

Mid Year Report 2024

Data from January to July 2024 Published on November 2024

Foreword

The National Hospital Survey (ENH) was born in 2014, thanks to a nationwide network of resident doctors to collect information on the hospital situation in Venezuela.

The Survey maintained an annual format until 2018 when information began to be collected on a weekly basis.

Currently, the ENH has more than 5 uninterrupted years of weekly data on the hospital situation in Venezuela and covers a wide range of aspects such as supply of supplies, operation of services, infrastructure, and intra-hospital violence.

The data, collected in the 40 largest hospitals in the country, assigned to different entities (Ministry of Popular Power for Health, Venezuelan Institute of Social Security, counties, states, and military health), are presented to the public to offer a comprehensive image of the current hospital situation in Venezuela and especially, contextualize what this means for patients in the country.

Below are the results of the ENH monitoring **between January to July 2024.**

A project by:

GIDETI

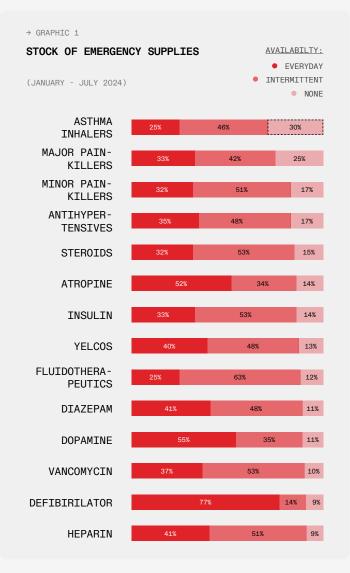


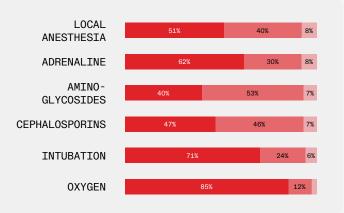
Emergencies.

Supplies' Stock

For the ENH, it is essential to be able to offer the public a numerical value that reflects the supply of supplies in emergencies. That is why, together with a group of specialists in critical areas, 20 basic supplies that every emergency must have were selected. Based on them, this measurement is made.

In the first half of 2024, the item with the greatest shortage was asthma inhalers, followed by painkillers¹ and antihypertensive medications.

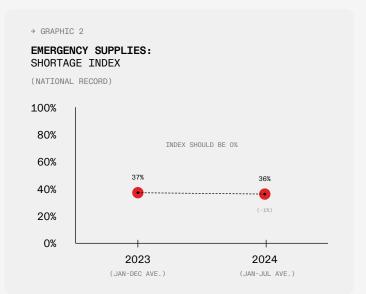




This indicator has had a similar behavior historically, that is, the lack of these inputs at the national level does not correspond to any situation but rather responds to a failure at the level of authorities and decision-makers, in relation to the supply of this area.

Based on the supply data of the 20 emergency supplies, the ENH has created an indicator that gives a numerical value to the shortage.

For the first half of 2024, the shortage rate of emergency supplies was 36%. Likewise, this indicator has not had any major variation in relation to the year 2023, that is, the supply has not worsened but it has not improved either.





Between January and July 2024, the states that recorded the greatest shortages were Carabobo, Amazonas, and Cojedes.



In the ENH's experience, the situation of the hospitals tends to be more critical the farther they are from Caracas, the city where all the responsible decision-makers in the health sector are located

Operational Beds

The hospitals monitored by the ENH are entirely type III or IV hospitals, that is, they are highly complex and offer the widest variety of services. These hospitals also tend to be of regional and even national reference.

This is why it is important to monitor how many beds are operational in emergencies, taking into account that when talking about operational beds it refers not only to the existence of a stretcher but also to whether it has the equipment and personnel necessary to ensure that in fact a patient can be treated there.



Between January and July 2024, there was an average of 35 operational emergency beds per hospital, with little variation compared to 2023. However, it is important to contextualize this data in the types of hospitals that are monitored. The average number of operational hospital beds for the first half of 2024 was 220, which implies that operational emergency beds represent 16% of total hospital beds.

Taking into account that generally at an international level, the ratio of emergency beds versus hospitalization beds in hospitals of this type is between 10% to 15%, hospitals currently on average have similar values of that ratio.

Available Health Personnel

Another element that influences the care capacity of health centers is the available personnel, in this case, in emergencies at the monitored hospitals.



This indicator has had very little variation compared to the end of 2023. However, in this aspect, it is important to take into account that the critical areas of hospitals: emergency, intensive care, and operating rooms, usually have priority for everything. That is, in a context where there are not enough resources, they are allocated to these areas to be able to attend to at least the most critical cases.

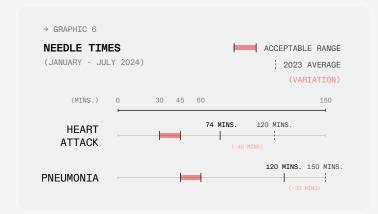
As with inputs, it also happens with personnel, which is why the variability of personnel is very low because probably, this number of people remains constant at the expense of other areas or services from which they remove personnel in order to be able to cover critical areas.



Needle Times

Needle time or *"door-to-needle time"* is a hospital management indicator that measures the time that elapses between a patient arriving at a health center emergency and the first medication being administered.

For the ENH, care time is measured only for heart attacks and pneumonia.



Between January and July 2024, the average time that a patient with pneumonia had to wait for the first medication to be administered was 2 hours, while that of a heart attack was 1 hour and 14 minutes.

According to international standards, an adequate time for heart attack care would be between 30 to 45 minutes. For pneumonia, we could estimate that up to 1 hour of waiting could be appropriate.

However, it is evident that in Venezuela we are far from being able to efficiently address any of these two conditions and probably none of the others.

This indicator has a lot to do with the other results presented so far. All the shortcomings in hospitals and specifically in emergencies will play a fundamental role in the health center's ability to timely care for a patient who arrives at the emergency.

For example, antihypertensive medications are among the supplies with the most failures reported nationwide and this necessarily impacts the time it takes for a heart attack patient to be treated since that patient's family members probably have to go to other establishments (pharmacies) to be able to get the medication that needs to be administered to the patient. This is without taking into account the importance of timely care to be able to survive a heart attack.

Likewise, the staff as well as the number of beds available play a fundamental role when evaluating the capacity of the country's hospitals to deal with emergencies.

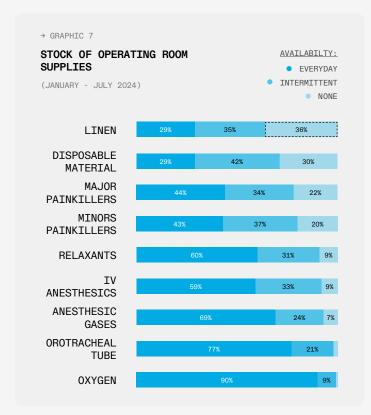


Operating rooms.

Supplies' Stock

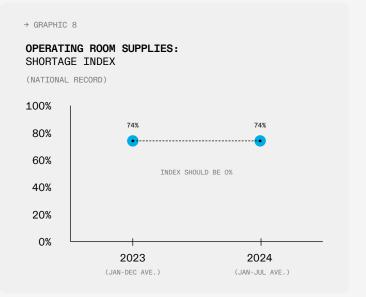
As with emergency supplies, to evaluate the supply of the operating rooms, 9 elements were taken that, according to specialists, are essential in any surgical room to be able to operate on a patient.

For the first half of 2024, the supplies that presented the greatest failure in the operating rooms of the monitored hospitals were lingerie and disposable material².



In the same way that the emergency shortage index is calculated, the ENH calculates the shortage of operating rooms.

For the first half of 2024, the Shortage Index was 74%, which means that it has remained the same since the end of 2023.



In this case, it is important to remember that, when there are no variations in the shortage, although it implies that the situation has not worsened, it also means that no one in the decision-making chain has sought to improve the supply of health centers.

Between January and July 2024, the states that reported the greatest shortages in operating room supplies were Táchira, Nueva Esparta, and Apure. As is the case with emergency supplies, in operating rooms there is also a tendency for states that are furthest from the capital to register greater shortages.



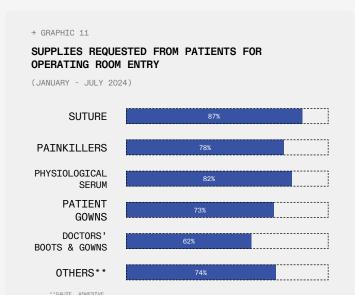


Understanding the high percentage of shortages in these areas, since mid-2023, the ENH incorporated some additional indicators to delve deeper into how these numbers translate into the patient experience at the national level.

Between January and July 2024, 91% of the monitored hospitals recorded that patients were asked for a list of supplies so they could be admitted to the operating rooms. This is regardless of whether the surgery is considered an emergency or not.

→ GRAPHIC	: 10			
	ALS REQUEST S FOR OPER			
(JANUARY	- JULY 2024)			
		91%		

These are the main supplies that hospitals ask for from patients to perform surgery, with sutures being the ones they request the most.



When the hospital asks the patient for any supplies that are not found in the health center, this inevitably implies that the patient or their family members must take money out of their pocket to be able to purchase them and be able to undergo surgery. Based on this, the ENH makes an approximation of the cost of these supplies so that by understanding the economic context of Venezuela, one can have an idea of what having surgery implies in economic terms for any Venezuelan patient.

\rightarrow	TABLE	1
		-

COST OF SUPPLIES FOR OPERATING ROOM ENTRY

(JANUARY - JULY 2024)

	PRICE (UNIT/BS.)	QTY.	TOTAL (BS.)	TOTAL (USD.*)
SUTURE	293.4	3	880.2	24
PAINKILLERS	177.9	4	711.6	19
PHYSIOLOGICAL SERUM	84	5	420	11
PATIENT GOWNS	65.9	1	65.9	2
DOCTORS' BOOTS & GOWNS	219.95	4	879.8	24
OTHERS* *	797	1	797	22
TOTAL	1,638.15		3,754.5	103
*CALCULATED BY THE BCV EXCHANGE RATE OF 31/07/2024: 36.6	**GAUZE, ADHESIVE, HYDROGEN PEROXIDE, TOPICAL USE ANTISEPTIC (POVIDINE)			

By July 2024, the cost of the basic supplies required to enter the operating room totals \$103. Taking into account that the minimum wage in Venezuela is 3.5 dollars³, we would be talking about at least 29 minimum salaries being needed to be able to buy the basic supplies necessary to enter the operating room.

To offer an even more real image of what the shortage of operating rooms means for patients in Venezuela, the ENH, based on a real medical report and the list of supplies that they requested from a patient for a part, investigated their costs, below the data:

HYDROGEN PEROXIDE, TOP-ICAL USE ANTISEPTIC



\rightarrow TABLE 2

COST OF REQUIRED SUPPLIES FOR A C. SECTION

(JANUARY - JULY 2024)

	PRICE (UNIT/BS.)	QTY.	TOTAL (BS.)	TOTAL (USD.*)
LAPAROSCOPE KIT	911.76	1	911.76	24.91
ELECTRODES	8.51	4	34.04	0.93
SURGEON'S BOOTS	216.8	4	867.2	23.69
PATIENT GOWNS	123.15	1	123.15	3.36
GLOVES (PAIR)	34.35	8	274.8	7.51
SURGICAL BRUSH	27.45	5	137.25	3.75
MOUTH COVER	80.1	8	640.8	17.51
GORROS	109.8	4	439.2	12
CAPS	16.1	4	64.4	1.76
PADS	45.4	7	317.8	8.68
0.9% SOLUTION	84	7	588	16.07
ELECTRO- SURGICAL PEN	184.19	1	164.19	4.49
SPINAL NEEDLE #23	24.91	1	24.91	0.68
SPINAL NEEDLE #26	24.91	1	24.91	0.68
GAUZE PACKETS	10.75	20	215	5.87
CHROMIC STITCH #1	28.15	10	281.5	7.69
CHROMIC STITCH #2-0	129.58	2	259.12	7.08
VYCRIL #1 SUTURE	108.81	2	217.62	5.95
NYLON #2-0 SUTURE	161.34	2	322.68	8.82
CLONIDINE VIAL	139.5	1	139.5	3.81
NEOGSTIMINE AMPOULE	123.18	5	615.9	16.83
20 CC INJECTOR	12.15	4	48.6	1.33
40 CC INJECTOR	183.3	4	733.2	20.03

	PRICE (UNIT/BS.)	QTY.	TOTAL (BS.)	TOTAL (USD.*)
5 CC INJECTOR	4.26	4	17.04	0.47
YELC0 #18	22.3	2	44.6	1.22
ADHESIVE	266.9	1	266.9	7.29
GERDEX	131.65	1	131.65	3.60
CONDUCTIVE GEL	352.2	1	352.2	9.62
HYDROGEN PEROXIDE	91.7	1	91.7	2.51
TOTAL	3,637.18		8,341.62	228.1
*CALCULATED BY THE BCV EXCHANGE RATE OF 31/07/2024: 36.6			HYDROGEN E ANTISEPTIC	

Based on the above, which constitutes a real list of supplies that was requested from a patient in a hospital in the interior of Venezuela, a cesarean section in a public hospital in Venezuela costs around 228 dollars or around 65 minimum wages.

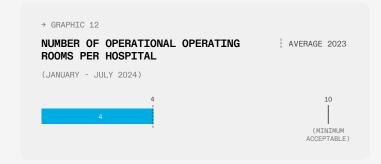
The World Health Organization has an indicator called the "Out-of-pocket expenditure in health" (out-of-pocket health spending), which records worldwide the spending that people in each country must make out of their pocket to cover health costs. This information must be provided by the countries to be analyzed and published by the WHO.

The latest data update for Venezuela is from 2021 and according to data from the Venezuelan government itself, out-of-pocket spending per capita in Venezuela was an average of \$160⁴.



Operational Operating Rooms

By July 2024, the monitored hospitals had an average of 4 operational operating rooms. Considering that the hospitals in this sample are all type III and IV and that these highly complex centers have the architectural capacity for around 10 operating rooms per hospital, we have a 60% deficit in surgical capacity due to the infrastructure in the monitored hospitals.

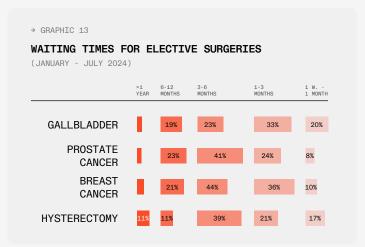


Since there are so few operational operating rooms, it is very common for them to be used mostly for emergency surgeries. This delays the so-called elective surgeries, which are all those that are not emergencies, including oncological surgeries, generating long waiting lists nationwide.

Elective Surgeries

Between January and July 2024, an average of 23 elective surgeries per week were recorded per hospital. Thus maintaining the volume of these types of surgeries that were registered during the year 2023.

For the first half of 2024, hysterectomies had the longest waiting time. Likewise, of the four types of surgery monitored, the majority report waiting times greater than one month.



It is important to take this into account because although these are not surgeries considered emergencies, in many cases, especially oncological cases, a delay in surgery can also imply a delay in diagnosis and therefore in treatment, significantly affecting the development of the disease.

Off-the-Record Payments

Another phenomenon that has been registered in the monitored hospitals is the request for payments for the use of services and even for fees of health personnel (doctors and/or nurses).

It is important to remember that the free nature of the public health system in Venezuela is enshrined in Article 84 of the Constitution of the Bolivarian Republic of Venezuela:

ART. 84:

"TO GUARANTEE THE RIGHT TO HEALTH, THE STATE WILL CREATE, EXER-CISE STEWARDSHIP, AND MANAGE A NATIONAL PUBLIC HEALTH SYSTEM, OF AN INTERSECTORAL, DECENTRALIZED, AND PARTICIPATORY NATURE, INTEGRATED INTO THE SOCIAL SECURITY SYSTEM, GOVERNED BY THE PRIN-CIPLES OF FREE HEALTH, UNIVERSALITY, COMPREHENSIVENESS, EQUITY, SOCIAL INTEGRATION, AND SOLIDARITY. (...)"

By July 2024, 46% of liaisons in the monitored hospitals reported being aware that someone within the hospital structure was requesting payments from patients. It is important to emphasize that this is a crime and we urge the relevant authorities to carry out the investigations that are required to be able to assign responsibilities.

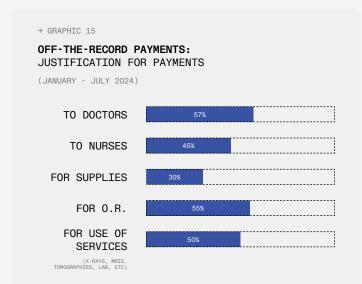
Mid Year Report 2024)
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HOSPITALS REQUESTING OFF-THE-RECORD PAYMENTS FOR OPERATING ROOM ENTRY (JANUARY - JULY 2024)	
(JANUARY - JULY 2024)	
54%	

Public health in Venezuela is free and any additional charge is a direct violation of the rights of Venezuelans.

Among the reasons why payments are requested from patients, until July 2024, the largest number of complaints are from medical personnel who request payments from patients to be able to care for them, followed by payments to be able to be treated in operating rooms, as well as for the use of any of the hospital services.



For the most part, payments are requested on a personal and individual basis. This has largely been driven by the lack of supplies and the low salaries of health personnel.

→ GRAPHIC 16					
••••••••••••••••	OFF-THE-RECORD PAYMENTS: PAYMENT REQUESTER				
(JANUARY - JULY 2024)					
HOSPITAL MANAGEMENT	26%				
SERVICES' STAFF	12%				
INDIVIDUAL STAFF	58%				
UNKNOWN	19%				

These data indicate that the majority of payments requested from patients are between \$100 and \$300.

→ GRAPHIC 17					
OFF-THE-RECORD PAYMENTS: AMOUNTS REQUESTED					
(JANUARY - JULY 2024)					
25-49\$					
17%	9%	43%	28%		
0-24\$	50-99\$	100-300\$	+300\$		

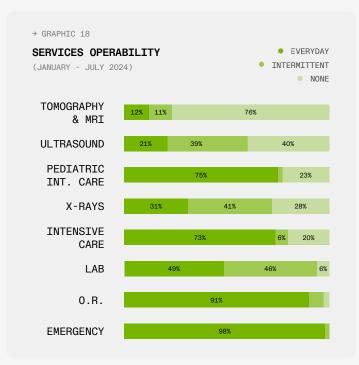
This data, although worrying in itself, when contextualized with the data presented previously, it is evident that the great shortcomings of hospitals in Venezuela are having a very important impact on patients in economic terms and that in addition, we are facing a flagrant violation of the principle of free public health enshrined in the Constitution.



Diagnostic support services.

In addition to critical areas such as emergencies, operating rooms, and intensive care, hospitals have diagnostic support services. These are the ones who, through a wide range of studies, help medical personnel to be able to give accurate and timely diagnoses to patients.

Since the beginning of the ENH, the operation of these services has been one of the main indicators that are monitored because the operation of these services impacts the care capacity of health centers.



For the first half of the year 2024, we have that the service that presents the greatest failure is tomography and magnetic resonance imaging. Historically, this has been the service with the worst operation, that is, at least since 2014, there has not been an initiative from the competent authorities to make the necessary investment to repair the equipment of these services that are damaged or to purchase new ones.

Once again, it is important to remember how this translates to patients; If the scans cannot be performed in the hospital, they have to go to services outside the hospital that are generally private, that is, they involve a cost for the patient. The cost of a simple CT scan at a private center can be around \$90.

Nutrition service.

Between January and July 2024, 10% of the monitored centers reported not having the nutrition service operational.

OPERATIONAL NUTRITION SERVICES	2023 AVERAGE
(JANUARY - JULY 2024)	
	93%
90%	

Of these centers that reported that the service does not work, 100% reported that it is due to a lack of supplies, added to other factors such as lack of equipment, lack of professionals in the area (nutritionists, nutritionists), as well as lack of staff (cooks).

→ GRAPHIC 20	
NON-OPERATIONAL SER CAUSES	VICES:
(JANUARY - JULY 2024)	
LACK OF SUPPLIES	100%
LACK OF EQUIPMENT	62%
LACK OF PERSONNEL	34%
LACK OF	26%
PROFESSIONALS	20%

Of the centers that did report that the service works, 36% reported that it does so intermittently, that is, sometimes it works and other times it doesn't.

On the days that the service does operate, 65% of the monitored centers reported that they serve less than 3 meals a day.

And of the meals that the service offers to patients, 81% report that it does not meet the needs or personalized indications for each patient.

In this regard, it is important to highlight that the patient's diet is just as important for their treatment as medications, especially in those patients who require strict or highly specialized diets, for example, diabetics.

<pre>→ GRAPHIC 21 OPERATIONAL SERVICES: (JANUARY - JULY 2024)</pre>	2023 AVERAGE
FREQUENCY OF OPERABILITY	0714
63%	67%
EVERY DAY OF THE WEEK	INTERMITTENT
NUMBER OF MEALS	
35%	
3 PER DAY	>3 PER DAY
COMPLIANCE WITH MEDICAL RECON	MENDATIONS
19%	
COMPLY DON'T CO	OMPLY

In hospital centers that have pediatric hospitalization, the ENH monitors the existence of milk formulas, since it is considered a therapeutic strategy, so all necessary options must be available.

→ GRAPHIC 22 AVAILABILII (JANUARY - JUL		FORMULAS	
24%	21%	48%	8%
ALL WEEK	INTERMITTENT	NONE	NEVER HAS BEEN

48% of hospitals that have pediatric hospitalization report that there were no milk formulas, between January and July 2024.



Blood bank.

Recently the ENH incorporated some indicators to be able to monitor the situation of hospital blood banks.

Although not all hospitals have this service, it is important that those that do not only function and can capture and store blood but also can process it properly so that it can be used safely.

Of the monitored hospitals that have this service, 97% recorded that they do have this operational.



The few centers that reported that they are not operational, in their entirety indicate that it is mainly due to lack of supplies.

→ GRAPHIC 24	
NON-OPERATIONAL BAN CAUSES	KS:
(JANUARY - JULY 2024)	
LACK OF SUPPLIES	100%
LACK OF EQUIPMENT	85%
LACK OF STAFF	30%

One of the most important elements, as explained above, is the ability of blood banks to properly process donations so that the blood is suitable for use. That is, blood must be tested against various diseases for its use to be safe. These tests are known as serologies.

DPERATIONAL BANKS: CAPACITY TO PERFORM SEROLOGIES	
(JANUARY - JULY 2024)	
73%	
	WITHOUT SEROLOGIES THE BLOOD CAN'T BE USED

27% of operating blood banks reported that they cannot perform serologies. That is, although these blood banks are operational and probably receive donations, they cannot test the blood so that it can be used safely. That is to say, it is of no use for them to be operational if in the end the blood cannot be used, or worse, if they decide to use the blood, even without performing the necessary tests.

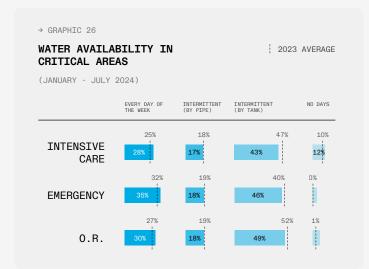
Ideally, you need to rule out hepatitis B, hepatitis C, HIV, Syphilis, and Chagas.

In this sense, national and international standards require that any blood product be checked for at least each of these diseases.

Public services.

On the other hand, the ENH also monitors the access that hospitals in Venezuela have to public water and electricity services. Although this does not constitute an indicator of hospital performance as such, it does influence the care capacity of health centers in Venezuela.

For the first half of 2024, the distribution of water to hospitals remains the same as that recorded in 2023. Most of the monitored centers report that the service is intermittent and that, for the most part, the water arrives by cisterns and not through the hospital pipes.

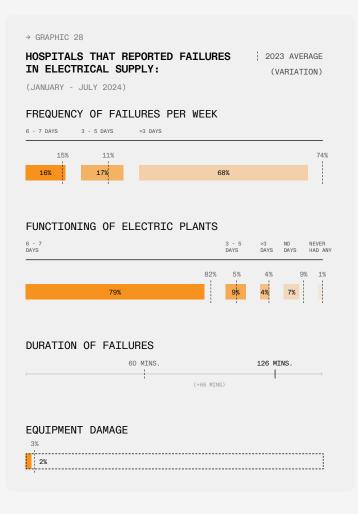


It is important to remember that having constant access to water is essential for the functioning of any health center, regardless of its level of complexity, because, in addition to having obvious importance for the maintenance and cleaning of the center, some treatments and procedures need a constant supply of water to be able to perform.

Regarding the electricity supply, its behavior has also remained similar to that recorded in 2023. However, the fact that this indicator has not changed does not imply an improvement; on the contrary, it indicates that no measures have been taken to solve the electricity crisis.



Although constant energy failures represent difficulties for any environment, in the hospital sector they also represent a danger for hospitalized patients. This is the case, for example, of patients who require ventilatory assistance.





Between January and July 2024, a variation is observed concerning the number of failures per week. Although hospitals reporting electrical failures in health centers remained the same as in 2023, there is a slight increase in the frequency of electrical outages.

ENH monitoring also recorded an increase in the duration of electrical outages. Between January and July 2024, the average duration was double that recorded in 2023.

During this period, there was no major variation in reports of equipment damage due to power outages.

During this time, there was a slight deterioration in the operation of power plants in hospitals. Needless to say, it is essential that hospital power plants are always in optimal operation, especially in a context like Venezuela, where electricity outages are so frequent.

It is also important to highlight that although power plants provide energy during power outages, they do so only for critical areas, that is, emergency, intensive care, and operating rooms. The rest of the hospital, including diagnostic support services, remains inoperative until the power returns.

Between January and July 2024, the ENH recorded 129 deaths in hospitals that coincided with the power failures.





Infrastructure.

In Venezuela, most type III and IV hospitals are structural, that is, they are multi-story buildings, so the operation of the elevators is essential.

For example, hospitals in Venezuela usually have emergencies on the ground floors, however, the operating rooms are on higher floors. If the elevators do not work and a crash victim arrives at the emergency room and needs to go into emergency surgery and the elevator does not work, there is no way to take the patient to the surgical rooms.

→ GRAPHIC 30			
ELEVATORS 0	2023 AVERAG		
(JANUARY - JULY	(2024)		
EVERYDAY		INTERMITTENT	NO DAY:
	38%		54% 85
41%		50%	9%

In the first half of 2024, we see a very small improvement compared to 2023.

About the operation of the air conditioners, a slight variation was recorded in the intermittency that was distributed between optimal operation and non-operation, in relation to 2023.





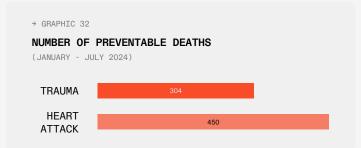
Preventable deaths.

Once most of the ENH monitoring indicators have been reviewed, it is also important to offer a perspective of what each of the shortcomings recorded here implies.

Each of the failures presented by hospital centers in Venezuela translates into a reduced capacity for care and this inevitably implies that the patient is the one who suffers the consequences.

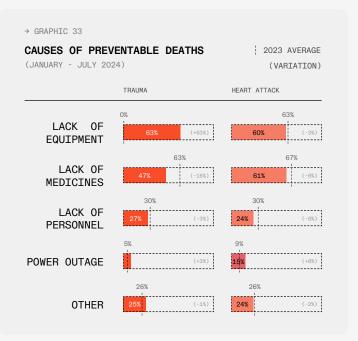
The ENH monitors the total number of deaths recorded in health centers, which according to the doctor's own criteria, are due to some deficiency in the health center and not to the patient's medical condition. These deaths, for the purposes of the ENH, are known as avoidable deaths.

It is important to highlight that this indicator does not seek to be a mortality index, but rather to offer how the failures of health centers translate to the patient level.



By the end of the first half of 2024, the ENH recorded a total of 450 preventable deaths due to heart attacks and 304 preventable deaths due to trauma. To better understand the magnitude of these figures, for the year 2023, the ENH recorded a total of 815 preventable deaths due to heart attack and 490 due to trauma.

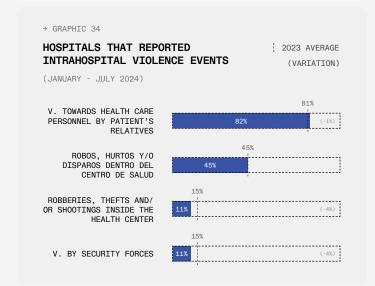
According to hospital staff, most of these deaths were due to a lack of necessary medications to care for patients.





Violence.

Between January and July 2024, 82% of the monitored hospitals reported events of violence by patients' relatives towards health personnel. This data has behaved similarly across time, thus showing that health centers in Venezuela are not safe spaces for the personnel who work there, by being exposed to being victims of violence.

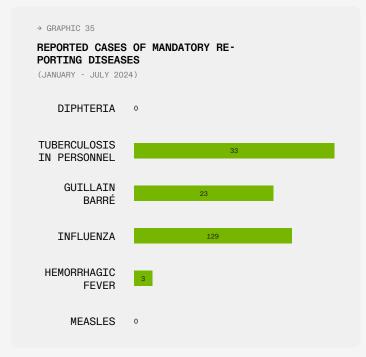




Reportable diseases.

All health authorities in the world have a list of diseases that must be reported by health personnel to the corresponding authorities. This is to be able to monitor active diseases in the territory and in this way, be able to more efficiently address any unusual situation.

This information must also be released by the authorities to the population, under the format of the epidemiological bulletin. Since 2016, the Ministry of Popular Power for Health has not published the bulletin, leaving no information on epidemics and active diseases in Venezuela.



Between January and July 2024, we see that the largest number of cases are of tuberculosis specifically in health personnel, however, we also have reports of cases of Guillain Barré and Influenza.

It is important to remember that this information does not in any way seek to replace the epidemiological bulletin but rather is a way to offer some perspective on which diseases are active in the national territory.

Final Considerations.

As can be seen throughout this report, the situation of hospitals in Venezuela continues to be critical. Added to the deficiencies that have already been recorded for 10 years through the National Hospital Survey, the unofficial charges and the need for patients to acquire supplies and medicines, reveal a public health system that is no longer free and hardly has the necessary capacity to care for Venezuelan patients.

Glossary

Adrenaline

Used to treat severe allergies, cardiac arrest, and acute respiratory problems.

Aminoglycosides

Antibiotics used to treat severe bacterial infections.

Anesthetic Gases

Inhalable substances used to induce and maintain anesthesia during surgery.

Antihypertensives

Medications to reduce high blood pressure and prevent cardiovascular problems.

Asthma Inhalers

Devices that deliver medications to relieve asthma symptoms and improve breathing.

Atropine

Used to treat abnormal heart rhythms and certain poisonings.

Cephalosporins

Antibiotics used to treat a variety of bacterial infections.

Connection Lines

Tubes that connect the patient to the hemodialysis machine, allowing blood to circulate to the filter and back to the patient.

Defibrillator

A device used to restore normal heart rhythm in the event of cardiac arrest.

Diazepam

Used to treat seizures, anxiety, and relax tense muscles.

Disposable Materials

Includes any equipment or materials used only once and discarded after use to prevent infections and maintain hygiJan in the operating room.

Dopamine

Medication used to increase blood pressure in critical situations.

Endotracheal Tube

A tubular device inserted through the mouth or nose into the trachea to secure an airway during gJanral anesthesia and assist with patient ventilation during surgery.

Filters

Also known as membranes or diaphragms, are critical in hemodialysis because they allow the separation of waste products and excess water from the blood, aiding in its purification.

Fluid

Refers to fluids and solutions administered to maintain fluid and electrolyte balance in the body.

Hemodialysis Kit

Contains a variety of necessary elements for dialysis, such as syringes, solutions, and other materials used in the procedure.

Heparin

An anticoagulant used to prevent or treat blood clots.

High-Flow Cannulas

Devices that allow adequate blood flow during hemodialysis, ensuring that blood flows correctly to and from the filter.

Insulin

Used to treat diabetes by helping control blood sugar levels.

Intubation

A procedure in which a tube is inserted into the trachea to secure an airway and aid in breathing.

Iron, B Complex, Calcium, and Zemblar

These nutrients and medications are essential to ensure the proper balance of electrolytes and maintain the patient's health during hemodialysis. Iron is vital for preventing anemia common in patients with kidney failure.

IV (Intravenous) Anesthetics

Substances administered through an intravenous route to induce loss of sensation or consciousness for painless surgical procedures.

Linen / Sterile Garb

Refers to the bedding and special attire used in the operating room to maintain asepsis and ensure optimal sanitary conditions during surgical interventions.

Local Anesthesia

Used to numb a specific part of the body during surgical procedures or to relieve localized pain.

Major Painkillers

Potent medications for relieving intense pain, such as morphine.

Minor Painkillers

Over-the-counter medications used to alleviate mild to moderate pain, such as ibuprofen or paracetamol.

Muscle Relaxants

Medications administered during anesthesia to relax the patient's muscles and facilitate certain surgical procedures.

Oxygen

An essential gas supplied in the operating room to ensure proper patient oxygenation during surgery and in the recovery phase.

Serology Tests

Blood tests to assess the presence of infections or communicable diseases that could affect the dialysis process or patient health.

Steroids

Used to reduce inflammation in various medical conditions.

Urea Reduction Ratio

A crucial indicator that measures the effectivJanss of treatment by evaluating the amount of urea (a waste product) removed during hemodialysis, helping determine if dialysis is effective.

Vancomycin

An antibiotic used to treat severe infections caused by bacteria resistant to other antibiotics.

Yelco

Intravenous catheter used to administer fluids, medications, or draw blood from a vein.

