Figure 1. Reasons for not taking any of the prescribed chemoprophylaxis (n = 103)

Table 1. Odds of full adherence to malaria chemoprophylaxis on multivariate logistic analysis

| Risk Factor                                  | Odds Ratio (95% CI) | P Value |
|----------------------------------------------|---------------------|---------|
| Enrollant post-deployment                    | 0.6 (0.4-0.9)       | <0.01   |
| Age, years (continuous)                     | 1.01 (0.96-1.03)    | 0.12    |
| Travel duration - 14 days                   | 0.1 (0.02-0.52)     | 0.001   |
| Shipboard accommodations                     | 0.0 (0.0-0.1)       | 0.16    |
| Destination-barriera accommodations          | 0.8 (0.4-1.1)       | 0.04    |
| Test accommodations                          | 0.7 (0.4-0.9)       | 0.08    |
| Did not stay overnight at destination        | 1.7 (0.5-5.7)       | 0.6     |
| Travel to Africa                            | 3.3 (2.5-4.7)       | 0.01    |
| Travel to South, Central, and West Asia     | 0.6 (0.4-1.1)       | 0.12    |
| Use of insect repellent on skin             | 1.0 (1.0-1.5)       | 0.48    |
| Often/everyday application of repellent to skin | 1.8 (1.2-2.7)   | <0.001  |
| Trust outreach clothing separately with repellent | 1.0 (0.5-1.7) | 0.32    |
| Percentage of nights using mosquito net     | 1.0 (1.0-2.2)       | 0.96    |
| Not recommended to use mosquito net          | 1.0 (1.0-3.3)       | 0.62    |
| 25-50%                                       | 1.8 (1.0-3.2)       | 0.03    |
| 51-75%                                       | 1.1 (0.6-2.0)       | 0.0001  |
| >75%                                        | 2.2 (1.3-3.7)       | <0.0001 |

Conclusion. Short-duration travel, travel to highly endemic regions, and mosquito-avoidance behaviors were associated with increased adherence to prophylaxis. The lower rate of adherence in post-deployment enrollees may be a surrogate for inadequate counseling or recall bias. Our study highlights potential holes in counseling regarding malaria prophylaxis and the importance of ongoing provider and patient education on malaria.

Disclosures. Heather Yun, MD, American Board of Internal Medicine (Individual(s) Involved: Self); Board Member 736. Delays in Malaria Recognition and Door to Anti-malarial Time in a South London Hospital

Nisha Patel, MBBS BSc (Hons) MRCP DTM&H1; Tomasz Matserski, Lekary1; Elisa Gonzalez, MD1; Solomon Russom, MBA in Accounting and Finance1; Gurjinder Sandhu, MBE FRCP DTM&H PhD1; Kings College Hospital, London, UK

Session: P-35. Global Health

Background. The prompt recognition and treatment of Plasmodium falciparum is necessary to prevent death. We reviewed data from a cohort of patients presenting with malaria to Kings College Hospital NHS Trust, London.

Methods. Retrospective review of electronic records and drug charts of patients diagnosed with malaria from Jan 2019- March 2021.

Results. 109 cases of malaria were identified representing travellers from 11 Sub-Saharan African countries: Nigeria(38%), Sierra Leone(33%), Ivory Coast(10%). The age range varied from 4 to 76 years with a mean of 44, 66% of the cohort was male. 22 cases occurred during the COVID-19 Pandemic. The commonest symptoms were Fever (97%), Headache (92%) and malaise (72%). P. falciparum was present in 99% of the cohort was male. 22 cases occurred during the COVID-19 Pandemic. The commonest symptoms were Fever (97%), Headache (92%) and malaise (72%). P. falciparum was present in 99% of the cases. A travel history was taken in 94% of cases. Malaria was considered by the first clinician in 82% of cases with the second highest differential being a viral illness. In 6 cases, it took 4 to 11 medical reviews before malaria was considered. 29 patients met the UK criteria for severe malaria. Door to antimalarial time varied from 1 to 128 hours, with a median of 7.4 hours. 46% of the cohort received intravenous Artesunate as their first antimalarial. Extreme delays occurred were clinicians did not consider malaria, patients had negative films or a patient did not declare a travel history when asked. 1 patient died of cerebral malaria with a door to needle time of 2hr 3min. Where a reason for delay is documented, drug availability represented the highest cause with mean delay from prescribing antimalarial to giving antimalarial of 2.7 hours. There was no difference in door to antimalarial administration during the COVID-19 Pandemic, but patients did have a delay in presentation to hospital from onset of symptoms, mean 6.2 days pre-pandemic, 10.5 days during pandemic, this was not statistically significant (P = 0.198). 3 patients presenting during the Pandemic had covid-19 swabs prior to admission and 10 had attended primary care services. Number of days between onset of malaria symptoms and presentation to the Emergency Department

Box plot demonstrating that patients were waiting longer post symptom onset to access care in the Emergency Department. 3 patients had covid swabs in the community and 10 accessed care through their primary care physician.

Conclusion. Our data show that malaria is being considered early in the emergency department however there remain significant delays in administration of treatment. In 6 cases where malaria was not considered early there were delays in diagnosis of up to 5 days. An audit cycle will be completed with the aim of reducing door to antimarial time.

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737. Geographic Clustering of Travel-acquired Infections in Ontario, Canada, 2008-2020

Vinyas Harish, BComshell1; Emmalnine Busiati, MPH1; Holly Burrows, MPH2; Joshua Pouen, MD, MPH1; Izack Bogoch, MD, MSc1; Jonathan Gubbar, MBBS, MMeSc1; Andrea Bogdell, MSc MD DTMH FRCP1; Andrea Bogdell, MSc MD DTMH FRCP1; Laura Rossella, PhD3; Shaun Morris, MD, MPH, DTM&H, FRCP, FAAP1; University of Toronto, Toronto, Ontario, Canada; 3Yale University, New Haven, Connecticut; 1Hospital for Sick Children, Toronto, Ontario, Canada; 2Hospital for Sick Children, University of Toronto, Toronto, Ontario, Canada

Session: P-35. Global Health

Background. As rates of international travel increase, more individuals are at risk of travel-acquired infections (TAIs). We aimed to review all microbiologically confirmed cases of malaria, dengue, chikungunya, and enteric fever (Salmonella enterica) (serovar Typhi/Paratyphi) in Ontario, Canada between 2008-2020 to identify high-resolution geographical clusters that could be targeted for pre-travel prevention.

Methods. Retrospective cohort study of over 174,000 unique tests for the four above TAIs from Public Health Ontario Laboratories. Test-level data were processed to calculate annual case counts and crude population-standardized incidence ratios (SIRs) at the forward sortation area (FSA) level. Moran’s I statistic was used to test for global spatial autocorrelation. Smoothed SIRs and 95% posterior credible intervals (CIs) were estimated using a spatial Bayesian hierarchical model, which accounts for statistical instability and uncertainty in small area incidence. Posterior CIs were used to identify high- and low-risk areas, which were described using sociodemographic data from the 2016 Census. Finally, a second model was used to estimate the association between drivetime to the nearest travel clinic and risk of TAI within high-risk areas.

Results. There were 5962 cases of the four TAIs across Ontario over the study period. Smoothed FSA-level SIRs are shown in Figure 1a, with an inset for the Greater Toronto Area (GTA) in 1b. There was spatial clustering of TAIs (Moran’s I = 0.61, p < 2.2e-16). Identified high- and low-risk areas are shown in panels c and d. Compared to low-risk areas, high-risk areas were significantly more likely to have higher proportions of immigrants (p < 0.0001), lower household after-tax income (p = 0.04), more university education (p < 0.0001), and were less knowledgeable of English/French (p < 0.0001). In the high-risk GTA, each minute increase in drivetime to the closest travel clinic was associated with a 4% reduction in TAI risk (95% CI 2 - 6%).