

## Threat and Hazards Assessment Table: Barton Health (Barton Memorial Hospital) in South Lake Tahoe, California

| Natural   | Technological  | Human-caused  |
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| Resulting from acts of nature   | Involves accidents or the failures of systems and structures   | Caused by the intentional actions of an adversary   |
| <ul style="list-style-type: none"> <li>● <u>Earthquake</u>. South Lake Tahoe has the possibility of an earthquake event, risk may be attributable to three specific fault lines. These include the West Tahoe, Stateline, and Incline Village fault lines. Potentially dangerous situation for local residents and employees. It has been estimated that the risk of an earthquake is relatively low in the near future. Nevertheless, a protocol can be prepared to facilitate evacuations effectively and minimize risk of mass casualties. In 2021, an earthquake struck nearby in the Chicago-Nevada border, and aftershocks ranged from 3.0 to 4.6 in magnitude. In addition to earthquakes, the aftermath can escalate the scale of impact, such as underwater landslides and tsunamis. (See ‘Tsunami and Seiche’)</li> <li>● <u>Tsunami and Seiche</u>. Located within an intermountain basin by fault lines, the possibility of sediment shifting (displacement) and eruption at the bottom of Lake Tahoe may provoke a tsunami wave. This would severely impact surrounding residences, medical facilities, and hospitals. A team of researchers from the University of Nevada studied the Tahoe Basin and discovered evidence indicating a landslide and consequential tsunami occurred thousands of years ago. Time sensitive event and</li> </ul> | <ul style="list-style-type: none"> <li>● <u>Emergency Power Failure</u>. Failure results in the inability to perform medical and surgical procedures, access medical records of patients, and inability to communicate with coworkers. Patients in intensive care would be at high risk in the event of an emergency power failure.</li> <li>● <u>Hazardous Materials or Chemicals Release</u>. Accidental spills, leaks, or explosions may occur during transportation from or to hospitals and laboratories, or due to malfunctioning storage devices. Responding to such incidents requires immediate action and decontamination to avoid and decrease risk of exposure and mass casualties.</li> <li>● <u>Lack of Emergency Supplies, Materials and Equipment</u>. In the case of an emergency event, ensuring medications and medical equipment are readily available, such as bandages, masks, antiseptic products, and PPE. Imperative to ensure storage systems are effective in maintaining and securing areas with stored items. Risk of delayed response in attending patients in urgent care, increasing risk of injuries and deaths.</li> <li>● <u>Malfunction of Surgical Robotics</u>. Failure of robotic-assisted technological equipment, including da Vinci Robotics surgical systems. Mechanical failures are rare but can occur. Increases the risk of patient injuries and deaths. Malfunction of da Vinci Robotic surgical systems increase the risk of hospital liability and related charges.</li> <li>● <u>Radiological Release</u>. Radioactive materials are used during medical</li> </ul> | <ul style="list-style-type: none"> <li>● <u>Active shooter Incident</u>. Federal Bureau of Investigation (FBI) crime data report that the South Lake Tahoe region is not considered one of the safest areas. Armed assaults, burglaries, and other violent crimes have been associated with this location. Due to increased levels of crime-related occurrences in this area, preparing for a violent crime such as an active shooter event would be beneficial for hospital staff, patients, and visitors. Can be perpetrated by an armed patient, staff, or hospital visitor. No formal active shooter response protocol has been established. This increases the likelihood and risk of injuries and casualties.</li> <li>● <u>Bombs or Explosives Attack</u>. Suspicious individuals with explosive devices in South Lake Tahoe have been reported in the news (recently in 2019 and 2020). One suspect was taken to Barton Memorial Hospital for possible drug overdose. Direct bomb or explosive threats have not occurred. In California, a <i>Bomb Threat Incident Planning Guide for Hospitals</i> document is provided towards basic preparation and response for such an event. Threats pose high risk and number of injuries and fatalities to patients and workers in hospital settings.</li> <li>● <u>Cyber-attack Against Data</u>. Occurs when medical records cannot be accessed or medical services are disabled (locked) or hacked. Major security threat for hospital workers and patients. Can be</li> </ul> |

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| <p>requires immediate action to decrease large-scale damages and casualties in the community.</p> <ul style="list-style-type: none"> <li>● <u>Wildfire</u>. Northern California is extremely vulnerable to wildfire events due to the dry climate, categorized as either warm-summer Mediterranean or continental Mediterranean. South Lake Tahoe is surrounded by forest land, and the region is known for high, strong winds. Dry summer season makes this area prone to wildfire spread from nearby regions. The Caldor Fire in 2021 is a prime example of this vulnerability in South Lake Tahoe. Patients and staff were evacuated to safety from Barton Memorial Hospital. In 2007 the Angora Fire occurred, where over 3,000 acres were destroyed, affecting residential homes and buildings. Provide emergency evacuations and sheltering for the community. High risk for mass casualty and destruction.</li> </ul> | <p>procedures (radiology department or (chemo) treatment) or for research purposes. Spillage of radioactive materials poses a serious threat to patients, laboratory workers, and hospital staff. This increases the risk of radioactive contamination, patient and staff injuries, and liability charges.</p> <ul style="list-style-type: none"> <li>● <u>Surgical Fire</u>. Fire incidents in surgical settings require immediate action to decrease the number of injuries and casualties. Due to the high risk and time-sensitive nature, it poses a life-threatening situation to patients and hospital staff at the scene of the event, and potential to spread across the hospital.</li> </ul> | <p>caused by system failures or deliberate attack by hospital-affiliated or hospital-nonaffiliated person(s).</p> <ul style="list-style-type: none"> <li>● <u>Kidnapping or Abduction</u>. South Lake Tahoe is a highly desirable tourist location due to its proximity to Lake Tahoe and hiking trails. Hosts hotels and casinos with transient visitors, making it a prime location for disappearances and kidnappings to occur. In 2001, a girl was abducted in Washington and was killed at Lake Tahoe. The victim's kidnappers were hospitalized at Barton Memorial Hospital. Hospital abductions pose immediate danger to victims, surrounding patients and hospital staff. Immediate alert and security threat.</li> </ul> |
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## References

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