIV positive people with COVID-19 had exposure to congregate settings. In addition to people with confirmed COVID-19, we identified another 11 individuals with probable COVID-19, almost all of whom had negative PCR testing."

Clinical characteristics, comorbidities and outcomes among persons with HIV hospitalized with coronavirus disease 2019 in Atlanta, Georgia

Collins LF et al. **AIDS.** 34(12):1789-1794, October 1, 2020.

https://journals.lww.com/aidsonline/Fulltext/2020/10010/Clinical_characteristics,_comorbidities_and.13.aspx

US case series of all HIV positive people diagnosed with COVID-19 at three hospitals in Atlanta.

"Of 530 confirmed COVID-19 cases hospitalised during this period, 20 occurred among PWH (3.8%). The median age was 57 (Q1–Q3, 48–62) years, 65% were men, and 85% were non-Hispanic Black. Presenting median symptom duration was 5 (Q1–Q3, 3–7) days; cough (90%), fever (65%), malaise (60%) and dyspnea (60%) were most common. On admission, 40% of patients required oxygenation support and 65% had an abnormal chest radiograph. Median length of hospitalisation was 5 days (Q1 to Q3, 4 to 12), 30% required intensive care, 15% required intubation, and 15% died. Median CD4 cell count prior to admission was 425 (Q1–Q3, 262–815) cells/mm³ and 90% of patients had HIV-1 RNA less than 200 copies/mL. Half of the patients had at least five comorbidities; hypertension (70%), dyslipidemia (60%) and diabetes (45%) were most prevalent. All three patients who died had CD4+ cell count more than 200, HIV suppression and each had a total of five comorbidities."

Comorbidity indices in people with HIV and considerations for coronavirus disease 2019 outcomes

Winston A et al. **AIDS.** 34(12):1795-1800, October 1, 2020.

https://journals.lww.com/aidsonline/Fulltext/2020/10010/Comorbidity_indices_in_people_with_HIV_and.14.aspx

A cross-sectional study looking for comorbidity indices of COVID-19 among older HIV positive people and a matched HIV negative control group (POPPY study).

"The 699 HIV positive and 304 HIV negative controls were predominantly male (87.5% vs. 64.0%), white (86.3% vs. 90.0%) and had median ages of 57 and 58 years, respectively. Among PWH, the median (IQR) CD4 count was 624 (475 to 811) cells/mm³; 98.7% were on ART. The median (IQR) ECI was 0 (0 to 8) and 0 (–3 to 1), Charlson

Comorbidity Index was 2 (1 to 5) and 1 (0 to 1) and Comorbidity Burden Index 8.6 (2.2, 16.8) and 5.9 (0.6, 10.8), respectively. While all three indices were significantly higher in PWH than in controls (p<0.001 for each), the magnitude of the differences between the two groups were small to medium, with effect sizes (95%CI) of 0.21 (0.16 to 0.27), 0.38 (0.32 to 0.42) and 0.18 (0.11 to 0.23), respectively."

BHIVA statement on HIV positive people and access to COVID vaccines

Simon Collins, HIV i-Base

On 9 November 2020, BHIVA published information about access to the new UK approval of the Pfizer/BioNTech vaccine against COVID-19 and the implications for people living with HIV. [1, 2]

It outlines that there is no reason for HIV positive people to be at any increased risk from the vaccine, although future research will need to check that immune responses are as strong.

Access to the vaccine across the UK will be based on criteria from a panel of independent experts (the JCVI). These are detailed in the Green Book. [3]

The vaccines will be available free and although vaccination is recommended, it is also voluntary.

Access to vaccines

BHIVA state that people will receive the vaccine in strict order of priority based on their age, health, occupation, whether they live in a care or residential home and who they live with. Vaccines will be offered strictly based on these priorities. There is no way to jump the queue, and you will be contacted when your vaccine is due.

There are nine priority groups: those in priority group one will get the vaccine first, followed by each group in order. After that the vaccine will be offered to everyone else (that is all the people not in priority groups 1-9). See Table 1 below,

HIV positive people (with uncomplicated infection) are included in priority group 6.

Some HIV positive people with complications that make them more vulnerable can be recommended for group 4. These people need to be added to a central NHS list by their HIV clinic.

Table 1: Criteria for access to COVID-19 vaccines by priority group

Priority group	Risk group
1	Residents in a care home for older adults. Staff working in care homes for older adults.
2	All those 80 years of age and over. Frontline Health and social care workers.
3	All those 75 years of age and over.
4	All those 70 years of age and over. Clinically extremely vulnerable individuals (not including pregnant women and those under 16 years of age). *
5	All those 65 years of age and over.
6	Adults aged 16 to 65 years in an at-risk group (Table 3). **
7	All those 60 years of age and over
8	All those 55 years of age and over
9	All those 50 years of age and over

* HIV can be included in group 4 if their heatlh is vulnerable.

** HIV is included in Table 3.

BHIVA suggest that the following factors could be used for access to group 4,

- People with a CD4 count less than 50.
- People with a serious HIV-related illness (e.g. an opportunistic infection) in the last 6 months.
- People with a CD4 count between 50 and 200 with other issues that increase the risk of getting very sick, such as:
  - Detectable viral load.

- Low nadir CD4 (the lowest CD4 before starting HIV treatment)

- Other medical conditions associated with increased risk of severe COVID (such as asthma, COPD, diabetes, heart disease, kidney disease, liver disease, Parkinson's disease, multiple sclerosis, motor neurone disease, conditions or drugs that suppress the immune system (e.g. steroid treatment), severe obesity.

- People with 'multi-morbidity' meaning that they have other health conditions that may increase the risk of getting very sick.

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COVID-19: VACCINE

Early safety and immune responses in older people using the Oxford COVID-19 vaccine: overall results complicated by dosing errors

Simon Collins, HIV i-Base

On 18 November 2020, the Lancet published initial safety and immunology results from a substudy of older adults enrolled in the phase2/3 ChAdOx1 vaccine study, together with a supportive editorial comment. [1, 2]

However, the main study results are also controversial for reporting higher efficacy in participants who, by error were only given a lower dose of the two-dose vaccine. [3]

Slightly fewer side effects (mainly local injection reactions and tiredness after the vaccine) were reported by the older participants receiving the active injection (200 aged >70, 120 aged 55 to 69, and 100 aged 18 to 54). Serious side effects will continue to be monitored for a year.

Overall, >99% of participants who received both an initial and boost vaccination generated neutralising antibodies by day 14,

Although these results are encouraging, the study included very few participants older than 80 years and people with substantial underlying chronic illnesses and frailty were also excluded.

The study concludes that summarise that this vaccine is better tolerated in older adults and has similar immunogenicity across all age groups after a boost dose.

Efficacy results from this substudy are still pending.

However, top-line results reported in a press release from AstraZeneca overall efficacy were controversial. Overall efficacy (in >11,600 participants) was reported at 70%, but this increased to 90% in participants (n=2,741) whose first dose, by error, used a half rather than full dose. When both doses were given at the full dose, also one month apart, efficacy was only 62%. [3]

This is controversial because the half-dose given to participants in the UK study was not planned but occurred as an error. Although the mistake was reported to the regulatory authorities at the time and the study was allowed to continue, actually producing better results, this changes the scientific approach of the overall analysis. [4]

C O M M E N T

It is currently unclear whether regulatory agencies, both in the UK and the US will require additional results from ongoing studies have used the initial half-dose as part of the study design.

This is unfortunately given the many practical advantages of the Oxford candidate, including easier transport (no need for cold chain) and proposal for the price to be much lower.

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Interim results report 94% efficacy with Moderna/NIH mRNA vaccine: FDA hearing on 17 December

Simon Collins, HIV i-Base

On 16 November 2020, a press statement from the UK NIH (a partner with Moderna for the mRNA-1273 vaccine) announced 94% efficacy in an interim analysis from the ongoing phase 3 COVE study. [1]

The results, released from the trial's Data and Safety Monitoring Board (DSMB) reported 95 cases of symptomatic infection: 90 vs 5 cases in the placebo vs vaccine groups, respectively.

Additionally, all 11/95 cases of severe COVID-19 were in placebo recipients.

The study was launched on 27 July 2020 and has enrolled 30,000 participants at 100 sites in the US. [2]

The FDA advisory committee hearing for this vaccine is due on 17 December 2020. Meeting amterials are posted online and the hearing is webcast. [3]

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HIV risk from some COVID-19 vaccines might be unlikely due to rarity of vector viruses involved

Simon Collins, HIV i-Base

On 19 October 2020 a letter to the Lancet from researchers involved in an HIV vaccine study more than a decade ago called STEP raised cautions about COVID vaccines that use an adenovirus (specifically Ad5). [1]

Although the HIV vaccine was not effective, an unexpected outcome was that uncircumcised men who received the active vaccine, and who have naturally previously been exposed to Ad5, were later found to be at slightly higher risk of becoming HIV positive compared to the placebo group (5.1% vs 2.2% per year for Ad5 positive and 5.2% vs 1.4% for uncircumcised men, respectively). This was not reported for women or circumcised men. [2] Similar results were also reported in a second HIV study. [3]

In their letter, the researchers question whether using a similar Ad5 platform for a vaccine against COVID-19 might also increase the risk of HIV in countries where HIV incidence is still high. They do not suggest that the vector might increase the risk of coronavirus.

Currently, several leading COVID vaccine candidates use an adenovirus platform (including those from CanSino, Oxford/AstraZeneca and Johnson & Johnson/Janssen), though only CanSino is using Ad5. [4, 5, 6, 7]

Although there is no evidence that any of these vaccines are likely to increase the risk of HIV infection, as yet, the letter has not been answered by researchers involved in COVID vaccines using Ad5.

Professor Lucy Dorrell from the Nuffield Department of Medicine emphasised that researchers had already considered the issues from STEP including the very low likelihood that people would have previously come into contact with the viral vectors used for COVID-19 vaccines:

"It is understandable that there is concern specifically around the use of Ad5, and the potential risks and uncertainties should be discussed fully with trial participants. In selecting other viral vectors such as Ad26 (JnJ) and ChAdOx1 (Oxford/AstraZeneca), vaccine developers rigorously applied the lessons learnt from the STEP trial. Very few people around the world have been exposed to these viruses, therefore, the chance that they have pre-existing immune responses that could increase the risk of HIV infection is extremely low".

C O M M E N T

The potential risk of increased susceptibility to HIV is acknowledged in the CanSino paper published in the Lancet in May 2020, even though the potential mechanism is unclear. It includes a comment that the researchers plans "to monitor the participants in our upcoming phase 2 and phase 3 studies to assess the indication for any such [HIV] acquisition". [4]

It might therefore be important for other studies to include a similar safety approach even though effective vaccines will only have limited follow-up time for the placebo arm (as participants should roll over to the active vaccine.

An important caution might be that if CD4 T cell responses to adenoviruses are cross-reactive and recognise multiple adenovirus variants, pre-existing CD4 T cell responses induced by a natural Ad5 infection might be boosted by a different adenovirus vector and it might not matter whether this was Ad26 or chimpanzee etc.

The signal from the STEP study was also generally recognised as modest. However, the plans for universal access to COVID vaccines might make even a small increase in risk important.

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COVID-19: INVESTIGATIONAL DRUGS

Hydroxychloroquine fails to prevent COVID-19 or SARS-CoV-2 transmission when used as PEP

Simon Collins, HIV i-Base

Results from a large randomised open-label phase 3 study reported hydroxychloroquine (HCQ) had no impact as prophylaxis against COVID-19 and didn't reduce symptoms in participants who did become infected.

The Barcelona PEP study was run in three regions in Catalonia, and reported in 24 November edition of NEJM. [1]

Between 17 March and 28 April 2020 the study enrolled 2314 adults in who had been in contact with 672 index case patients with confirmed COVID-19. Participants were randomised to open label HCQ (n=1116) or standard of care (n=1198) (based on hand hygiene, face masks, social distancing, and isolation of case patients and contacts).

Contact risk was defined as being within two metres for >15 minutes to 7 days before enrollment and who were at high risk (a health care worker, a household contact, a nursing-home worker, or a nursing-home resident). Participants connected to the same index case were randomised together as a group.

The primary endpoint of incidence of symptomatic COVID-19 confirmed by PCR was similar in both groups: 5.7% vs 6.2%, respectively (risk ratio: 0.86 [95% CI: 0.52 to 1.42]). There were also no differences in SARS-CoV-2 transmission: 18.7% vs 17.8%, respectively.

However, side effects were significantly higher (56.1% vs 5.9%) although these were not related to higher rates of discontinuations from the study.

C O M M E N T

This finding support those from other RCTs.

A randomised study in 821 participants that also found no benefits from hydroxychoroquine used as post exposure prophylaxis (PEP) for COVID-19 after moderate or high risk of exposure, although fewer index cases had PCR-confirmed infection. [3]

Another randomised, double-blind, placebo-controlled clinical study of HCQ as PEP in 132 health workers also found no benefit in preventing infection, but with higher side effects reported in the HCQ arm. [4]

Other large well-publicised studies have reported that HCQ also has no benefit as treatment from COVID-19 in moderate or advanced infection. [5, 6, 7]

With definitive studies now finding no benefit before infection or in moderate (hospitalised infection) it is difficult to believe that a new study planned in 13 African countries - the ANTICOV study - is likely to find any benefit hydroxychoroquine in early confirmed infection. [8]

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Hydroxychloroquine has no benefit on symptoms at 14 days

Simon Collins, HIV i-Base

Although hydroxychloroquine is no longer being studied as either treatment or prophylaxis for COVID-19 there will continue to be studies that add to this negative data set that are worth briefly reporting.

In this case, a randomised, blinded, placebo-controlled study that planned to enrol ~ 500 adults hospitalised with COVID-19 and respiratory symptoms was stopped early (after 479 participants had been enrolled) due to no evidence of effect. The primary endpoint was change in symptoms at day 14 based on a 7-category ordinal scale.

The study concluded "these findings do not support the use of hydroxychloroquine for treatment of COVID-19 among hospitalised adults".

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WHO SOLIDARITY study published in NEJM

Simon Collins, HIV i-Base

On 2 December 2020, the controversial results from the international, randomised, open label WHO SOLIDARITY study were published in NEJM. [1]

Earlier results were published ahead of peer review last month. [2]

This large study randomised more than 11,500 adults from over 400 sites in 30 countries to remdesivir (n=2750), hydroxychloroquine (HCQ, n=954), lopinavir (LPV/r) without interferon (n=1411), interferon (IFN, n=2063, including 651 to interferon plus lopinavir) or a control arm with no study drugs (n=4088).

None of these drugs significantly reduced mortality (including in any subgroup) or needing ventilation or duration of hospitalisation (including remdesivir).

Rate ratios for death by day 28 were, 0.95 (95%CI: 0.81 to 1.11);,1.19 (95% CI: 0.89 to 1.59); 1.00 (95% CI: 0.79 to 1.25); and 1.16 (95% CI: 0.96 to 1.39), for remdesivir, HCQ, LPV/r, and IFN respectively.

In a related editorial, SOLIDARITY is recognised as a significant achievement in rapidly enrolling so many participants from very diverse health settings and that the results "sends the clear message that these drugs as currently used should no longer be considered viable treatment options for Covid-19". [3]

It separates the more controversial results on remdesivir as "more nuanced" due to its role in reducing hospital duration (the basis for current FDA and EU approval). However, it also suggests that further research is needed on timing of remdesivir, use in specific populations, and in combination with other drugs before concluding: "It will not be simple to achieve clarity on when and how – or even whether – to use remdesivir".

References

1. WHO Solidarity Trial Consortium. Repurposed antiviral drugs for COVID-19 — interim WHO Solidarity trial results. NEJM. DOI: 10.1056/NEJMoa2023184. (2 December 2020).
   https://www.nejm.org/doi/full/10.1056/NEJMoa2023184
2. No survival benefit from remdesivir, hydroxychloroquine, lopinavir/r or interferon-β1a in moderate and severe COVID-19: interim results from the WHO SOLIDARITY study. HTB (11 November 2020).
   https://i-base.info/htb/39223
3. Harrington DP et al. A large, simple trial leading to complex questions. NEJM. DOI: 10.1056/NEJMe2034294. (2 December 2020).
   https://www.nejm.org/doi/full/10.1056/NEJMe2034294

COVID-19: PATHOGENESIS

Severe complications commonly reported three months after recovery from COVID-19

Simon Collins, HIV i-Base

Although many studies on COVID-19 initially focused on mortality rates 28 days after diagnosis there are limited data on longer-term outcomes in people who survive.

A Dutch study, by Bram van den Borst from Nijmegen Medical Centre and colleagues, report outcomes from COVID-19 three months after recovery in 124 participants. COVID-19 stage was categorised using WHO criteria as mild (n=27), moderate (n=51), severe (n=26) and critical (n=20) infection.

The chance for an intensive medical examination was offered consecutively to all people either hospitalised with COVID-19 at Radboud Medical Centre between 23 April and 15 July 2020 or not-admitted but who had symptoms for >6 weeks who were then referred by their GP.

The standardised detailed assessment included lung function, chest CT/X-ray, 6-minute walking test, body composition and questionnaires on mental cognitive health status and quality of life (QoL).

Baseline characteristics included mean age 59 years (+/– 14), 60% were male and 40% had comorbidities (median 1; IQR 0 to 2).

At three month, most participants recovered lung function, with 99% having reduced ground-glass opacification and 93% of people with mild COVID-19 had normal chest x-ray.

However, lung difusion capacity was less than normal for 43% and residual abnormalities were still present in more than 90% of discharged patients - and this correlated with diffusion capacity. Participants with critical COVID-19 (that involved longer hospital stays and mechanical oxygen) were more likely to still show signs of pulmonary fibrosis (50%).

Approximately one third of participants had abnormal mental status or cognitive function although this was not correlated with severity of COVID-19, suggesting this was not directly modulated by inflammation. Fatigue was also still common and less than 40% reported general and health-related QoL as normal.

The study concluded that a substantial percentage of participants reported severe problems in several aspects of health and that long follow-up studies were needed to predict complications related to long-term recovery.

C O M M E N T

These results from a relatively small study support the increasing concern with longer term complications from COVID-19 and highlight the importance of show the importance of further research.

Even with the potential bias from self-selection of participants where continued symptoms might have influenced the decision to take part.

Reference

van den Borst B et al. Comprehensive health assessment three months after recovery from acute COVID-19. Clinical Infectious Diseases ciaa1750. DOI: 10.1093/cid/ciaa1750. (21 November 2020).

https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa1750/5998118

COVID-19: FUTURE 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 now virtual including those that were rescheduled in the hope that COVID-19 restrictions would be relaxed.

New dates for workshops organised by Virology Education are at this link:

https://www.virology-education.com/covid0-19-update/

HIV Research for Prevention (HIV R4P 2020)

27 – 28 January and 3 - 4 February 2021, Cape Town (reshedulled from October 2020). NOW VIRTUAL

https://www.hivr4p.org

Conference on Retroviruses and Opportunistic Infections (CROI 2021)

NOW VIRTUAL

6 – 10 March 2021

https://www.croiconference.org

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)

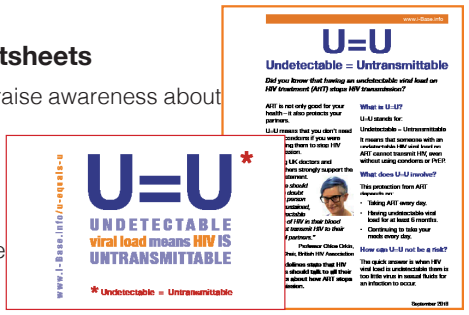
Pocket guides

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 clincs.

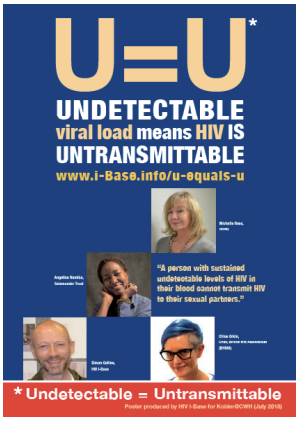
This project was developed with the Kobler Centre in London.

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 orded 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 Trevelion at i-Base:

roy.trevelion@i-Base.org.uk

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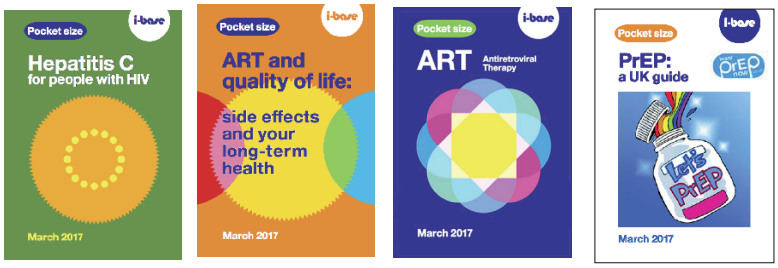

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- **Pocket leaflets** - *A7 small concertina-folded leaflets (2017)*

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Pocket ART	**quantity** _____	**Pocket pregnancy**	**quantity** _____
Pocket side effects	**quantity** _____	**PrEP for women**	**quantity** _____

- **Booklets about HIV treatment**

NEW: Introduction to ART *(October 2019): 48-page A5 booklet* **quantity** _____

NEW: UK Guide To PrEP *(November 2019): 24-page A5 booklet* **quantity** _____

ART in pictures: HIV treatment explained *(June 2019): 32-page A4 booklet* **quantity** _____

Guide to HIV, pregnancy and women's health *(April 2019): 36-page A5 booklet* **quantity** _____

Guide to changing treatment: what if viral load rebounds *(Jan 2018): 24-page A5 booklet* **quantity** _____

HIV and quality of life: side effects and long-term health *(Sept 2016): 96-page A5* **quantity** _____

Guide to HIV testing and risks of sexual transmission *(July 2016): 52-page A5 booklet* **quantity** _____

Guide to hepatitis C coinfection *(April 2017): 52-page A5 booklet* **quantity** _____

- **Other resources**

U=U resources:

A3 posters quantity _____ **A5 leaflets quantity** _____ **A6 postcards quantity** _____

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