

# HURRICANE DORIAN

Situation Report No. 11

11 September 2019 – 09:00 EDT

## HIGHLIGHTS

- Search and rescue efforts continue in Abaco and Grand Bahama
- The Ministry of Health reports shelters in Nassau are at full capacity and need staff for family medicine. According to the Caribbean Disaster Emergency Management Agency (CDEMA), nine shelters in New Providence have been activated with a total of 2,043 people reported in the facilities.
- The total number of people evacuated from Abaco and Grand Bahama is still being accounted for as many have found private means of transport. According to the National Emergency Management Agency (NEMA) approximately 4,800 registered people have been evacuated to New Providence. It is estimated 4,000 residents are still on Abaco. Search and Rescue missions continue on both islands
- A syndromic surveillance system is operational in hospitals and shelters. The Ministry of Health continues to strengthen epidemiological surveillance capacity.
- The water on Abaco has been deemed not safe for potable or domestic use by the Water and Sanitation Corporation.
- Environmental conditions continue to be an issue. Smells from animal carcasses and cadavers under the rubble in Abaco and Grand Bahama is a mounting concern. There is a significant risk of waterborne and vector-borne disease transmission due to the deteriorated sanitary conditions (i.e. floodwaters and potential sewage contamination) and the lack of access to safe water in the affected communities. Increase in mosquito and rodent vectors are expected in the medium term.



**Figure 1:** Damages in Treasure Cay/New Plymouth (Abaco) during an aerial reconnaissance flight



**Figure 2:** PAHO with collaboration from USAID and other colleagues are preparing to leave to affected islands of Abaco and Grand Bahama.

## AFFECTED

 **>76,000**  
People <sup>1</sup>

 **45-50**  
Deaths <sup>2,3</sup>

## DAMAGED

 **13,000**  
homes <sup>2</sup>

 **5**  
Health Facilities <sup>2</sup>

## SHELTERS

 **27**  
**>3,000** people total<sup>3</sup>  
Abaco: 449  
Grand Bahama: 346  
Nassau: 2,043 <sup>4</sup>

## DEPLOYED

 **14** PAHO staff

1. UN News September 5  
2. PAHO Bahamas Situation Report 12.  
3. ECHO Daily Flash Sept 11  
4. CDEMA Situation Report 11

## SITUATION OVERVIEW

Hurricane Dorian reached Category 5 intensity on September 1, 2019 when it made landfall in Elbow Cay, Abaco at 12:40 EDT peaking with sustained winds of 185 mph. At 23:00 EDT Dorian made landfall in Grand Bahama with the same intensity. However, the ridge of high-pressure steering Dorian westward collapsed on September 2, causing Dorian to stall over Grand Bahama for about over two days. The hurricane had devastating effects, especially on the islands of Grand Bahama and Abaco, as they had prolonged exposure to extreme hurricane force winds, storm surges, flooding and intense rainfall. New Providence has also experienced some impacts from the hurricane. This disaster is considered the largest humanitarian crisis in the country caused by a Hurricane with over \$7 billion estimated in property damages, including thousands of destroyed dwellings.

As of 11th September 2019, it is estimated that more than 76,000 persons are affected; over 449 persons are in shelters in Abaco, 346 in Grand Bahama, and 2,043 in New Providence. The ministry of health reports that most shelters are already at full capacity. The death toll has also increased to 50 (42 on Grand Abaco and 8 on Grand Bahama) according to the National Emergency Management Agency (NEMA) but mass casualty numbers are expected to rise significantly as more areas become accessible and search and rescue operations continue. An estimated total of 5,000 people have been evacuated from Abaco and Grand Bahama and many are still waiting to be evacuated at the major ports.

As a result of massive flooding and damages to the water and sanitation and health infrastructure, water safety, sanitation, and hygiene are primary concerns. Therefore, there is a significant risk of waterborne and vector-borne disease transmission due to the deteriorated sanitary conditions and the lack of access to safe water in the affected communities. Increase in mosquito and rodent vectors are expected in the medium term with reports already of increased mosquito breeding in Abaco and Grand Bahama. Mosquito-borne diseases such as dengue, and malaria, and the rodent borne leptospirosis are of particular concern. Food and water have arrived in Marsh Harbor Town (Abaco), but hygiene and surveillance (early warning system) are critical issues to address.

The capacity of the healthcare delivery system has been impacted by Hurricane Dorian in Abaco and Grand Bahama. Access to health services and medical care delivery capacity has been significantly hampered in the most affected areas. The operational status health facilities in both islands is being assessed. Information regarding status and damages reported might change daily as assessments are underway.

### BAHAMAS<sup>iii</sup>

#### Abaco island:

- Progress continues in restoring communication and electricity capacity on the island and cays. WiFi available at ports and the airport in Marsh Harbour and the main government building. Power has been restored in Walkers Cay and Grand Cay
- A field hospital has been set up in Coopers Town
- Daily syndromic surveillance remains difficult to establish because of phone connectivity issues
- Search and Rescue missions continue
- The water tank for Treasure Cay and Marsh Harbour has been reported by PAHO to be destroyed

#### Grand Bahama:

- Work is being performed to restore capacity to Freeport airport. The control tower is now operational with ongoing pavement evaluation. Other airports in Grand Bahama are open but not receiving commercial flights.
- A regular contact has been established with head of surveillance at Rand Memorial Hospital who will be responsible for reporting. The head of surveillance will make daily reports on clinics and shelters that are open in Grand Bahama. Two operational clinics (Eight Mile Clinic and Hawksbill Clinic) and three shelters (St. George's, Ascension, and Christ the King) have been identified for daily reporting.
- Search and Rescue missions continue

#### New Providence:

- 9 shelters have been activated in New Providence (3 more than reported on September 10) and are also at full capacity with currently 2,043 people. According to USAID, over 600 people from Abaco and cays arrived in Nassau on the 9<sup>th</sup> of September, in addition to the 4,800 that arrived September 6-8. Many evacuees from Abaco and Grand Bahama have sought shelter with family and friends on other islands.
- Government officials are discussing the possibility of providing free WiFi for shelters
- Daily reports of the regular weekly syndromic surveillance system following the established case definitions should be given to the Ministry of Health from:
  - All shelters in Grand Bahamas, New Providence, and Eleuthera
  - All operational healthcare facilities in Grand Bahama and Abaco
  - All EMTs working in the country
  - Clinics in New Providence and Eleuthera that treat evacuees from New Providence and Abaco

#### Eleuthera:

- About 500 Internal Displacement People (IDP) from Abaco and Grand Bahama have been evacuated to Eleuthera to date.
- Camp Symoneth Shelter in Hatchett Bay have been set up. Nurses have been identified in Hatchett Bay, South, and

Spanish Wells that will report daily syndromic surveillance information.

## NEEDS

Preliminary needs include safe water, food, sanitary and hygiene measures. As fatality numbers will increase, body bags have been requested by the Ministry of Health for Abaco. More information will be provided after a formal needs' assessment is performed on both islands. In the coming days and weeks, risk communication, health promotion, and mental and psychosocial support activities will also need to be planned and executed. Logistical support is also needed to take inventory of kits available through health partners before requesting additional supplies, and to quantify the amount of water needed in the affected areas in Abaco and Grand Bahama. Additionally, the Ministry of Health has requested the need for Diphtheria (Dt) vaccine and 500 Hepatitis A vaccines for health care providers deployed to Abaco and Grand Bahama.

WASH supplies, shelter supplies, non-perishable food items, and first aid items are needed. Medical supplies and equipment need to be restocked at the affected hospitals. Additionally, with a constant increase in fatality counts as bodies are being found, the Ministry of Health has requested a need for a forensic pathologist for identification of bodies. Additional storage is also likely to be needed.

According to the United States Agency for International Development (USAID), 40% of the 500 residents of Grand cay (Abaco) have already evacuated (pre and post hurricane). The remaining 300 are expected to need medical support.

According to CDEMA, there is an increased risk of environmental concerns as smell of dead animal carcasses and cadavers under the rubble is heavily present on Abaco and Grand Bahama. As such, debris clearance remains a priority with a need for adequate heavy equipment on the islands.

**Shelters:** With an increasing number of people arriving in various shelters, many of which are already at capacity in Nassau, food safety, WASH, and general hygiene measures need to be strengthened. While syndromic surveillance systems are in place, health staff and medical supplies are still needed at the shelters. Ensuring access to health clinics and pharmacies from shelters, and characterization of the evacuee destinations is also needed so that health care services can be planned and monitored for ongoing surveillance.

**Hospitals:** A preliminary assessment of the 3 severely impacted health facilities: Marsh Harbour Clinic (Abaco); Rand Memorial Hospital (Grand Bahama); Cooper's Town (Abaco) is underway. Assessment of other clinics on the impacted islands whose status are unknown is also needed. Rand Memorial Hospital, is partially operational, having suffered severe loss of equipment and supplies and requiring major cleaning following flooding. While the hospital clean-up has started, more in depth cleaning is needed to remove contamination. Marsh Harbour (Abaco) is partially operational. Infrastructure assessments so far indicate that the clinic is in good condition and the infrastructure is intact. Medicines and medical supplies need to be restocked and general cleaning and sanitation is required. For more detailed information, on current assessments reported by PAHO, refer to the report of health facilities section in this report.

The Ministry of Health have identified Cooper's Town Clinic (Abaco) to be of high priority to restore health services to Northern Abaco, it is currently operating on a generator and there is no water available. More information is needed regarding the types of admissions at the hospitals and those that have been MEDEVAc'd including characterization of the injuries. Direct relief reports many lesions and fungal infections.

**Health care workers:** As most of the population on Abaco and Grand Bahama affected, including health care workers, there is an anticipated shortage of health personnel. Currently there is a rotation system with health care workers from New Providence providing support to the affected clinics in Abaco and Grand Bahama, however it is imperative to continue to support the health sector's response and care delivery capacity and facilitate rotation of health workers. These include surgeons, anaesthesiologists, pathologists, midwives, family physicians, psychiatrists, emergency and public health nurses. Additionally, providing adequate accommodation for medical personnel in the affected area is needed. Mental health and psychosocial support are also urgently needed to assist victims to deal with the consequences of the disaster.

## PRIORITY CONCERNS

- Restoring access to essential health services and continued medical care delivery
- Ensuring water quality in affected communities and in health facilities to restore access to safe water
- Mass casualty management including identification and storage of dead bodies.
- Restoring proper hygiene and sanitation and adequate waste management and vector control in affected communities and health facilities
- Ensuring quality donations and management of incoming supplies and donations as many are arriving directly to Freeport and Abaco.
- Increasing epidemiological surveillance to support early detection and timely management of disease outbreaks

## RESPONSE ACTIONS

The Pan American Health Organization (PAHO) has pledged health sector infrastructure and public health support. PAHO is acting quickly with the support of the Ministry of Health to assess needs and damage assessments. A \$3.5 million donor appeal was issued on September 8<sup>th</sup> as a preliminary estimate to cover short-term healthcare, water and sanitation, epidemiological surveillance and vector needs in the most affected islands for the next 6 months.

An Incident Management System has been established in the country office. The PAHO's Disaster Response Team include 14 staff pre and post-deployment:

- Logistics (PHE Barbados)
- Infrastructure assessment (PHE Barbados)
- WASH (CPC Barbados)
- LLS/SUMA (PHE Barbados)
- EMT coordinator (PHE WDC)
- Civil and military coordination (PHE Barbados)
- Information management (PHE Barbados)
- Epidemiological surveillance (2 X PHE WDC)
- Communications and media (2X PHE WDC)
- Incident Manager (PHE Belize)
- Coordination (PHE Barbados)
- Health Services (HSS WDC)

**Coordination:** UN coordination system is on the ground and the Ministry of Health and PAHO are co-leading the Health Cluster. According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), there are over 200 humanitarian actors in the Bahamas, with operations focused on central and north Abaco, and Freeport, Grand Bahama.

A health partners meeting to discuss collaboration and specific needs and gaps for the short, medium and long term was hosted at the Ministry of Health with PAHO support. The Ministry of Health, PAHO, Public Health Authority, and the Dutch army met regarding the deployment of Dutch Naval assets to assist in emergency repair of health facilities, transportation and water desalination. The ship is expected to arrive to the Bahamas on the 11th of September. PAHO continues to support the deployment of international medical corps and EMTs.

**Logistics:** A Logistics Support System (LSS) has been set up by PAHO and operating at Odyssey Aviation, Nassau for incoming supplies. In collaboration with WFP and NEMA, PAHO will aid in streamlining the clearance and movement of incoming health and humanitarian relief for safe and fast distribution to the affected areas.

PAHO, through the UNHRD warehouse in Panama, has sent its first shipment of supplies to Nassau, including Aquatabs, Trauma Kits A+B, water bladders, and body bags. An additional shipment of the same supplies is being mobilized. PAHO's Revolving Fund has been informed and is taking action regarding the diphtheria and hepatitis A vaccines.

**WASH** and health infrastructure assessments continue to be carried out. A post-disaster assessment by the UN Economic Commission for Latin America and the Caribbean (ECLAC) will begin on the 22<sup>nd</sup> of September.

**Risk Communication:** PAHO is collaborating with the Ministry of Health to disseminate key messages on vector and water borne diseases

**Surveillance:** Daily syndromic and event-based surveillance have been established at shelters and hospitals. PAHO epidemiologist continue conducting field visits to assess risk of disease transmission and investigate rumors or signals.

**EMTs:** A Medical Information and Coordination Cell (CICOM) has been set up within the Ministry of Health to coordinate the clinical care response to Hurricane Dorian. PAHO has deployed an EMT coordinator to join the CICOM in Nassau, and PAHO's EMT secretariat is supporting CICOM in verifying the registered EMTs and coordination with the health logisticians to support incoming teams and in-country transportation. The table below shows the operational status of the EMT teams.

**Current status on EMTs:**

EMTs	Operation Status	Location
Samaritan's Purse	Deployed	Grand Bahama near Rand Hospital
Team Rubicon	Deployed	Mobile teams based in Little Harbour and mobile deployed to serve Southern parts of Abaco
Heart to Heart International	Deployed	Treasure Cay and Marsh Harbour
International Medical Corp	Deployed	Grand Bahama; working closely with RAND Hospital
Humanity First	Deployed	Coopers Town and Fox Town Clinic
New York City Medics	Deployed	Location will be North, Central and South Eleuthera

**REPORTS ON HEALTH CARE FACILITIES** \*indicate update information as of September 10<sup>th</sup>, 2019. <sup>ii</sup>:

District	Service	Operational status	Status Update	Needs
Grand Bahama	Rand Memorial Hospital*	Partially operational	<ul style="list-style-type: none"> <li>Generator is functioning</li> <li>Grand Bahama Port Authority Technical Division will reconnect hospital to the city electrical grid once available</li> <li>Emergency room services are functional</li> </ul>	<ul style="list-style-type: none"> <li>A further in depth assessment of physical infrastructure, light and water needed and well as need to replacing and repairing equipment</li> </ul>
	Eight Mile Rock*	Operational	<ul style="list-style-type: none"> <li>Generator is working</li> <li>Facility is fully staffed</li> </ul>	Internal infrastructure repairs needed as a result of flooding
	High Rock	Destroyed	<ul style="list-style-type: none"> <li>Reports indicate that the clinic has been completely destroyed</li> </ul>	New facility needed
	Free Town	Unknown	<ul style="list-style-type: none"> <li>Assessment is still pending</li> </ul>	
	McLean	Unknown	<ul style="list-style-type: none"> <li>Assessment is still pending</li> </ul>	
	Pelican	Unknown	<ul style="list-style-type: none"> <li>Assessment is still pending</li> </ul>	
	Freeport Community Clinic*	Operational	<ul style="list-style-type: none"> <li>Water damage</li> <li>patients with special needs have be transferred to private and public health care facilities</li> </ul>	Internal repairs needed as a result of flooding
	East Sunrise Clinic (Private)	Operational	<ul style="list-style-type: none"> <li>Identified for surgical services</li> <li>Main maternity clinic in Grand Bahama</li> </ul>	
	Hawksbill Clinic	Operational	<ul style="list-style-type: none"> <li>Structure intact</li> <li>Generator restored</li> </ul>	Internal repairs needed as a result of flooding
	Pearce Plaza Specialty Clinic*	Operational	<ul style="list-style-type: none"> <li>Structure is fully intact</li> <li>Moderate water damage</li> <li>Is used as an outpatient clinic</li> </ul>	General and medical cleaning; Internal repairs needed as a result of flooding
	West End Clinic	Operational	<ul style="list-style-type: none"> <li>The physical structure is intact</li> <li>Water and electricity working.</li> </ul>	Repair to the residences for the nurse and physician
	Okyanos (Private)	Operational	<ul style="list-style-type: none"> <li>Water and power needed. Once restored can offer relief medical services to the surrounding area.</li> </ul>	
	Sweeting's Cay	Unknown	<ul style="list-style-type: none"> <li>No information available</li> </ul>	

	Grand Cay	Unknown	<ul style="list-style-type: none"> <li>No information available</li> </ul>	
District	Service	Operational status	Status Update	Needs
Abaco	Marsh Harbour Clinic*	Operational	<ul style="list-style-type: none"> <li>Unknown leaking</li> <li>All external lighting down</li> <li>Treatment plant destroyed</li> <li>Pump failed – 1 functioning for potable water system</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of medical equipment</li> <li>Medicine and medical supplies need to be replenished (antibiotics and tetanus vaccines)</li> <li>General Cleaning and Sanitization required</li> </ul>
	Cooper's Town Clinic*	Operational	<ul style="list-style-type: none"> <li>MoH reported structural damage to the roof.</li> <li>Operating on generator power</li> <li>No water available</li> <li>Power disruption, generator in place with 5 days worth of fuel</li> </ul>	
	Fox Town Clinic	Operational	<ul style="list-style-type: none"> <li>PAHO preliminary assessment states that the structure is standing</li> <li>There is drinking water, medical supplies and a generator.</li> </ul>	Food Supplies to clinic
	Green Turtle Cay Clinic	Unknown	<ul style="list-style-type: none"> <li>No report</li> </ul>	
	Hope Town Clinic*	Non-operational	<ul style="list-style-type: none"> <li>Reports of major damage to clinic</li> <li>Power disruption</li> </ul>	Assessment needed
	Man o war Cay Clinic*	Unknown	<ul style="list-style-type: none"> <li>Some damage reported</li> <li>Power disruption</li> </ul>	
	Moore's Island Clinic*	Unknown	<ul style="list-style-type: none"> <li>No major damage reported. The structure is intact</li> </ul>	Require food and water Health Staff on rotation is needed
	Sandy Point Clinic*	Operational	<ul style="list-style-type: none"> <li>Power disruption, no generator</li> </ul>	Health Staff on rotation need
	Treasure Cay Clinic (Private)	Unknown	<ul style="list-style-type: none"> <li>Population is small due to evacuations</li> </ul>	Supplies needed
	Crossing Rock Clinic	N/A	<ul style="list-style-type: none"> <li>Was damaged in a previous hurricane</li> </ul>	
Spring City (Satellite Clinic)	Unknown	<ul style="list-style-type: none"> <li></li> </ul>		

<sup>i</sup> CDEMA Situation Report 11

<sup>ii</sup> PAHO Country Office Situation Report 12