HOSPITAL RECOVERY FOLLOWING HURRICANE MARIA

This survey asks questions about the following hospital: [Displays hospital name and address of record]

O1. Is your hospital location today the same as it was at the time of Hurricane Maria?

○ Yes
○ No (the hospital has moved to a new location after Hurricane Maria)

O2. Were you employed at this hospital prior to Hurricane Maria?

○ Yes
○ No

O3. Are you knowledgeable about Hurricane Maria's physical and non-physical impacts on this hospital, such as those to services, resources, and infrastructure?

○ Yes, I know or can readily obtain this information
○ Somewhat, but there is another individual at this institution who is better suited to provide the information on these topics
○ No

O4. Can you provide us with the name and contact information for someone who meets these criteria?

○ No, I do not know anyone who could provide this type of information for this hospital.
○ Yes, please contact the following individual:

Name

Phone number

Email address

Section A: Information from Respondents

Section A: Information from Respondents
The first set of questions asks about your position and experience, as well as some basic information about your hospital.

A1. What best describes your current position in this hospital? [please list your job title or a brief description of your job]

A2. How long have you worked for or with this hospital? *(years)*

A3. How long have you worked in this position for any healthcare organization? *(years)*
[includes current hospital and any past experience in the same position]

A4. In 2017 (before Hurricane Maria), what was your hospital's ownership structure?

○ Public
○ Public/Private
○ Private - Single owner
○ Private - Partnership (multiple owners)
○ Private - Corporation or Franchise
○ Private - Non profit
○ Other (please specify):

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A5. Has your hospital's ownership structure changed since Hurricane Maria?

○ [   ] Yes (please specify current ownership structure):

○ No

A6. Which of the following has <u>most negatively impacted</u> your hospital's ability to provide services?
Interviewer: read list, select one response

○ Economic recession or Economic downturn of 2008
○ Hurricane Irma
○ Hurricane Maria
○ Earthquakes in 2019/2020
○ COVID-19

A7. How would you characterize your hospital's recovery from Hurricane Maria on a scale from 0 to 5, where 0=not at all recovered and 5=fully recovered?

0 = not at all recovered	1	2	3	4	5 = fully recovered
○	○	○	○	○	○

Section B: Changes in Resources and Service

In this survey, we will ask about different time periods. We are interested in the general situation for your hospital, to the best of your recollection, at the following times:

- **Before Hurricane Maria**, which is referred to as 2017;
- Approximately **1 year after Hurricane Maria**, which is referred to as 2019;
- And approximately **2 years after Hurricane Maria** and before COVID-19, which is referred to as 2020.

Section B: Changes in Resources and Service

The next set of questions is about your hospital's resources in 2017, before Hurricane Maria and in January 2020, before COVID-19. Please provide your best estimate and answer to the best of your knowledge.

B1. What was your hospital's annual operating budget? (Report to the nearest thousand USD$)
Interviewer: read each statement and then record response in the units specified.

a. In 2017 (before Hurricane Maria)?	$ 0
b. In 2020 (before COVID-19)?	$ 0
Total	$ 0

B2. How many staffed beds did your hospital have? (Report to the nearest whole number#)
Interviewer: read each statement and then record response in the units specified.

a. In 2017 (before Hurricane Maria)?	# 0
b. In 2020 (before COVID-19)?	# 0
Total	# 0

B3. What was your hospital's average occupancy rate? (Report to the nearest percent %)
Interviewer: read each statement and then record response in the units specified.

a. In 2017 (before Hurricane Maria)?	0 %
b. In 2020 (before COVID-19)?	0 %
Total	0 %

B4. How many hospital-wide staff meetings were held each month, on average?
Interviewer: read each statement and then record response in the units specified.

	<1	1-3	4-6	7 or more
a. In 2017 (before Hurricane Maria)?	○	○	○	○
b. In 2020 (before COVID-19)?	○	○	○	○

B5. Before Hurricane Maria (in 2017), what percent of your hospital's purchased supplies in the following categories came from outside of the Commonwealth?
Interviewer: then ask
How about before COVID-19 (in 2020), what percent of your purchased supplies in the following categories came from outside of the Commonwealth?
Interviewer: Repeat for each Supply type.
(Please provide your best estimate and answer to the best of your knowledge)

	2017 (Before Hurricane Maria)	2020 (Before COVID-19)
a. Food	_____ %	_____ %
b. Computers/Tablets	_____ %	_____ %
c. Cleaning products	_____ %	_____ %
d. Pharmaceuticals/Medicines	_____ %	_____ %
e. Treatment supplies (e.g., dressings, splints, IV bags)	_____ %	_____ %

Now we will focus on any changes in the services provided by your hospital.

B6. Before Hurricane Maria (in 2017), did your hospital provide any of the following services? (Select all that apply)
Interviewer: Repeat for each service type

2017 (Before Hurricane Maria)

	Yes	No	Don't know
Clinical Services			
Emergency Services	☐	☐	☐
Out-Patient Clinic Services	☐	☐	☐
Surgical Services	☐	☐	☐
Obstetrics/Delivery Services	☐	☐	☐
Physical Therapy/Rehabilitation Services	☐	☐	☐
Non-ICU Floor Services	☐	☐	☐
ICU Services	☐	☐	☐
Cardiac monitored/Non-ICU Services	☐	☐	☐
Intensive Care Unit Beds	☐	☐	☐

2017 (Before Hurricane Maria)

	Yes	No	Don't know
Transportation Services			
Ground ambulance	☐	☐	☐
Air medevac	☐	☐	☐
Support Services			
Kitchen and Cooking Services	☐	☐	☐
Housekeeping/Cleaning Services	☐	☐	☐
Laundry Services	☐	☐	☐
Medical Records Services	☐	☐	☐
Hospital Administration Services	☐	☐	☐
Laboratory Testing Services	☐	☐	☐
Radiology Services	☐	☐	☐
Pharmacy Services	☐	☐	☐
Blood Bank Services	☐	☐	☐
Chaplain Services	☐	☐	☐
Community Services			
Birthing/Parenting Training	☐	☐	☐
First aid/CPR Training	☐	☐	☐
Fitness Classes	☐	☐	☐
Food Pantry/Food Bank	☐	☐	☐
AA/Al-Anon Meetings	☐	☐	☐

For the following questions, please consider all services that fall under the relevant category and compare to your hospital's services before Hurricane Maria, in the year 2017.

B7. About what percentage of <u>clinical services</u> was restored:
Interviewer: Record from zero to 100%. Read each statement and then record response.

a. By 2019, approximately 1 year after Hurricane Maria? `0` %

b. In 2020, before COVID 19? `0` %

Total `0` %

Clinical Services refers to: Emergency Services, Out-Patient Clinic Services, Surgical Services, Obstetrics/Delivery Services, Physical Therapy/Rehabilitation Services, Non-ICU Floor Services, ICU Services, Cardiac monitored/Non-ICU Services, and Intensive Care Unit Beds

B8. About what percentage of <u>transportation services</u> was restored:
Interviewer: Record from zero to 100%. Read each statement and then record response.

a. By 2019, approximately 1 year after Hurricane Maria? `0` %

b. In 2020, before COVID 19? `0` %

Total `0` %

Transportation Services refers to: Ground ambulance, Air medevac

B9. About what percentage of <u>support services</u> was restored:
Interviewer: Record from zero to 100%. Read each statement and then record response.

a. By 2019, approximately 1 year after Hurricane Maria? `0` %

b. In 2020, before COVID 19? `0` %

Total `0` %

Support Services refers to: Kitchen and Cooking Services, Housekeeping/Cleaning Services, Laundry Services, Medical Records Services, Hospital Administration Services, Laboratory Testing Services, Radiology Services, Pharmacy Services, Blood Bank Services, Chaplain Services

B10. About what percentage of <u>community services</u> was restored:
Interviewer: Record from zero to 100%. Read each statement and then record response.

a. By 2019, approximately 1 year after Hurricane Maria? `0` %

b. In 2020, before COVID 19? `0` %

Total `0` %

Community Services refers to: Birthing/Parenting Training, First aid/CPR Training, Fitness Classes, Food Pantry/Food Bank, AA/Al-Anon Meetings

B11. What is your best estimate of the number of physicians <u>working</u> within your hospital on an average day? (This is intended to be different from the total number of physicians that have privileges at your hospital.)

> [   ]

Section C: Physical Impacts & Repair

<u>**Section C: Physical Impacts & Repair**</u>
The next set of questions focuses on physical damage and repairs associated with your hospital campus. If you are unsure of any responses, please just answer to the best of your ability.

C1. Did your hospital campus suffer any physical damage due to Hurricane Maria?

◯ Yes
◯ No
◯ Don't know

C1a. Is your hospital campus made up of more than one building?

◯ Yes
◯ No
◯ Don't know

C1b. Please identify the building where most of the services of your hospital are performed. (This is likely the building with the most beds.)

> [   ]

Please answer the following questions for ${q://QID346/ChoiceTextEntryValue}, the building you have identified above.

If you are unsure of any responses, please just answer to the best of your ability.

C2. How would you characterize the:
Interviewer: Read list of responses. Repeat list of responses as needed.

	None	Minor	Moderate	Severe	Complete Loss
a. Building damage?	○	○	○	○	○
b. Contents/inventory damage?	○	○	○	○	○
c. Machinery/equipment damage?	○	○	○	○	○

C3. About what percent area of all the _roof cover_ was damaged or lost as a result of Hurricane Maria?

Interviewer if needed: *The roof covering is the exterior part of the roof system that protects the building from the weather. Common types of roof cover include asphalt shingles, clay tiles, rubber membranes, and built-up asphalt roofs.*

○ No roof cover damage
○ Less than 25 %
○ 25-50 %
○ 51-75 %
○ 76-100 %
○ Don't know

C4. About what percent area of all the _roof structures and/or decking_ was damaged or lost as a result of Hurricane Maria?

Interviewer if needed: *The roof decking and/or roof structure is the intermediate section of the roof between the internal structural components and the weatherproofing layers. Roof decking and/or structures include roof beams, joists, or girders, the roof structural members that support the decking, also precast planks or single or double T for concrete roofs.*

○ No roof structure and/or decking damage
○ Less than 25 %
○ 25-50 %
○ 51-75 %
○ 76-100 %
○ Don't know

C5. About how many of the _windows and doors_ were damaged by Hurricane Maria?
Interviewer: Read list

○ None
○ A few
○ Several
○ Most or all of them
○ Don't know

C6. How many _exterior walls_ were damaged by Hurricane Maria?

Interviewer: Read list

Interviewer if needed: *Damage to the exterior walls of the building can range from very little or no visible damage, minor damages like marks or dents that need paint or patching for repair, partial failure of one wall, failure of one wall, to the failure of more than one wall.*

○ None
○ A few
○ Several
○ Most or all of them
○ Don't know

C6a. How would you describe the damage to the exterior walls caused by Hurricane Maria?

Interviewer: Read list

○ None
○ Minor
○ Moderate
○ Severe
○ Complete
○ Don't know

C7. How would you describe the damage to the interior finishes (ceilings, paint, tile, carpet, etc.) and contents (furniture, equipment, etc.) caused by Hurricane Maria?

Interviewer: Read list

Interviewer if needed: *Interior finish includes things like floors, walls, ceilings, tiles, marble, plastic, wood, and paint, whereas contents refers to the furniture, appliances/equipment and things inside of the building.*

○ None
○ Minor
○ Moderate
○ Severe
○ Complete
○ Don't know

C8. How would you describe the extent to which water entered the building during Hurricane Maria, in terms of building space, with 0% meaning no water intrusion and 100% meaning water intruded inside the whole building?

Interviewer if needed: *Water intrusion is the unwelcome and uncontrolled movement of water into a building. Water intrusion can originate from rain and floods.*

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☐ Don't know

C9. Did flooding from rising water occur at the building site? For example, within a parking lot or a walkway leading to the facility.
Interviewer if needed: *Flooding from rising water can involve the overflow of inland or tidal waters, the unusual and rapid accumulation of runoff surface waters from any source, or mudslides.*

○ Yes
○ No
○ Don't know

C9a. Did flood water enter the building?

○ Yes
○ No
○ Don't know

C9b. About what was the maximum water height inside the building? (Please provide your best estimate in meters.)

☐
[   ]

☐ Don't know

C10. Was equipment mounted on the roof damaged or dislodged by the hurricane?
Interviewer if needed: *Roof-mounted equipment includes air conditioners, compressors, conduits, condensers, pipes, vents, ducts, etc.*

○ Yes
○ No
○ Don't know

C11. Was the damage to this building similar to the damage to the other buildings on your hospital campus?

○ Yes
○ No
○ Don't know

C11a. How would you describe the damage to the other buildings?

○ Much higher
○ Higher
○ Lower
○ Much lower

C12. When thinking about your entire hospital campus, did the damage cause your hospital to close completely?

○ Yes
○ No
○ Don't know

C12a. How long did it take for your hospital to reopen at any level of service? (days)

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C12b. Did the damage directly inhibit your hospital's ability to provide **any** services following the hazard event?

○ Yes
○ No
○ Don't know

The next set of questions asks about the impact of Hurricane Maria on utilities and the back up or emergency reserves. Please answer to the best of your knowledge. If your hospital does not use a particular utility, please indicate "Not Applicable".

Utilities

○ electric power
○ water/sewer
○ oxygen
○ internet/IT
○ land-line telephone

Section C: Physical Impacts & Repair Q13-16

C13. Did your hospital lose *${lm://Field/1}*?

○ Yes
○ No
○ Don't know
○ Not applicable

C14. About how many days until *${lm://Field/1}* was fully repaired? (days)

C15. Did your hospital have backup systems or emergency reserves for *${lm://Field/1}*?

○ Yes
○ No
○ Don't know
○ Not applicable

C16. Did your hospital use backup systems or emergency reserves for *${lm://Field/1}*?

○ Yes
○ No
○ Don't know
○ Back-up system damaged by HM
○ Not applicable

Section C: Physical Impacts & Repair Q17-Q21

C17. Did utility issues following Hurricane Maria directly inhibit your hospital's ability to provide any services in 2019 (the year after Hurricane Maria)?

○ Yes
○ No
○ Don't know

C18. Did ground transportation issues (i.e. road/bridge closures) following Hurricane Maria directly inhibit your hospital's ability to provide any services in 2019 (the year after Hurricane Maria)?

○ Yes
○ No
○ Don't know

C19. Did air transportation issues (i.e. air traffic control, damage to landing pad) following Hurricane Maria directly inhibit your hospital's ability to provide any services in 2019 (the year after Hurricane Maria)?

○ Yes
○ No
○ Don't know

C20. What temporary measures were put into place to get your hospital back to a functional state? Interviewer, READ LIST, select all that apply.

☐ Tents, trailers, or other temporary structures
☐ Prepackaged food (MREs)
☐ Delivery of water
☐ Generators
☐ Other (please describe):

[text box]

C21. About what percentage of the repairs to your hospital campus were completed ...
Interviewer: Read each statement and record response.

a. In 2019 (approximately 1 year after Hurricane Maria)?   `0` %

b. In 2020 (before COVID 19)?   `0` %

Total   `0` %

Section D: Non-physical Impacts

<u>**Section D: Non-physical Impacts**</u>
The following set of questions focus on non-physical impacts. The first questions ask about impacts within the first year after Hurricane Maria. If you are unsure of any responses, please just answer to the best of your ability.

D1. To what extent were the following a problem within the first year after Hurricane Maria?
Interviewer: Read List, ask

Would you say this was?

	Not a problem	Minor problem	Moderate problem	Major problem	Don't know
a. Employees had trouble reporting to work due to transportation problems?	○	○	○	○	○
b. Employees had trouble reporting to work due to housing problems?	○	○	○	○	○
c. Employees had trouble reporting to work because their children were not yet back to school?	○	○	○	○	○

	Not a problem	Minor problem	Moderate problem	Major problem	Don't know
d. Employees had trouble reporting to work because their children were not yet back to daycare/childcare?	○	○	○	○	○
e. Employees had trouble reporting to work because of disaster-related physical health issues?	○	○	○	○	○
f. Employees had trouble reporting to work because of disaster-related mental health issues?	○	○	○	○	○

D2. Within the first year after Hurricane Maria...

[Interviewer: Repeat lead-in for 2b through 2d if needed]

	Yes	No	Don't know
a. did your hospital transfer any patients *to* other hospitals as a result of the hurricane?	○	○	○
b. did the utility loss result in the need to transfer patients to other hospitals?	○	○	○
c. did your hospital accept any patient transfers **from other hospitals** as a result of the hurricane?	○	○	○
d. did your hospital accept any patients transferred *from* other facilities such as nursing homes as a result of the hurricane?	○	○	○

The next set of questions will reference impacts in the first 2 weeks after Hurricane Maria, or the second half of September 2017.

D3. Within the first two weeks after Hurricane Maria, were there any DEATHS at this facility **directly** related to the hurricane?

○ Yes
○ No
○ Don't know

D3a. Were these deaths from injuries caused by damage to the building (falling ceiling, broken glass, etc.)?

○ Yes

○ No
○ Don't know

D3b. Were these deaths from flooding (drowning)?

○ Yes
○ No
○ Don't know

D3c. Were these deaths because conditions worsened by loss of power, water or other limitations?

○ Yes
○ No
○ Don't know

D4. Within the first two weeks after Hurricane Maria, were there any INJURIES at this facility **directly** related to the hurricane?

○ Yes
○ No
○ Don't know

D4a. Were these injuries from injuries caused by damage to the building (falling ceiling, broken glass, etc.)?

○ Yes
○ No
○ Don't know

D4b. Were these injuries because of clean-up or recovery activities?

○ Yes
○ No
○ Don't know

D4c. Were these injuries because conditions worsened by loss of power, water or other limitations?

○ Yes
○ No
○ Don't know

Section E: Decisions, Planning and Communication

Section E: Decisions, Planning, and Communication
The following set of questions focus on decisions, planning and communication. If you are unsure of any responses, please just answer to the best of your ability.

E1. Before Hurricane Maria (in 2017), how would you characterize the culture of your hospital in relation to natural hazard risks?

○ Regularly planned for potential natural hazards and set aside funds to minimize risks
○ Occasionally planned for potential natural hazards and set aside funds to minimize risks
○ Acknowledged natural hazards risks, but did not have financial or other means to help minimize risks
○ Did not discuss or plan for natural hazards risks
○ Deliberately avoided the topic of natural hazard risks

E2. Please indicate to what extent you agree with the following statement:

Before Hurricane Maria (in 2017), my hospital was adequately prepared for potential hurricane impacts.
Interviewer: Read list of responses, select one

○ Agree
○ Somewhat agree
○ Neither agree, nor disagree
○ Somewhat disagree
○ Disagree

E3. Before Hurricane Maria (in 2017), did your hospital have an emergency plan for natural hazard events such as hurricanes in place?

○ Yes
○ No
○ Don't know

E3a. What percentage of hospital administration and/or staff was familiar with the plan and its contents? (%)

E3b. How would you characterize the implementation of the emergency plan during Hurricane Maria?
Interviewer: read list of responses, select one

○ Very Good
○ Good

○ Acceptable
○ Poor
○ Very Poor

E4. Before Hurricane Maria (in 2017), how would you rate your hospital's connection to other local organizations (e.g., businesses, schools, and churches)?
Interviewer: For example, did you co-sponsor events, offer space, or help promote activities of these organizations?
Would you say:
Interviewer: read list of responses, select one

○ Very connected
○ Somewhat connected
○ Average
○ Somewhat disconnected
○ Very disconnected

E5. Before COVID 19 (in 2020), how would you rate your hospital's connection to other local organizations (e.g., businesses, schools, and churches)?
Interviewer: For example, did you co-sponsor events, offer space, or help promote activities of these organizations?
Would you say:
Interviewer: read list of responses, select one

○ Very connected
○ Somewhat connected
○ Average
○ Somewhat disconnected
○ Very disconnected

Section F: Recovery Q1-Q3

Section F: Recovery
The last set of questions address the recovery of your hospital and surrounding areas. If you are unsure of any responses, please just answer to the best of your ability.

F1. Regarding the recovery of the entire Commonwealth of Puerto Rico since Hurricane Maria, would you say it is:
Interviewer: read list of responses, select one

○ Fully recovered
○ Partially recovered
○ Still in survival/response mode

○ Will never recover (please explain)

[   ]

F2. Regarding the <u>recovery of the municipios your hospital serves</u>, since Hurricane Maria would you say the municipios are:
Interviewer: read list of responses, select one

○ Fully recovered
○ Partially recovered
○ Still in survival/response mode
○ Will never recover (please explain)

[   ]

F3. Regarding the <u>recovery of your hospital</u> since Hurricane Maria, would you say it is:
Interviewer: read list of responses, select one

○ Fully recovered
○ Partially recovered
○ Still in survival/response mode
○ Will never recover (please explain)

[   ]

F4. Before Hurricane Maria, did your hospital have private insurance coverage on any of the following?

	Yes	No	Don't know
The Buildings	○	○	○
The Contents (for example, furniture, medical supplies, medical equipment)	○	○	○
Business interruption	○	○	○

Did your hospital file claims for insurance on the following insurance types?

	Yes	No	Don't know

	Yes	No	Don't know
» The Buildings	○	○	○
» The Contents (for example, furniture, medical supplies, medical equipment)	○	○	○
» Business interruption	○	○	○

When did you receive money from the following insurance policy claims? *Please provide your best recollection of the timing of funds received.*

	Less than 6 mos	6 - 12 mos	12 - 18 mos	18 - 24 mos	24+ mos	NEVER	Don't know
» The Buildings	○	○	○	○	○	○	○
» The Contents (for example, furniture, medical supplies, medical equipment)	○	○	○	○	○	○	○
» Business interruption	○	○	○	○	○	○	○

5. Did your hospital apply for any of the following assistance types?

	Yes	No	Don't know
Federal financial assistance (FEMA, SBA, HHS, Medicare/Medicaid, Other)	○	○	○
Commonwealth/PR funds	○	○	○
Municipal government funds	○	○	○
Private/bank loans	○	○	○

When did you receive funding from the following assistance types? *Please provide your best recollection of the timing of funds received.*

	Less than 6 mos	6 - 12 mos	12 - 18 mos	18 - 24 mos	24+ mos	NEVER	Don't know

	Less than 6 mos	6 - 12 mos	12 - 18 mos	18 - 24 mos	24+ mos	NEVER	Don't know
» Federal financial assistance (FEMA, SBA, HHS, Medicare/Medicaid, Other)	O	O	O	O	O	O	O
» Commonwealth/PR funds	O	O	O	O	O	O	O
» Municipal government funds	O	O	O	O	O	O	O
» Private/bank loans	O	O	O	O	O	O	O

F6. To what extent did the following factors make important contributions to your hospital's recovery in 2019 (approximately 1 year after Hurricane Maria)?
Interviewer read: Select either "Major contribution, minor contribution, no contribution or not applicable" for the following:

	Major contribution	Minor contribution	No contribution	Not applicable
Effective leadership and sound decision making	O	O	O	O
A clearly understood process for making and approving decisions	O	O	O	O
The provision of adequate and timely financial resources (including disaster assistance)	O	O	O	O
Having materials easily accessible (e.g., building materials)	O	O	O	O
Having needed equipment accessible (e.g., construction equipment, generators)	O	O	O	O
Being able to hire contractors for building repairs	O	O	O	O
Employees	O	O	O	O
Patients	O	O	O	O
Recovered utility services	O	O	O	O
Personal networks/knowing the right people	O	O	O	O
Sharing resources with other organizations in the community	O	O	O	O

F6a. Of these factors, please rank the 3 most important to your hospital's recovery where 1 is the most important factor:

	» Effective leadership and sound decision making
	» A clearly understood process for making and approving decisions
	» The provision of adequate and timely financial resources (including disaster assistance)
	» Having materials easily accessible (e.g., building materials)
	» Having needed equipment accessible (e.g., construction equipment, generators)
	» Being able to hire contractors for building repairs
	» Employees
	» Patients
	» Recovered utility services
	» Personal networks/knowing the right people
	» Sharing resources with other organizations in the community

END

F7. We would like to hear more from you about your hospital's experience of Hurricane Maria and the process of recovery through a more discussion-based approach. Would you be willing to share your hospital's story in a face-to-face interview or by video conference?

○ Yes
○ No
○ Maybe