

Health Action 2018:
Staying Strong for America's Families
Afternoon Plenary: Tale of a Medicaid Block Grant:
Notes from the Puerto Rico Health Crisis



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On September 20, 2017 Hurricane Maria hit Puerto Rico as a Category 4

HURRICANE MARIA
PUERTO RICO & VIRGIN ISLANDS
11 AM AST TUE SEP 19 2017
Tuesday night into Thursday

GOES-FLOWER RING IR - SEP 19 17 14 25 UTC

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

Hurricane Maria
 Tuesday September 19, 2017
 11 AM AST Advisory 14
 NWS National Hurricane Center

Current information: x
 Center location: 16.3 N 63.1 W
 Maximum sustained wind: 160 mph
 Movement: WNW at 10 mph

Forecast positions:
 ● Tropical Cyclone ○ Post-Potential TC
 S: 39 mph D: 39 mph
 S: 39-73 mph H: 74-110 mph M: > 110 mph

Potential track area: Day 1-3 Day 4-5
Watches: Hurricane Tropical Storm
Warnings: Hurricane Tropical Storm
Current wind extent: Hurricane Tropical Storm

WINDS: *Devastating to Catastrophic*

- 90 to 125 mph with gusts up to 175 mph
- **Impacts:** Widespread power outages. Impassible roads & bridges. Structural damage to buildings with complete wall & roof failure.

STORM SURGE: *Extensive*

- 6 to 9 feet
- **Impacts:** Large areas with coastal flooding. Structural damage to buildings, with several washing away. Roads washed out or severely flooded. Severe beach erosion. Damage to marina structures, as well as overturned or broken boats.

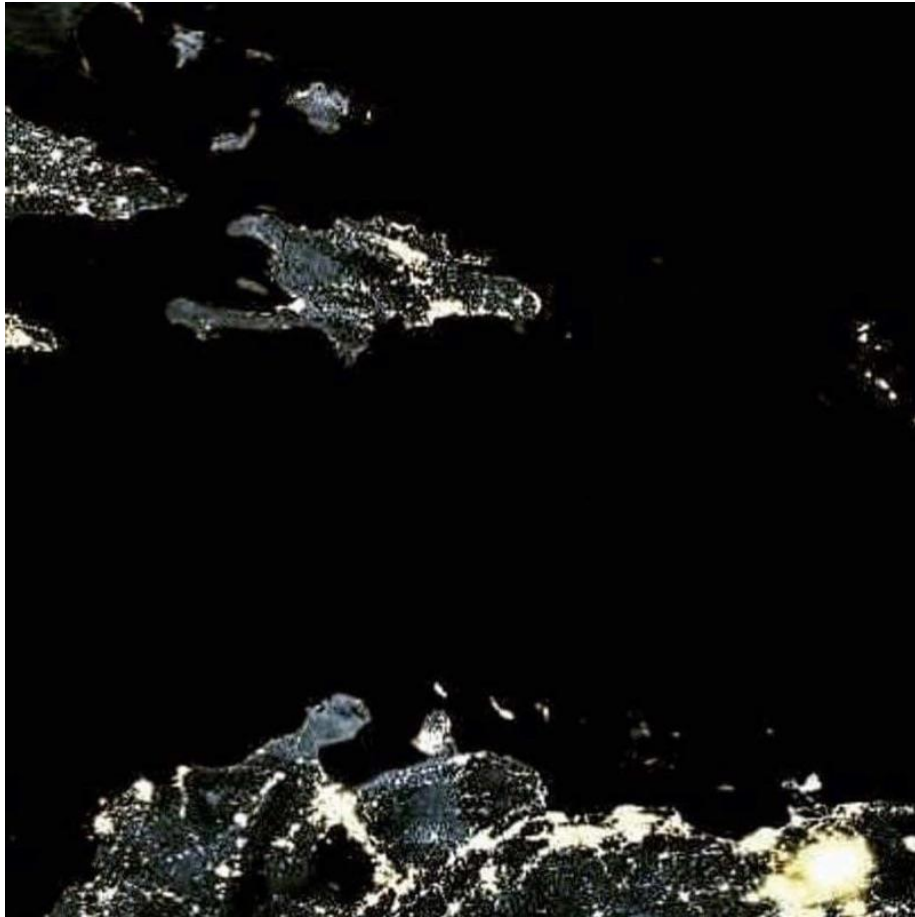
FLOODING: *Devastating to Catastrophic*

- 12 to 18 inches with isolated amounts of 20 to 25 inches
- **Impacts:** Rivers & tributaries ranging out of their banks. In mountain areas, runoff may rage down valleys while increasing susceptibility to rockslides & mudslides. Flood waters can enter numerous structures. Roads & bridges closures. Driving conditions become extremely dangerous.

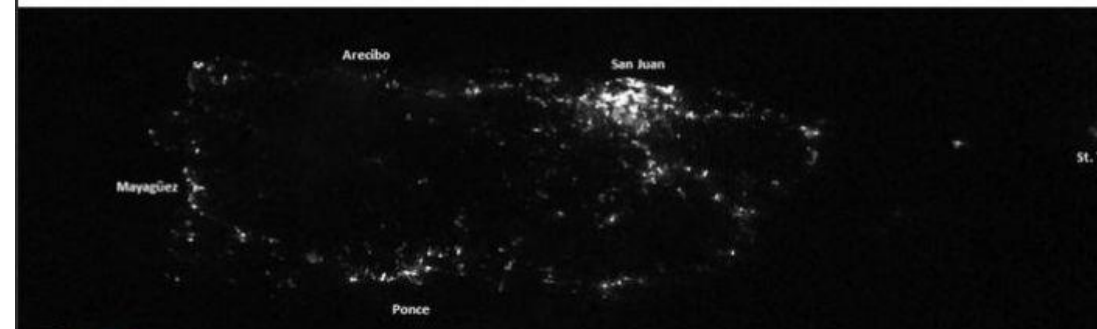
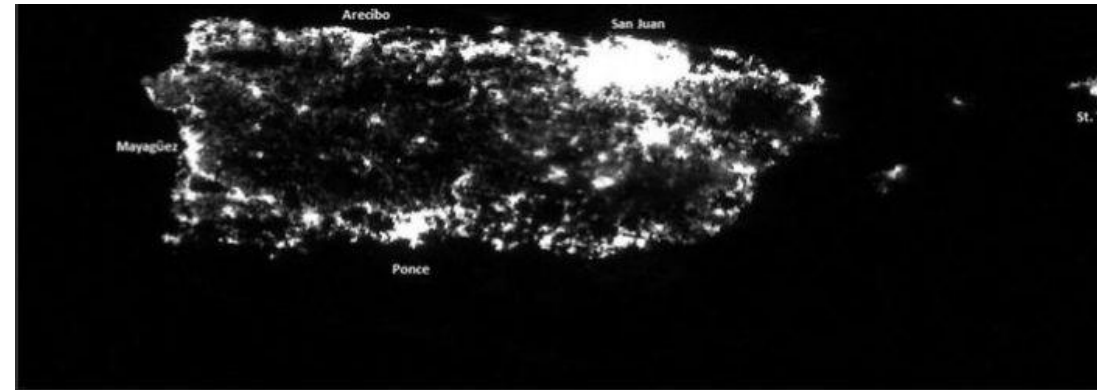
MARINE CONDITIONS: *Dangerous*

- Seas of 20 to 30 feet with occasional seas of 40 feet or higher
- Life-threatening rip currents & surf conditions.

Power Grid collapse after Hurricane Maria: Puerto Rico

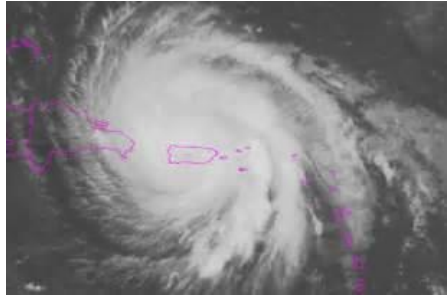


Before Hurricane Maria



After Hurricane Maria

<http://www.abc.net.au/news/image/8987766-3x2-700x467.jpg>



Hurricane Maria was a catastrophic event

- **Catastrophic events** are rarer than disasters, and they tend to wipe out infrastructure over a large swath of land. “Most, if not all, of the built environment is destroyed” in a catastrophe.
- In addition of damage to property, bridges and homes, roads were blocked by debris and communication towers collapsed.
- Total loss of power grid
- Disruption of communications
- Loss of water filtration systems and water pumps.
- Loss of emergency services communications
- Inoperable hospitals, pharmacies, banks, health facilities
- Scarcity of gasoline and diesel
- Need for cash



“Continuous HIV High-risk Obstetrical Services During a Hurricane”



- Baby Z was born at home on September 25, 2017.
- Her mother is living with HIV and had a prior C/S on November 8, 2015.
- The ambulance never arrived, after the birth, they went to a local health center where the umbilical cord was cut and then she was taken to our hospital.
- This photo was taken on October 24 during her post-partum visit.
- She was on HAART and had undetectable VL, but wanted a repeat C/S for this pregnancy.

El Nuevo Dia; September 23, 2017



con graves daños por el impacto del huracán María, como muestra esta imagen. Muchos municipios tienen situaciones similares, por lo que el acceso a diversos sectores es limitado.



ARECIBO

- Los ciudadanos de ese ayuntamiento necesitan agua y comida.
- Todavía hay varios sectores del municipio incomunicados.

BARRANQUITAS

- Necesitan combustible para poder abrir camino en los diversos sectores.
- Hay escasez de alimentos para suplir las necesidades de la ciudadanía.

DORADO

- El alcalde informó la muerte de una anciana como una fatalidad relacionada con el paso del huracán María.
- La sala de emergencia no está operando.
- Necesitan agua, alimentos y toldos para los refugiados.

Ordenan el desalojo de 70,000

Inminente colapso de represa acentúa los peligros que aún enfrenta el país

BENJAMÍN TORRES GUTIÉRREZ
Corresponsable de la edición

Caracas de puercos personas en estado de desalojo de sus centros de trabajo en Isabela y Quetzaltenango.

gir operado y alcóides están que quedan pocos días de suministros para los miles de personas que siguen refugiadas. Hasta que, extraoficialmente, había confirmado una cifra preliminar de 30 millones de personas desplazadas por el paso del huracán María. Cuando se efectuaron un censo alternativo arrojó el cuantioso que se protegían de la tormenta, otros millones de personas que fueron



ABANDONAN SUS HOGARES

Abarrotados los refugios de toda la isla

Desde que el huracán María comenzó a azotar la isla el martes en la noche, la cifra de refugiados suma **15,000 personas**, lo que aumenta la preocupación de que se acaben los abastos de agua y alimentos



REFUGIOS

ESTERAN POCOS DIAS para que se termine el suministro de alimentos en la isla. El alcalde informó la muerte de una anciana como una fatalidad relacionada con el paso del huracán María.

El aumento en el número de refugiados es una de las preocupaciones más importantes de los líderes abastecedores de la isla, que en días recientes han alertado que los suministros de agua y alimentos se agotarán en poco tiempo.

El alcalde de Ponce, María "Morya" Meléndez, informó que en los 13 refugios del pueblo solo quedan comida y agua para dos días. Ponce llegó a tener 2,200 refugiados en 13 instalaciones, pero se estima que ese número seguirá en los próximos días según las personas siguen inspeccionando los daños en sus hogares.

Al igual que su homólogo en Ponce, el alcalde de Isabela, Carlos Delgado Abiari, estima que



El martes, el número de refugiados reportado creció debido a diversas empresas cerradas por el paso del huracán María.

En San Juan, el gobernador Ricardo Roselló publicó en su cuenta de Twitter que la cantidad de refugiados era de 4,422 personas con

105 manzanas. Punt, según las estadísticas se fueron efectuando la cantidad aumentó drásticamente. Los sectores de turismo tropical comenzaron a sentirse en la noche del martes, unas horas de oscuridad que parecían una eternidad en todo Puerto Rico.

En San Juan, la cantidad de refugiados se había duplicado y Roselló informó en Twitter que el miércoles, a las 10 de la mañana, ya habían pasado personas y 350 manzanas de refugiados. Poco más de una hora después, luego de las tics de la mañana, el gobernador Ricardo Roselló publicó en su cuenta de Twitter que la cantidad de refugiados era de 4,422 personas con

Streets in Puerto Rico Blocked by Debris from Hurricane Maria.

The View from Puerto Rico — Hurricane Maria and Its Aftermath

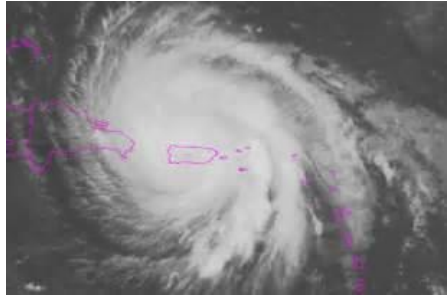
Carmen D. Zorrilla, M.D.

My residents were overwhelmed, not just from physical exhaustion but from our patients' stories and the difficult decisions we had to make.

We are not trained in disaster management, so we ***had to draw on our own personal and emotional strengths in managing the situation, aiming to provide high-quality and efficient care while maintaining our professionalism, humanism, and empathy.***

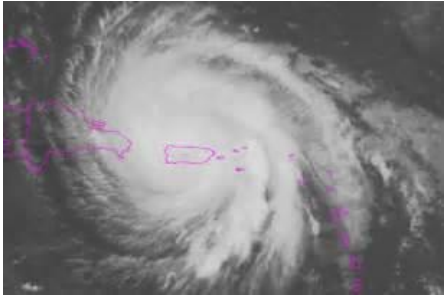


Zorrilla CD. N Engl J Med 2017. DOI: 10.1056/NEJMp1713196



Impact of Hurricane Maria on the Health Care System in PR

- Complete disruption of Hospital care for more than a month with partial services afterwards
- Complete disruption of Primary Care and Prevention services
- Interruption of all elective surgery, procedures and care, including cancer surgery, chemotherapy for months
- Interruption and disruption of Dialysis treatments
- Interruption of Pharmacy services due to lack of power and internet
- Increased mortality reports **initially denied**, now under study
- Concerns with outbreaks at shelters (scabies, lice, conjunctivitis)
- Outbreaks/epidemics **never confirmed** by the state epidemiologist (i.e. Leptospirosis-74 cases)
- Complete disruption of the epidemiologic surveillance systems for vector-borne diseases.



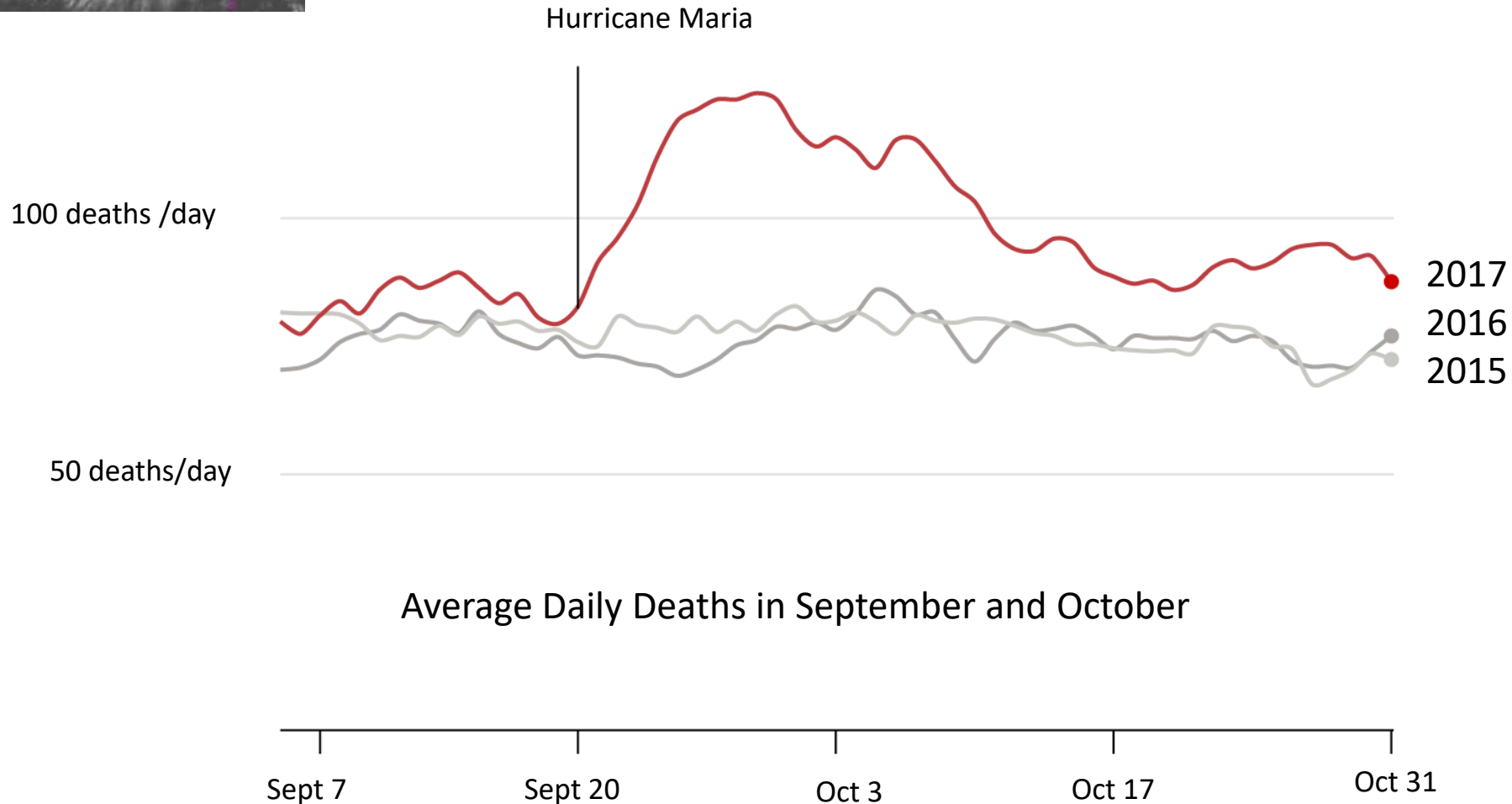
The New York Times

Official Toll in Puerto Rico: 64. Actual Deaths May Be 1,052

By FRANCES ROBLES, KENAN DAVIS, SHERI FINK and SARAH ALMUKHTAR

UPDATED 10:43 AM ET, DEC. 9, 2017

<https://www.nytimes.com/interactive/2017/12/08/us/puerto-rico-hurricane-maria-death-toll.html>



Estimates of excess deaths in Puerto Rico following Hurricane Maria Santos, A. R., & Howard, J. T. (2017, December 27)

Retrieved from <https://osf.io/preprints/socarxiv/s7dmu>

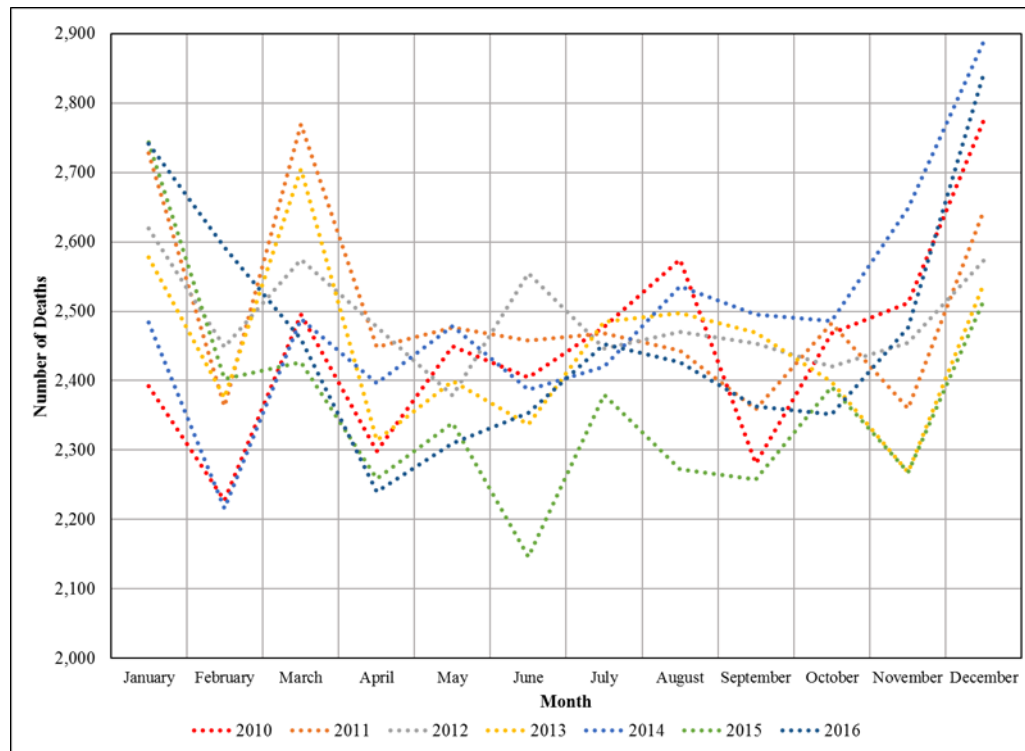


Figure 2: Number of deaths by month and year, in Puerto Rico, 2010-2016

- Estimates for total deaths, for September and October 2017 were 2,987 (95% CI 2,900-3,074) and 3,043 (95% C.I. 2995-3,091), respectively.
- The difference between our estimates and the upper 95% CI for the average deaths is **518 deaths for September and 567 deaths for October.**



Impact of Hurricane Maria on mental health

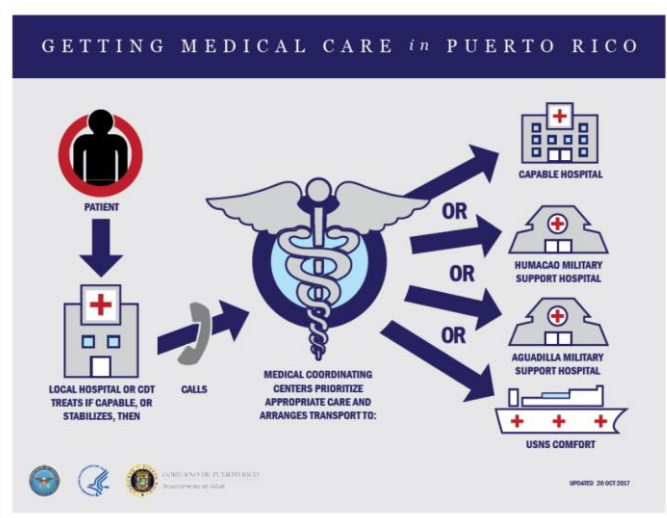
- Emotional aspects of disaster, loss of property, services, health and life
 - Disruption of families, need for additional support
 - Interruption of mental health services to patients with Psychiatric conditions who need medications and therapy
 - New appearance of PTSD
 - Reactivation of stress-related illnesses (Zoster etc)
 - Exposure to increased violence
 - Generalized sense of hopelessness, loneliness, despair
- *“ I lost everything”*
 - *“ I lost everything that was inside my home and all the roof was damaged”*
 - *“ Part of the roof of the terrace fell, as well as the door”*
 - *“ I lost everything, but at least I’m alive”*
 - *“ I have anxiety”*
 - *“ I feel anxious, insecure and I have stress”*
 - *“ I feel depressed”*
 - *“ I have hypertension and the pain has increased”*
 - *“ I’m scared and I feel stressed; I feel anxious and depressed”*
 - *“ I feel a lot of tension”*
 - *“ Sometimes I have burst of crying, I feel desperate and depressed”*



“How families were separated and concerns for treatment”

- Twin girls born at the University Hospital on September 18, 2017.
- Their parents are from a town called Arroyo (see map).
- This photo was taken on November 3, 2017 during a visit.
- One baby was discharged home and the other stayed at the NICU.
- They were told to come every day to the hospital.
- On day 126th, they have no power, no running water and had damage to their home.



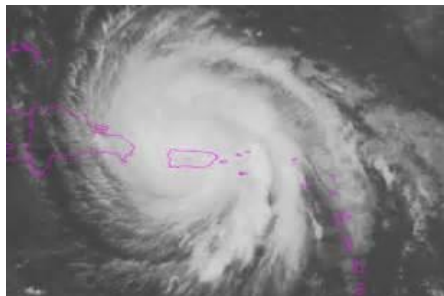


USNS Comfort

- USNS Comfort was deployed to PR on September 29, 2017 from Norfolk VA
- Arrived October 3, 2017
- Instructions for referrals were not clear among physicians or community
- Protocols for referrals were complex and had to be modified several times
- **October 30, 2017 ship in San Juan port (day 40) open for triage**
- 4,799 patients evaluated from October 3 to November 7 on all 3 military hospital facilities

Patient Capacity:
 Intensive care wards: 80 beds
 Recovery wards: 20 beds
 Intermediate care wards: 280 beds
 Light care wards: 120 beds
 Limited care wards: 500 beds
Total Patient Capacity: 1000 beds
 Operating Rooms: 12





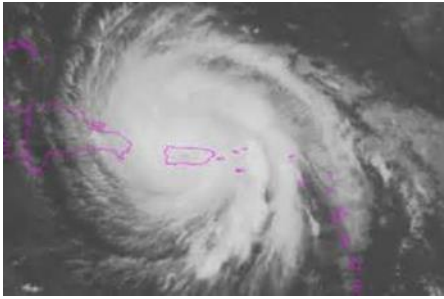
Slow Progress of recovery after Hurricane Maria (Puerto Rico) <http://status.pr/> Day 126

Hurricane Maria September 20, 2017	Electricity (% power)	Operational Hospitals (with generators)	Hospitals with Power	Total Hospitals	Cellphone Communications	Running water
Day 6	n/a	n/a	2	2	27%	40%
Day 13	5%		17	70		45%
Day 21	11%	45	25	70	53%	64%
Day 34	24%	21	49	70	65%	74%
Day 37	26%	20	50	70	66%	78%
Day 44	37%	14	56	70	71%	80%
Day 48	42%	11	59	67	72%	83%
Day 55	49%	8	59	67	74%	90%
Day 61	47%	8	59	67	74%	90%
Day 111	81%	1	67	68	97%	96%
Day 126	85%	1	67	68	97%	93%

How many days it took to restore 95% of the peak number of customers left without power after major hurricanes since 2004, including **Sandy, Ivan, Katrina, Rita, Wilma, Ike and Irene?**

http://www.pennlive.com/midstate/index.ssf/2012/11/restoring_power_to_hurricane_s.html

- After **Sandy, New York** utilities restored power to at least 95% of customers **13 days** after the peak number of outages was reported. **New Jersey** reached that same level in **11 days** and **West Virginia** in **10 days**.
- The longest stretch to 95% restoration since 2004 was **Louisiana after Hurricane Katrina**, where local utilities had power restored to only **three-quarters of their customers after 23 days** before Hurricane Rita hit and caused additional outages.
- **Rita** left **Texas** customers in the dark for **16 days**; **Katrina** knocked out power to **Mississippi** customers for **15 days**; **Wilma** and **Ike** knocked **Florida** and **Texas** out for **14 days** each before power was restored to 95% of those who lost it, according to the federal data.



Chaos can bring opportunity to:

- Decreased medication adherence, increased risk of trauma (home repairs), vulnerability to OIs among people living with HIV
- Unlicensed practitioners misrepresenting themselves as MDs
- Increase in violence and theft of resources (gasoline, cash, businesses)
- Mixed messages: “ everything is fine”; “ this is terrible”
- Unscrupulous contracts and businesses
- Redesign of systems
- Increase in voluntary work
- Opportunities for faith communities and charity organizations to be part of the solution
- Evidence of the need to involve everyone in the planning of future responses to emergencies
- Redirection of resources and support
- Need to reinvent government responsibilities, eliminate an electric power dysfunctional service and monopoly

Humor in social media

Star Wars in Puerto Rico...



Completaste tu entrenamiento



Mas de 70 dias sin luz
bienvenido al lado oscuro

Mi emoción en el 1997



Mi emoción en el 2017



FOTO FAMILIAR PR 2017



Our new normal: long lines, recovery efforts.... and hope



In order to live fully,
it is necessary to be in
constant movement.
Only then can each day be
different from the last

Paulo Coelho
The Zahir

