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Travel medicine consultation in Bogotá D.C., Colombia: the first twenty-month experience of a private healthcare center

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Abstract

Introduction: Travel medicine emerged in the late 1970s and has gained global importance over time. As international travel from developing countries has increased, Latin American countries have recognized the need for travel medicine services. This study aimed to describe the first twenty-month experience of a private travel medical consultation initiated in Bogotá D.C. and Colombia.

Materials and methods: This study was conducted at the "Servicios y Asesorías en Infectología" private healthcare center in Bogotá, Colombia, between August 2022 and March 2024. Patients were anonymized, and data were collected using a standardized survey. The patients were categorized into three groups: pre-travel, post-travel, and foreign vaccine consultations.

Results: Over 20 months, 52 patients attended travel medicine consultations in Bogotá. Of these, 24 were pre-travel, 15 were post-travel, and 13 were foreigners who consulted for vaccination. Most pre-travel patients were middle-aged men, with common destinations in South America and Central America. Typhoid fever and influenza vaccines were frequently administered. Post-travel patients were mostly men, and consultations were mainly for control and recommendations. Foreign individuals sought vaccination, with yellow fever and typhoid fever being the most common. Most consultations were virtual.

Discussion: During the first 20 months of the travel medicine service in Bogotá, Colombia, 52 patients were cared for, mostly for pre-travel consultations. Despite the initial low number of patients, the service provided essential vaccines and preventive medication. Its impact is expected to grow, improving public health for both local persons and travelers.

Keywords: Travel medicine; Colombia; Bogotá; travelers; patients; vaccination

Consulta de medicina del viajero en Bogotá D.C., Colombia: la experiencia de los primeros veinte meses en un centro de salud privado

Resumen

Introducción: La medicina del viajero surgió a finales de la década de 1970 y adquirió importancia mundial con el tiempo. Con el aumento de los viajes internacionales desde países en desarrollo, los países latinoamericanos reconocieron la necesidad de servicios de medicina del viajero. El objetivo de este estudio fue describir la primera experiencia de veinte meses de una consulta privada de medicina del viajero, iniciada en Bogotá D.C. y en Colombia.

Materiales y métodos: Este estudio se llevó a cabo en el centro de salud privado "Servicios y Asesorías en Infectología" en Bogotá, Colombia, entre agosto de 2022 y marzo de 2024. Los pacientes fueron anonimizados y los datos se recopilaron mediante una encuesta estandarizada. El estudio clasificó a los pacientes en tres grupos: consultas pre-viaje, post-viaje y consultas de vacunación al extranjero.

Resultados: Durante veinte meses, 52 pacientes asistieron a la consulta de medicina del viajero en Bogotá. De estos, 24 fueron consultas pre-viaje, 15 post-viaje y 13 extranjeros que consultaron por vacunación. La mayoría de los pacientes pre-viaje eran hombres de mediana edad, con destinos comunes en Sudamérica y Centroamérica. Se administraron con frecuencia vacunas contra la fiebre tifoidea y la influenza. Los pacientes después del viaje fueron mayoritariamente hombres, y las consultas se centraron principalmente en el control y la formulación de recomendaciones. Las personas extranjeras solicitaron la vacunación, siendo la fiebre amarilla y la fiebre tifoidea las más comunes. La mayoría de las consultas fueron virtuales.

Discusión: Durante los primeros veinte meses del servicio de medicina del viajero en Bogotá, Colombia, se atendió a 52 pacientes, principalmente en consultas pre-viaje. A pesar del bajo número inicial de pacientes, el servicio proporcionó vacunas esenciales y medicamentos preventivos. Se espera que su impacto aumente, mejorando la salud pública tanto para los residentes locales como para los viajeros.

Palabras clave: Medicina del viajero, Colombia, Bogotá, viajeros, pacientes, vacunación.

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Introduction

Travel medicine is a relatively new medical discipline that gained importance in the late 1970s due to significant interest in the health and illnesses of travelers in Europe and North America[1]. The first studies on Travel Medicine were performed in Canada, investigating the use of emergency departments in some healthcare centers by travelers and immigrants[2,3]. The first international conference on travel medicine was held in April 1988 in Zurich, Switzerland[4]. Both led to the establishment of the first Travel Medicine Faculty in 2006 in Glasgow, Scotland[5]. Since then, travel medicine has gained popularity in several regions worldwide and has gained importance in recent years, especially during the recent coronavirus disease 2019 (COVID-19) pandemic[6].

Travel medicine focuses on promoting the health and well-being of travelers, mainly international travelers. Travel medicine addresses health risks associated with global travel (e.g., exposure to infectious diseases and the need for vaccination) by offering health recommendations to help minimize the risks that travelers may face and ensure that they remain safe and in good health during their trip, thus preventing issues that may arise and be carried from one region to another[7-9].

The greatest importance of travel medicine has been in industrialized countries since the inception of the field, focusing on safeguarding the health of travelers from developed nations who visit less developed countries[10,11]. However, international travel from developing and immigration from underdeveloped countries has recently become more popular and common, making travel medicine an important field in many of these countries in Asia, Africa, and Latin America[12,13]. Most studies on travelers seeking consultation have been conducted in developed and industrialized countries[14,15]. Data regarding less developed countries are still scarce, and in South America, the availability of these studies is limited to Argentina[16], Brazil[17,18], and Chile[19], which are the only countries where a travel medicine service has been developed.

Colombia has different climates and five different geographic regions: The Amazon rainforest, Andes mountain range, Caribbean coast, Grassland Plains, and the Pacific coast. Its climate is mainly tropical and isothermal, with only rainy and dry seasons[20]. In recent years, Colombia has experienced remarkable growth in tourism, becoming one of the most popular destinations in Latin America for international travelers due to its great biodiversity and stunning natural landscapes[21,22]. With this growth, the need for travel medicine services in the country has become increasingly evident. Bogotá is the capital of Colombia and a central hub for both national and international tourists (https://colombia.travel/es, accessed March 25th, 2025). Travelers from around the world mostly visit Bogotá as the final destination or transit to other Colombian regions[23]. Thus, establishing a travel medicine service would be highly beneficial from a logistical perspective. Travelers who visit Bogotá are mainly exposed to high-altitude health risks[24,25]. However, those who visit other areas, mainly rural and remote areas, and cities located in tropical regions, face several infectious diseases, such as vector-borne (e.g., malaria), bat-borne (e.g., rabies), water-borne, and food-borne (e.g., typhoid fever) diseases, some of which require mandatory notification to the national surveillance system and others that do not [26-29]. To prioritize the health of both the local population and international travelers, in 2022, we created the first travel medicine service in a private healthcare center in Bogotá D.C., to promote this emerging field in Colombia. The aim of the present study was to describe the first twenty-month experience of this private travel medical consultation in Colombia.

Materials and methods

The present study was conducted at the travel medicine consultation of the "Servicios y Asesorías en Infectología" private healthcare center in Bogotá D.C., Colombia, during twenty months from August 2022 to March 2024. All patients who attended the consultation were anonymized and included in this report. A standardized survey was conducted to retrieve patient data during medical consultations. Patients who attended were classified into three groups: 1) patients who consulted during the pre-travel period, 2) patients who consulted during the post-travel period, and 3) foreigners who consulted only for vaccination.

Eighteen variables were recorded from patients during pre-travel consultation: 1) consultation date, 2) sex, 3) age, 4) consultation type, 5) nationality, 6) place of residence, 7) educational level, 8) significant medical history, 9) previous vaccinations, 10) days before the trip when the consultation occurred, 11) destination region, 12) length of stay at the destination, 13) purpose of the trip, 14) type of residence at the destination, 15) travel insurance, 16) vaccines administered at consultation, 17) medications prescribed at consultation, and 18) serologic studies at consultation.

Twenty-two variables were obtained from patients during post-travel consultations; 15 of them (1 to 9 and 13 to 18) were the same as the pre-travel variables. The remaining seven variables were as follows: 1) pre-travel consultation background, 2) use of malaria prophylaxis, 3) use of traveler's diarrhea medication, 4) period after the trip when the consultations took place, 5) region visited, 6) days of stay at destination, and 7) clinical impression.

Finally, for foreigners who consulted only for vaccination, four variables were retrieved: 1) vaccination date, 2) sex, 3) age, 4) region of origin, and 5) administered vaccine.

All variables were described using frequency tables and percentages. Considering that all data retrieved from the medical history were gathered anonymously, informed consent from the patients was not required for this study.

Results

A total of 52 patients attended the travel medicine consultation between August 2022 and March 2024 (Figure 1). Twenty-four patients were evaluated pre-travel, 15 post-travel, and 13 foreigners consulted only for vaccination. Regarding the patients who consulted pre-travel, most of them were seen in March 2023 (11/24 [45.8%]). A little more than half of the patients were men (13/24 [54.2%]), half of the patients were middle-aged adults (12/24 [50%]), and the most frequent mode of medical consultation was virtual (16/24 [66.7%]). More than half of the patients were Colombian residents (14/24 [58.3%]), but a few were foreign nationals, and most patients had a professional education level (22/24 [91.6%]) (Table 1). Although most of the patients did not report any significant medical history (9/24 [37.5%]), nine medical conditions were identified, with a history of cardiovascular disease being the most common (4/24 [16.7%]) (Table 1). Previous vaccination history showed that all patients were vaccinated against SARS-CoV-2, and at least half of them had received the yellow fever vaccine (16/24 [66.7%]), hepatitis B vaccine (13/24 [54.2%]), and measles, mumps, and rubella (MMR) vaccine (12/24 [50%]) (Table 1). Most patients sought pre-travel consultation fewer than 10 days before the trip (10/24 [41.6%]). The most common travel destination identified was another region in South America (12/24 [50%]), followed by Central America (5/24 [20.8%]). Most patients reported remaining at the travel destination for fewer than 10 days (16/24 [66.7%]). Most trips were for business (13/24 [54.2%]), and almost all patients planned to stay in a hotel (23/24 [95.8%]). A large number of patients obtained travel insurance (18/24 [75%]) before their trip (Table 1). Thirteen different vaccines were administered during medical consultation, mainly typhoid fever (18/24 [75%]) and influenza (6/24 [25%]) vaccines. Loperamide and azithromycin were the most frequently prescribed drugs (21/24 [87.5%]) in cases of traveler's diarrhea, and four different serological tests were requested, with Hepatitis A IgG being the most frequent (17/24 [70.8%]) (Table 1).

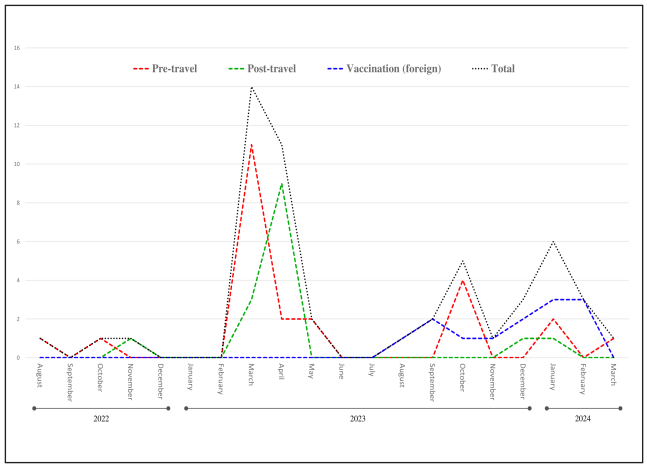

Figure 1. Seasonality and number of patients who attended to the travel medicine service in Bogotá D.C., Colombia per month during the first twenty months of medical service. Red dotted lines: pre-travel consultations. Green dotted lines: post-travel consultations. Blue dotted lines: vaccination consultations. Black spotted lines: total of consultations. X-axis: month of consultation. Y-axis: number of patients who were attended.

Medical consultations for post-travel patients occurred mainly in April 2023 (9/15 [60%]); most of them were middle-aged adult males (9/15 [60%]), and almost all were evaluated by virtual meeting (14/15 [93.3%]) (Table 2). A little more than half of this patient group were Colombians (8/15 [53.3%]), most of whom resided in Colombia (7/15 [46.7%]) and had a professional education level (12/15 [80%]) (Table 2). In addition, most of the patients did not report significant medical history (6/15 [40%]); however, six medical conditions were identified among all the patients, including cardiovascular conditions (3/15 [20%]) (Table 2). Previous vaccinations included the SARS-CoV-2 vaccine (12/15 [80%]), yellow fever vaccine (9/15 [60%]), and hepatitis B vaccine (8/15 [53.3%]) (Table 2). Previous pre-travel consultation was sought by 73.3% (11/15) of the patients, and a large number (12/15 [80%]) had travel insurance. Malaria prophylaxis (13/15 [86.7%]) and traveller's diarrhea medication (14/15 [93.3%]) were not required by the patients. Post-travel medical consultation occurred mainly in the first ten days after the trip (10/15 [66.7%]). Most patients travelled outside Colombia to other South American countries (12/15 [80%]), and stayed at the travel destination for fewer than 10 days (7/15 [46.7%]) and 10–20 days (5/15 [33.3%]). Most trips were for business purposes (11/15 [73.3%]), and patients frequently stayed in hotels during their trips (12/15 [80%]) (Table 2). Most of the patients who received post-travel medical consultation sought it only for recommendations for the next trip (11/15 [73.3%]); however, in two of them, presumptive rabies exposure was determined (Table 2). Although several post-travel patients did not receive the vaccine during the medical consultation (6/15 [40%]), some were vaccinated with the influenza virus vaccine (5/15 [33.3%]) (Table 2). Very few patients were prescribed medications (12/15 [80%]), but rabies immunoglobulin, antiparasitic drugs, and analgesics were prescribed (Table 2). Similarly, serologic studies were seldom requested (12/15 [80%]) (Table 2).

Finally, foreigners who consulted only for vaccination sought the service since August 2023, with a peak in January and February 2024 (3/13 [23.1%]) (Table 3). More than half were female (7/13 [53.8%]) and between 24 and 60 years old (median 35 years) (Table 3). Most patients were Europeans (9/13 [69.2%]). Seven vaccines were administered in this population, with yellow fever (5/13 [38.5%]) and typhoid fever (3/13 [23.1%]) vaccines being the most frequently administered (Table 3).

Discussion

According to the Infectious Diseases Society of America (IDSA), travel medicine practice has increased due to several factors, with the sudden increase in the number of international travelers being the most important[8]. For several decades, travel medicine has mainly focused on protecting the health of 'travelers' from industrialized countries, aiming to prevent the spread of prevalent diseases from less developed

Table 1. Data regarding the patients who attended for pre-travel consultation

Variable	Category	Total (%)
Consultation month	August 2022	1 (4.2%)
	October 2022	1 (4.2%)
	March 2023	11 (45.8%)
	April 2023	2 (8.3%)
	May 2023	2 (8.3%)
	October 2023	4 (16.7%)
	January 2024	2 (8.3%)
	March 2024	1 (4.2%)
Sex	Male	13 (54.2%)
	Female	11 (45.8%)
Age	Children (0-12)	0 (0.0%)
	Adolescents (13-18)	1 (4.2%)
	Young Adults (19-34)	9 (37.5%)
	Middle-aged Adults (35-59)	12 (50.0%)
	Old Adults (above 60)	2 (8.3%)
Consultation type	In-person	8 (33.3%)
	Virtual	16 (66.7%)
Nationality	Colombian	14 (58.3%)
	Other Latin American country	5 (20.8%)
	European country	5 (20.8%)
Place of residence	Colombian	14 (58.3%)
	Other Latin American country	6 (25.0%)
	Other country	4 (16.7%)
Educational level	Professional	22 (91.6%)
	Student	1 (4.2%)
	Non-professional	1 (4.2%)
Significant medical history	None	9 (37.5%)
	Cancer	1 (4.2%)
	Dermatological	2 (8.3%)
	Cardiovascular	4 (16.7%)
	Ophthalmological	1 (4.2%)
	Allergic	2 (8.3%)
	Endocrinological	1 (4.2%)
	Respiratory	1 (4.2%)
	Rheumatological	2 (8.3%)
	Psychiatric	1 (4.2%)
Previous vaccination	SARS-CoV-2	24 (100.0%)
	Yellow Fever	16 (66.7%)
	Hepatitis B	13 (54.2%)
	MMR	12 (50.0%)
	DPT	9 (37.5%)
	Influenza	6 (25.0%)
	Polio	5 (20.8%)
	Hepatitis A	4 (16.7%)
	Chickenpox	4 (16.7%)
	Meningococcal	1 (4.2%)
	Rabies	1 (4.2%)
	Japanese Encephalitis	1 (4.2%)
	Human Papilomavirus	1 (4.2%)
	Pneumococcal	1 (4.2%)
	BCG	1 (4.2%)
	Haemophilus influenzae	1 (4.2%)
	Typhoid fever	1 (4.2%)
Days before the trip when the consultation was provided	Less than 10 days	10 (41.6%)
	10 – 20 days before	6 (25.0%)
	21 – 30 days before	4 (16.7%)
	More than 30 days before	4 (16.7%)
Destination region	South America	12 (50.0%)
	Central America	5 (20.8%)
	North America	3 (12.5%)
	Southeast Asia	3 (12.5%)
	Africa	1 (4.2%)
Length of stay at the destination	Less than 10 days	16 (66.7%)
	10 – 20 days	3 (12.5%)
	21 – 30 days	3 (12.5%)
	More than 30 days	2 (8.3%)
Purpose of the trip	Business	13 (54.2%)
	Tourism	8 (33.3%)
	Academic	2 (8.3%)
	Business/Tourism	1 (4.2%)
Type of place of stay at the destination	Hotel	23 (95.8%)
	Family home	1 (4.2%)
Travel insurance	Yes	18 (75.0%)
	No	1 (4.2%)
	ND	5 (20.8%)
Vaccines administered at consultation	Typhoid Fever	18 (75.0%)
	Influenza	6 (25.0%)
	DPT	4 (16.7%)
	Polio	4 (16.7%)
	Haemophilus influenzae	4 (16.7%)
	Hepatitis B	3 (12.5%)
	Hepatitis A	3 (12.5%)
	Rabies pre-exposure	3 (12.5%)
	Yellow Fever	2 (8.3%)
	Meningococcal	2 (8.3%)
	Pneumococcal	2 (8.3%)
	MMR	1 (4.2%)
	SARS-CoV-2	1 (4.2%)
	None	3 (12.5%)
Medications prescribed at consultation	Loperamide and azithromycin	21 (87.5%)
	Acetazolamide	2 (8.3%)
	Doxycycline	1 (4.2%)
	None	3 (12.5%)
Serologies requested at consultation	Hepatitis A IgG	17 (70.8%)
	Anti-HBs Ag	4 (16.7%)
	IgG MMR	3 (12.5%)
	IgG Chickenpox	3 (12.5%)
	None	5 (20.8%)
Total Patients		**24 (100.0%)**

Anti-HBs Ag = Anti-Hepatitis B Surface Antigen; BCG = Bacillus Calmette-Guérin; DPT = Diphtheria, Pertussis, and Tetanus; IgG = Immunoglobulin G; MMR = Measles, Mumps, and Rubella; ND = No Data; SARS-CoV-2 = Severe Acute Respiratory Syndrome Coronavirus 2

Table 2. Data regarding the patients who attended for post-travel consultation

Variable	Category	Total (%)
Consultation month	November 2022	1 (6.7%)
	March 2023	3 (20.0%)
	April 2023	9 (60.0%)
	December 2023	1 (6.7%)
	January 2024	1 (6.7%)
Sex	Male	9 (60.0%)
	Female	6 (40.0%)
Age	Children (0-12)	0 (0.0%)
	Adolescents (13-18)	0 (0.0%)
	Young Adults (19-34)	4 (26.7%)
	Middle-aged Adults (35-59)	9 (60.0%)
	Old Adults (above 60)	2 (13.3%)
Consultation type	In-person	1 (6.7%)
	Virtual	14 (93.3%)
Nationality	Colombian	8 (53.3%)
	Other Latin American country	4 (26.7%)
	European country	2 (13.3%)
	United States	1 (6.7%)
Place of residence	Colombia	7 (46.7%)
	Other Latin American country	5 (33.3%)
	Other country	3 (20.0%)
Educational level	Professional	12 (80.0%)
	Retired	1 (6.7%)
	ND	2 (13.3%)
Significant medical history	None	6 (40.0%)
	Cancer	1 (6.7%)
	Dermatological	1 (6.7%)
	Cardiovascular	3 (20.0%)
	Ophthalmological	1 (6.7%)
	Allergic	1 (6.7%)
	Endocrinological	1 (6.7%)
	ND	1 (6.7%)
Previous vaccination	SARS-CoV-2	12 (80.0%)
	Yellow Fever	9 (60.0%)
	Hepatitis B	8 (53.3%)
	MMR	6 (40.0%)
	DPT	5 (33.3%)
	Influenza	2 (13.3%)
	Polio	2 (13.3%)
	Hepatitis A	2 (13.3%)
	Chickenpox	1 (6.7%)
	Meningococcal	2 (13.3%)
	Rabies	2 (13.3%)
	Human Papilomavirus	1 (6.7%)
	Pneumococcal	1 (6.7%)
	Typhoid fever	6 (40.0%)
	ND	2 (13.3%)
Pre-travel consultation background	Yes	11 (73.3%)
	No	2 (13.3%)
	ND	2 (13.3%)
Travel insurance	Yes	12 (80.0%)
	No	0 (0.0%)
	ND	3 (20.0%)
Use of malaria prophylaxis	Yes	1 (6.7%)
	No	13 (86.7%)
	ND	1 (6.7%)
Use of traveler's diarrhea medication	Yes	0 (0.0%)
	No	14 (93.3%)
	ND	1 (6.7%)
Days after the trip when the consultations took place	First 10 days	10 (66.7%)
	10 – 20 days later	2 (13.3%)
	21 – 30 days later	1 (6.7%)
	More than 30 days later	2 (13.3%)
Region visited	South America	12 (80.0%)
	Central America	4 (26.7%)
	North America	1 (6.7%)
	Europe	1 (6.7%)
	Africa	1 (6.7%)
Days of stay at destination	Less than 10 days	7 (46.7%)
	10 – 20 days	5 (33.3%)
	21 – 30 days	0 (0.0%)
	More than 30 days	2 (13.3%)
	ND	1 (6.7%)
Purpose of the trip	Business	11 (73.3%)
	Tourism	3 (20.0%)
	Business/Tourism	1 (6.7%)
Type of place of stay at the destination	Hotel	12 (80.0%)
	Tent	1 (6.7%)
	ND	2 (13.3%)
Reason for consultation	Post-travel control/ recommendations for next travel	11 (73.3%)
	Presumptive rabies exposure	2 (13.3%)
	Chronic diarrhea	1 (6.7%)
	Arthritis-related arbovirosis	1 (6.7%)
Vaccines administered at consultation	Typhoid Fever	2 (13.3%)
	Influenza	5 (33.3%)
	Hepatitis B	1 (6.7%)
	Hepatitis A	1 (6.7%)
	Rabies post-exposure	2 (13.3%)
	Yellow Fever	1 (6.7%)
	SARS-CoV-2	1 (6.7%)
	None	6 (40.0%)
Medications prescribed at consultation	Rabies immune globulin	1 (6.7%)
	Albendazole/Ivermectin.	1 (6.7%)
	Analgesics	1 (6.7%)
	None	12 (80.0%)
Serologies requested at consultation	Hepatitis A IgG	3 (20.0%)
	None	12 (80.0%)
Total Patients		**15 (100.0%)**

DPT = Diphtheria, Pertussis, and Tetanus; IgG = Immunoglobulin G; MMR = Measles, Mumps, and Rubella; ND = No Data; SARS-CoV-2 = Severe Acute Respiratory Syndrome Coronavirus 2

regions[10,11]. However, over time, travel medicine has become an important medical field worldwide[12,13]. Despite this emergence, some limitations still exist in Latin America, as there are only a few travel medicine services available in three countries (Argentina, Brazil, and Chile) [16-19]. The present manuscript reports the first twenty-month experience of the first travel medicine service in Colombia, which was developed at a private healthcare center in Bogotá D.C.

There were only a few patients during the first four months after the service began; a greater number of patients were seen in March and April 2023, and after August 2023, the number of patients who attended the service became more regular. However, only a small number of patients (n=52) received the service compared to the experience of other Latin American countries such as Chile (1341 patients in 24 months)[19], Argentina (278 patients in 24 months) [16], and Brazil (111 patients in 10 months)[18]. This highlights the need to improve the perception and importance of travel medicine among the Colombian population, who are still not fully aware of the need for pre-travel preparation to avoid preventable diseases during their trips.

Although most patients were Colombian, the service also cared for the foreign population, highlighting the importance of a travel medicine service, as international travelers, mainly from Europe and North America, are more cautious regarding their health status during travel and are frequent travelers in Colombia[30,31]. Compared with experiences reported in Europe and North America, the lower number of consultations in Colombia reflects differences in healthcare structure, cultural awareness, and accessibility to preventive services. In these regions, travel medicine is more consolidated, supported by well-organized healthcare systems due to the integration of pre-travel consultations within national health systems, broader insurance coverage that includes pre-travel consultations, wide availability of vaccines, and greater public awareness of infectious risks associated with international mobility. Moreover, European and North American travelers tend to plan their trips further in advance, often for business or long-distance tourism, facilitating timely medical evaluation and vaccination. In contrast, in Colombia, public awareness of travel-related health risks remains limited, consultations are typically paid out-of-pocket, and last-minute travel plans, especially visits to friends or relatives, reduce the likelihood of seeking pre-travel medical advice.

Almost all patients had travel insurance, which included several features to mitigate risks during the trip[32]. This service has become more popular among travelers after the COVID-19 pandemic[33], driven by increasing concerns over health, safety, and travel uncertainties during international trips, and seeking approaches to handle unforeseen situations. Additionally, most patients attended virtually. Considering that travel medicine attention is usually preventive, telemedicine and online consultations may be more useful in this field than in other medical specialties, allowing timely assessment and counseling[34,35]. With the increasing use of social media, travel medicine healthcare professionals can interact easily with patients, facilitating communication before and during their trips[36], bringing a high benefit for travel medicine attention. However, virtual consultations have inherent limitations, such as the inability to perform physical examinations, which can affect clinical decision-making and the reliability of the collected data when consultations are not purely preventive. Regarding vaccination, a central component of travel medicine, for patients attending virtual consultations, a clear plan was implemented to ensure in-person vaccine administration at the healthcare center immediately after consultation when required. Therefore, while virtual consultations significantly improve accessibility and convenience, they still require careful coordination for essential in-person procedures, such as vaccination, in some cases. This approach saved patients' time and ensured a coordinated care process that maintained adherence to clinical guidelines and quality of care.

Although most of the patients who attended the service were apparently healthy, some of them reported medical conditions, with cardiovascular disease being the most frequent. Usually, patients with cardiovascular disease are pharmacologically controlled, but travel medicine attention is an opportunity to reinforce the importance of cardiovascular disease treatment, and travel to a high-altitude region could represent a risk for this population[37,38]. Despite specific risks for patients with significant medical conditions, all patients are exposed to transmissible infectious diseases, with vaccination status being an important consideration during travel

Table 3. Data regarding foreign who attended for vaccination only.

Variable	Category	Total (%)
Vaccination date	August 2023	1 (7.7%)
	September 2023	2 (15.4%)
	October 2023	1 (7.7%)
	November 2023	1 (7.7%)
	December 2023	2 (15.4%)
	January 2024	3 (23.1%)
	February 2024	3 (23.1%)
Sex	Male	6 (46.2%)
	Female	7 (53.8%)
Region of origin	Europe	9 (69.2%)
	North America	3 (23.1%)
	Oceania	1 (7.7%)
Administered vaccines	Typhoid Fever	3 (23.1%)
	Polio	2 (15.4%)
	Hepatitis B	1 (7.7%)
	Hepatitis A	1 (7.7%)
	Yellow Fever	5 (38.5%)
	MMR	1 (7.7%)
	Tetanus toxoid	1 (7.7%)
Total Patients		**13 (100.0%)**

MMR = Measles, Mumps, and Rubella

medicine consultation[39,40]. In the present study, several important vaccines, such as those against SARS-CoV-2, yellow fever, hepatitis B, and MMR, had been previously administered to patients; however, considering that many patients were travelling to other South American countries, other vaccines were also administered during the pre-travel consultation, with typhoid fever and influenza vaccination being the most frequent among post-travel patients. It is clear that travel medicine physicians play an important role in checking and updating routine vaccinations, as travel medicine consultations are an important opportunity to improve vaccine coverage[41].

According to recent guidelines and publications, pre-travel consultation must take place between four and six weeks before trip departure, mainly to allow for the protective effect of administered vaccines[7,42]. The data obtained in the present study showed that most patients attended the service for fewer than four weeks, usually fewer than ten days, before the trip. This highlights the need to improve travel medicine services in Colombia. Since it is the first one developed so far, the population is still not familiar with it, nor is it appropriate to seek consultation. Most patients received preventive medications for travelers' diarrhea according to the guidelines[7,8], considering that it can develop unexpectedly at any time, mainly when the trip is made to underdeveloped countries[43,44], to prevent inconveniences during the trip and post-travel, since it can also occur after returning, mainly when the length of the trip is short[45].

Of all the patients who obtained pre-travel consultation, fewer than half attended the post-travel follow-up, most of whom attended during the first ten days after returning from the trip. Most of them attended only to receive recommendations for future travels without showing any medical problems; however, a few had problems such as presumptive rabies exposure, chronic diarrhea, and arthritogenic arbovirosis. Post-travel screening is important for identifying subclinical infections among travelers returning from developing and underdeveloped endemic regions[46]. Symptomatic and asymptomatic travelers must always be screened to identify exposure risk factors for several diseases (e.g., consumption of food or water from unsafe sources, exposure to arthropods or animal bites, unsafe sexual practices with casual partners), since several travelers have returned home with infectious diseases, some of them exotic and neglected, or develop the disease after returning from the trip[47-49]. This is an important opportunity to prevent fatal outcomes and avoid potential outbreaks of these infectious diseases. Thus, travelers must fulfill the entire travel medicine attention, without omitting the post-travel consultation.

After Argentina, Brazil, and Chile[16,18,19], Colombia became the fourth Latin American country to develop a travel medicine service. Although the number of patients who attended medical consultations was low during the first 20 months, as the service is promoted and its role in preventing travel-related health issues becomes clearer, the local Colombian community will likely become more engaged with travel medicine services. Moreover, the establishment of a travel medicine service in the country will strengthen healthcare and ensure the health and safety of international travelers, contributing to tourism in Colombia.

In conclusion, data from the first travel medicine service in Colombia during the first 20 months of service, between August 2022 and March 2024, highlights the growing need for this emerging medical field in Colombia to provide healthcare services for both the national population and international travelers. During this period, 52 patients sought medical consultation, most of whom attended pre-travel consultations, followed by a few patients who sought post-travel consultations and foreigners seeking only vaccination. Most patients were Colombian, and a significant proportion had travel insurance. Online consultations were the most frequent for all pre- and post-travel patients. The service also played a key role in providing essential vaccines and medications, such as typhoid fever and influenza vaccines, as well as preventive medications for traveler's diarrhea. Despite the initial low number of patients, the service's impact on healthcare and the prevention of travel-related health issues is expected to grow as awareness of its importance increases in Colombia. Furthermore, the establishment of this travel medicine service contributes to improving public health for both local and international travelers.

Ethical considerations

Protection of persons. The study used information from medical consultations. All procedures complied with national regulations and international ethical guidelines for research involving human data. No patient contact was made beyond the routine medical encounter.

Protection of vulnerable populations. Not applicable.

Confidentiality. Personal identifiers including names, identification numbers and contact details were removed from the clinical records prior to analysis. Only aggregated, anonymized data were used for research purposes, and no individual could be identified from the study results.

Privacy. Anonymized datasets were stored in password-protected files on secure clinic servers with restricted access granted only to authorized research staff, following the clinic's data protection policy.

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& Editing, Supervision. A.D: Data Curation, Writing - Review & Editing. A.A.F.M: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data Curation, Writing - Review & Editing, Supervision. All authors contributed to read and approved the version of the submitted manuscript.

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