

THE BAHAMAS POST HURRICANE DORIAN RECONSTRUCTION



Health

MINISTRY OF HEALTH

1. Background

The Bahamas is an archipelago of 13,940 km² consisting of 700 islands and 2,400 cays of which around 30 are inhabited. The population of The Bahamas is estimated at just over 400,000 of which the largest population outside of New Providence, prior to Dorian, were resident on Grand Bahama Island (15%) and second largest in the Abacos (5%). These islands are also the second and third economic centers for The Bahamas.

The health care system of The Bahamas is a network of public and private facilities. Public sector health care services is accessible on all major islands through a tier of main and satellite clinics. On the island of Grand Bahama, the Rand Memorial Hospital provides limited tertiary care services and is also a regional hub for public sector clinic referrals on that island as well as referrals from other northern islands and cays. On Abaco, the Marsh Harbor Health Center provides advanced primary care, secondary and urgent care with the potential to provide limited tertiary care services with infrastructural and equipment augmentation. This facility is the hub for public sector health care services delivery for Abaco and the surrounding Cays. The Princess Margaret Hospital, on the island of New Providence, is the public sector tertiary level referral hospital and, as such, it is the central Hub for public sector referrals from all islands inclusive of Abaco and Grand Bahama.

The passage of Hurricane Dorian through The Bahamas on September 1-3, 2019, resulted in significant infrastructural damages on both Grand Bahama and the Abaco. Public sector health care services delivery was altered on these islands and by extension, New Providence. Deficiencies in the public sector healthcare system infrastructure and services on islands directly impacted as well as New Providence were realized. The population shift from both islands into New Providence, with an already challenged health service at the community clinics and Princess Margret Hospital, has been impacted by events surrounding Dorian.

Regarding the health facilities which sustained direct impact from Dorian, in Abaco:

- i. The Hope Town Clinic on Elbow Cay will need replacement
- ii. Coopers Town Clinic in North Abaco sustained infrastructural damages requiring repair.

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Notably however, with population shift from Marsh Harbour City, into other settlements and Cays of the Abacos, there is a resulting need for enhanced services at that peripheral health care facilities to meet needs of the increased numbers and varying health conditions now residing further distances away from the Marsh Harbour Health Centre.

To provide the highest level of quality health care services to remaining and returning residents, it is essential that the Cooper's Town Clinic be repaired and repurposed as an advanced primary care facility with the provision of required imaging and diagnostics. The Sandy Point Clinic in South Abaco, while sustaining no direct infrastructural damages from Dorian, will require repurposing mirroring that of the Cooper's Town Clinic given the major population shift to this settlement. Moores Island, Man O War Cay, Fox Town and Green Turtle Cay clinics all require service augmentation with required infrastructural changes as needed while Guana Cay is now in need of a new clinic.

Specifically, in Grand Bahama, the physical infrastructure was either lost entirely or comprised due to the intrusion of standing black water. The High Rock facility was completely demolished and 75% of the Rand Memorial Hospital became unusable thereby compromising the delivery of healthcare services to the residents of the northern Bahamas. Patients and services were directed to other healthcare facilities in Grand Bahama and New Providence. In the interim, the Government has benefited from the assistance of international partners that are providing care in mobile facilities. This arrangement is governed by a number of Memoranda of Understanding between the Ministry of Health, the Public Hospitals Authority and Non-governmental Organizations.

PROJECT 1: Rebuild A Better and Stronger Rand Memorial Hospital in Grand Bahama

Amount: \$ 120M

Based on previous facility assessments, the following contributing factors indicate that there is a critical need for a new facility and investments should **NOT** be channeled to attempt repairing the entire facility:

- i. The existing topography is susceptible to future flooding, resulting in an inevitable repeat of service and staff disruption;
- ii. The age of the structure (~50 years) guarantees high maintenance costs with limited opportunity for developing a smart, climate resilient facility;
- iii. Ten years of expansion and modification has resulted in a mix of various HVAC and air conditioning systems delivering varying levels of performance and reliability;
- iv. Electrical components (i.e. transformers, switchgear, UPS) and plumbing that have experienced storm-related damage;
- v. 75% of the ductwork throughout the facility is fiber glass, which **CANNOT** be cleaned of mold;
- vi. The existing campus cannot accommodate all inpatient and outpatient services; necessitating perpetual maintenance of annual rental contracts

PROJECT 2: New Hospital for New Providence

Amount: \$500M

As the major tertiary facility for the nation, the Princess Margaret Hospital has received the brunt of the patient load as a result of this catastrophic event. This aging facility has long outgrown its clinical spaces and

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the ability to safely provide the level of service required to meet the healthcare needs of the nation. To this end, designed / redevelopment plans dating back to 1985 have supported this need. Understandably, after the passage of Hurricane Dorian, the population shift from the affected islands to New Providence exacerbated the existing situation with respect to critical bed shortages and the need to expand clinical spaces. Inpatient wards are over-crowded, particularly maternity, male surgical and children's wards; shortages in critical services areas (i.e. Dialysis, ICU); and notable challenges within the Emergency Department include further overcrowding with accompanying long wait times, constrained workspaces, and poor patient/work flows.

PROJECT 3: Construction and Repurpose of Clinics

Amount: \$50M

Abaco & Cays

The vision for the public health care services in Abaco is to deliver the highest level of care to all residents utilizing a network of seven clinics, with March Harbour as the hub, providing 24 hour primary, secondary and tertiary care services. Additionally, there is a move toward regionalization of health care facilities, with Marsh Harbour as parent clinic for Hope Town; Man O War Cay; and Guana Cay in central Abaco.

Sandy Point Clinic in South Abaco is to serve as the parent facility for the Moore's Island Clinic while Coopers Town Clinic will provide same for the Fox Town and Green Turtle Clinics while also servicing Treasure Cay community.

This vision has not been fully realized in part due resource constraints relative to infrastructure and equipment. While recognizing the opportunity for redesign, repurposing and enhancement to improve resilience, the focus cannot be singularly on reconstruction but must also geared toward achievement of the medium and long term vision for health care services across the Commonwealth of The Bahamas.

Ongoing challenges such as inter island/cay connectivity via information technology and well as air, land and sea transport deficits, are all critical items for creating a resilient health care system in an archipelagic small island developing state, such as The Bahamas must be addressed. Constructing resilient facilities is recognized by the Ministry as an area of specialty and it is anticipated that assistance would be needed to ensure consideration is given to disaster risk reduction by rebuilding climate smart facilities taking into consideration ongoing and evolving environmental factors.

The following outline key areas are required to restore and optimize health care services in Abaco with associated cost estimates:

- i. Ensure climate resilient accommodations for staff returning
- ii. Adequate transport to facilitate clinical and public health*
- iii. Consultancy to Determine Specific Resiliency Requirements for health facilities
- iv. Develop a master plan for ensuring optimal climate resilient health facilities
- v. Repairing Existing Public Health Physical Infrastructure Resiliently
- vi. Implementing Non-Technological Resilient Measures
- vii. Constructing New Public Health Physical Infrastructure
- viii. Resilient Technology & Equipment

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TOTAL BUDGET of Three (3) Components \$670M

*This cost excludes air and sea transportation which is needed and essential for delivery of health care services in The Bahamas