Ireland, Dublin, Dublin, Ireland; [3]Beaumont Hospital, Dublin, Dublin, Ireland

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Background: With globalisation fuelling the fire for infectious diseases, it's important for general physicians to be aware of the tropical infections presenting to hospitals. Malaria, with over 400,000 deaths annually worldwide, has an Irish notification rate of 1.2 per 100,000 of the population, the seventh highest incidence rate of imported malaria globally. This analysis aims to examine the demographics and outcomes of Irish patients with malaria over a four year period.

Methods: A retrospective analysis of all patients with malaria admitted to Irish hospitals between January 1st 2016 and December 31st 2019 was performed. Data was obtained from the National Quality Assurance Improvement System (NQAIS), a national electronic database that collates data from hospital admissions. This was analysed using STATA. Patient demographics, hospital length of stay and documented malaria subspecies are described.

Results: Between January 1st 2016 and December 31st 2019 there were 289 cases of malaria admitted to Irish hospitals, 13/289 (4.5%) requiring high dependency care. 197/289 (68%) were male. The mean age was 35 years (95% CI 33.3 – 37). 220/289 (76%) of all cases resulted from *Plasmodium falciparum* infection, 16/289 (5.5%) *Plasmodium ovale*, 11/289 (3.8%) *Plasmodium vivax* and 2/289 (0.7%) *Plasmodium malariae,* while 40/289 (13.8%) were unspecified. The median length of stay was 3 days (IQR 1-4 days) and 72/289 (25%) were admitted under an Infectious Diseases team, although this had no significant impact in length of stay (3.1 days versus 3.4 days, p=0.68). 117/289 (40%) were admitted in the months of August and September. There were no reported deaths.

Conclusion: This report gives a clinical context to the 2016 – 2019 NQAIS data, particularly with regards to inpatient length of stay, malaria species diagnosed and numbers requiring critical care. The majority of all cases in the four year period were *P. falciparum*, reflective of the dominant African region of exposure in most cases. Interestingly, 43% of all cases were from hospitals outside of the Dublin City catchment area, reflecting a diversification of travel and population demographics in Ireland. This highlights the importance of malaria awareness in all regions in Ireland, not simply the major urban centres.

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769. Mortality Among Inpatients After the Initiation of 'Treat All' With Dolutegravir in Botswana

Amanda E. Klinger, MD[1]; Ryan J. Kronen, MD, MPHS[2]; Tomer Barak, MD, Msc, DTM&H[2]; Patricia Mophuthegi, n/a[3]; Joseph Makhema, MD[3]; Rebecca Zash, MD[2]; Roger Shapiro, MD, MPH[4]; [1]NYU, New York, New York; [2]Beth Israel Deaconess Medical Center, Boston, Massachusetts; [3]Botswana Harvard Partnership, Molepolole, Kweneng, Botswana; [4]Harvard TH Chan School of Public Health, Boston, Massachusetts

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Background: Botswana was the first African country to implement a 'treat all' dolutegravir (DTG)-based treatment program for all adults. We studied whether this transition made a short-term impact on inpatient mortality among people living with HIV (PLWHIV).

Methods: From Dec 2015-Nov 2017, data were collected prospectively on all patients admitted to the medical wards of a district hospital in Botswana. Tenofovir/emtricitabine/efavirenz (TDF/FTC/EFV) was the first-line recommended antiretroviral treatment (ART) regimen for all ART-naïve adults with CD4 < 350 until May 2016, when it was replaced by TDF/FTC/DTG without CD4 restriction ('treat all'). Multivariable logistic regression was used to compare mortality by ART regimen.

Results: Of 1,969 patients admitted, 41.5% were PLWHIV and of these 62.9% were on ART prior to admission. Before 'treat all', 160 (58.0%) of 276 PLWHIV were on ART prior to admission, and post-implementation 354 (65.4%) of 541 PLWHIV were on ART prior to admission (p=0.01). Among 315 patients on EFV-based ART and 85 on DTG-based ART prior to admission, demographics were similar (Table 1), except for more recent ART initiation with DTG, and lower median CD4 cell count with DTG (256 vs. 339 cells/mm^3). Tuberculosis (TB) and community acquired pneumonia were the leading causes of hospitalization for both regimens. Death occurred in 178 (21.8%) PLWHIV, including 29% not on ART and 19% on any ART (p=0.003). Overall, 38% who initiated ART < 3 months prior to admission died (23.7% DTG, 48.8% EFV), and 36% with CD4 cell count < 50 cells/mm^3 died (42.9% DTG, 30.8% EFV). Fewer deaths occurred among those on EFV (18%) compared with those on DTG (27%). However, controlling for CD4 count and timing of ART start, the risk of mortality among those on DTG and EFV was similar (aRR 1.08, 95% CI 0.62, 1.87). TB was the leading cause of death (40.1% off ART, 31.8% on DTG, 22.2% on EFV).

Table 1. Demographics, clinical characteristics, and outcomes of people living with HIV (PLWHIV) admitted to Scottish Livingstone Hospital, stratified by ART regimen prior to admission.

	EFV-based regimen (n=315)	DTG-based regimen (n=85)	Any ART (n=514)	No ART (n=222)
Demographics				
Age (median [IQR])	43 [35,55]	42 [33,54]	43 [35,54]	39 [32,50]
Female gender (N, %)	174 (55.2)	49 (57.7)	300 (58.4)	97 (43.7)
Residence in Molepolole (N, %)	206 (66.2)	53 (62.4)	329 (65.2)	148 (67.6)
HTN (N, %)	48 (15.2)	12 (14.1)	77 (15.0)	16 (7.2)
T2DM (N, %)	15 (4.8)	3 (3.5)	23 (4.5)	4 (1.8)
Clinical characteristics				
CD4 count (median [IQR])*	339.5 [166, 518]	256 [106, 458]	358 [157, 533]	163.5 [60,309]
Timing of ART initiation (N, %)				N/A
<3 months	41 (13.0)	38 (44.7)	84 (16.3)	
>3 months	162 (51.4)	23 (27.1)	202 (39.4)	
Unknown	112 (35.6)	24 (28.2)	228 (44.4)	
Primary diagnosis (N, %)				
TB	70 (22.2)	27 (31.8)	122 (23.7)	89 (40.1)
CAP	39 (12.4)	10 (11.8)	60 (11.7)	16 (7.2)
DVT/PE	1 (0.3)	5 (5.9)	11 (2.1)	0
Suicide attempt	14 (4.4)	6 (7.1)	25 (4.9)	4 (1.8)
Kidney disease	18 (5.7)	1 (1.2)	22 (4.3)	6 (2.7)
Severe anemia	22 (7.0)	4 (4.7)	40 (7.8)	4 (1.8)
HIV Complications				
PCP	9 (2.9)	11 (12.9)	22 (4.3)	27 (12.2)
Kaposi sarcoma	4 (1.3)	4 (4.7)	10 (2.0)	5 (2.3)
HIV-associated encephalopathy	5 (1.6)	3 (3.5)	11 (2.1)	9 (4.1)
Outcomes				
Death (N, %)	56 (17.8)	23 (27.1)	97 (18.9)	64 (28.8)

Conclusion: We found no improvement in inpatient mortality among PLWHIV during the shift to 'treat all' with DTG-based ART in Botswana. Decreasing high inpatient HIV mortality will require increased testing in the community to detect and treat PLWHIV prior to disease progression, and improved screening for opportunistic infections.

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770. Otherwise Unavailable Non-Malarial Parasitic Disease Treatment Drugs in the United States: an Update from CDC Parasitic Diseases Drug Service

Rebecca J. Chancey, MD[1]; Yon Yu, PharmD[1]; Patricia Yu, MPH[1]; Julian Jolly, PharmD[1]; Susan Montgomery, MPH, DVM[1]; [1]Centers for Disease Control and Prevention, Atlanta, Georgia

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Background: The Centers for Disease Control and Prevention's (CDC) support to clinicians includes providing access to certain drugs exclusively available through CDC for diseases that lack, or have limited market availability of, FDA-approved therapeutics in the U.S. These drugs are provided by CDC under expanded access Investigational New Drug (IND) applications, authorized by the FDA, to treating physicians. The CDC Parasitic Diseases Drug Service provides treatment drugs for patients with parasitic diseases, including travelers, immigrants and refugees from endemic countries.

Methods: CDC's records for patients for whom drug was released over a 10-year period were reviewed.

Results: From 2010–2019, the annual number of drug releases for patient treatment ranged from 21–113 (median 99). Benznidazole, a treatment for Chagas disease, was the most common drug released for patients between 2012–2018, ranging from 42–63% of total drug releases annually. Sodium stibogluconate (Pentostam®[1]), for treatment of certain presentations of cutaneous, visceral, and mucocutaneous leishmaniasis, accounted for 6–22% of annual releases over the last 10 years. While requests for treatment for human African trypanosomiasis are rare, in 2019 CDC released eflornithine and nifurtimox for one patient who met criteria for treatment according to the 2019 WHO recommendations.[2]

Conclusion: Recent changes to release frequency of triclabendazole, benznidazole, nifurtimox, and sodium stibogluconate are likely due to FDA-approval and commercial