Figure 1. CRE Colonization - Study Sites

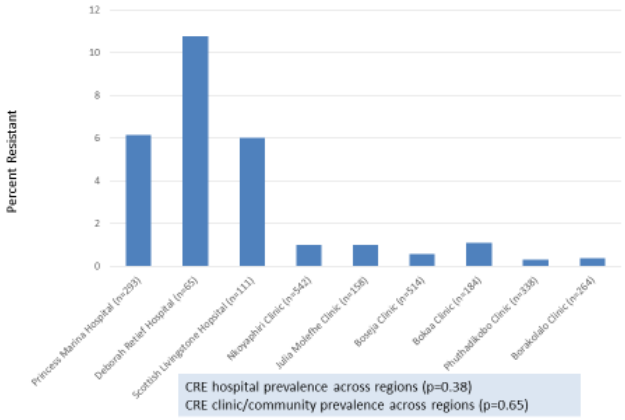
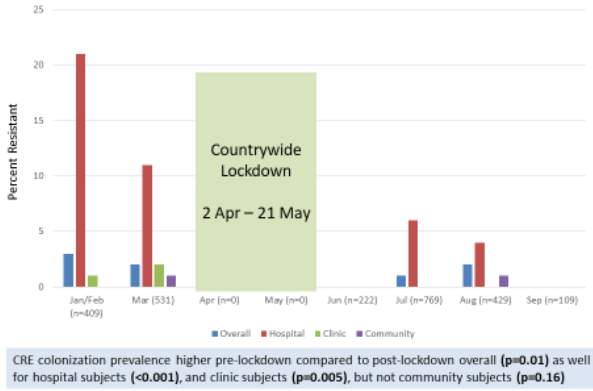


Figure 2. CRE Colonization - Temporal Trends



CRE colonization prevalence higher pre-lockdown compared to post-lockdown overall **(p=0.01)** as well as for hospital subjects **(<0.001)**, and clinic subjects **(p=0.005)**, but not community subjects **(p=0.16)**

FIgure 3. CRE Genotypic Analyses

Organism	# CREs	# (%) VIM+	# (%) NDM+	# (%) KPC+	# (%) IMP+	# (%) OXA+	# (%) no gene
Escherichia coli	17	2 (12%)	0(0%)	0 (0%)	0 (0%)	0 (0%)	14 (82%)
Klebsiella pneumoniae	20	1 (5%)	2 (10%)	0 (0%)	0 (0%)	0 (0%)	16 (80%)
Klebsiella oxytoca	4	1 (25%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	4 (100%
Enterobacter cloacae complex	11	2 (22%)	1 (11%)	0 (0%)	0 (0%)	0 (0%)	10 (91%)
Proteus mirabilis	2	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (100%
Non-Freundii *Citrobacter*	2	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (50%)
Citrobacter freundii	1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (100%

Among those isolates with no gene identified, carbapenemase activity via mCIM noted in: *E. coli* (1); *K. pneumoniae* (8); *K. oxytoca* (2)

Conclusion. CRE colonization was significantly higher in hospital vs community settings in Botswana. CRE prevalence varied by region and decreased significantly following a countrywide lockdown. With CRE prevalence still modest, elucidating risk factors for CRE colonization holds promise in developing strategies to curb further emergence of CRE. Additional investigation of the CRE isolates without identified resistance genes is warranted.

Disclosures. **Robert Gross, MD, MSCE**, **Pfizer** (Other Financial or Material Support, Serve on DSMB for drug unrelated to HIV) **Ebbing Lautenbach, MD, MPH, MSCE**, **Merck** (Other Financial or Material Support, Member of Data and Safety Monitoring Board (DSMB))

734. Abnormal Lipid Profiles in Human Babesiosis

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Session: P-35. Global Health

Background. Babesiosis has gained attention as an emerging protozoal zoonotic disease with an expanding known incidence and geographical range in the US. The infection is caused by *Babesia microti* in the US and is transmitted by the bite of *Ixodes* ticks, and occasionally by blood transfusion. The diagnosis is usually established by microscopic examination of a stained blood smear to see intraerythrocytic organisms. The level of parasitemia is only loosely correlated with clinical severity. Anecdotal reports suggest that HDL cholesterol levels decline during acute babesiosis. In this study, we report cholesterol levels in a series of patients with acute babesiosis with the hypothesis that HDL levels may be a potential biomarker for more severe infections.

Methods. A retrospective chart review was performed at Stony Brook University Hospital and Stony Brook Southampton Hospital between 2013 and 2018. Inclusion criteria was defined as a case of acute Babesia infection proven by peripheral blood smear microscopy and who had a lipid profile drawn during presentation to the emergency department. Cholesterol levels that were measured either before or after the infection (at least 1 month apart) were also recorded to compare to the levels reported during acute infection.

Results. A total of 40 patients (27.5% female) met criteria for acute Babesia infection. Fifteen (37.5%) had a history of splenectomy. The patients were divided into two groups for comparisons based on the treating physician's clinical decision: 32 patients who were admitted to the hospital and 8 patients who were not-admitted. History of hypertension was more common in admitted than non-admitted patients (37% vs. 17%, Chi-square test p=0.02); the median levels of LDL and HDL were more reduced in admitted than non-admitted patients (46 vs 76 mg/dL, p=0.04 and 9 vs 28.5 mg/dL, p=0.03, based on t-test respectively)

Conclusion. LDL and HDL levels are significantly reduced in acute babesiosis, and LDL levels are inversely proportional to the parasitemia, suggesting that low levels of LDL may predict worsening disease in babesiosis. The mechanism of this phenomenon is unknown. Further prospective studies are needed.

Disclosures. **All Authors**: No reported disclosures

735. Malaria Chemoprophylaxis Adherence Among U.S. Active Duty Service Members during Deployment to Endemic Regions

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Session: P-35. Global Health

Background. Military members frequently deploy to malaria-endemic regions. Most cases of travel-related malaria occur due to prophylaxis non-adherence, impacting mission readiness. Factors assessing adherence are described in outbreak settings; we prospectively assess adherence in military travelers.

Methods. TravMil is a prospective, observational cohort study of US military beneficiaries traveling outside the US (2010-2019). Our analysis includes only active-duty service members traveling with a military purpose to malaria-endemic regions, who were prescribed malaria prophylaxis, and who completed a pre- and post-deployment survey; they could also enroll after return from deployment. All travelers received pre-travel counseling. Survey responses were assessed using descriptive statistics and multivariate regression to determine risk factors for adherence.

Results. 1504 travelers were included (85% male; median age 28 years; 73% white). Median duration of travel was 77 days (12% traveled ≤ 14 days). Africa was the most common destination (33%). Primary prophylaxis included doxycycline (54%) and atovaquone/proguanil (43%). 969 (64%) were fully adherent to their regimen. The frequency of prophylaxis did not match expected values, as 3.6% of subjects reported taking prophylaxis weekly, and 2.9% did not know how often they took it. 103 (6.9%) did not take any of the prescribed regimen. On multivariate analysis, deployers were more likely to adhere if they traveled for ≤ 14 days or to Africa or practiced other mosquito-avoidance behaviors. Study enrollment post-deployment was associated with decreased odds of adherence, as was use of a tent. The use of daily versus weekly prophylaxis was not associated with a difference in adherence, though we had limited subjects prescribed weekly regimens.

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

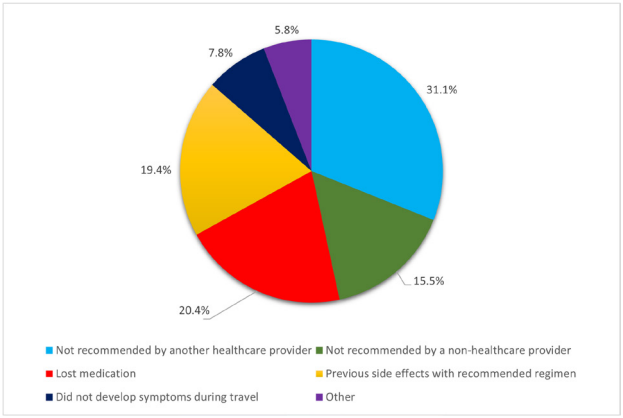

Table 1. Odds of full adherence to malaria chemoprophylaxis on multivariate logistic analysis

Risk Factor	Odds Ratio (95% CI)	P Value
Enrollment post-deployment	0.4 (0.3-0.6)	<0.01
Age, years (continuous)	1.01 (0.99-1.03)	0.12
Travel duration ≤ 14 days	9.1 (3.2-25.6)	<0.01
Shipboard accommodations	1.7 (0.9-2.8)	0.06
Dormitory/barracks accommodations	0.8 (0.5-1.1)	0.16
Tent accommodations	0.7 (0.5-0.9)	0.04
Did not stay overnight at destination	1.7 (0.9-2.9)	0.08
Travel to Africa	3.3 (2.3-4.8)	<0.01
Travel to South, Central, and West Asia	0.6 (0.4-1.1)	0.12
Use of insect repellant on skin	1.4 (1.0-1.9)	0.04
Often/everyday application of repellant to skin	1.8 (1.3-2.5)	<0.01
Treat outer clothing separately with repellant	1.2 (0.9-1.7)	0.15
Percentage of nights using mosquito net		<0.01
Not recommended to use mosquito net	1.5 (1.0-2.2)	
1-25%	1.0 (0.7-1.6)	
26-50%	1.8 (1.0-3.2)	
51-75%	1.1 (0.6-2.0)	
>75%	2.2 (1.5-3.3)	

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

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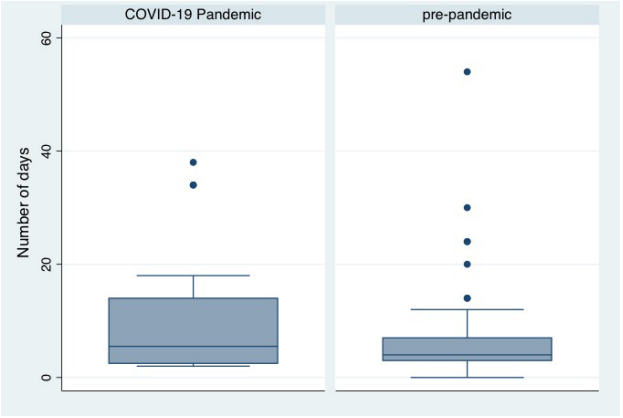
Session: P-35. Global Health

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% 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 antimalarial time.

Disclosures. **All Authors**: No reported disclosures

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

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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%).