

# Alaska Earthquake 2018: Healthcare Impacts

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# Agenda

- Overview of AK health care system and response structure
- Earthquake
  - Immediate infrastructure impacts
  - Immediate state health response activities
  - Overall health care system impacts
- Health care impact examples
- Lessons learned



# Alaska Health Care System Overview



# Health Care System in Alaska (a brief summary)

- 24 Acute Care Hospitals in the State
- 4 Acute Care Hospitals in Anchorage
  - Providence Alaska Medical Center
  - Alaska Regional Hospital (HCA)
  - Alaska Native Medical Center
  - Joint Base Elmendorf Richardson
- 1 Acute Care Hospital in Mat-Su
  - Mat-Su Regional Medical Center
- Alaska Psychiatric Institute also located in Anchorage
- Most patients in need of higher level of care are routinely transferred to Anchorage (or Seattle) via air





# Alaska Health Response Structure

- One statewide health care coalition
- One local health department in Anchorage
- Health and medical coordination and response quickly escalates to the state
  - Department of Health and Social Services  
Emergency Operations Center (DHSS EOC)

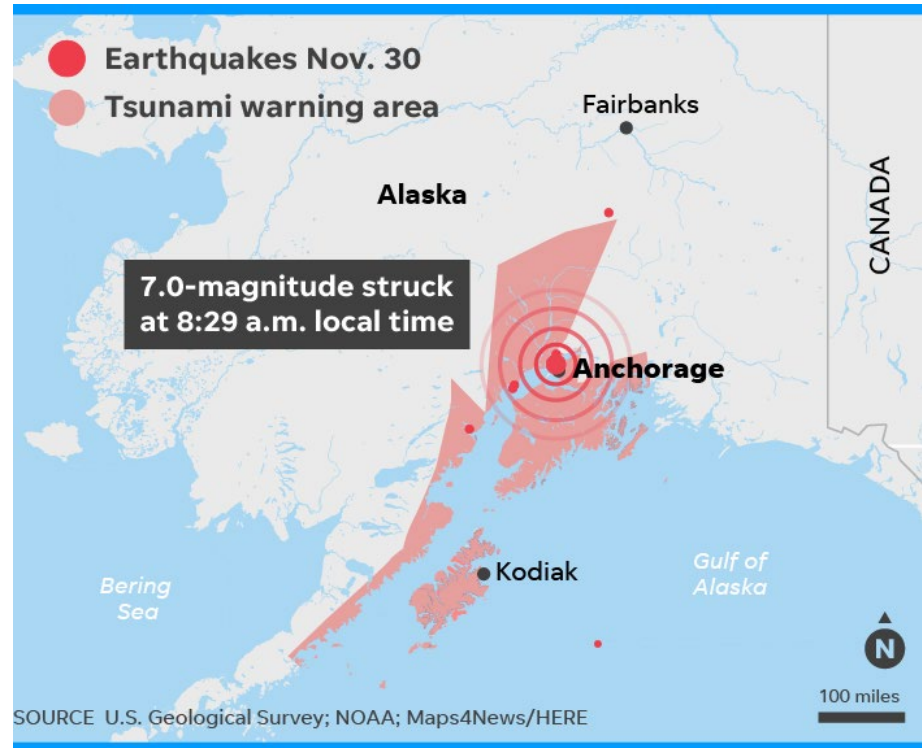


# Earthquake and Infrastructure Damage



# Earthquake

- November 30, 2018
- 8:29am
- Magnitude 7.0 (initial)
  - Later revised to 7.1M
- Approx. 10 miles north of Anchorage
- Depth 46.7 km
- Tsunami warning
  - Quickly revoked



# Immediate Impacts— Communications

- Radios operational
- Land lines
  - Initially intermittent disruption
  - Quickly re-established
- Cell phone
  - Most providers operational
    - Delayed systems quickly re-established to normal operations
- Internet connectivity unaffected generally
  - Connectivity affected at some locations due to facility damage and/or power loss





# Immediate Impacts—Infrastructure

- Airport closure (Ted Stevens International Airport)
  - Temporary, quickly re-opened
- Port closure
  - Temporary, quickly re-opened
- Railroad ceased operations
  - Operational after approximately 72 hours
- Water
  - Some areas of Anchorage experienced water main breaks
  - Boil water notice issued for several days—precautionary
- Power
  - Some areas of Anchorage and Mat-Su experienced power outages
  - Restored quickly to most areas
- Gas
  - Operational
  - Individual facilities affected/monitoring for gas leaks



# Road Damage

- Extensive road damage throughout Anchorage and Mat-Su
- Temporary shutdown of Glenn Highway one way
  - Only road between Anchorage and Mat-Su
  - Opened one way in the evening
  - Impacted hospital staffing
    - Incoming hospital staff from Mat-Su unable to get to work in Anchorage
    - Hospitals notified DHSS EOC and Municipality of Anchorage
      - Began working to establish quick process for allowing passage of hospital staff
      - Road re-opened early, prior to implementation of process
- Quick, efficient response from Department of Transportation and associated businesses to repair roads



# Balancing Other Immediate Impacts

- Business closures and evacuations
  - Gas stations
  - Grocery stores
- School Districts
  - Released all students at the same time
  - Roads congested and nearly impassable in some areas
  - All employees with school-aged children had to respond
  - All schools in Anchorage, most in Mat-Su, remained closed for one week



# Other Immediate Impacts

- Home damage significant in Anchorage, Eagle River, Mat-Su
- Staff balancing extensive home clean-up and/or repairs with response work



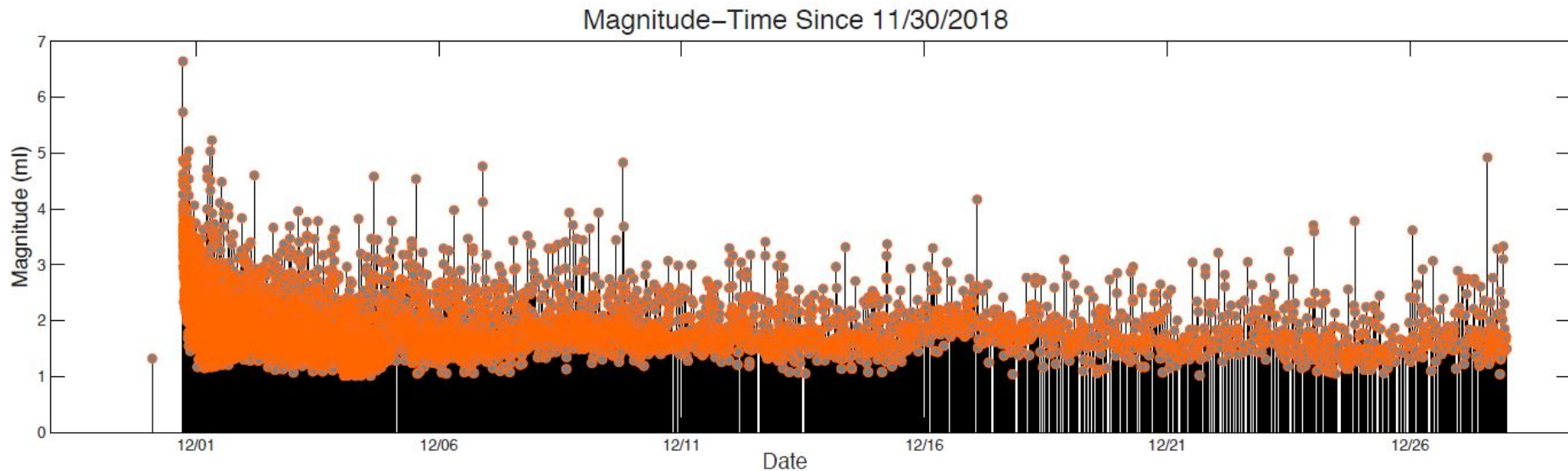
# Weather Forecast

- November 30<sup>th</sup> = cold (November in Alaska)
- December 1<sup>st</sup> = Major Windstorm
- December 2<sup>nd</sup> = Heavy snow



# AFTERSHOCKS

- Major aftershocks continued all night
- Thousands of aftershocks in the following months
- 5.0M on New Year's Eve
- 5.2M on 9/16/19

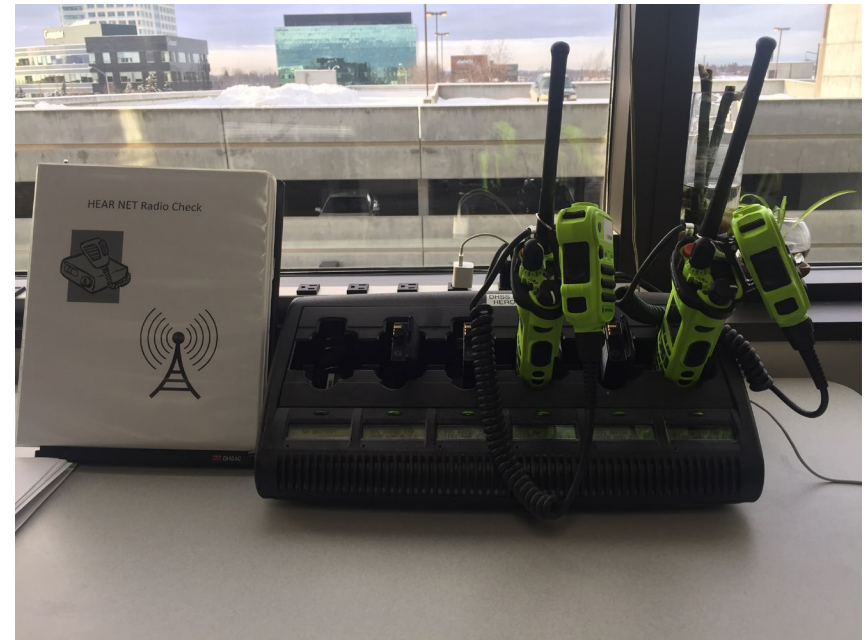


# State Health Response



# DHSS EOC Initial Actions

- Activated
  - Building operational/Staff remained
- Call to all hospitals
  - Phone—intermittent
  - ALMR Radio (Hearnet)
  - Info within 30 minutes
- Gathered situational awareness of non-hospital healthcare facilities
  - Nursing Homes
  - Anchorage Neighborhood Health Center
  - Blood Bank
  - Air medical
- Note: facilities received calls from EOC and Licensing
  - State agencies later coordinated to reduce these redundant calls





# DHSS EOC Initial Actions

- Information gathering/sharing
  - Critical infrastructure
  - Rumor Control
    - Hospital on fire (false)
    - Hospital structure collapse (false)
  - Liaison to the State Emergency Operations Center (SEOC)
- Statewide hospitals calling for awareness
  - Many patients transferred to Anchorage for higher level of care
  - Hospitals around the state needed updated info asap



# Statewide Teleconferences

- DHSS EOC distributed first situation report to hospitals and health care partners at 11:17am
- First statewide health teleconference occurred at 11:30am
- Updates from:
  - State DHSS EOC/Epidemiology/Public Health Labs
  - Hospitals in Anchorage
  - Hospital in Mat-Su
  - EMS/Air Medical in Anchorage and Mat-Su
  - Municipality of Anchorage Health Department
- Fielded questions from hospitals
- Provided State DHSS and Muni 24/7 contact information
- Set schedule for the next call



# Injury Reports

- Initial reports from hospitals indicated:
  - Minor surge or no surge
    - Medication related/addiction management surge
  - Lacerations, bruising, falls
  - Very few/no serious injuries
  - No fatalities
- Epidemiology Bulletin published December 18, 2018
  - 361 earthquake related ED visits



# Other Health Care Response Coordination

- 1135 Waiver requested by Division of Health Care Services and granted – December 3, 2018
- Medicaid pre-approvals for travel
  - Process identified upon request from hospital
  - Immediate phone response and integration from Director of Health Care Services Division (Medicaid)
- Request for quick nursing staff licensure process
  - Board of Nursing responded
- Integration of State Pharmacist
  - Update on open pharmacies
- Integration of Behavioral Health
- Dialysis Center updates
  - Most dialysis centers operational
  - Worked with regional network for ongoing situation reports
- Air medical update
  - Flooding temporarily impacted on provider, quickly restored services
  - Other air medical operational



# Health Care System Impacts



# Health System Impact

## Mat-Su Regional Medical Center

- All information and photos provided with permission from Mat-Su Regional Medical Center Emergency Preparedness Manager
- Only hospital in Matanuska Susitna Borough
  - Borough = size of West Virginia
- Had a medical surge drill/earthquake scenario on 11/7/2018
  - Recent practice for this scenario aided quick response



# Health System Impact

## Mat-Su Regional Medical Center

- **Facility Assessment**

- Minor structural damage
- Utilities- Electricity and Natural Gas are off
- Boilers converted to diesel but now both are off due to broken boiler line with Glycol spills; currently no heat
- Air handlers turned off to reserve internal heat
- 3<sup>rd</sup> floor sprinkler line rupture, repaired with no impact to patient care
- All elevators inoperable but cleared
- Attached Medical Office Building had natural gas leak and water-main break on 4<sup>th</sup> floor with flooding all the way down to the first floor surgery center
  - Building evacuated
- Outpatient center and urgent care evacuated due to structural damage and boiler line glycol spill



# Health System Impact

## Mat-Su Regional Medical Center

- **Needs**

- Situational awareness (possible casualties, road updates, etc.)
- Blood Products from Blood Bank of Alaska (to bring up to par)
- 200+ gallons of Glycol for Heating system
- Elevator contractor to turn on elevator
- Possible: Shelter for displaced patients or those with AFN

- **Summary**

- 200 patients in the first 24hrs. (120 disaster related and 80 deemed regular ER patients)
- All systems and utilities restored within 12 hours
- Returned to normal hospital operations on Monday Dec. 3<sup>rd</sup> 2018





# Health System Impact: Alaska Regional Hospital

- All information and photos provided with permission from Alaska Regional Hospital Emergency Preparedness Manager
- 1 of 4 major hospitals located in Anchorage
- Licensed for 250 beds (max around 150)
- Approximately 1,000 employees
  - 30% live outside of Anchorage
- Involved in the Joint Medical Emergency Preparedness Group (Anchorage/Mat-Su)
- Involved in Statewide Health Care Coalition



# Health System Impact: Alaska Regional Hospital

- No major structural damage—cracks, damaged ceiling tiles, sprinkler heads, carpet, expansion joints
- Water damage to multiple areas: Central Sterile Processing, Peri-operative area, supply storage
- Medical Office Building—Water and Glycol Damage
- Elevator went to the basement and stayed there
- Water main fracture in parking lot



# Health System Impact: Alaska Regional Hospital

- 20 providers presented to labor pool without being called
- Leadership and corporate response set the tone for staff morale
- Trade/facility specialists proactively called to offer help
- Water testing company at the ready to perform multiple in-house tests during precautionary boil water notice
- Security company doubled force as precaution
  - No civil unrest occurred in Anchorage
- Water company standing by with tanker as water main repaired
- Established relationships with local hospital emergency managers allowed for quick and effective rumor control



# Health System Impact

## Local Clinic

- Notification from clinic to DHSS EOC
- Major damage—serves Medicaid patients
- Where would these patients go if the clinic could not provide services?
- Structural Engineer assessed—building structurally sound
- Temporary shutdown while repairs completed



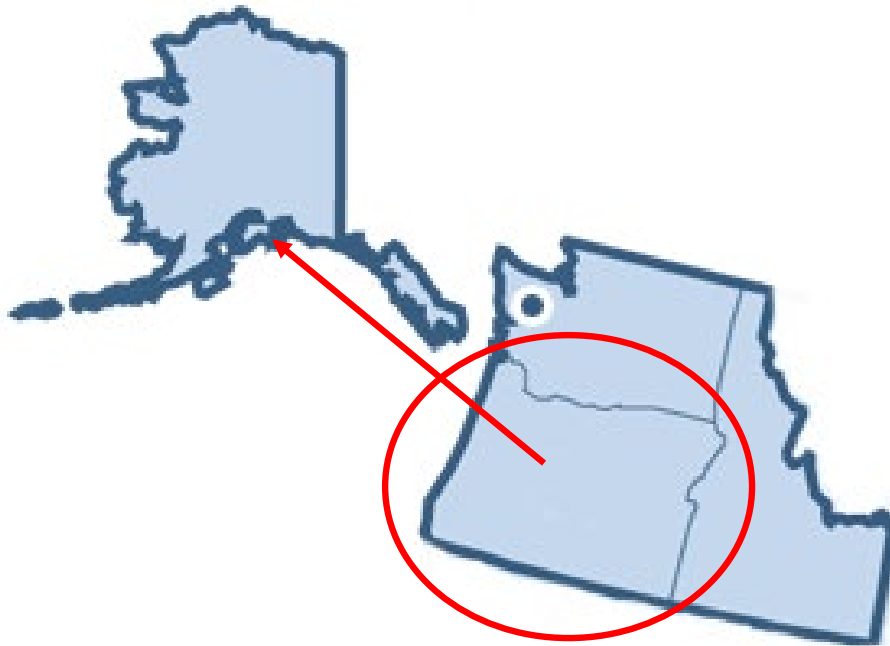
# Health System Impact

## Public Health Laboratory

- Damage to several areas of Anchorage Public Health Laboratory
  - 13 rooms affected
  - Cracks in walls rendered areas unusable
  - Sprinkler break resulted in water, minor flooding
- Only one other state laboratory
  - Fairbanks, different capabilities
- Impacted in-state testing of tuberculosis, botulism, other testing
  - Delays of up to one week in receiving results
  - Botulism from New Year's Day dinner
    - 9 ill w/compatible symptoms
    - 1 death
- Decontamination, specialized equipment, training needed to repair



# EMAC Request-Behavioral Health



- Emergency Management Assistance Compact
- Anchorage and Mat-Su District schools closed for one week
- Children returning to site where they experienced earthquake
- Identified need for support
- Behavioral health teams through EMAC and HCA Health System



# Health Care System Lessons Learned

## An Incomplete List...

- Maintain consistent engagement between health care emergency managers
- Underscores the value of exercises
- Ongoing training for health care facilities in incident command structure
- Review prioritization of health care facilities for infrastructure restoration (example: elevators, water supply)
- Opioid/Addiction Treatment Center Planning
- Assisted Living Homes
- Other health care provider types
  - Need non-hospital providers to consider themselves essential and remain open



# Questions?

