

Impacts of hurricanes on health outcomes and health insurance company operations

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Natural disasters have far-reaching impacts, both in the short term and longer term. On a personal level, the loss of lives, homes, and personal property on communities and individuals can be tragic and devastating. From an operational and financial perspective, natural disasters can have significant effects on healthcare providers, insurers, and payers.

While every hurricane affects local areas in different ways and with varying severity, they share common impacts on the delivery, timing, and magnitude of healthcare expenditures in affected areas. In recent memory, significant hurricanes have included Katrina in 2005, Sandy in 2012, and, so far in 2017, Harvey, Irma, and Maria. Each of these hurricanes displaced many people, which in turn considerably impacted the healthcare claims of the affected populations. Organizations that deliver or finance healthcare services in the impacted areas must consider a variety of effects on their healthcare claims, both in the short and long term.

Short-term impacts

- **Incurred claims:** In the near term, incurred claims may be lower than historical levels. Individuals may face evacuations, and providers' offices may be closed due to the emergency situation. Even after the hurricane, it may take days or weeks until individuals can return home and until providers' offices reopen. Even hurricanes that ultimately result in relatively little damage can cause disruptions in healthcare, to the extent that there are evacuations and provider office closures in the days leading up to landfall.
- **Reported claims:** There may be an increased lag in the reporting and payment of claims, if providers' administrative teams and payers' claims processing staffs are unable to maintain standard working hours. The loss of members' insurance cards or other documentation can hinder providers' ability to verify eligibility and members' ability to find providers and access benefit information, and can delay an insurer's ability to efficiently process claims. Insurers may need to temporarily increase customer service and claims administration staffing levels to meet the increased complexity and call volumes.
- **Type of claims:** There may be changes in the distribution of services, such as:
 - **More emergency room (ER) visits:** Individuals may be unable to see their usual providers, and displaced persons may instead use ER services for routine care or for treatment of chronic issues that would normally be treated at a primary care provider.
 - **More inpatient services:** In many cases, there may be more hospital inpatient stays because of trauma, injuries, and the exacerbation of existing health conditions.
 - **Extended inpatient stays:** Inpatient hospital stays may be extended for some patients to the extent that they cannot be safely discharged to home care during the evacuation, landfall, and aftermath.
 - **Fewer primary care visits and routine services:** Individuals may be unable to see their primary care providers and may defer routine services until the natural disaster has passed.
- **Drugs:** Impacts may include:
 - Missed or inappropriate drug doses while displaced, which can have both short-term and long-term health effects.
 - Duplication of prescriptions due to lost medications and mail order medications not able to be delivered.

- Drugs may be provided by emergency medical support operations in evacuation centers. However, if records are lost or unavailable and prescribing physicians cannot be reached, then there is an increased risk that the drugs are provided with inappropriate ingredients or dosages and that potentially harmful drug interactions are introduced.
- **Healthcare management:** Care management may be more difficult in the short term. Impacts may include:
 - Difficulty in locating displaced persons for care management follow-up.
 - Evacuation centers may not have the full range of healthcare provider specialties, supplies, and drugs available to treat the acute or chronic conditions of displaced persons.
 - Insurer relaxation of preauthorization requirements, which may lead to suboptimal healthcare delivery.
 - Less adherence to disease management protocols. This may have longer-term impacts for specific populations. For example, members with chronic diseases may be most susceptible to care discontinuity and acute episodes (such as patients with kidney disease whose dialysis treatments are interrupted).
- **Out-of-network claims:** Higher out-of-area/out-of-network claims, especially if communities are evacuated or displaced. Payers may grant more exceptions for out-of-network/out-of-area coverage, due to the displacement caused by the natural disaster.
- **Insurance fraud:** Insurance fraud rates may increase in the short term as fraud detection and prevention functions at insurance companies are disrupted and as more exceptions are granted.
- **Nearby areas:** Claims may be temporarily lower because of decreased provider availability, to the extent providers are also providing services to displaced persons.
- **Medicare Advantage:** Recently, the Centers for Medicare and Medicaid Services (CMS) has released requirements for Medicare Advantage Prescription Drug (MAPD) plans, including:
 - Members in an impacted area, or who depend on a friend or family member in an impacted area to assist with enrollment decisions, are eligible for a special open enrollment period.¹
 - MAPD plans with members in an impacted area must ensure continuous provider access for all members, including potentially the coverage of services at non-contracted providers, relaxation of gatekeeper referrals, and in-network cost sharing at out-of-network providers.²

Long-term impacts

- **Membership:** Providers and payers may experience changes in their at-risk populations, which would be due to long-term damage in communities. Depending on the level of devastation to the community, members might take time to return to the impacted communities or may ultimately settle in other areas. While the large-scale evacuation after Hurricane Katrina was followed by a gradual return of evacuees, many settled in other cities and there was a long-term shift in the population distribution among Louisiana parishes (county equivalents).
- **Health outcomes:** As discussed in a recent New York Times article,³ natural disasters increase stress among members in the impacted area, which leads to more mental health claims in the long term. Because of the cleanup effort after hurricanes (and the unsanitary conditions created), the rate of infections and respiratory illnesses is increased.
- **Claims projections:** To the extent that the historical experience for a period encompassing a natural disaster is used for future projections, adjustments may be needed. If the incurred claims are atypical due to the short-term nature of the natural disaster, these claims may need to be adjusted back to typical levels for projection purposes.
- **Operational:** A disruption in care management during the lead-up to and aftermath of the hurricane can adversely impact health outcomes and other reported healthcare management metrics. Quality-based payments to insurers from government programs, such as Medicare Advantage, may be adversely affected. Additionally, the disruption of healthcare encounters may depress diagnosis reporting and affect the administration of diagnosis-based risk adjustment programs.

1 CMS (September 29, 2017). Memo: Emergencies and Major Disasters - Additional Opportunities to Join, Drop, or Switch Medicare Health and Prescription Drug Plans and Other Guidance.

2 CMS (September 29, 2017). Memo: Reminder of Pharmacy and Provider Access During a Federal Disaster or Other State or Public Health Emergency Declarations.

3 Carroll, A.E. & Frakt, A. (August 31, 2017). The long-term health consequences of Hurricane Harvey. New York Times. Retrieved October 6, 2017, from <https://www.nytimes.com/2017/08/31/upshot/the-long-term-health-consequences-of-hurricane-harvey.html>.

- **Delivery system:** Hospitals and other healthcare facilities may sustain long-term or even permanent damage, be decommissioned, or otherwise require significant rehabilitation. Over time, the location and type of healthcare facilities may change significantly.
- **Reserving:** Valuation actuaries use historical claims payment patterns to estimate claims reserves. The payment pattern for months including and immediately following a hurricane may not be an appropriate estimate for future months unless these impacts are considered and appropriate adjustments are made.

The impact of each hurricane on healthcare providers and payers will vary, depending on the severity and dispersion of the disaster's impacts. As organizations prepare their year-end financial statements or project future healthcare experience, they will need to carefully evaluate the healthcare claims experience for the impacted areas, and make adjustments as appropriate.

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