



Department of Medicine
IDWeek 2020

Travel Destination, Demographics, and Underlying Medical Conditions Among Travelers Seeking Yellow Fever Vaccination at a Large Academic Medical Center in the U.S.

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Questions or concerns
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INTRODUCTION

Yellow fever (YF) virus has the potential to cause fatal outcomes among at-risk individuals visiting endemic areas. Vaccinating travelers who are at risk is necessary to prevent virus-related life-threatening complications. We lack data on the clinical features of travelers seeking YF vaccination. This study aims to describe the characteristics of a cohort of travelers receiving the YF vaccine.

METHODS

A retrospective analysis of 964 travelers receiving the YF vaccine (Stamaril®) from Oct 2016 to Jul 2019 was performed at the University of Colorado Hospital, U.S. Percentages, means, and standard deviations were calculated. A multivariate logistic regression model was built to evaluate the association between receiving YF vaccination less than 10 days before departure and visiting friends and relatives (VFR).

RESULTS

Variables	Total (N = 964)	VFR N = 170 (18%)	Other Reason, N = 794 (82%)	p-Value
Age (years), mean (SD)	39 (18)	30 (20)	41 (17)	<0.0001
Age ≥ 60 years old	167 (17%)	18 (11%)	149 (19%)	0.01
Sex, female	502 (52%)	74 (44%)	428 (54%)	0.01
Race				<0.0001
White	614 (64%)	36 (21%)	578 (73%)	
African American	142 (15%)	104 (61%)	38 (5%)	
Other	208 (22%)	30 (18%)	178 (22%)	
Out of Colorado State	41 (4%)	5 (3%)	36 (5%)	0.35
Pregnancy	11 (2%)	5 (6%)	6 (1%)	0.004
Hematologic/Immunologic Disease	36 (4%)	9 (5%)	27 (3%)	0.237
Diabetes Mellitus	27 (3%)	6 (4%)	21 (3%)	0.526
Neoplasm	72 (7%)	7 (4%)	65 (8%)	0.07
HIV	22 (2%)	12 (7%)	10 (1%)	<0.0001
Destination				
Africa	551 (57%)	146 (86%)	405 (51%)	<0.0001
South America	387 (40%)	22 (13%)	365 (46%)	
Other	26 (3%)	2 (1%)	24 (3%)	
Time between vaccine administration and departure (days), mean (SD)	41 (38)	34 (39)	43 (38)	0.0049
Vaccination < 10 days	110 (11%)	30 (18%)	80 (10%)	0.005

Identifying the type of travel and underlying medical conditions allows safe administration of YF vaccine to travelers over the age of 60 years as well as those with immunologic comorbidities. In addition, there is a need to identify strategies to improve the timing of YF vaccination among VFR travelers.

Heat map of destinations of total cohort of travelers

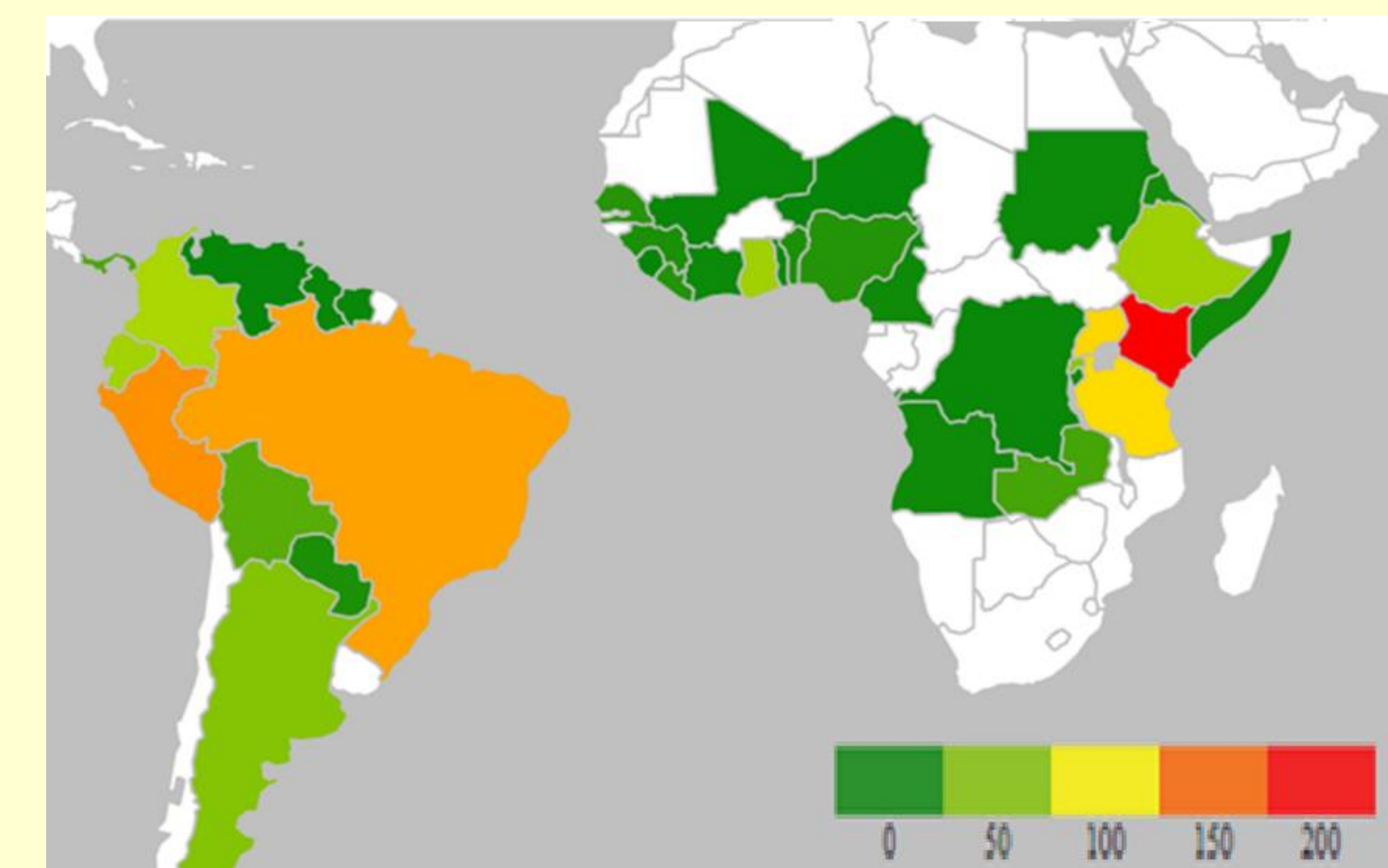


Figure 1.

Reason for travel

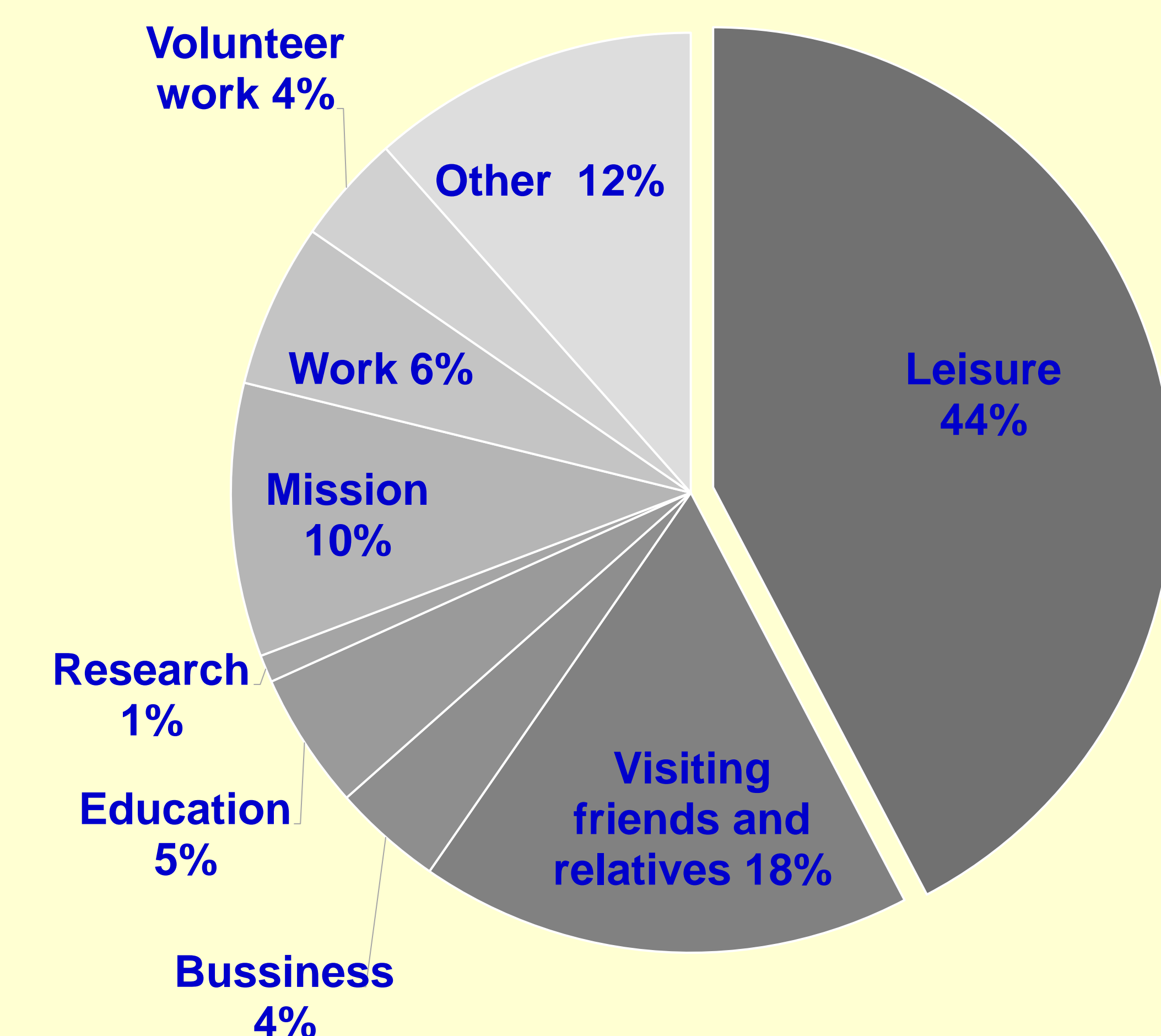


Figure 2.