

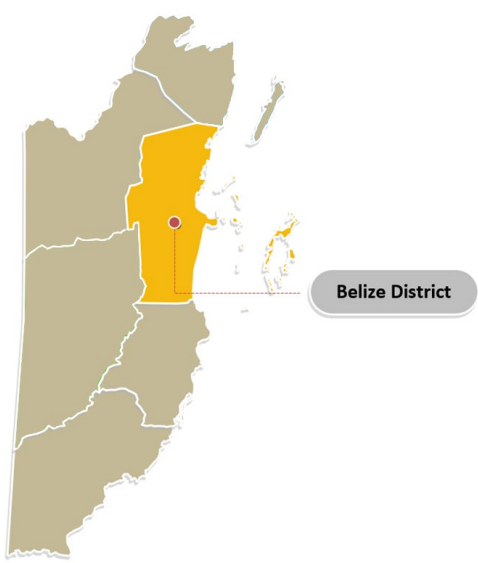
HIGHLIGHTS

Situation Overview and Context (11 November 2022 at 12:00 pm CST)

- On 4 Nov. 2022, Hurricane Lisa **made landfall at 17.4°N latitude, 88.3°W longitude or about 10 miles southwest of Belize City at the mouth of the Sibun River**. The Category 1 Hurricane affected the country for 12 hours. The “All Clear” was declared on 4 Nov.
- The 24-Hour Report or Initial Damage Assessment and Needs Analysis (DANA) summarized preliminary findings:
 - The Belize District was severely impacted: 94,271 residents affected; 500 houses completely destroyed; 5,000 houses partially destroyed
 - Damage estimates included: US\$100 million (public infrastructure), US\$10 million (houses); US\$11 (food, clothing, construction materials and household supplies)
- In the week since the hurricane made landfall, immediate disaster response was implemented:
 - the Government of Belize allocated emergency funds for urgent needs (food and supplies) for the most affected families.
 - the Relief and Supplies Committee activated 24 hours after the all-clear for the objective of providing assistance to persons in Belize City who were more affected.
 - the Ministry of Health and Wellness (MoHW) completed daily assessments of hurricane shelters and is now focused on securing medical supplies and pharmaceuticals.
 - the massive cleanup effort in Belize City has removed a thousand truckloads of debris in 6 days.
- Preparation of a final damage assessment report is expected within the next two to four weeks.
- The country has started to transition towards medium-term response, under the coordination of the Ministry of Human Development, Families and Indigenous Peoples’ Affairs (MoHDFIP), with interventions such as temporary rental of homes for displaced families.

MAP

Map showing the Belize District, which was more severely affected by Hurricane Lisa



IN NUMBERS

441,471
Exposed

0 **Deaths**

0 **Injured**

0 **Missing**

0
Evacuated

0 **Damaged**
Health facilities



HEALTH

- Before the hurricane,
 - the Ministry of Health and Wellness activated its Emergency Operations Center (EOC) at the National Vaccine Building in Belmopan, within the compound of the Western Regional Hospital.
 - emergency operational plans were activated at health regions across Belize.
 - community and regional hospitals announced temporary closure of outpatient services. Regional hospitals prepared to offer primary and secondary healthcare services while patients who were assessed as being able to continue care at home were discharged from hospitals that were projected to be directly affected by the hurricane.
 - the Ministry of Health and Wellness advised supervisors at Hurricane Shelters to maintain COVID-19 preventive measures including physical distancing.
 - the MOHW ensured that its generators are fully functional in the event that it loses electricity from the national grid.
- In the aftermath of Hurricane Lisa,
 - The MoHW conducted assessments of health facilities in the central health region, the area of the country in where the hurricane made landfall and directly affected for 12 hours.
 - The Ministry of Health and Wellness (MoHW) teams, consisting of the senior health inspector, the vector control and the infection prevention and control nurse, conducted daily monitoring of shelters to identify persons who had become ill and those who exhibited signs and symptoms of COVID-19.
 - Mental Health clinics countrywide encouraged the public to seek care after the trauma of experiencing a hurricane.
 - the MoWH worked with the Ministry of Education to provide access to psychological first aid for teachers and students who needed support.
 - the most affected area, Central Health Region, deployed 4 mobile health teams to provide care and conduct public health education while visiting impacted communities in rural Belize district.
 - the Health Education and Community Participation Bureau (HECOPAB) mobilized its network of community health workers to provide public health education, advising the public on safe drinking water and water borne diseases.
- The National Emergency Management Organization (NEMO) continues to conduct damage and needs assessments and expects to have a final report



HEALTH RISK ASSESSMENT

- In the immediate aftermath of the hurricane, health risks included secondary injuries from flooding, debris, live wires from collapsed electrical poles and sharp objects or fragments.
- Days after, the risks included expired food from defrosted refrigerators and contaminants from chemicals, human and animal waste, as well as dead animals.
- The current health risks include a proliferation of mosquitoes and pests from water containers and flooded areas may contribute to vector-borne diseases.
- Additionally, displaced persons exposed to new environment and general uncertainty about the future may experience emotional reactions; so there is need for mental health services to help affected persons develop positive coping mechanisms.
- Interrupted access to health care may cause worsening of management of noncommunicable diseases and exacerbation of pre-existing conditions.



INFRASTRUCTURE

- Assessment of health facilities in the areas more severely impacted by the hurricane were initiated on Nov 4, the day “all clear” was declared.
 - No major damages were identified
 - one SMART retrofitted facility lost two solar panels
 - Minor leaks were visible in other facilities.
- Of note, the SMART retrofitted clinic was quickly able to resume operations because it had electricity and water supply. Another clinic also resumed operations in Belize City after the all clear; however, functionality was



limited by lack of electricity and water. Annex 5 provides a summary of the 5 Health Facilities retrofitted (UK fund support) and already handed over and the 3 Health Facilities currently being retrofitted with the support of funds from the EU.

- Even though power to homes was restored within days, the impact on infrastructure for the utility companies was severe. Power lines and transformers were destroyed. A major telecommunication tower was lost.
- The Ministry of Sustainable Development, Climate Change & Disaster Risk Management has announced that the methodology for evaluating damage to homes is a housing and billing assessment tool from the United Nation's Development Program (UNDP).
- A total of 2,500 homes in Belize City and 500 homes in other parts of the country have been assessed for damages. Of these, 280 homes in Belize City have been completely destroyed. The most affected neighbourhoods in Belize City are all on Southside Belize City: Lake Independence, Port Loyola and Albert Division, an area that already faces several challenges in social determinants of health.

WASH

- The Belize Water Services (BWS), Belize's sole provider of potable water, warned of the risk of contamination before the hurricane started affecting Belize. Public Service messages encouraged persons to store emergency water supplies and services in affected areas were interrupted.
- After the passage of the hurricane, BWS repaired broken water supply.
- Hygiene and sanitation kits were distributed by NEMO but also through the Red Cross.
- The Ministry of Health and Wellness launched a social media campaign to build awareness of control and prevention of food and water borne infections after the hurricane.
- The MoHW also tested water samples which revealed suboptimal chlorination in affected areas. BWS was to be notified of findings.

NUTRITION

- In the immediate aftermath of the hurricane, the effect on nutrition was not as apparent:
 - Food stores in some hurricane shelters fell short, primarily because some shelters were above capacity and displaced persons did not have adequate food supplies for their needs.
 - While the impact on the agriculture sector has not as yet been completed, based on previous experience of the 2016 Hurricane Earl which hit South of Belize and affected the country for 15 hours, the damage to both the Cayo and Belize Districts could be as high as US\$10 million.
 - Interventions to ensure safety of food included inspection of grocery stores, the disposal of damaged products that were affected by extended power outage.
 - Ensuring a proper diet for displaced persons included the provision of food baskets, that were rationed based on the size of family. Besides government initiatives, NGOs and the general public joined the food aid campaign.
- In the long term, the effects of the storm are expected to negatively affect the country's economic growth. For example, one private company whose sugarcane crop was affected has estimated losses in final production of 4 to 7%. Several small farmers reported loss of fruit trees, grains and vegetables, which may contribute to scarcities and increased cost in the medium-to-long term.
- While the immediate effect of the hurricane on supply chain and transportation may have been minimal, vulnerable families that have been facing food insecurity have been receiving short-term food aid. 568 persons have been assessed for assistance.

SHELTERS

- Shelters were opened two days before the hurricane made landfall in order to accommodate about 2,000 persons who relocated from the offshore islands in the Belize District.
- Countrywide 5,000 persons were housed in 132 shelters:
 - 44 shelters in the Cayo District
 - 36 in the Belize District
 - 14 shelters in the Stann Creek district
 - 16 shelters in the Toledo district

- 12 in Orange Walk
- 10 in Corozal
- One day after the all clear was declared (Nov. 5), only 378 persons remained in shelters.
- When most schools that had been repurposed as shelters were needed for the resumption of school after the hurricane, the decision was made to relocate all displaced persons into one facility. By Nov. 7 only 161 persons remained in 7 shelters
- Temporary housing arrangements were sought for those whose homes were completely destroyed. As of Nov. 9 there are no reports of persons in shelters.
- While major damage was not reported to the structures used as shelters, the Ministry of Infrastructure Development (MIDH) has been coordinating with the Ministry of Education to repair schools that were identified as having sustained minor damages.



HEALTH NEEDS

- Initially, health needs included bed nets, repellent, first aid kits, PPEs, water tablets and medication.
- However, the Ministry of Health and Wellness has requested support medication and supplies. (Please see Annex 3 and Annex 4)



RESPONSE

GOVERNMENT RESPONSE:

- Responsibility for preparing for and responding to hurricanes, floods and other natural disasters falls under the National Emergency Management Organization (NEMO). 72 hours before the hurricane made landfall,
 - NEMO EOC was setup at NEMO conference room, its operational readiness plan was activated, inventory checks of its warehouse was conducted and additional supplies were procured.
 - District Emergency Management Organizations (DEMO) and City Emergency Management Organizations (CEMO) were activated across the country.
 - The public was briefed on the country's preparations and encouraged to activate their family plans (stock up on food, supplies and water) and to move into safe homes
 - The search and rescue component, including the Belize Special Assignment Group (BSAG), Coast Guard, Belize Defence Force (BDF) and all those critical uniform services that will assist with potential rescues, was alerted.
 - Members of the BDF's regular element who were on annual leave were asked to report to the nearest military installation for duty as part of preparation and readiness plan of action in anticipation of TS Lisa.
 - The Belize Police Force activated its hurricane plan with police officers being advised to secure homes and families, in anticipation of a 12-hour shift system since they conduct search and rescue operations and ensure the safety of hurricane shelters.
 - The Department of the Environment sent reminders to store industrial chemicals, pesticides and other hazardous substance (fuels, oils and lubricants) on high ground to prevent potential environmental contamination.
- 48 hours before the hurricane made landfall
 - 15 shelters were opened to accommodate persons who evacuated from the offshore cayes (islands).
 - The Foreign Assistance Committee was activated and were provided with a diplomatic briefing
 - The Economic Recovery Committee chaired by CEO in the Ministry of Economic Development was activated.
 - The international and municipal airports were closed.
 - The Belize Tourism Industry Association (BTIA) held consultations with stakeholders in response to flight and cruise ship cancellations.
 - The Ministry of Education announced cancellation of classes to allow for schools to be used as hurricane shelters.
- 24 hours before the hurricane made landfall
 - 117 additional shelters were opened across the country.
 - Public service employees, who are a part of the hurricane response, were asked to present to respective posts for duty.
 - To discourage movement during the hurricane, the Belize and Stann Creek Districts were placed under curfew until "all clear" was declared.
 - Public bus transportation was suspended operations the day of the hurricane.

- Post hurricane
 - To discourage unnecessary movement, allow utility crews to conduct repairs and assessments and to ensure public safety from injury and crime, a curfew (7:00 PM to 6 AM) was instituted for the Belize District, except for Caye Caulker.
 - The Government of Belize (GoB) conducted preliminary assessment a day after the hurricane and presented it to Cabinet.
 - Emergency funds were issued to area representatives to address urgent needs, including food, waters, and quick repairs to homes.
 - A 72-hour clean-up campaign was conducted with participation of municipal leaders and members of Government departments, including the Belize Police Force, the Belize Defence Force and the Belize Coast Guard. An estimated 208 truckloads of debris totalling 6 to 7 tons were cleared the first two days of the campaign. The cleaning operations have continued.
 - The Ministry of Agriculture, Food Security and Enterprise (MAFSE) has continued to perform damage assessments for farmers living in affected areas.
 - The Ministry of Education released a list of schools in the Belize and Cayo district which received extensive damage and were approved to re-open later than 7 Nov. 2022 when all other schools were mandated to reopen.
 - The Ministry of Infrastructure Development and Housing (MIDH) started a house-to-house survey in order to quantify the damage caused by Hurricane Lisa.
 - The Ministry of Human Development, which chairs the Relief and Supplies Management Committee of NEMO, set up Hurricane Lisa Relief operations for the planning and distribution of food and hygiene packages for affected persons in Belize City.
 - The Ministry of Human Development created a Hurricane Lisa Relief Donation Account to facilitate donation of cash, clothing, baby pampers and formula, mattresses, food items and building supplies.
 - The Economic Recovery Committee started to coordinate and assist with the rehabilitation and reconstruction during the recovery.
 - The Ministry of Infrastructure Development and Housing has taken a 2-phased approach. The relief phase would address minor, intermediate and major repairs. The recovery phase would address the replacement of houses that were lost.

PAHO/WHO RESPONSE:

- Before the hurricane
 - PAHO/WHO activated its Hurricane Management Plan. PAHO staff was advised to activate family and personal emergency plans to safeguard lives and properties. Emergency communication equipment was tested. The call tree was activated before and during the hurricane. Transition back to technical cooperation work was 7 days after the hurricane.
 - Special Emergency Procedures (SEP) was announced by Director of PAHO/WHO and continues in effect to facilitate response and recovery actions of the Belize country office.
 - An Incident and Crisis Management Team was established in the country office. The PAHO's Disaster Response Team included 7 staff supporting the preparedness and response. Situation Reports were prepared beginning daily beginning 72 hours before the hurricane made landfall and continuing until 48 hours after landfall. Thereafter, situation reports were presented once a week
 - Coordinated with the Ministry of Health and Wellness on hurricane preparedness and response.
 - Led the UN Country Team preparedness and response as Chair of the UNETT. The plan was to provide technical cooperation in the areas of Health, Wash, Food and Nutrition coordination with UNICEF and UNFPA.
- After the hurricane
 - PAHO/WHO Belize continues to coordinate with UNICEF in an effort to respond to the medication and supplies needs listing shared by the Ministry of Foreign Affairs, Foreign Trade and Immigration (MOFAITI) Foreign Assistance Committee Service.
 - In response to a list of needs received from the Ministry of Foreign Affairs, the PAHO/WHO Belize Critical Team coordinated with PHE to assess the availability of emergency packages from WHO emergency distributors which can be procured through the PAHO Strategic Fund.
 - The PAHO Strategic Fund committed to identifying medications in the list shared by the MOHW that can be purchased on emergency basis. PAHO SF promised to share list of medicines that could be requested through the Loan/Donations platform. MOHW (Dr Diaz) has been asked to help determine priority items, given funding constraints.
 - PAHO/WHO worked closely with the Ministry of Health and NEMO to assessment of health facilities and hurricane shelters in rural Belize District and to apply rapid assessment tool for health facilities.
 - The country office collaborated with the NEMO, MoHW and other agencies to disseminate key messages on WASH in general and measures to prevent water and vector-borne diseases specifically.

- Support was also provided for risk communication related to mental health post – hurricane.
- The PAHO/WHO Belize Country office welcomed back members of staff onsite, especially those needing access to electricity to charge devices during the days-long power outages that affected Belize City.
- Coordination continued with Health Emergencies (Caribbean) to provide technical cooperation to the country during its recovery and a shipment of supplies to include gloves, water purification and bednets as requested by the MoHW.
- Some of the supplies requested in Annex 4 were also in the process of being procured by the Belize CO utilizing WHO USG funds to support the work of the Community Health workers- including BP apparatus, glucometers, and pulse oximeters.

UN RESPONSE:

- The UN coordination (UNETT) started holding meetings with the participation of Office for the Coordination of Humanitarian Affairs (OCHA), PAHO/WHO, UNDP, UNICEF, UNFPA, UNHCR, IOM and WFP on 1 Nov. 2022. Two Flash Updates were prepared.
- The UN agencies were asked to continually update an excel sheet that the RCO used to monitor the safety of staff and family members.
- UNICEF pre-positioned 300 Early Childhood Development (ECD) kits for families with children aged 0-8 years. It also pre-positioned 150 hygiene kits, to reach 750 people including women and children, with the Belize City Emergency Management Office as a part of its emergency preparedness.
- The World Food Program, which has been working in Belize on disaster risk management and social protection, supported the Ministry of Human Development to provide shock responsive social protection in the aftermath of the hurricane.
- The WFP was poised to quickly mobilize cash assistance to support affected families through a parametric insurance coverage against tropical cyclones, excess rainfall and earthquakes for policy year 2022/23 through the Caribbean Catastrophe Risk Insurance Facility (CCRIF SPC), a not-for-profit risk pooling facility that offers disaster risk insurance. WFP also donated tablets to MHD for digital data collection to support household assessments in advance of Hurricane Lisa's landfall.

OTHER AGENCIES RESPONSE:

- The Government of Belize has received several donations from partners:
 - The Government of Japan donated emergency relief items (generators, sleeping bags and blankets).
 - The United States Embassy in Belize through the U.S. Southern Command (SOUTHCOM) Humanitarian Assistance Program, donated US\$97,300 in disaster relief supplies (hygiene and cleaning supplies, first aid kits and construction materials) to the Government of Belize.
 - The Government of Taiwan donated US\$200,000 for hurricane relief.
 - The Banana Growers Association has donated US\$50,000
 - The Belize Tourism Board donated US\$25,000 to Belize City municipal government to support its hurricane relief work.
 - The Inter-American Development Bank has approved US\$200,000 in emergency technical cooperation aimed at humanitarian aid, including food, drinking water and cleaning supplies, that will benefit 300 families and will be distributed through the Belize red Cross.
 - The International Federation of Red Cross and Red Crescent societies in Geneva, Switzerland has earmarked 275,00 Swiss Francs or US \$292,383 for non-food items, including cash and voucher programs, water sanitation and hygiene support, hygiene products, communication campaigns. 1,000 families are expected to benefit from this intervention.
 - The Belize Water Services Ltd. and Minister of Public utilities gave a donation of US\$7,500 towards the renovation and repair of Sister Cecilia's Home for the Elderly. The long-term care facility lost its roof, which in turn resulted in damage to the ceiling, cabinets, and personal items during the hurricane.
- The Adventist Development and Relief Agency International distributed pantry bags to 250 families that affected persons in Ladyville, a village North of Belize City, that received significant damage.
- The Belize Red Cross started implementing its response plan which prioritizes coastal areas to determine which families and communities are most in need. Volunteers have been distributing supplies to most affected neighbourhoods, such as Port Loyola (Belize City) and Vista del Mar (North of Belize City), that were inundated by 4 to 5 feet of sea water during the storm surge. Families affected by flooding received cleaning kits (mops, brooms, buckets, detergent, and bleach) and those who lost roofs received tarps and mattresses.
- HelpAge Belize, a non-governmental organization which usually provides a hot meal once a week to elderly and home-bound persons, assessed damages to the persons they usually visit. HelpAge will then advocate, through the National Council of Aging and the Ministry of Human Development, for the 40 persons in Belize City who need assistance.

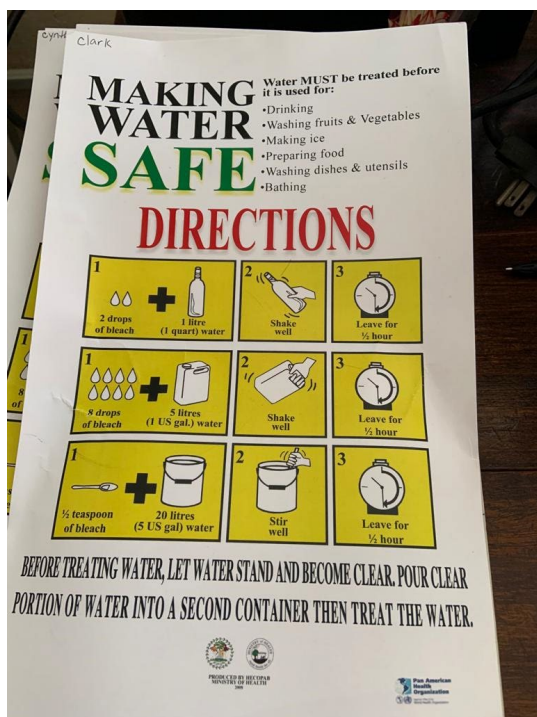
- The Belize Sugar Cane Farmers Association (B.S.C.F.A) travelled from Orange Walk to donate their loaders, that are usually used in sugar cane fields, to assist with clean-up efforts in Belize City.
- A dumping area has been designated on the ground of the Belize City Transfer Station's Compound under the management of the Belize Solid Waste Management Authority.
- UNDP is coordinating with National Recovery Committee and is committed to provide technical support to committee actors as the country defines its recovery roadmap.

Annex 1 Evaluation of Belize Rural Health Facilities and Hurricane Shelters:

The PAHO/WHO-MoHW Team conducted an assessment of rural Belize health facilities and hurricane shelters:

- Hattieville Community Center Hurricane Shelter**
 During Hurricane Lisa, 27 families sought shelter at the Community Center. 70 homes were severely damaged and 30-40 lost their roofs. The main needs at the community center are medical supplies such as masks and hand sanitizer, food, potable water.
- Hattieville Community Health Center serving a population of 1,200 people:**
 The health center experienced no damages, is fully function and is providing services. There was no loss or damage of equipment or medication reported. The clinic has running water; however, electricity and telecommunication services have yet to be restored. The vaccines were taken to Belize city for proper storage since no generator is available on site. No hurricane or secondary casualties have been reported at the clinic. Current needs include blood pressure measuring devices for adults and pediatrics and a laryngoscope.

Annex 2 Photos of Assessment by PAHO-MoHW team 4 Nov. 2022:



4 Nov. 2022: Public education materials developed for a community affected by Hurricane Lisa, Hattieville, Rural Belize District.



4 Nov. 2022: Inspection of damaged homes in Hattieville, Rural Belize District



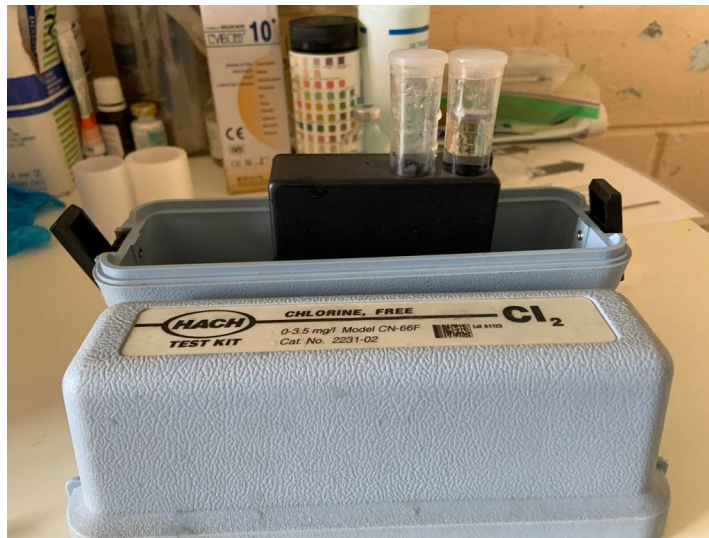
4 Nov. 2022: Meeting with Village Chairman and NEMO Staff at the Hattieville Community Center /hurricane shelter in Hattieville, Rural Belize District



4 Nov. 2022: Assessment of the Hattieville Health Center in Hattieville, Rural Belize District



4 Nov. 2022: Review of Hurricane First Aid Kit at Hattieville Health Center, in Hattieville, Rural Belize District



4 Nov. 2022: As part of WASH initiatives, Chlorine tests, reported levels of (0.2) concentration (Reference: (0.5-2.5)). Recommendations made to MoHW.

Annex 3: Medication List from MoHW (7 Nov. 2022)

Description	Units
Amlodipine 5mg Tabs	30,000
Amlodipine 10mg Tabs	30,000
Captopril 25mg tablets	36,000
Carbamazepine 200mg tablets	9,000
Diphenhydramine 50mg	36,000
EnalaprilL 5mg tablets	45,000
Ibuprofen 400mg tablets	60,000
Salbutamol inhaler	450
Ketotifen 1mg tablets	9,000
L_Thyroxine 0.1mg	6,000
Loperamide 2mg tablets	2,000
Losartan 100mg	15,000
Losartan 50mg	15,000
Metformin 500mg tablets	45,000
Metoclopramide 10mg tablets	12,000
Naproxen 500mg tablets	6,000
Omeprazole 20mg	12,000
Propranolol 40mg	3,000
Salbutamol 4mg tablets	6,000
Amoxil 500mg capsules	36,000
Azitromycin 500mg	15,000
Co-Trimoxazole 960mg	15,000
ADRENALINE 1mg/ml inj	300
<i>Penicillin G Procaïn 4MU</i>	150
<i>Phenytoin 250mg/5mls inj</i>	90
<i>Promethazine 25mg/ml inj</i>	90
PHYTOMENADIONE (Vit K) 10mg inj	180
Neomycin/Polymixin B/Hydrocortisone	450
Miconazole 2% topical cream	1,000
Neomycin& Bacitracin cream	1,000
Permetrin 1% shampoo	1,000
Amonium Chloride	50kg
Licorice	10 5L
ORS	1,000
Savlon	
hydrogen peroxide	

Annex 4: Supplies needed according to MoHW (7 Nov. 2022)

BP portable	120
Gauze	180 rolls
Pulse oximeter	60
Glucometer kit	60
syringe 3cc	6000
Drape sheet	6000
Glove 7	3000
Glove 7.5	3000
Glove 6	3000
Durapore tape 2"	650
storage bags	3000
toothbrushes	3000
toothpaste	3000

Annex 5: Status of UK and EU funded Smart Health Facilities post Hurricane Lisa

Donor	Name of Facility	Design Phase 1	Design Phase 2	Final Design	Retrofitting Stage	Handover of facility	Effects from Hurricane Lisa
FCDO/UK	San Ignacio Community Hospital	Completed	Completed	Completed	Completed	Completed	No effects from Hurricane Lisa
	Palm View Center	Completed	Completed	Completed	Completed	Completed	No effects from Hurricane Lisa
	San Antonio Polyclinic	Completed	Completed	Completed	Completed	Completed	No effects from Hurricane Lisa
	Cleopatra White Polyclinic	Completed	Completed	Completed	Completed	Completed	Loss of two solar panels
	Independence Polyclinic	Completed	Completed	Completed	Completed	Completed	No effects from Hurricane Lisa
	Matron Roberts Polyclinic	Completed	Completed	Completed		Will not be retrofitted under this project.	

Donor	Name of Facility	Design Phase 1	Design Phase 2	Final Design	Retrofitting Stage	Handover of facility	Effects from Hurricane Lisa
EU	Northern Regional Hospital	Completed	Completed	Completed	Not Started		No effects from Hurricane Lisa
	Western Region Hospital	Completed	Completed	Completed	Not Started		No effects from Hurricane Lisa
	Southern Regional Hospital	Completed	Completed	Completed	In Progress		No effects from Hurricane Lisa
	Corozal Community Hospital	Completed	Completed	Completed	In Progress		No effects from Hurricane Lisa
	Punta Gorda Community Hospital	Completed	Completed	Completed	In Progress		No effects from Hurricane Lisa
	Central Medical Laboratory	Completed	Completed	Completed	Not Started		No effects from Hurricane Lisa