RENAL HIV Q&A

ANSWERS FROM PROFESSOR J LEVY

CLIMATE CHANGE

PHARMACY AND CLIMATE CHANGE

CONFERENCE FEEDBACK

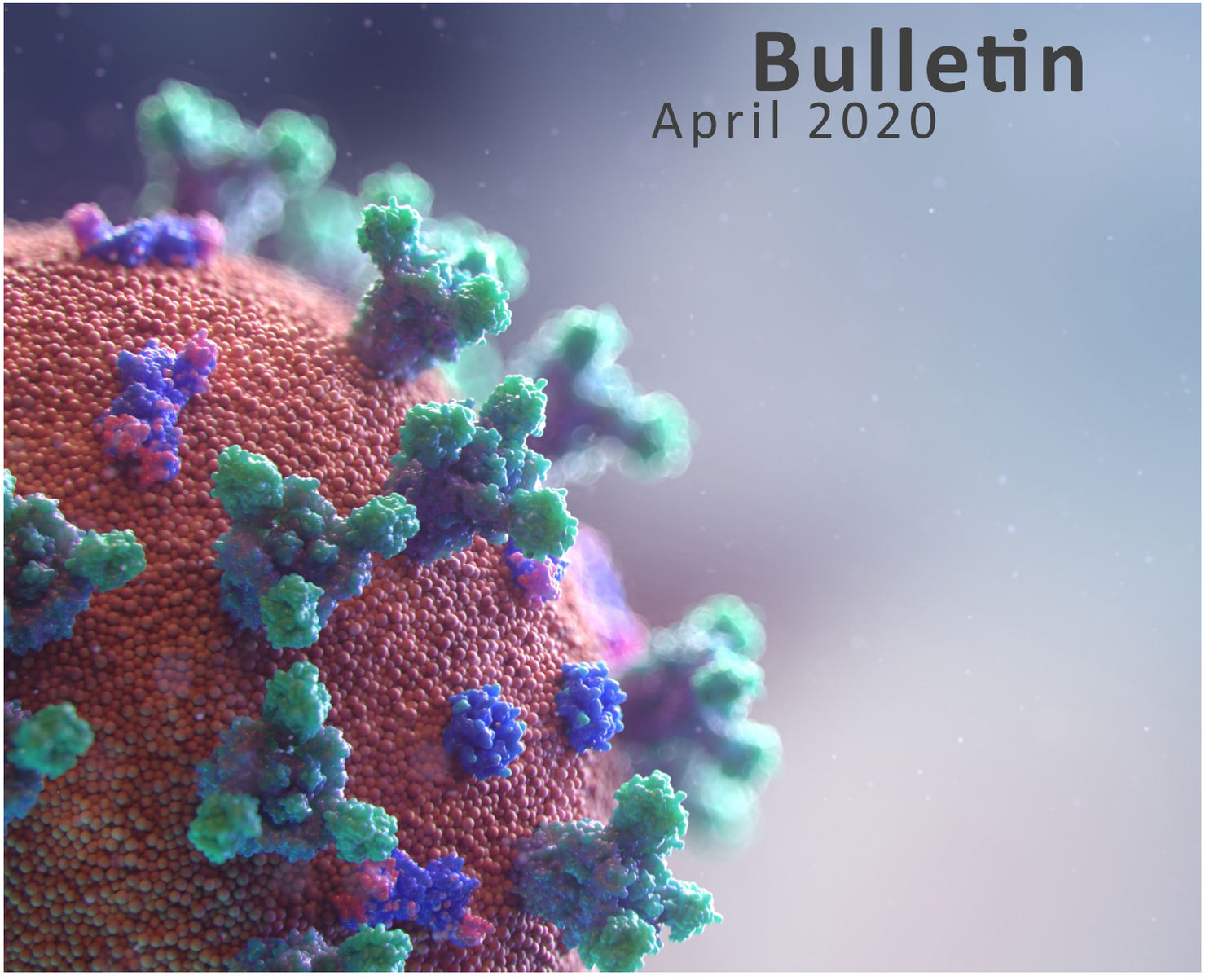
FEEDBACK FROM ICASA 2019

HIVPA NEWS

LATEST UPDATES FROM THE COMMITTEE

HIVPA

HIV Pharmacy Association



Bulletin

April 2020

Follow us on Twitter:
www.twitter.com/hivpa

hivpaoffice@gmail.com

HIVPA News

Hello and welcome to the HIVPA bulletin! Although this edition of the bulletin comes at a challenging time for all of us, It continues to highlight the important work and achievements of HIV pharmacy teams across the country. Thank you to all the authors for their valued contributions. At a time where social-distancing and self-isolation are the norm, the bulletin is a great way to connect with fellow colleagues, celebrate success and share in good practice.

For future editions of the bulletin, if you have been involved in a project, attended a conference or study day, enjoyed a recent success or have any suggestions please get in touch directly at yemi.daramola@nhs.net.

With this as my first edition of the HIVPA bulletin, I hope you all enjoy reading.

Yemi Daramola (HIVPA Bulletin Lead)

HIVPA COMMITTEE UPDATES

A warm welcome to our newest committee members. Rory Grier-Gavin from Imperial NHS Trust and Kathryn Ashton from North Manchester General Hospital are joining the committee as co-education leads, covering Lucy Hedley's position during her sabbatical. We wish Bronagh McBrien the best while she is away on maternity leave. Thanks for her hard work on the committee and for producing engaging editions of the bulletin.

REGIONAL UPDATES

HIVPA currently have vacancies for a Regional Representatives in the following regions:

South Central and South West
Wales
Northern Ireland

If you would be interested in filling any of these posts and/or would like to discuss in more detail what the role involves, I would be delighted to hear from you. I can be contacted via the HIVPA office at: hivpaoffice@gmail.com. Please send all expressions of interest by Friday 17th April 2020.

Many thanks
Portia Jackson
HIVPA Regional Representative Lead

EVENT UPDATES

In order to aid the response to the COVID-19 pandemic and current pressures on services, the HIVPA committee has decided to cancel the April virtual study day (Wednesday 22nd April 2020) and the HIVPA conference (12-13th June 2020). This decision comes with great disappointment however, we are looking at alternative ways to cover the content planned for these events later in the year.

BHIVA COVID-19 STATEMENTS

BHIVA have released a series of statements on COVID-19 and PLWH.

Joint statement on risk of Coronavirus (COVID-19) for people living with HIV (PLWH)

So far there is no evidence for a higher COVID-19 infection rate or different disease course in people with HIV than in HIV-negative people. Current evidence indicates that the risk of severe illness increases with age, male sex and with certain chronic medical problems such as cardiovascular disease and diabetes. Although people with HIV who are on treatment with a normal CD4 T-cell count and suppressed viral load may not be at an increased risk of serious illness, many people with HIV have other conditions that increase their risk.

https://www.bhiva.org/joint-EACS-BHIVA-statement-on-risk-of-coronavirus-for-PLWH

HIVPA News

Intensive Care Society (ICS) and British HIV Association (BHIVA) statement on considerations for critical care for people with HIV during COVID-19

People with well-controlled HIV have a normal life expectancy.

In the UK 97% of people diagnosed with HIV are on ART and 97% of this group are fully suppressed (i.e. well controlled.)

There is no evidence that outcomes of coronavirus infection (SARS, MERS, COVID-19) for people living with HIV are worse.

Patients with an undetectable plasma HIV-RNA on ART & CD4 count greater than 200 cells/mm^3 are not at higher risk of severe COVID-19.

Patients with well controlled HIV have similar intensive care outcomes to HIV-negative individuals.

HIV is not a predictor of mortality in people with acute lung injury admitted to intensive care.

COVID-19 may be associated with significant T-cell reduction, including CD4 cell count, in all patients
https://www.bhiva.org/BHIVA-statement-on-considerations-for-critical-care-for-people-with-HIV-during-COVID-19

British HIV Association (BHIVA) and Terrence Higgins Trust (THT) statement on COVID-19 and advice for the extremely vulnerable

People with CD4 >200 and undetectable on ART are considered at no greater risk than the general population; follow general advice.

People with CD4 <200, detectable viral load or not on ART may be at higher risk of severe illness; follow general advice.

People with a CD4 count <50 or opportunistic illness in last 6 months; follow shielding advice for extremely vulnerable.

https://www.bhiva.org/BHIVA-and-THT-statement-on-COVID-19-and-advice-for-the-extremely-vulnerable

NHS ENGLAND HIV-COVID COMMS

A communication is expected from the NHS England with HIV antiretroviral prescribing guidance during the COVID-19 response.

COMISSIONING

The NHS England commissioning policies for Dolutegravir/Lamivudine (DOVATO), Dolutegravir/Rilpivirine (JULUCA) and Doravirine (DELSTRIGO/PIFELTRO) are now available. These represent the first licensed dual therapy, single tablet regimes and a novel NNRTI. The policies are available on the NHSE HIV commissioning page.
https://www.england.nhs.uk/commissioning/spec-services/npc-crg/blood-and-infection-group-f/f03/

SPONSORS

HIVPA would like to thank all of our sponsors for their continued support:

Gilead Sciences
Mylan
Merck Sharp & Dohme Limited
ViiV Healthcare
Dr Reddy's Laboratories

The support of our sponsors is essential to much of the work carried out by HIVPA including events such as study days and conference. Thank you!

HIVPA Study Days

Unfortunately, due to the COVID-19 Pandemic and social distancing guidance, the April 2020 study day has been cancelled. As this is a developing situation, any further changes or cancellations will be communicated nearer the time.

Dates and topics for 2020

An introduction to HIV	**Monday 3rd February 2020**
Future-Proofing HIV services	**Tuesday 15th September 2020**
HIV co-infections— The brain and Liver	**Thursday 19th November 2020**

The study days are open to any pharmacy or healthcare staff especially those with a special interest in HIV, so please feel free to share information about these events with your colleagues. Attendance is free for HIVPA members. A small charge is required for non members, payable in advance.

The Study Days are held at the Pullman hotel, 100-110 Euston Road, London NW1 2AJ near Euston and Kings Cross train stations.

To reserve your space on any of our Study Days please email
hivpaoffice@gmail.com

Previous feedback comments from study day attendees:

Very informative and highlights areas that may not be experienced in each clinic.

A very interesting and extremely informative meeting.

Very informative study day, lots of very useful information + some very impressive speakers. Starting later a good idea in terms of travel. Thanks!

Recognition of the Climate & Health Emergency we face

Tracy Lyons Medicines Optimisation Pharmacist
Poole Hospital NHS Trust

Health professionals on the front line of climate change.

In 2019, doctors, nurses, and midwives risked their freedom and reputation for arrest, in climate change protests around the world. The medical community is feeling the effects of ecological breakdown and health professionals now have to treat 'climate patients' in clinics and hospitals with respiratory, cardiovascular, infectious and mental health presentations. This slow-acting bomb has started to explode and is causing harm at ever-faster rates. Pharmacy professionals are beholden to a standard of practice in which deliverance of patient safety is considered 'central' but a pharmacy presence in this discussion has so far been discreet.

Pharmacists are health scientists whose entire practice is predicated on evidence. Evidence-based medicine determines how we treat our patients and we spend a lifetime sourcing it to further improve how we manage those in our care. So why are so many of us turning a blind eye to the largest dataset ever established in human history?

A brief history of climate breakdown.

The evidence that climate change is due to human activity has reached an academic 'gold standard' level of certainty, indicating a one-in-a-million chance that it would appear if there was no association. Decades of science support this:

- **1959:** the American Petroleum Institute was warned that increased $C0_2$ levels would melt the polar icecaps and flood New York.
- **1965:** US President Lyndon Johnson's Science Advisory Committee stated that "pollutants had altered on a global scale the CO^2 content of the air with effects that could be deleterious to human beings."
- **1981:** Exon management were warned that "CO^2 emissions would produce catastrophic effects for a substantial fraction of the Earth's population."
- **1992:** Rio Earth Summit – the world's first international agreement to stabilise greenhouse gases.
- **2013:** A study published in the journal *Climatic Change* revealed that 90 companies were responsible for producing two-thirds of the carbon that had entered the atmosphere since the start of the industrial age. The same year the United Nations' Intergovernmental Panel on Climate Change (IPCC) concluded that it was "extremely likely" that human activities had been the main cause of climate change since the 1950s".

Recognition of the Climate & Health Emergency we face

- **2015:** 195 nations signed the Paris Agreement "to combat climate change and to intensify the actions and investments needed for a sustainable low carbon future."
- **May Day 2019:** the UK Parliament declared a climate emergency.

But it's not enough. We (you, me, and all our patients) are still on course for a global temperature rise which will see millions of people displaced, injured or dying through rising sea levels, starvation and disease. Currently, global temperatures are 1.0^{0}C above pre-industrial levels and already the evidence of harm can be seen. The last decade was confirmed as the hottest on record, fire has destroyed 27 million acres of Australia and Arctic ice has receded so much that it is expected to ice free by 2040.

The UK environment agency has warned that within 25 years water shortages will be a threat to life, and by that point, vast swathes of Asia, the Middle East and even central Europe will be uninhabitable.

The WHO has predicted a movement of tropical diseases such as malaria and dengue fever, along with a mass migration of people escaping climate poverty. The health costs will be extraordinary. DEFRA estimated in 2012 that the cost of annual additional patient days in the UK due to increased temperatures from climate change would be £51 million in the 2020s, £183 million in the 2050s, and £404 million in the 2080s. In psychological terms the costs will be unimaginable.

What's truly terrifying is that the IPCC have warned that without dramatic limitation on the use of fossil fuels global temperatures will see a 4.0^{0}C rise by 2100, an estimation built into the UK government's future strategy plans. At this variation life on earth as we know it will be irrevocably destroyed.

Access to medicine in a changing world.

The United Nation's sustainable development goals include healthy lives for all, with reduced child mortality and increased life expectance by 2030. To reach this, health and poverty inequalities must be levelled alongside climate stability. One cannot be achieved without the other: universal health care and climate change mitigation are co-dependent and unavoidably intertwined, and running through each of these are complex, global pharmaceutical supply chains. One can only imagine how they will be impacted by an increased number of extreme weather events in manufacturing sites such as India, China and Europe (drought induced crop-failures, fatal heatwaves, sinking cities and rising sea-levels).

Recognition of the Climate & Health Emergency We Face

The UK will experience more and intense winter storms, such as Ciara and Denis. Hospitals and homes will flood. The fragility of medicine supply chains must be protected against these situations.

What we can do within the NHS.

The current healthcare system is not sustainable - but it can be. Simon Stevens, Chief Executive of NHS England, recently announced plans to accelerate a reduction in carbon output, encourage staff to feel 'emboldened' to discuss the measures to tackle climate change and ultimately reach carbon neutrality. There is a lot to achieve. The NHS is the largest public sector contributor of carbon emissions (25% of the public sector total) and responsible for 5.4% of the UK's total.

Praise has to go to Newcastle NHS Foundation Trust who were the first in the world to declare a climate emergency. It was the first Trust in Europe to implement reusable sharps boxes, they source electricity from 100 % renewable suppliers, have removed single-use catering plastics and have outlined a carbon neutral commitment by 2040.

Cornwall Sustainability & Transformation Partnership has recently become the first NHS region to target carbon neutrality, with a hugely ambitious target of 2030. The project involves 2 acute Trusts, the clinical commissioning group, the local council and university, in creating an environment in which all resources are utilised in protection of patients within the area.

However, we can start with small steps.... the pharmacy at my Trust has recently committed to using only recycled paper, saving approximately 75,000 litres of water per year. The change is currently cost neutral but will financially rewarding in time as bleached stock is subject to price rises which the recycled line escapes. More importantly, a national switch would mean the NHS could reduce CO^2 emissions by over 5,000 tonnes per year – equivalent to over 1000 thousand cars removed from the road.

What we can do within pharmacy.

Pharmacists are in a unique position to drive forward sustainable medication use. We need to assess medications for their wider ecological impact as well as their immediate effect on patients.

Anaesthetic gases for example, represent up to 5% of the carbon-footprint of acute NHS Trusts and while all of them (sevoflurane, isoflurane and desflurane) are potent global warming agents, they vary in the degree of their effect. CO^2 emissions from 1 hour of desflurane are equivalent to driving a car for 230 miles, more than seven times as impactful as 1 hour of sevoflurane use.

Hydrofluorocarbon gases in metered dose inhalers (MDIs) have a global warming potential thousands of times greater than CO^2 and contribute to the UK's greenhouse gas output. The UK practice of extensive MDI use contrasts sharply with other countries where dry powder devices are more common, yet without variation in patient outcome, suggesting that the trend is predominantly habit driven.
The NHS Sustainable Development Unit encourages patients to return inhalers to pharmacies for safe disposal or recycling but currently only GSK offer an inhaler recycling programme. It has processed 1.2 million inhalers, equivalent to removing over 5000 cars off roads but is now closed to new sites and there is no easily identifiable replacement to step into its place.
From manufacture to point of drug use we are the ideal clinicians to champion the 'sustainability question' and present it as an essential, non-negotiable component of patient care.

We can stand up and be heard

Health workers are some of the most trusted individuals in the country. We have to make a stand and protest this medical catastrophe, vocally and clearly, at every conceivable step, placing demands for sustainability at the highest levels of healthcare and government.
We must turn to our specialist bodies and seek disassociation from the petrochemical companies harming us and our patients, in the same way we would demonstrate against investment the arms or tobacco industries. The British Medical Association, the Royal College of Nurses, the Royal College of Medicine, the Royal College of General Practitioners and the Royal College of Emergency Medicine have all declared a climate emergency and divested from fossil fuels. Pharmacy organisation must follow suite. The urgency cannot be overstated. As Richard Horton, Lancet editor, wrote in support of the Extinction Rebellion Doctors & Health Professionals, "it might be an exaggeration to say health workers have 14 days to save the world. But not much."

The opinions expressed in this article are those of the author. They do not purport to reflect the opinions or views of HIVPA or its members.
The author declares: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years. The author is a member of Medact who are currently running climate justice and fossil fuel divestment campaigns, and a member of Extinction Rebellion Doctors & Health Workers.

Conference Feedback —ICASA 2019

Ratidzai Magura Clinical Pharmacist HIV and Sexual Health
Northern Devon Healthcare NHS Trust

In December 2019, I attended the 20th International Conference on AIDS and Sexually Transmitted Infections in Africa (ICASA) held in Kigali, Rwanda. Attending ICASA was a valuable opportunity to learn from global thought-leaders in the international HIV field who are making an impact in their communities. ICASA brings together researchers, people living with HIV, political leaders and others committed to ending the epidemic. An estimated 10000 delegates from 150 countries attended the conference.

The theme for the conference was 'An AIDS free Africa' , which is a bold vision considering Africa has the highest burden of HIV and AIDS. However, the dream is possible because countries like Rwanda have already reached the 90-90-90 target due to access to treatment and access to HIV prevention.

ICASA exists to facilitate dialogue. President Paul Kagame, opened the conference with a call to open dialogue, stating that ' open dialogue saves lives, while shame discourages people living with HIV living a fulfilled life.'

My conference highlights included appreciating the beauty of Rwanda, learning about innovation in reaching the unreached, pharmacy involvement in attaining UNAIDS targets and current research towards developing a globally effective HIV vaccine.

Some interesting facts about Rwanda

- Rwanda is also known as the land of a thousand hills because most of the country is covered by rolling grassy hills.
- Rwanda's Parliament has more female members than any other parliament in the world (currently 61%)

- Plastic bags are banned nationwide (since 2008)
- The people of Rwanda are required to take part in the national clean-up day, Umuganda, on the last Saturday of every month. It is the cleanest city I have visited!

Innovation in reaching the unreached.

Innovative models of health promotion and engagement are required to reach those who are not comfortable attending traditional health care settings. Many of those traditionally labelled *'hard to reach'* can be reached in their comfort zones.

A resonating theme for many poster presentations and the success of sustainable interventions was 'no intervention for me without my input'. An example of this is where communities are taking a lead in designing and implementing models of distributing HIV self-screening kits & promoting linkage to post –test services. Such methods are designed to target remote communities with high level of undiagnosed populations. A list of peer reviewed journal articles focusing on self testing initiatives can be accesses via http://hivstar.lshtm.ac.uk/files/2019/02/2019.02.05_Publication-list-V1.pdf

Pharmacy participation in reaching the unreached.

Community pharmacy involvement is also a recognised model for scaling HIV self screening .This can be done by; Provision of over the counter kits to pharmacy clients on request, offer to pharmacy clients seeking services indicative of HIV risk and offer to pharmacy clients who do not know their status.

Disclaimer – these are models for normalising testing in a country known to have a high prevalence of HIV.

Vaccine Development.

Prior to attending the conference I will admit I had not been convinced for the need for a vaccine in the era of cheaper generic antiretrovirals and PrEP.

The current tailored toolbox for HIV prevention e.g. condoms; PrEP; vaginal rings; PEP; circumcision, are all strategies that require continuous adherence (except circumcision) and high saturation in countries with generalized epidemics. The HIV prevention trials network is currently involved in several studies to optimize prevention and develop new ways to prevent HIV. For more information on the studies visit www.hvtn.org

Attending an international conference was one of the highlights of my year. Meeting ordinary people doing extraordinary work with the goal to end the AIDS epidemic was an inspiration to me and a convincing reminder that dreams can come true!

Audit Project — Medication Reviews

Suki Leung Specialist Pharmacist HIV/GUM
Chelsea & Westminster NHS Trust

Keeping on track with medication reviews: a multi-site audit

Leung S, Mohammed H, Naous N, Asboe D, Boffito M

Background

The life expectancy of people living with HIV (PLWH) has dramatically improved due to advances in antiretroviral (ARV) therapy. Polypharmacy increasingly occurs in aging HIV populations with an estimated prevalence of clinically significant drug-drug interactions (DDIs) between 14% and 58%. Management of these DDIs is often the responsibility of the HIV clinician.

Aim: To assess compliance with the current British HIV Association (BHIVA) Standards of Care for documentation of a medication review over a 15-month period. We also aimed to review documentation of DDI management plans.

Method

Retrospective case note review was conducted on 171 patient consultations across four London clinics. The definition of medication review was discussed and locally agreed as 'an attempt at documenting drug history or review of current ARVs and/or co-medications'. Patients were excluded if newly diagnosed or had transferred their care in the last 15 months. The significance of DDIs was graded using the Liverpool HIV Drug Interaction traffic light system.

Results

Patients were predominantly male (92.4%) and Caucasian (71.9%) with a median age of 50. The median CD4 count was 720 cells/mm3 and 95.3% of PLWH were virologic ally suppressed. Of the 171 patients, 150 (87.7%) had a documented medication review in the preceding 15 months.

Of the 90 PLWH (52.6%) taking co-medications, 1 'red' (when co-administration is not recommended) and 40 'amber' (potential) interactions were identified, affecting 15.8% of the audited population. However, only 36.6% (15/41) of the interactions and their management plans were documented.

Among the documented DDIs, the most common perpetrators were boosted PIs (20/41), followed by NNRTIs (16/41) and INIs (4/41). Documented management of DDIs included interventions such as monitoring clinical effects, adjusting dosages of co-medications and switching ARVs.

Conclusion

Overall, we demonstrated good adherence to BHIVA standards in documenting medication reviews. However, there was lack of documentation for both interactions and management plans. Recommendations to improve this include: creating an electronic HIV consultation template with a self-populated drug history once inputted and link to Liverpool HIV Drug Interaction website; prompting PLWH to bring current list of co-medications to their appointments.

Limitations include incomplete medication review on electronic patient records, therefore underestimating the prevalence of DDIs; lack of documentation of recreational drug use; possibility where successful interventions made by pharmacists were not documented.

Audit Project — Medication Reviews

Table 1. Characteristics and management of identified drug-drug interactions in 27 PLWH.

Characteristics	**'Red' interaction (n=1)**	**'Amber' Interaction (n=40)**
Age, y, (SD)	52 (-)	57 (8.0)
Male, *n* (%)	1 (100%)	24 (92.3%)
Caucasian, *n* (%)	1 (100%)	19 (73.1%)
CD4 T-cell count, cells/mm^3, median (IQR)	437 (-)	581 (459-834)
Viral suppression <200 copies/mL, *n* (%)	1 (100%)	25 (96.2%)
***Drug class, n* (%)**		
PI	1 (100%)	13 (50%)
NNRTI	0	10 (38.5%)
INI	0	3 (11.5%)
***Medication initiation, n* (%)**		
More than 15 months ago	1 (100%)	37 (92.5%)
Less than 15 months	0	3 (11.5%)
***Documented interactions, n* (%)**		
At regular review	1 (100%)	12 (85.7%)
Switching ARTs	0	2 (14.3%)
***Documented management of DDIs, n* (%)**		
Monitor clinical effects of co-medications	0	7 (50%)
Administering co-medications at different times	0	1 (7.1%)
Adjusting dosages of co-medications	0	4 (28.6%)
Stopping co-medications	1 (100%)	0 (0%)
Switching ARTs	0	2 (14.3%)

PI, protease inhibitor; NNRTI, non-nucleoside reverse transcriptase inhibitor; INI, integrase inhibitor; ART, antiretroviral therapy; DDIs, drug-drug interactions.

Learning from the audit

Difficulties encountered during the audit included navigating various electronic prescribing and medical record systems in search of clinic notes up to August 2018 during data collection. With 3 different systems over 4 clinic sites and numerous proformas documented under separate sections, these all added to the timely process. However, as Chelsea and Westminster Healthcare NHS Foundation Trust has just moved to a new prescribing system, all clinics would be using one system for prescribing medications and recording medical notes. This would help data collection at re-audit.

This audit has established a reliable baseline of current practice via randomised sampling. The results have highlighted areas for improvement and feasible recommendations to mitigate potential adverse outcomes from the lack of medication review and/or management of DDIs.

The number of PLWH included in the audit was sufficient to draw reliable results and conclusions. In order to compare practice from different clinics in future audits, it would be best to include same number of patients in each clinic. It would also be advised to include the dosages of co-medications so that the extent of DDIs could be thoroughly evaluated. It might also be useful to include various references, including Toronto interaction databases from Canada and summaries of product characteristics (SPC) to have a broader understanding of the interactions and more informed approach for management of DDIs.

Regional Study Day—Feedback

Rachael Leese Lead Pharmacist -HIV & Hep C
Worcestershire Acute Hospitals NHS Trust

Following on from our July 2019 questionnaire the West/East Midlands Region ran the first of our local revamped study and networking events which was attended by 18 delegates on Wednesday 12th February 2020 in Birmingham. The event was kindly supported by both HIVPA and Viiv.

The first half of the day was dedicated to the medicines optimisation agenda. We first received an update from Rabia Gowa on NHS England's plans to move to a national procurement process and the forthcoming new drug approval process via NICE technology appraisal. Time was also dedicated to horizon scanning and discussing the commissioning strategies being considered for forthcoming injectable anti-retrovirals (ARVs).

Next we heard from Justine Barnes (member of the Midlands and East of England HIV Improving Value Network) where we considered local ARV prescribing trends (learning that Triumeq was our number 1 anti -retroviral as a region) and how we can use that data to influence practice.

Our focus then moved to local audit where Sutej Sivia from the Queen Elizabeth Hospital in Birmingham shared their audit undertaken to assess ARV drug waste and the measures they had taken to prevent avoidable drug wastage episodes.

We ended the morning with Joel Beckitt from Viiv who presented their medicines optimisation tool which outlines the cost savings to be gained by switching between

We first heard from Dr Maurice Murphy from the Royal London Hospital who shared their experience with 2-drug regimens in their co-morbidity clinics. This sparked much debate over the dosing of lamivudine in patients with renal impairment. The following paper is worth a look (Fischetti *et al.* Lamivudine dosing in renal impairment. Open Forum Infectious Diseases, (2018) p.1-6). Finally we rounded the day off with Ali Darley from Nottingham University Hospitals NHS Trust who presented their audit work on identifying and characterising drug-drug interactions in those aged over 50 years within their cohort. We were interested to learn that amlodipine was the top interacting drug and discussed how we can share changes in drug interaction management advice locally.

Feedback from those who attended showed that the event was a resounding success. Delegates expressed that it was an informative event, relevant to their practice and provided a great opportunity to network/ share practice locally.

So thank you (!!!) again to those who attended and presented on the day; it wouldn't have been a success without your support. For those who weren't able to make it this time; the next event is planned for Autumn 2020 (further details to follow). Please do get in touch with West Midlands HIVPA Representative Rachael Leese at **r.leese@nhs.net** if you have anything you'd particularly like to see at the next event or

A brief Q&A With Professor Jeremy Levy

Professor Jeremy Levy
Consultant Nephrologist at Imperial College NHS Trust

For obese patients, should actual, adjusted or ideal body weight be used when calculating creatinine clearance (CrCl)? Ideal body weight (IBW) often over estimates renal impairment and this has resulted in adverse events where DOAC doses have been reduced and patients have clotted or have had a stroke.
No one knows. Most people use IBW but it is completely unclear and there are no real data.

As we have some data for using Descovy in patients on haemodialysis (HD), can this also be applied to patients on peritoneal dialysis (PD) ? Is PD as efficient as haemodialysis HD or does it depend on other factors such as urine output etc?
Yes.. The major differences are
a) for some drugs HD washes them out so they must be given after dialysis or given a top up dose
b) Most patients on HD have no residual kidney function while many patients on PD do have a little bit of native [kidney function] GFR (3-5 ml/min) – its not much and does not make much difference probably to drug dosing. PD is not as efficient as HD but does given pretty equivalent overall renal clearance/function

Does Lamivudine need to be dose reduced in renal impairment given its wide therapeutic index particularly in the context of dual therapy?
No

For patients with an eGFR between 15ml/min and 30mL/min who aren't on haemodialysis would you advise avoiding Descovy as per the product license, or are there situations where its use could outweigh the potential risks.
Good question.. There may be very good reasons to use, in which benefits may outweigh small risks, but if you have a choice, avoiding anything with potential kidney toxicity better. [There is] really very little evidence that TAF causes problems. For example [in] most inpatients, rapid HIV suppression in viraemic patients even if they have an AKI, since mostly this is glomerular damage and just needs the HIV treating.

Does the use of OCT MATE inhibitors such as DTG or Cobicistat have any clinical or practical impact on patients who then require haemodialysis in practice
No not for HD. The major impact is on transplant drugs e.g. tacrolimus and ciclosporin.

Given the use of ARVs which inhibit OCT/MATE transporters such as DTG and Cobicistat and their effects on creatinine. Is there any benefit or scope in the use of other renal clearance biomarkers such as those used in research settings.
Yes.. but the effect is pretty marginal since creatinine only rises 5-20 mcmol/L .. BUT if [you] need accuracy, use cystatin C measure of renal function (blood test is available in some centres) and not use creatinine at all, but [serum] cystatin C.

Could you give us your thoughts on the few case reports of Fanconi Syndrome and tubular damage with Tenofovir Alafenamide.
Have there been many ??? theoretically it still releases some tenofovir but the [number] of cases is tiny.. it is generally much better than TDF (I am not paid by anyone!)

Prescribing Information
Dovato▼ dolutegravir 50mg/lamivudine 300mg tablets
See Summary of Product Characteristics (SmPC) before prescribing

Indication: HIV-1 in adults & adolescents above 12 years of age weighing ≥40kg, with no known or suspected resistance to the integrase inhibitor class, or lamivudine. **Dosing:** One tablet once daily with or without food. Use an additional 50mg tablet of dolutegravir approximately 12 hours after the dose of Dovato when co-administered with efavirenz, nevirapine, tipranavir/ritonavir, etravirine (without boosted PI), carbamazepine, oxcarbazepine, phenytoin, phenobarbital, St John's Wort or rifampicin. *Elderly:* Limited data in 65+ yrs. Not recommended in patients with creatinine clearance < 50 mL/min. Caution in severe hepatic impairment. **Contraindications:** Hypersensitivity to any ingredient. **Warnings/precautions:** Risk of hypersensitivity reactions. Discontinue dolutegravir and other suspect agents immediately. Risks of osteonecrosis, immune reactivation syndrome. Monitor LFTs in Hepatitis B/C co-infection and ensure effective Hepatitis B therapy. Caution with metformin: monitor renal function and consider metformin dose adjustment. Use with etravirine requires boosted PI or increased dose of dolutegravir. Use with Mg/Al-containing antacids requires dosage separation. Use with calcium, multivitamins or iron also requires dosage separation if not taken at the same time with food. Use with cladribine or emtricitabine not recommended. When possible, avoid chronic co-administration of sorbitol or other osmotic acting alcohols (see SmPC section 4.5). If unavoidable, consider more frequent viral load monitoring. **Pregnancy/lactation:** The safety and efficacy has not been studied in pregnancy. Before initiating dolutegravir, women of childbearing potential (WOCBP) should undergo pregnancy testing. WOCBP who are taking dolutegravir should use effective contraception. Dolutegravir should not be used during the first trimester due to the potential risk of neural tube defects, unless there is no alternative. Dolutegravir should only be used during the second and third trimester of pregnancy when the expected benefit justifies the potential risk to the foetus. Avoid breast-feeding. **Side effects:** See SmPC for full details. Headache, GI disturbance, insomnia, abnormal dreams, depression, anxiety, dizziness, somnolence, rash, pruritus, alopecia, fatigue, arthralgia, myalgia, hypersensitivity, suicidal ideation or suicide attempt, hepatitis, blood dyscrasias, acute hepatic failure, pancreatitis, angioedema, rhabdomyolysis, lactic acidosis, peripheral neuropathy. Elevations of ALT, AST and CPK. **Basic NHS costs:** £656.26 for 30 tablets (EU/1/19/1370/001). MA holder: ViiV Healthcare BV, Huis ter Heideweg 62, 3705 LZ Zeist, Netherlands. Further information available from Customer Contact Centre, GlaxoSmithKline UK Ltd, Stockley Park West, Uxbridge, Middlesex UB11 1BT.
POM S1A

Date of approval: July 2019 PI-2451

Adverse events should be reported. For the UK, reporting forms and information can be found at *www.mhra.gov.uk/yellowcard* or search for **MHRA Yellowcard** in the **Google Play** or **Apple App store**. Adverse events should also be reported to GlaxoSmithKline on 0800 221441.

Adverse events should be reported. For Ireland, adverse events should be reported directly to the HPRA; Freepost, Pharmacovigilance Section, Health Products Regulatory Authority, Earlsfort Terrace, Dublin 2, Tel: +353 1 676 4971, *medsafety@hpra.ie*. Adverse events should also be reported to GlaxoSmithKline on 1800 244 255.

References: 1. Department of Health and Human Services. Guidelines for the use of antiretroviral agents in adults and adolescents with HIV, December 2019. Available at: http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf [Accessed March 2020]. **2.** European AIDS Clinical Society Guidelines. Version 10.0, November 2019. Available at: https://www.eacsociety.org/files/2019_guidelines-10.0_final.pdf [Accessed March 2020].

March 2020 | PM-GB-DLL-ADVT-200005