



Dominican Republic

**Cady Kadah
March 2024**

DOMINICAN REPUBLIC
RAD-AID International Country Report
Cady Kadah



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GENERAL COUNTRY PROFILE

Geography and Population

Geography

The Dominican Republic is located in the heart of the Caribbean on the island of Hispaniola. One of the most geographically diverse nations in the region, the territory stretches 18,704 square miles.¹ Bordered by Haiti on its western side, the island of Hispaniola is one of the few islands in the world to be shared by two independent nations. Located on the southern coast is Santo Domingo, the nation's capital and the oldest city in the Caribbean. This bustling metropolitan area is home to a population of 4 million people and a vibrant history and culture of the Dominican Republic.²



Figure 1. Map of Hispaniola (Borrowed from britannica.com)

Climate and Seasonal Cycles

The Dominican Republic has a tropical climate with warm and humid conditions and fairly consistent weather year-round. There are two main seasons, a rainy season which spans from May to November and a dry season from December to April. Due to unique tectonic structure and weather patterns, Latin America is the second-most disaster-prone region in the world.³ Subsequently, the Dominican Republic is very vulnerable to natural disasters, even more exacerbated by climate change. Hurricanes, drought, flooding, heat waves, rising sea levels, and wildfires have affected the country. Over 40 percent of Dominicans live in vulnerable conditions and are at risk of falling into poverty due to climate-related impacts and economic crises.⁴

Geographic Landmarks

The country's topography is remarkably diverse, with landmarks including Pico Duarte of the Cordillera Central mountain range, the Caribbean's highest peak, and Lake Enriquillo, the country's largest lake and lowest elevation.⁵ There are five large mountain ranges and several smaller upland areas. The majority of the population lives in the lowland areas and plains, where transportation networks, agricultural practices, and other economic activities are based.⁶ Cibao Valley, an agricultural heartland in northern region, is the most densely settled area in the country.⁷ The extensive coastline stretches over 1,600 kilometers and comprised of pristine beaches and vibrant coral reefs.⁸

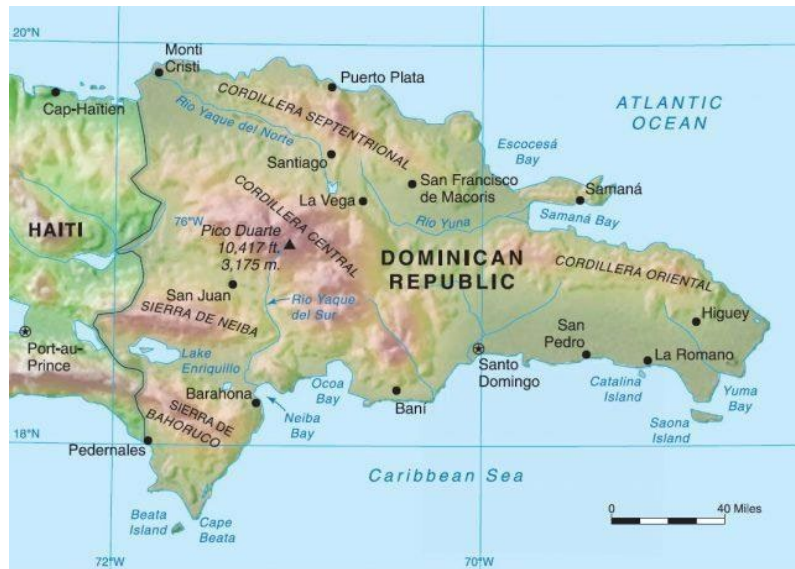


Figure 2. Physical Map of the Dominican Republic (Borrowed from [geography.name/physiclandscapes](https://www.geography.name/physiclandscapes))

Population Data

In 2022, the total population of the Dominican Republic was 11,228,821.⁹ The Dominican Republic has a higher rate of population increase compared to other nations in the region with a population density of 232.85 per square kilometer in 2023, a 0.93% increase from the previous year.¹⁰ Population data taken from World Bank is shown in Table 1 below.

Total Population	11,228,821 (2022)
Total Population World Rank	84th
Annual Population Growth Rate	1% (2022)
% of Population in Rural Areas	16% (2022)

Table 1. Population Data for the Dominican Republic (Adapted from World Bank <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=DO>)

For age distribution, approximately 30% of the population is under 15 years of age while 40% is in the 25-54-year age range. The average age is 27 years old. In 2021, the

average life expectancy was 73.¹¹ Taken from Census.gov, the population distribution chart is shown below.

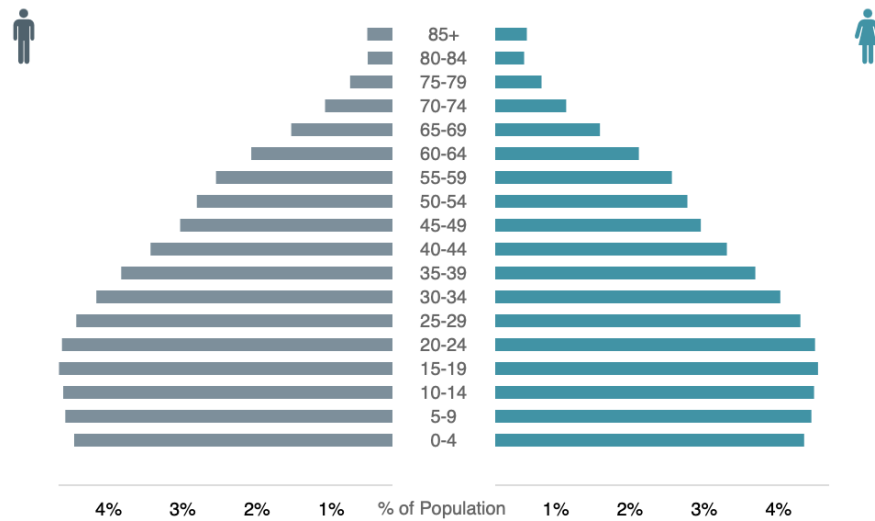


Figure 3. Population Distribution for the Dominican Republic in 2022. (Borrowed from Census.gov)

The Dominican Republic received United Nations human development index (HDI) score of 0.767 in 2022, ranking 80th out of 191 countries.¹² The HDI score is mechanism used to comparably measure human development in a country by studying the health, life expectancy, education level, income, and living conditions in a country. Below is a breakdown of HDI scores by region in the Dominican Republic.

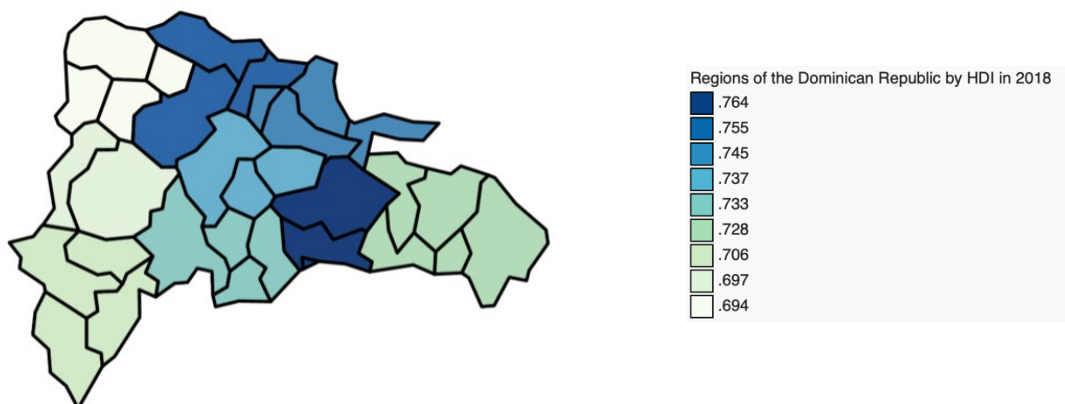


Figure 4. HDI for the Dominican Republic by region (Borrowed from [Wikipedia.org](https://en.wikipedia.org))

Income

The Dominican Republic suffers from marked income inequality; the poorest half of the population receives less than one-fifth of GNP, while the richest 10% enjoys nearly 40% of national income.¹³ The national gross income per capita peaked at 9,050 USD in 2022.¹⁴ While the Dominican people share many commonalities in religion, history, and language, their daily experiences are very individualized and depend on their socioeconomic status and physical location. Most of the population lives in rural areas. Disparities in housing quality are evident, with relatively affluent areas featuring roofs fashioned from corrugated metal sheets and concrete floors, in contrast to poor households which may have thatched roofs and floors made from packed earth. In urban areas, many urban squatter settlements are constructed from discarded materials and scavenged resources.

History and Politics

Brief History

The Dominican Republic's earliest recorded history is traced to 1492 when Christopher Columbus laid claim to the island for Spain.¹⁵ An indigenous Arawak people, referred to as "Taino" by the Spanish, inhabited the island, fostering village-based societies. While their true name remains unknown, Spanish documents used the term "Taino" to signify the goodness and nobility of their character and peaceful demeanor.¹⁶ The Taino affectionately referred to their homeland as Quisqueya which translates to "Mother of all Lands," but the Spaniards called the island La Isla Espanola, later latinized to Hispaniola.¹⁷

The first Spanish colony was established on the north coast but tales of gold soon lured the Spaniards south, culminating in the establishment of Santo Domingo in 1496.¹⁸ Hispaniola was the first settlement in the New World to receive the full mark of Spanish colonialism, with Santo Domingo being home to the oldest cathedral, monastery, hospital, and university.¹⁸ A stringent class and caste system took root from which a cruel slavery-based society emerged. The indigenous population, ravaged by European disease and inhumane treatment, faced rapid decline.¹⁸ Promise of gold and silver propelled the Spanish to other lands, leaving the island neglected and ridden with poverty for the next three centuries.

At the turn of the 18th century, an ongoing war in Europe brought the island of Hispaniola under French control. The French had already established a prosperous sugar-producing colony on the western side of the island, now known as Haiti. Under French control the living conditions continued to worsen, eventually leading to a successful slave rebellion beginning in Saint-Domingue on the western side of the island. The rebels ventured to the eastern side of the island and despite instilling fear in the Dominican colonists, were eventually driven back to the western regions. The colony was reunited with Spain for a short time, before declaring independence following the lead of other

countries on the mainland. Within weeks, Haitian troops invaded and took control over the eastern domain, where they remained in power for 22 years.¹⁹ During this time, the Haitians monopolized the government and eradicated western European and Hispanic traditions.

The 1830s saw the rise of Juan Pablo Duarte, known as the father of Dominican independence, who organized a secret society to fight the Haitians.¹⁸ Independence was achieved in 1844, but military strongholds and foreign entanglements prevented democratic growth and plunged the nation further into impoverishment. The United States intervened in 1916, assuming control of the government and introducing significant infrastructure development led by the U.S. Marine Corps. The United States maintained a substantial military presence which impacted the culture by introducing chewing gum and baseball, a game now well-loved by the country.¹⁸

In 1924, the United States began withdrawal of its military as part of a larger policy towards non-intervention in Latin America, and the Dominican Republic reclaimed independence.²⁰ The post United-States era has been marked by a series of power struggles and political instability characterized by contested leadership and shifting alliances.

Ethnicity and Culture

Ethnicity in the Dominican Republic is predominantly multiracial, stemming from a blending of European (largely Spanish), native Taino, and African ethnicities. This unique fusion has led to a population where most of the Dominican people share a mixed-race heritage reflecting the historical interactions and diverse cultural influence on the country. A breakdown of the Dominican Republic ethnic groups and their share of the population taken from World Atlas are shown in Table 2 below.

Ethnic Group	Share of Population in the Dominican Republic
Mulatto, Mestizo, or Multiracial (<i>Mixed Ancestry</i>)	72%
White Dominican (<i>European Ancestry</i>)	16%
Black Dominican (<i>African Ancestry</i>)	11%
Arabs, Asians, and Other Groups of People	1%

Table 2. Ethnic Groups in the Dominican Republic (Adapted from World Atlas <https://www.worldatlas.com/articles/ethnic-groups-of-the-dominican-republic.html>)

Dominican culture has a collective ethos with respect for each other and tradition that defines their way of life. Dominicans place high importance on interpersonal relationships between family and community members.²¹ It is common for several generations to share a household and for young adults to stay in the home even after gaining financial independence, reflecting strong familial bonds. Small gatherings featuring Dominican music and dancing are a popular way to celebrate and strengthen community ties. Dominican values also hold special respect for courtesy and hospitality. For example, failure to give a proper greeting when entering a business, store, or home will be considered rude and offensive.²²

Major life events such as the passing of an individual carry special traditions within Dominican Culture. A death in the Dominican Republic marks a period of nine days of mourning. The first three days are for grieving and reminiscing, followed by 3 days of silence for reflection, and finally, 3 days for accepting and moving forward. Funerals involve traditions such as “cumplir,” emphasizing the cultural duty to attend as a gesture of to show respect and care.²³

Religious Practices

The Dominican Republic is a strong supporter of religious freedom, hosting several regional conferences and international events surrounding religious liberty.²⁴ Taken from World Atlas, the majority of Dominicans are Roman Catholic Christians, followed by Protestant Christianity and other belief systems as shown in Table below.

Belief System	Share of Population in the Dominican Republic
Roman Catholic Christianity	75%
Protestant Christianity	20%
Atheism or Agnosticism	3%
Caribbean Vodou, Islam, Judaism, Eastern Religions, or Other Beliefs	2%

Table 3. Belief Systems in the Dominican Republic. (Adapted from World Atlas)

Roman Catholicism is designated as the official state religion and the Catholic church is extended special privileges not granted to other religious groups.²⁵ Christian religious holidays are a large part of Dominican culture and social life. The most celebrated days are Semana Santa (Holy Week), Corpus Cristi (Body of Christ), Dia de San Andres (an egg-throwing festival), Dia de La Altagracia (Virgin of Altagracia), La Navidad (Christmas), and Los Reyes (Day of the Three Kings).²²

Language and Dialects

Spanish is the official language of the Dominican Republic, with Dominican Spanish being the most common dialect.²⁶ Dominican Spanish is spoken by 85% of the population, followed by 2% Hatian Creole, 1% Samana English, and other languages contributing small percentages.²⁷

Government and Legal System

The Dominican Republic government operates as a representative democracy separating powers into three branches: executive, legislative, and judicial.²⁸ The President leads the executive branch serving as both Chief of State and Head of Government alongside the Vice President and the cabinet. The Legislative branch is composed of a bicameral congress consisting of the Senate and the Chamber of Deputies.²⁹ The senate has 32 members and the Chamber of Deputies has 178 members, each elected for a four year term.³⁰ The judicial branch is made of the supreme court and constitutional court, both appointed by the national council of the judiciary. The Dominican Republic's most recent constitution was adopted in 2015 and since claiming independence the country has adopted 38 constitutions, more than any other country.^{30,31} The major political parties include the Social Christian Reformist Party (PRSC), Dominican Revolutionary Party (PRD), Dominican Liberation Party (PLD), among several others.

Each year, the World Bank publishes a large database of governance Indicators for over 200 countries. Six governance indicators measured, each capturing household, business, and citizen perceptions of the quality of governance in their country. Each indicator is measured on a scale from -2.5 (least effective) to 2.5 (most effective). The governance indicator estimate and percentile rank are listed in the Table below.

World Bank Governance Indicator	2020	2021	2022
Voice and Accountability: Estimate	.24	.30	.31
Voice and Accountability: Percentile Rank	54.6	57	58
Political Stability and Absence of Violence/Terrorism: Estimate	.2	.3	.3
Political Stability and Absence of Violence/Terrorism: Percentile Rank	52.4	55.7	55.2
Government Effectiveness: Estimate	-0.28	0.00	-0.07
Government Effectiveness: Percentile Rank	41.9	51.9	50
Regulatory Quality: Estimate	-0.03	-0.02	0.02

Regulatory Quality: Percentile Rank	51.9	52.9	54.3
Rule of Law: Estimate	-0.43	-0.37	-0.32
Rule of Law: Percentile Rank	26.7	29	29.5
Control of Corruption: Estimate	-0.79	-0.83	-0.84
Control of Corruption: Percentile Rank	23.3	22.4	23.3

Table 4. World Bank Governance Indicators for the Dominican Republic

Of the countries ranked, the Dominican Republic falls in the middle of the ranks for voice and accountability, political stability, absence of violence and terrorism, government effectiveness, and regulatory quality as shown in Table 4. Generally, the people perceive their elections as free and fair, feel that they receive their constitutional freedoms, and trust that their government is effective in providing quality public services and implementing new policies. The society’s major concerns are political corruption and excessive use of police force. These concerns are represented by the fall to the 26th and 23rd percentile for both rule of law and control of corruption, respectively. For decades control of corruption has been an issue for the Dominican Republic citizens. They feel that political corruption and several political scandals have gone on without consequence.³² From 2017 to 2018, citizens took action and organized a series of protests called the Green Movement or Green Wave, in which tens of thousands of Dominican citizens flooded the capital wearing green to peacefully demonstrate their anger over political corruption.³³

Economy and Employment

The Dominican Republic is the tenth largest economy in Latin America and the largest in the Caribbean region open for commercial trade.³⁴ The upper middle-income country is on track to achieve its goal of becoming a high-income country by 2030. Barriers to continued growth of the economy include insufficient human capital to meet needs, disasters related to climate change, and inefficient allocation of tax exemptions.³⁵ The economy is largely based on tourism, mining, agriculture, and manufacturing.³⁶ In 2022, Gross Domestic Product (GDP) for the Dominican Republic was 10,121 USD per capita and Gross National Income (GNI) per capita was 9,050 USD.³⁷

Major Industries

Tourism: The Dominican Republic is the most popular tourist destination in the Caribbean, and tourism is the single largest revenue earner for the country.³⁸ In 2019, the service sector generated 61% of the GDP. The service sector is also the leading employer for Dominicans, employing over 70% of the workforce.³⁹

Mining: Mining has a pivotal role in generating export earnings for the country, constituting a significant portion of the country’s economy. The country is ranked 9th in nickel production globally.⁴⁰ The country is also home to the Pueblo Viejo mine, the largest gold mine in Latin America. Mineral rents comprised 2.04% of the GDP in 2021.⁴¹

Agriculture: The Dominican Republic has an agriculturally favorable landscape with nearly 80% of its land deemed suitable for crop production.⁴² Sugarcane is considered the nation’s most important crop. Additionally, the Dominican Republic is the second-largest producer of avocados. Other notable crops include papaya, banana, cocoa, palm oil, pineapple, rice, and orange. In 2022, the agricultural sector accounted for 5.79% of the GDP.⁴³

Manufacturing: Operating as a Free Trade Zone, the Dominican Republic manufactures and exports a wide range of products including medical devices, electrical equipment, pharmaceuticals, and chemicals. Manufacturing contributed 14.9% of the country’s GDP in 2022.⁴⁴

Employment

Labor Force, Total	5,277,616 (2022)
Employment in Agriculture (% of workforce)	8.268% (2021)
Employment in Industry (% of workforce)	20.334% (2021)
Employment in Services (% of workforce)	70.398 (2021)
Unemployed	7.121% (2022)

Table 5. Employment Distribution in the Dominican Republic taken from Global Edge by Michigan State University (<https://globaledge.msu.edu/countries/dominican-republic/economy>)

Physical and Technological Infrastructure

Telecommunication

The Dominican Republic has one of the more advanced telecommunication infrastructures in Latin America. Estimates pertaining to telecommunication and access to resources such as mobile phones and internet vary greatly among sources. In early 2023, there were 9.75 million active cellular mobile connections translating to 86.4% of the total

population and 9.61 million active internet users totaling 85.2% of the population.⁴⁵ However, a significant digital divide in telecommunications exists between urban and rural settings where penetration rates vary significantly. Additionally, a recent report estimates that 36.7% of educational centers in rural areas lack internet connectivity compared to 18.1% in urban areas.⁴⁶ In recent years, the Dominican Republic has taken steps towards expanding internet access by launching several initiatives including the National Broadband Plan, access to community internet centers, and digital literacy programs, but there is still much progress to be made.⁴⁷

Electricity

For decades, the electricity sector has been a major roadblock to economic growth and a source of extreme financial loss. This ongoing electricity crisis is caused by old, weak, and overloaded power lines which fail to deliver reliable power causing a cycle of system-wide blackouts. Financially, losses stem largely from illegal electricity connections, issues with billing, and issues with meters. In 2021, electricity access in the Dominican Republic was estimated to reach 98.1% of the population but access varies greatly depending on geographic location.⁴⁸ Notably, the Government has shown a strong commitment to address these long-standing challenges. In December 2023, the Dominican Republic launched the first of three projects with the World Bank to help support sustainable development of the electricity sector. The World Bank ⁴⁹ describes the project as following:

“Through an investment of 225 million USD, the project will assist distribution companies reduce the significant losses experienced in electricity distribution by rehabilitating the distribution network, upgrading the management technology, and reducing electricity outages. 813,000 consumers, urban and rural, from the residential and commercial sectors, are expected to benefit from these upgrades.”

Transportation

In 2019, the Dominican Republic ranked 40th out of 144 countries in road infrastructure and ranked 3rd with respect to Latin America. Five main highways connect the largest cities and tourist centers in the Dominican Republic. Notably, several alternative routes exist to get to each of the more rural and less populated areas, whereas similar countries typically have just one or two roads to reach a destination.⁵⁰ Rural access roads provide access to agricultural production areas with lower population density and experience a vehicle volume ranging from 20 to 300 vehicles per day. While major roads are said to be in good condition, only 22% of rural access roads are in good condition, with 44% being fair condition and 34% in poor or very poor condition.⁵¹ The table below details the infrastructure of the transportation system taken from the government’s economic planning and development 2021 Sector Competitiveness Bulletin.⁵²

Total Roads	19,730 km
Highways	5,514 km
Rural Access Roads	8,697 km
Temporary Roads and Trails	5,519 km
Total Paved Roads	7,766 km (39.3%)
Total Unpaved Roads	11,964 km (60.7%)
Roads in South-Central Region	23.8%
Roads in Southwestern Region	10.4%
Roads in the Eastern Region	15.3%

Table 6. Transportation Infrastructure for the Dominican Republic taken from the 2021 Sector Competitiveness Bulletin.

Major cities have reliable public transportation, with a metro, bus service, and drive-share services available. Below is a roadway map of the Dominican Republic.

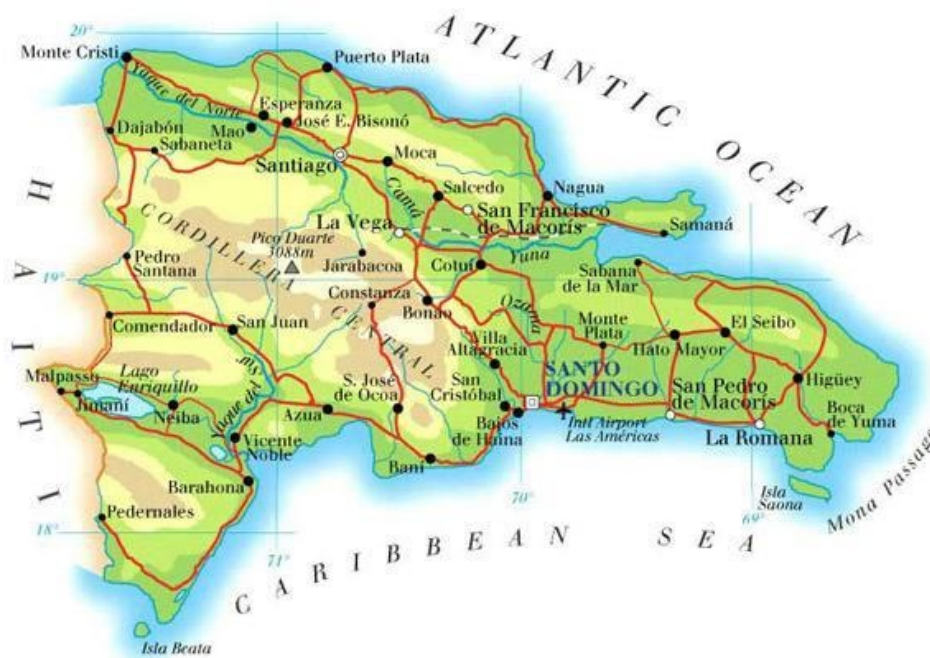


Figure 5. Dominican Republic detailed road and physical map. (Borrowed from vidiani.com)

Water and Sanitation

The Dominican Republic has made strides to improve access to drinking water and sanitation services over the last two decades, but serious deficiencies remain. In 2019, an estimated 96% of the urban population had access to public network water while 76.8% of the rural population had access.⁵³ Access does not reflect quality, as residents frequently

report discoloration and odor to water from the government supply and often must rely on water bottles. An estimated 40% of Dominican households spend an eighth of their income of water.⁵⁴ Many people living in impoverished communities such as Batey 8 cannot afford to purchase drinking water and must use the free local tap for drinking, laundry, bathing and other activities. The tap is often contaminated with dead bird carcasses and insects. Additionally, an estimated 45.5% of the total population does not use safely managed sanitation services to include handwashing facilities.⁵³ The lack of access to clean water and proper sanitation had led to cholera, waterborne, and diarrheal disease outbreaks in the past.



Figure 6. Family living in Batey 9 using free but untreated local cistern. Then water often is contaminated by dead animals, feathers, and dirt. Image by Erin Lough borrowed from https://cronkite.asu.edu/projects/buffett/dr/unsafe_water.html

Natural disasters are considered the most significant contributor to the water crisis in the Dominican Republic. By destroying sewage systems and damaging pipelines they allow bacteria to contaminate the water system along with feces and animal carcasses. This creates a toxic mixture than the community will likely ingest. Further, disposal of solid waste poses additional environmental issues, with many factories and informal settlements dumping waste directly into the Ozama River where people then collect water and bathe.



Figure 7. Children in Santo Domingo near aqueduct full of garbage (Borrowed from Dreamstime <https://www.dreamstime.com/children-playing-near-aqueduct-full-garbage-waste-ozama-river-santo-domingo-dominican-republic-may-children-image194074594>)











NATIONAL HEALTH CARE PROFILE

National Health Care Profile

Globally, the Dominican Republic is ranked 51st in healthcare performance.⁵⁵ In recent times, the Dominican Republic has taken many efforts to improve their system through major reform, but there still exists large healthcare disparities especially for those living outside of the major cities in rural areas. Following ischemic heart disease, the greatest threats to public health include road injury, stroke, neonatal complications, cancers, and diabetes mellitus. Notably, the country has the highest national mortality rate caused by traffic injuries in the world.⁵⁶ According to WHO, over half of deaths due to traffic injury are of pedestrians, cyclists, and motorcyclists. The World Health Organization lists the leading causes of death for the country shown in the image below.

Top causes of death for females

Deaths per 100 000 population. Dominican Republic, 2019

Ischaemic heart disease	124	
Stroke	71	
Breast cancer	27	
Diabetes mellitus	26	
Neonatal conditions	25	
Lower respiratory infections	21	
Alzheimer disease and other dementias	20	
Cirrhosis of the liver	19	
Kidney diseases	19	
Road injury	19	

Top causes of death for males

Deaths per 100 000 population. Dominican Republic, 2019











Ischaemic heart disease	155	
Road injury	111	
Stroke	76	
Neonatal conditions	32	
Prostate cancer	31	
Interpersonal violence	31	
Cirrhosis of the liver	31	
Diabetes mellitus	25	
Lower respiratory infections	21	
Kidney diseases	20	

Figure 8. Top causes of death for females and males in the Dominican Republic (2019). (Borrowed from the World Health Organization <https://data.who.int/countries/214>)

Prominent infectious diseases within the Dominican Republic include HIV/AIDS, tuberculosis, leptospirosis, and cholera. Within the Caribbean region, the country has the second highest HIV/AIDS prevalence. They are actively working to manage the epidemic, recently adopting the “Treatment for All” strategy to cover treatment for all persons living with HIV.⁵⁷ In 2019, The National Tuberculosis Control Program reported an incidence of 30.4 TB cases per 100,000 people living in the Dominican Republic. Leptospirosis is prevalent on the island and is associated with variables such as heavy rainfall, flooding, agricultural practices, inadequate disposal of waste, and poor sanitation. In 2020, 210 leptospirosis cases and 38 deaths were reported.⁵⁸ The last cholera outbreak occurred in 2018 but since then sporadic cases have been reported each year.

Chronic childhood malnutrition has been a major point of concern for the Dominican Republic. Data from the most recent Demographic and Health Survey (ENDESA) report a decline in the prevalence of chronic childhood malnutrition from 16.5% in 1991 to 6.9% in 2013.⁵⁹ Notably, the level of chronic malnutrition reached 12% for the country’s poorest children.⁵⁹

National Health Care Structure and Policy

The Dominican Republic government claims commitment to improving healthcare for their country. Previously, the country had three health-care delivery systems. The first and largest being the Secretaria de Estado de Salud Publica y Asistencia Social (SESPAS) which is funded by the government to serve the general population.⁶⁰ SESPAS is most concentrated in urban areas and inaccessible to rural areas. The second was a social security health system, the Instituto Dominicano de Sequros Sociales (IDSS).⁶⁰ The third system, the Instituto de Seguridad Social de las Fuerzas Armadas (ISSFAPOL), provided health care to members of the armed forces.⁶⁰ In 2022, the Dominican Republic received its first Joint Sustainable Development Goals Fund from the United Nations to carry out the creation of a universal National Care System to take place over the following two years.⁶¹ This is a universal healthcare system with goals to reduce poverty and improve access to essential care and services.⁶² Additional coverage through private health insurance is also available.

Article 8 of the General Health Law (42-01) designates the Ministry of Public Health (MSP) as the entity responsible for governing the National Health System of the country.⁶³ Despite the new legal framework providing health authority and sectoral leadership to the MSP, the practical implementation has fallen short of achieving leadership. It is acknowledged that governing functions are carried out collaboratively with other state entities and civil organizations which has led to conflicts of jurisdiction within the health and social security systems.⁶³

The Social Security Law (87-01) states that health establishments must be previously authorized by the Ministry of Public Health.⁶³ There are standards in place for these purposes, but few establishments have made effort to comply and request to undergo inspection.

Health Care Expenditures

In 2020, health care expenditures as a share of gross domestic product was 5%.⁶⁴ The total household out-of-pocket healthcare spending was estimated to be 960 million USD in 2020, down from the previous year at over one billion, attaining the lowest value in the past decade.⁶⁵

Health Infrastructure

There are 445 hospitals in the Dominican Republic but the average hospital is relatively small with 25 beds available.⁶⁶ There are three basic types of healthcare facilities in the Dominican Republic: major hospitals, public hospitals, and private clinics. A public hospital exists in most of the larger towns.⁶⁷ Medical treatment there is typically free, but occasionally the facility will charge for imaging, stitches, or medications. Patients must provide their own bedding, toiletries, and food.⁶⁷ The major hospitals are located in Santo Domingo and Santiago, well-equipped with medical supplies, technology, and staff. These hospitals are capable of managing very complex cases and providing major surgeries; however, the services are not free. Patients must pay for the care they receive, but health insurances are generally accepted. The private clinics can be divided into local clinics and tourist-area clinics. There are typically 3-5 local clinics in each town and are considered to be of higher standard than the public hospitals. Many have private rooms and intensive care units, although complex cases will need to be transported to one of the major hospitals. The tourist area clinics are similar to the local private clinics but with English-speaking staff and much higher fees.

Healthcare Workforce

There are 33,772 health professionals affiliated with the Dominican Medical College (CMD), though under-registration does not allow for exact data.⁶⁸ The majority of physicians are concentrated in metropolitan areas, and an estimated 70% of specialists work in the capital and larger cities.⁶⁸ The World Health Organization recommends a minimum of 2-3 doctors per thousand inhabitants and in 2019 the Dominican Republic had 1.7 doctors per thousand. Below is a table listing specialists registered with the CMD and where they practice.

Region/Specialty	Metro	North Central	East	Region I	Ciabo	Northeast	Enriquillo	Valley
Anesthesiologists	169	38	14	25	17	20	11	17
Anesthesia Assistants	-	48	49	33	22	27	-	-
Cardiologists	34	-	-	-	-	-	-	-
Endocrinologists	22	-	-	-	-	-	-	-
Gastroenterologists	53	-	10	-	-	-	-	-
General Surgeons	-	-	-	11	-	-	18	-
Geriatricians	-	11	-	-	-	-	-	-
Gynecologists	235	61	52	34	25	33	24	26
Internists	40	25	-	4	12	12	8	8
Neurologists	36	-	-	-	-	-	-	-
Pediatricians	266	74	35	34	19	43	9	16
Plastic Surgeons	8	28	15					
Psychiatrists	-	9	-	-	-	-	3	-
Obstetricians	-	40	25	-	19	16	-	6
Radiologists	-	10	-	-	-	-	-	-
Urologists	-	13	-	-	-	10	-	-

Table 7. Specialists in the Dominican Republic by Region (adapted from Hoy Digital

As seen in the table above, specialists are concentrated within the major cities largely due to poorer living and working conditions and lower pay in the rural communities.

NATIONAL RADIOLOGY PROFILE

The number of radiologists practicing in the Dominican Republic is estimated to fall somewhere between 201-400 individuals. Educational requirements to become a Radiologist in the Dominican Republic include 5 years of medical school followed by 4 years of radiology residency as shown in the table below: ⁶⁹

Length of Medical School	5 years
Length of Radiology Residency	4 years
Number of Radiology Residency Programs	6-10

Table 8. Radiology Education in the Dominican Republic.

Like many other countries in Latin America, the Dominican Republic does not currently offer training for those interested in any of the radiology subspecialties. More than half of Radiologists who train in the Dominican Republic travel abroad for specialization after completing their respective programs.⁷⁰ There are professional societies including the Dominican Society of Radiology (Sociedad Dominicana de Radiología), which serves as a platform for networking, knowledge exchange, and professional development within the radiology community in the Dominican Republic.

Urban areas continue to add to its growing arsenal of new age medical imaging equipment. OncoServ, a comprehensive cancer center in Santo Domingo, can now treat tumors virtually anywhere in the body. Their newly installed CyberKnife robotic system complements other linear accelerators at the center, including a Varian Unique linear accelerator, a Varian iX dual photon energy system, and a brachytherapy suite.⁷¹ While urban centers like Santo Domingo have



Figure 9. CyberKnife at Oncoserve borrowed from <https://www.oncologysystems.com/blog/cyberknife-in-the-dominican-republic>.

large hospitals and outpatient centers equipped with state-of-the-art equipment, rural areas face a pronounced disadvantage and severely limited access to radiology.

Comprehensive data and numerical figures regarding rural access to imaging are not currently available. However, anecdotal evidence strongly suggests significant and severe disparities in healthcare and imaging access. For example, the image below shows a point-of-care ultrasound service to provide urgent evaluations for pregnant women in a maternal and infant health program in rural Dominican Republic.⁷² The ultrasound probe is connected to a laptop powered by an external battery.

Additionally, inability to maintain equipment leads to out-of-service machines, experienced by those in San Juan de Maguana who have to travel 4 hours two way to Santo Domingo for MRI. The lack of concrete statistics highlights the importance of addressing and rectifying the evident healthcare imbalances experienced by these rural communities. Fortunately, there are several past and ongoing initiatives aimed at improving imaging access, including modalities like telephonography and AI implementation which have made an impact on their respective communities.



Figure 10. A medical imaging clinic in resource-poor rural Dominican Republic. (Borrowed from pubs.rsna.org/doi/full/10.1148/radiol.202020143)

CONCLUSION

In conclusion, the healthcare system in the Dominican Republic is challenged by significant regional disparities. Despite government efforts to improve access and quality of care in rural areas, these challenges persist especially in the area of radiologic services. While urban centers have state-of-the-art equipment and facilities, rural communities often lack basic imaging services, leading to prolonged travel times and often very limited access to essential diagnostics. Moving forward, prioritizing investments aimed at improving healthcare and infrastructure in rural areas is crucial to ensure equitable access to care for Dominican citizens. Ensuring that these individuals have access to clean water, drivable and safe roads, basic healthcare services, and diagnostic imaging is essential. Initiatives such as teleultrasonography, mobile imaging units, educational programs, and AI implementation offer promising avenues for addressing these disparities and enhancing healthcare delivery in remote areas. By embracing these advancements and doing our part, we can help bridge geographical barriers, improve access to diagnostic imaging, and ultimately contribute to better health outcomes globally.

REFERENCES

1. U.S. Agency for International Development. (2022, December 12). Dominican Republic. <https://www.usaid.gov/dominican-republic>
2. Macrotrends.net. (2024). Santo Domingo, Dominican Republic Metro Area Population 1950-2024. <https://www.macrotrends.net/cities/20898/santo-domingo/population>
3. International Atomic Energy Agency. (2023, January 9). Latin America, Caribbean achieves capability in using nuclear techniques to respond to natural disasters. <https://www.iaea.org/newscenter/news/latin-america-caribbean-achieves-capability-in-using-nuclear-techniques-to-respond-to-natural-disasters>
4. World Bank. (2023, October 4). Dominican Republic Overview. <https://www.worldbank.org/en/country/dominicanrepublic/overview>
5. LAC Geo. (2021, June 9). Pico Duarte: Cordillera Central (Dominican Republic). <https://lacgeo.com/pico-duarte-cordillera-central>
6. Geography.name. (2020). The Dominican Republic: Physical Landscapes. <https://geography.name/physical-landscapes/>
7. Encyclopedia Britannica. (1998, July 20). Cibao Valley | region, Dominican Republic. <https://www.britannica.com/place/Cibao-Valley>
8. GoDominicanRepublic.com. (2024). Beaches in Dominican Republic. <https://www.godominicanrepublic.com/things-to-do/natural-attractions/beaches/>
9. The World Bank. Population total for Dominican Republic data. <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=DO>
10. Macrotrends.net. (2024). Dominican Republic Population Density 1950-2024. <https://www.macrotrends.net/countries/DOM/dominican-republic/population-density>
11. The World Bank. Life expectancy at birth, total (years) - Dominican Republic Data. <https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=DO>
12. Dominican Today. (2022, September 11). The Dominican Republic remains a country with high human development. <https://dominantoday.com/dr/economy/2022/09/11/the-dominican-republic-remains-a-country-with-high-human-development/>
13. Embassy of the Dominican Republic in the United States. (2016). General Information. http://www.domrep.org/gen_info.html
14. Statista. National income per capita Dominican Republic 2020. <https://www.statista.com/statistics/1068878/gross-national-income-per-capita-dominican-republic/>
15. Embassy of the Dominican Republic. (2016, August 22). History. <https://www.dominicanembassy.org.uk/dominican-republic/history/>
16. Hopper, R. (2008). Taino Indians: Settlements of the Caribbean (Vol. 38). <https://soar.wichita.edu/server/api/core/bitstreams/a1323a14-b0a9-4001-8105-8baf36e324b3/content>

17. Penland, J. (2004). The impact of intercultural factors on the planning of theological education in the Dominican Republic [Doctoral dissertation, University of Georgia].
https://getd.libs.uga.edu/pdfs/penland_jonathan_s_200408_phd.pdf
18. Wiarda, H. History of Dominican Republic. Encyclopedia Britannica.
<https://www.britannica.com/topic/history-of-Dominican-Republic>
19. The Editors of Encyclopedia Britannica. (2020). Haitian Revolution | Causes, Summary, & Facts. In Encyclopedia Britannica.
<https://www.britannica.com/topic/Haitian-Revolution>
20. U.S. Department of State. (2019). Dominican Republic, 1916-1924.
<https://2001-2009.state.gov/r/pa/ho/time/wwi/108649.htm>
21. Rodriguez, Y. (2021). Dominican Identity and the Experience of Interpersonal Conflict.
<https://scholarship.shu.edu/cgi/viewcontent.cgi?article=4011&context=dissertations>
22. Guzman, O. (2020, October 23). Dominican Culture and Customs: Know before You Go. Visit Dominican Republic. <https://visitdominicanrepublic.com/up-close/dominican-culture-and-customs-know-before-you-go/>
23. The Funeral Market. Dominican Republic Funeral Customs.
<https://thefuneralmarket.com/funerals-customs-around-the-world/dominican-republic>
24. International Center for Law and Religion Studies. (2023). Religion in the Dominican Republic. <https://www.iclrs.org/blurb/religion-in-the-dominican-republic/>
25. United States Department of State. (2019). 2019 Report on International Religious Freedom: Dominican Republic. <https://www.state.gov/reports/2019-report-on-international-religious-freedom/dominican-republic/>
26. WorldAtlas. (2017, September 26). What Languages Are Spoken In The Dominican Republic? <https://www.worldatlas.com/articles/what-languages-are-spoken-in-the-dominican-republic.html>
27. Fajkus, M. M. (2021, January 28). Does Dominican Republic Speak Spanish? Homeschool Spanish Academy. <https://www.spanish.academy/blog/does-dominican-republic-speak-spanish/>
28. U.S. Department of State. Dominican Republic (05/06). <https://2009-2017.state.gov/outofdate/bgn/dominicanrepublic/66141.htm>
29. Embassy of the Dominican Republic. (2016, August 22). Government.
<https://www.dominicanembassy.org.uk/dominican-republic/facts-and-figures/>
30. Msu.edu. (2010). Dominican Republic: Government from globalEDGE.
<https://globaledge.msu.edu/countries/dominican-republic/government>
31. Climate Change Laws of the World. (2015). Constitution of Dominican Republic.
https://climate-laws.org/document/constitution-of-dominican-republic_d9ec
32. Rodriguez, J. (2018). The Green March Movement: Fighting Political Corruption in the Dominican Republic.
<https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=7380&context=dissertations>
33. Pineda, J. (2017, July 16). Tens of thousands march over corruption in Dominican Republic. Reuters. <https://www.reuters.com/article/idUSKBN1A2083/>

34. International Trade Administration Trade.gov. Dominican Republic Market Overview. <https://www.trade.gov/country-commercial-guides/dominican-republic-market-overview>
35. World Bank. The World Bank In Dominican Republic Overview. <https://www.worldbank.org/en/country/dominicanrepublic/overview>
36. Wikipedia. (2024, January 3). Economy of the Dominican Republic. https://en.wikipedia.org/wiki/Economy_of_the_Dominican_Republic
37. MacroTrends. Dominican Republic GDP per capita 1960-2024. <https://www.macrotrends.net/countries/DOM/dominican-republic/gdp-per-capita>
38. Wikipedia. (2024, January 1). Tourism in the Dominican Republic. https://en.wikipedia.org/wiki/Tourism_in_the_Dominican_Republic#cite_note-2
39. World Tourism Organization. (2024, February 4). Tourism Doing Business Investing in Dominican Republic. <https://www.unwto.org/investment/tourism-doing-business-investing-in-dominican-republic>
40. Wikipedia. (2024, January 17). Economy of the Dominican Republic. https://en.wikipedia.org/wiki/Economy_of_the_Dominican_Republic
41. Trading Economics. Dominican Republic Mineral rents (% of GDP) Historical. <https://tradingeconomics.com/dominican-republic/mineral-rents-percent-of-gdp-wb-data.html>
42. Wikipedia. (2024, March 3). Economy of the Dominican Republic. https://en.wikipedia.org/wiki/Economy_of_the_Dominican_Republic
43. Trendera, E. (2024, February). Agricultural sector's share of GDP in the Dominican Republic 2022. Statista. <https://www.statista.com/statistics/1078759/dominican-republic-agriculture-share-gdp/>
44. Trading Economics. Dominican Republic Manufacturing, value added (% of GDP). <https://tradingeconomics.com/dominican-republic/manufacturing-value-added-percent-of-gdp-wb-data.html>
45. Kemp, S. (2023, February 13). Digital 2023: The Dominican Republic - Global digital insights. Data Reportal. <https://datareportal.com/reports/digital-2023-dominican-republic>
46. Dominican Today. (2023, October 30). 76.6% of devices given to students in the Dominican Republic have defects. <https://dominantoday.com/dr/local/2023/10/30/76-6-of-devices-given-to-students-in-the-dominican-republic-have-defects/>
47. Isp.page. (2023, December 21). Internet Access in the Dominican Republic, The Road Ahead. <https://isp.page/news/internet-access-in-the-dominican-republic-the-road-ahead/>
48. MacroTrends. (2024, January 17). Dominican Republic Electricity Access 1991-2024. <https://www.macrotrends.net/countries/DOM/dominican-republic/electricity-access-statistics>
49. World Bank Group. (2023, December 13). World Bank to boost efficient electricity distribution in the Dominican Republic. <https://www.worldbank.org/en/news/press-release/2023/12/13/banco-mundial-impulsara-distribucion-eficiente-de-electricidad-republica-dominicana>

50. BNAMERICAS. (2023, January 9). Dominican Republic makes inroads on infrastructure. <https://www.bnamericas.com/en/interviews/dominican-republic-govt-progressing-well-on-infrastructure-but-still-lots-to-do>
51. Rodriguez Porcel, M., Levfevre, B., & Sholl, L. (2022). Road Infrastructure and Maintenance Program in the Dominican Republic. EWS Data Rights Development. <https://ewsdta.rightsindevelopment.org/files/documents/51/IADB-DR-L1151.pdf>
52. Boletín de Estadísticas oficiales de pobreza monetaria - mepyd.gob.do. (2021). <https://mepyd.gob.do/wp-content/uploads/drive/VAES/Pobreza/Desigualdad%20del%20ingreso/Bolet%C3%ADn%20de%20estad%C3%ADsticas%20oficiales%20de%20pobreza%20monetaria%20en%20la%20Rep%C3%BAblica%20Dominicana%202021%20no%209%20%E2%80%A2%20a%C3%B1o%207.pdf>
53. United Nations Dominican Republic | Department of Economic and Social Affairs. Dominican Republic Progress on achieving SDG 6. <https://sdgs.un.org/basic-page/dominican-republic-34123>
54. Philipp, J. (2022, November 11). Clean water in the Dominican Republic. The Borgen Project. <https://borgenproject.org/clean-water-in-the-dominican-republic/>
55. Aetna International. Health Care Quality in the Caribbean: Jamaica, Cuba, the Bahamas, Dominican Republic and more. <https://www.aetnainternational.com/en/about-us/explore/living-abroad/culture-lifestyle/health-care-quality-in-caribbean.html>
56. Dominican Today. (2023, July 29). The Dominican Republic ranks first in traffic accident fatalities. <https://dominantoday.com/dr/local/2023/07/29/the-dominican-republic-ranks-first-in-traffic-accident-fatalities/>
57. USAID. "Treatment for All" Strategy for HIV Adopted in the Dominican Republic. <https://www.hfgproject.org/treatment-for-all-strategy-for-hiv-adopted-in-the-dominican-republic/>
58. Centers for Disease Control and Prevention. (2024). Dominican Republic. <https://wwwnc.cdc.gov/travel/yellowbook/2024/itineraries/dominican-republic>
59. UNICEF. (2019, October 15). Se reduce la desnutrición infantil crónica en república dominicana y se incrementa el sobrepeso y la obesidad Afectando al 33% de los niños en edad escolar. <https://www.unicef.org/dominicanrepublic/comunicados-prensa/se-reduce-la-desnutrici%C3%B3n-infantil-cr%C3%B3nica-en-rep%C3%BAblica-dominicana-y-se>
60. Countries and Their Cultures. (2024). Dominicans - Religion and Expressive Culture. <https://www.everyculture.com/Middle-America-Caribbean/Dominicans-Religion-and-Expressive-Culture.html#ixzz8LqIcc5PW>
61. United Nations. (2022, March 18). The Dominican Republic receives funds to establish a national care system to help reduce poverty and meet the sdgs. <https://unsdg.un.org/latest/announcements/dominican-republic-receives-funds-establish-national-care-system-help-reduce>
62. World Health Organization. (2021). One Billion more people benefiting from Universal Health Coverage. <https://open.who.int/2020-21/country-category/DOM/01>
63. Rathe, M., & Moline, A. (2010, December). Sistema de salud de República Dominicana. <https://www.scielosp.org/pdf/spm/2011.v53suppl2/s255-s264>

64. Mendoza, J. (2023, March 21). Health expenditure as share of GDP in the Dominican Republic. Statista. <https://www.statista.com/statistics/952547/dominican-republic-health-expenditure-share-gdp/>
65. Mendoza, J. (2023, March 3). Dominican Republic: Household out-of-pocket health expenditure. Statista. <https://www.statista.com/statistics/1284426/out-of-pocket-health-expenditure-dominican-republic/>
66. Global Health Intelligence. (2023, June 22). Number of hospitals in Dominican Republic. <https://globalhealthintelligence.com/tag/number-of-hospitals-in-dominican-republic/>
67. Expat.com. (2015, May 12). The Healthcare System in the Dominican Republic - Dominican Republic Guide. <https://www.expat.com/en/guide/central-america/dominican-republic/12435-health-care-in-the-dominican-republic.html>
68. Hoy Digital. (2019, December 9). El 70% Médicos especialistas está en la capital y las grandes ciudades. <https://hoy-com-do.translate.google/el-70-medicos-especialistas-esta-en-la-capital-y-las-grandes-ciudades/? x tr sl=es& x tr tl=en& x tr hl=en& x tr pt=sc>
69. Rehani, B., Zhang, Y., & Goa, K. (2016, December 21). Radiology education in Latin America - Journal of the American College of Radiology. [https://www.jacr.org/article/S1546-1440\(16\)31034-1/fulltext](https://www.jacr.org/article/S1546-1440(16)31034-1/fulltext)
70. Virk, J., & Holmes, D. (2023, February 21). Radiology in Mexico: Country report. Journal of Global Radiology. <https://publishing.escholarship.umassmed.edu/jgr/article/id/632/>
71. Hirschfelder, P. (2022, August 29). Cyberknife in the Dominican Republic. Radiology Oncology Systems. <https://www.oncologysystems.com/blog/cyberknife-in-the-dominican-republic>
72. Mollura, D., Culp, M., Polack, E., et al. (2020, October 6). Artificial Intelligence in low and middle-income countries. <https://pubs.rsna.org/doi/full/10.1148/radiol.2020201434>
73. Resonandina. (2023, May 19). Saving 8 hours of travel with pay-per-use by CEDEMER. <https://resonandina.com/2023/04/07/new-client-saving-8-hours-of-travel-with-pay-per-use-by-cedemer/>
74. Sutherland, E., Sutphin, D., & Burton, J. (2009, May 26). A comparison of teleultrasonography with standard ultrasound care in a rural Dominican clinic. Sage Journals. <https://journals.sagepub.com/doi/10.1258/jtt.2009.080909>