## Emergency Preparedness from a Nursing Home Resident's Viewpoint

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## Agenda

- Overview of the Emergency Preparedness Regulation
- Planning for a disaster from a resident's viewpoint
- Experiencing an emergency from a resident's perspective

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## Why this Population?

- The number of Americans aged ≥65 is expected to double from 40.2 million in 2010 to 88.5 million in 2050
- Those aged ≥85 (oldest old) are projected to triple from 6.3 million in 2015 to 17.9 million in 2050
- Almost 42% of the nursing home residents were ≥85 years of age, 50% had a diagnosis of Alzheimer's disease, 48% had a diagnosis of depression, and 32% diabetes.

(US Census Bureau, 2012).

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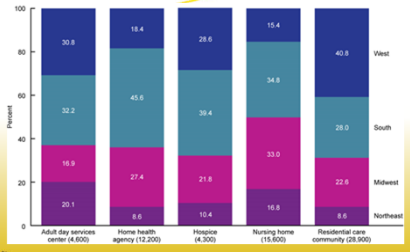
Percent distribution of long-term care services providers, by sector and region: United States, 2016

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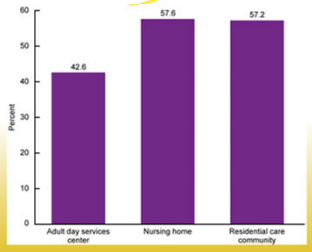
SOURCE: NCHS, "Long-term Care Providers and Services Users in the United States: 2015–2016," Figure 1.

Percentage of long-term care services providers that are chain-affiliated, by sector: United States, 2016

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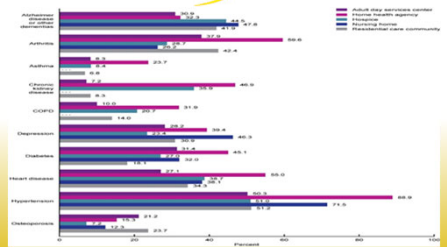
SOURCE: NCHS, "Long-term Care Providers and Services Users in the United States: 2015–2016," Figure 5.

Percentage of long-term care services users with selected diagnoses, by sector: United States, 2015 and 2016

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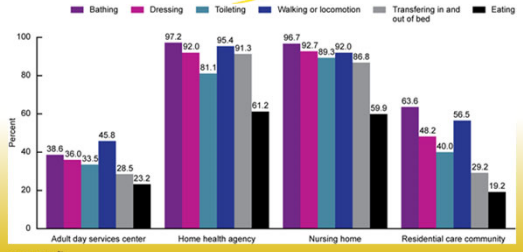
- - - Data not available.

SOURCE: NCHS, "Long-term Care Providers and Services Users in the United States: 2015–2016," Figure 24.

## Percentage of long-term care services users needing any assistance with activities of daily living, by sector and activity: United States, 2015 and 2016




SOURCE: NCHS, "Long-term Care Providers and Services Users in the United States: 2015–2016," Figure 25

## Impact of these Statistics on Older Adults

- Older adults are more vulnerable to natural disasters for many reasons, including post-disaster psychological stress, inability to comply with evacuation procedures, decreased cognitive abilities, limitations of mobility, vision/hearing impairments, and fewer economic resources, which can reduce willingness or ability to evacuate
- In a study of post-Katrina harm, 30 days post-Katrina, there were an additional 277 deaths and 872 hospitalizations. At 90-days, 579 deaths and 544 additional hospitalizations were observed in this demographic (Dosa, et al, 2012). Other studies found that almost one half of the deaths following Hurricane Katrina were adults aged 75 and older

## USDHHS, Office of Inspector General 2006 Report Findings

- 94% of US NH met Federal Standards for emergency planning
- 80% of US NH conducted sufficient emergency training
- Those who evacuated and those who sheltered-in-place both experienced problems following Hurricane Katrina
- Emergency plans were not followed, nor were they always complete
- Lack of coordination between NH & local & state emergency agencies

## USDHHS, Office of Inspector General 2012 Report Findings

- 92% of US NH met Federal standards for emergency planning
- 72% for sufficient emergency training
- Most NH did not use the checklist to develop their emergency plans
- None of the NH plans included all 70 items
- Tasks often not included:
  - staffing back up plan
  - evacuate &/or shelter staff's family with facility
  - staffing requirements
  - ensure staff accompany residents during evacuation

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## USDHHS, Office of Inspector General 2012 Report Findings (cont.)

- Resident care tasks often not completed
  - Procedures for resident illness or death in route to evacuation site
  - Mental health and grief counselors at evacuation site
  - Resident care during evacuation
  - Contact information for next of kin
  - Specific characteristics and needs of residents
    - DOB, diagnosis, current drug and diet regimens, & method to account for individuals during & after evacuation

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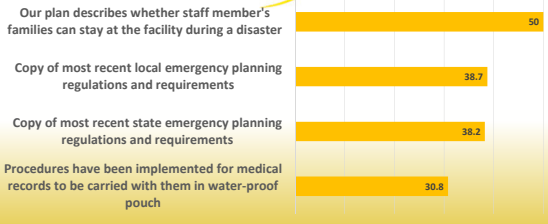
## Planning Tasks with ≥ 20% Non Initiated

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## Evacuation Tasks ≥ 20% Non Initiated


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## Study Conclusions

More planning and sheltering-in-place tasks have been initiated or completed than evacuation tasks. This could be due to:

- newness of the task
- complexity of evacuation tasks (alternate locations and routes)
- availability of transport vehicles and or road closures
- resident acuity and risk during evacuation
- hazard vulnerabilities vary depending on location and geography

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## Key Essentials of the Final Rule

- Safeguarding human resources
- Maintaining business continuity
- Protecting physical resources

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## Four Core Elements

- Risk Assessment & Planning
- Policies & Procedures
- Communications Plan
- Training & Testing

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## Risk Assessment & Planning

- Perform risk assessment using an "all-hazards" approach, focusing on capacities and capabilities.
- Facility-based and community-based risk assessment
- Develop an emergency plan based on a risk assessment
- Must update the emergency plan annually
- Must account for missing residents

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## Categories of Threats & Hazards

- Natural hazards – hurricanes, floods, blizzards, acts of nature
- Technological hazards – accidents for the failures of systems and structures
- Human-caused incidents – intentional action of an adversary

(US Dept. Homeland Security FEMA, CPG 201, 2013)

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## Policies & Procedures

- Develop & implement policies and procedures based on the emergency plan and risk assessment
- Policies and procedures must address a range of issues including subsistence needs, evacuation plans, procedures for sheltering in place, tracking residents and staff during an emergency
- Must review and update policies and procedures at least annually

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## Communication Plan

- Develop a communication plan that complies with both Federal and State laws
- Coordinate resident care within the facility, across healthcare providers, with state and local public health departments and emergency management systems
- Must review and update the plan at least annually

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## Training & Testing Program

- Develop and maintain training and testing programs, including initial training in policies and procedures
- Demonstrate knowledge of emergency procedures and provide training at least annually
- Conduct drills and exercises to test the emergency plan

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## Emergency Fuel & Generator Testing

- Hospitals, critical access hospitals, and nursing homes
  - Generator must be located according to NFPA 99, NFPA 101, & NFPA 110 guidelines
  - Generator must be inspected, tested, and maintained
  - Must have a plan for how to keep emergency power systems operational during the emergency

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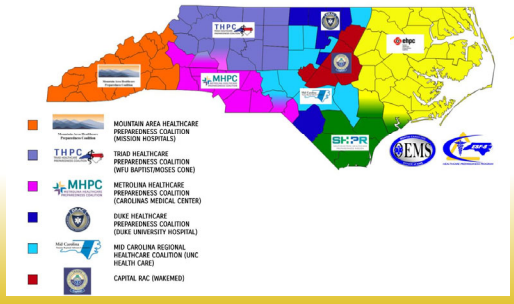
## North Carolina Healthcare Coalitions

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Source: nchealthcarecoalitions.org

## Wisconsin Healthcare Emergency Readiness Coalitions (HERC)

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## Risk Assessment & Planning

Healthcare Coalitions

Risk = Hazard * (vulnerability-resources)

All hazards approach

Facility based & Community based

Threat Hazard Identification and Risk Assessment

Outcome of the *planning process*

Plan considers all hazards & threats

Facility based & Community based

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## Policies & Procedures

Healthcare Coalitions

**Elements**

- Subsistence
- Infrastructure
- Patient Tracking
- Evacuation &/or Shelter-in-Place
- Patient Records
- Volunteer Management
- Continuity of Operations
- Resource Management

**Collaborators**

- Food, water, medical suppliers
- Electricity, water, sewage, fire detection, & fuel suppliers
- Other facilities to receive residents
- Family members (residents & staff)
- Safety & Security Agencies
- Healthcare staffing agencies
- Transportation agencies

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## Communications Plan

Healthcare Coalitions

**Elements**

- Guidelines
- Contact information
- Procedures (step-by-step instructions)
- Specific people & their backups
- How information will shared
- Track and share individual status
- Inform stakeholders
- How to change communication channels as events develop

**Collaborators**

- Emergency management (911, police, fire, & EMS)
- Acute care facilities & other LTC providers
- Patients & Families
- Staff, volunteers, & their families
- Providers & suppliers
- Utilities
- News media, regulators, state health care associations

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## Training & Testing Program

Healthcare Coalitions

**Elements**

- Based on HVA & THIRA, Policies & Procedures, & Communications Plan
- Evaluates effectiveness of program & employees know what to do
- Initial & ongoing (annually)
- Testing (drills, exercises, etc.)
- Paper-based table top & community-based full-scale

**Collaborators**

- Appointed & elected officials, community stakeholders establish multi-year exercise priorities (HSEEP)
- Emergency management (911, police, fire, & EMS)
- Acute care facilities & other LTC providers
- Patients & families
- Staff, volunteers, & their families
- Providers & suppliers
- Utilities

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## A study of LTC decision-making

- Explore and describe the shelter-in-place and evacuation decisions made by long-term care organizations in preparation for Hurricanes Michael and Florence
- Learn best practices that contributed to ensuring the safety of residents and staff

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## Data Collection

- Convenience sample of Administrators, Executive Directors, Regional Vice Presidents and other LTC professionals in NC & FL
- Interviewed 19 LTC professionals between Dec. 1, 2018 – Mar. 30, 2019.
- An interview guide with open-ended questions
- No recordings only notes taken by interviewers

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## How were decisions made to SIP or Evacuate?

- Monitor storm
- Attend local Emergency Management Meetings
- Communication with Emergency Management
- Location – history of flooding, bridges damaged no way in or out
- Most initially planned to SIP

Who made decision

- Corporate officers and Administrators
- Mayor and/or Emergency Management mandatory evacuation

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## Preparations: Medication, Generator & Fuel, Etc.

- Extra 1-2 weeks of medications & E-kits had extra supplies
- Sandbags, plywood for windows
- Backup generator (onsite or nearby) generator tests, calculated fuel use, reduced HVAC use, dimmed lighting, refuel at half-way mark

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## Preparations: Food

- Use of normal supplier (US Foods, Sysco, etc.)
- Pre-ordering double and triple amounts
- Most ordered 7-10 day supply of food
- Use of emergency contracts
- Some stocked supply of nonperishable foods year-round
- Evacuated facilities had their food orders rerouted to destination facility
- No reports of running out of food

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## Providing Food to Residents, Staff, Families

- Up to 100 extra people SIP in facility
- Feeding residents first
- Meal patterns – boxed meals, buffet lines, dining shifts, 3x day
- Dining rooms used as sleeping quarters
- Asking staff to bring their own food for family
- Hiring catering company to reduce burden on kitchen staff
- Evacuated residents provided with food during transportation

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## Preparations: Water

- Use of different suppliers – water distributors (Culligan)
- Ordered extra bottled water for potable water
- Water bladders, filled up sinks, gallon drums, water barrels for non-potable water
- Some noted trouble storing vast amount of water
- Estimated needs based on X gallons/day/resident

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## Preparations: Supplies

- 10-12 days of paper goods, briefs, wipes, gloves, etc.
- In one case, supply delivery late due to blocked roads - had to borrow from other facilities
- Flashlights, batteries, testing weather radios
- Air mattresses, linens, pillows, towels
- Games and toys to keep children occupied

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## Preparations: Caring for Families & Pets

- Families of both residents and staff SIP with facilities
- Used large rooms (dining, therapy, etc.) for family members
- Some facilities provided air mattresses and food – not all
- Pets were crated or kept in shower rooms
- Few resident families evacuated their residents with them

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## Staffing – no issues

- Policies about work during storms
- Staff had been trained and understood expectation
- Staff arrived early and stayed
- Felt safe in building
- Brought families & pets

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## Staffing - challenges

- Evacuated with families
- Let staff go home after hurricane, couldn't get back once started to rain
- Couldn't get in once rains came and roads flooded
- Due to flooding, buses were not running (Raleigh and Winston Salem)
- Young college students evacuated with parents
- National Guard rescued on family after they had gone home
- Terminated staff that violated attendance policy / rewrote attendance policy during disasters

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## Impacted by storm – Services made Available

- Ranged - Many staff lost everything – none aware of
- Flooding, roofing and/or siding torn off – homes and apartments
- Foundations to provide cash for essentials, gift cards
- Started Go-FundMe account
- Paid staff quickly, bonuses
- Provided hotels for short period or stay in building
- Donations – families and staff shared what they had
- Churches – donated essentials
- FEMA

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## Resident Issues

- Many reported – none
- One resident needed to be transported to hospital – airlifted
- One resident severe anxiety – SW sat with him
- One resident had a fall – needed stitches
- Operate as usual, maintain consistency, achieve normalcy
- Kids everywhere, big party

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## Evacuation: Where and How

- Projected a Category 4 storm
- Sister facilities in-land
- In-land flooding was near rivers
- Charter bus, limousine, facility vans, ambulance
- Many had multiple transportation contracts or back up contracts
- Not all charter buses are wheelchair accessible
- Stretcher bound residents emergency management transport
- Staff evacuated with residents, had a supply of food and water for trip

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## Evacuation: Equipment & Supplies

- Rented trucks, facility vans, & sister facility vans
- Took medication carts, resident equipment, oxygen, c-pap machines, tube feedings,
- Resident clothing, wheelchairs, walkers, briefs, supplies

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## Staff roles in evacuated locations

- Cared for their residents
- Tried to house evacuated residents together
- Nurses and CNAs Regular nursing duties
- Housekeeping, maintenance, & non-clinical staff acted as sitters and kept residents company, and brought them food and water
- At times cultures between staff of two buildings clashed

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## Resident issues after evacuation

- Had to borrow meds as meds didn't arrive with residents
- Residents confused after long bus ride
- Ride hard on residents and needed assistance ambulating
- Had a resident go to ER in middle of evacuation – no way to pick up resident from hospital- used Emergency Medic to transport
- Had to discharge residents to non-sister facility – very hard on residents, families and staff
- Culture shock, one resident had heart attack
- Difficult getting in touch with physicians after storm

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## What contributed to safe outcomes?

- Previous experience - prepare way in advance
- Communication lots and regularly – 'over communicate'
- Maintaining a prepared status – year round, lots of unknowns
- Review vendor contracts annually – make sure can adhere
- Having enough supplies to feed, staff, families and community if necessary
- Evacuate early, packed over weekend and started transporting residents on Monday
- Followed company policy, planning, training and testing policy

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## Challenges of Evacuating Residents

- Physiological frailty – loss of skeletal muscle & strength, reduced bone mass, hearing & vision loss, decreased functional ability, co-morbidities, & loss of independence
- Psychological distress
- Cognitive impairment – 50% of nursing home residents, many residents symptoms of mental illness
- Limited social support networks – fewer emotional support resources, friends and family nearby who visit

(Claver, Dobalian, Fickel, Ricci, Mallers, 2013)

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## Communication Plan

- Residents with cognitive decline
- Residents who understand the emergency preparedness plan
- Communication with families
  - Concerned about changes in resident's condition
  - Keeping families informed of building status and updates

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## Resident – Testing Emergency Plan

- Alarms, sounded or quieted?
- Hallway, wing, and/or building evacuations
- Participation in a community-wide drill
- Informative or disruptive for resident?
- Drilling/testing a risk identified threat (act of terrorism, infectious disease, fire, gas leak/explosion, flood, derailed rail car, etc.)

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## Resident – Shelter-in-place

- Room changed or have a roommate changed
- Meals are different – menu, time delivered, staff assisting
- Hallways dimmer – to conserve generator fuel
- No air conditioning / no heat
- Stress because extra people in the building
- New staff providing care
- 'Like a party' children and dogs

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## Resident – Shelter-in-place

- Family can't get there – worried about family
- Stress – remembers previous storms and experiences
- Medications and supplies can't be delivered
- Previous disaster experience trigger thoughts and stress

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## Resident - Evacuations

- Transfers to multiple facilities breaks up relationships between residents and residents and staff
- Long bus rides, not wheelchair accessible, need to be lifted, uncomfortable seats, very tired when arrive
- Disconnected from stability, loss of independence

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## Family Functions Informal Networks

- Family functions well, it will adapt to crisis
- If family fails to function, maladaptations may result including low psychological well-being
- Informal networks – family and friends rather than formal networks – governmental organizations were most critical sources of emergency aid and basic items for Katrina survivors.

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## Relocation versus Home

- Home
  - Related to healthy aging
  - Perceived sense of control
  - Strong cognitive ties are formed
- Relocation
  - Major stressor
  - Creates uncertainty
  - Postdisaster distress – PTSD, depression, stress, & functional difficulties (Hamblin, et al., 2009: Kamo, Henderson, & Roberto, 2011)

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## Evacuation Challenges

- Difficult and fraught with unpredictability
- Volatility of the storm
- Challenges finding 'like facility' who will accept residents
- Appropriate transportation – stretchers, wheelchairs, etc.
- Routes open and passable
- Heavy traffic increases drive times

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## Shelter-in-place Challenges

- Adequate staffing
- Family members and pets SIP
- Challenges in providing care during power outage
- Generators inadequate in providing care over a long period of time
- Utilities do not consider nursing homes 'priority organizations'
- Conserve fuel by having 'hot' and 'cool' zones, dimming lights, calculating fuel needs
- No laundry – no clean linens

(Hyer, Brown, Christensen, Kali & Thomas, 2009)

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## Psychological first aid

- Provides residents with needed resources that can increase sense of empowerment, hope and restore dignity.

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## Psychological First Aid

- Consistent with research on risk and resilience following trauma
- Applicable and practical in field settings
- Appropriate for developmental levels across the lifespan
- Culturally informed and delivered in a flexible manner

(Brown & Hyer, 2008)

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## Behaviors/Triggers

- Disoriented
- Confused
- Suspicious
- Frantic or agitated
- Panicked
- Withdrawn/shut down
- Irritable

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## Posttraumatic stress reactions

- Intrusive reactions
- Avoidance and withdrawal reactions
- Physical arousal reactions

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## Barriers to adhere to evacuation orders

- Older adults living in the community need assistance with transportation, securing their homes, and evacuating pets
- Have physical health and psychological barriers
- Older adults in New Orleans, Metairie, & Kenner
  - 32% physical disability, 17% required special equipment, >50% women, > 75 years of age, & were unmarried.
  - Many were in poor health, lacked transportation, financial resources, and nearby family support

(McGuire, Ford, Okoro, 2007)

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## Challenges Older Adults Experienced

- Community dwelling older adults coped by
  - Leaning on spirituality
  - Manifesting positive attitudes
- Challenged obtaining basic resources (i.e. food, water, clothing, & shelter)
- Unable to contact friends or family - no cell phone service
- Public transportation limited
- Bank cards didn't work, SS checks were delayed due to relocation

(Henderson, Roberto & Kamo 2011)

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## Coping mechanisms

- Positive attitudes – thankful, grateful, hopeful
- Modified thinking – moving on, acceptance, surviving, managing,
- Staying busy
  - Activities: chores, writing music, crafts, exercise, volunteering, working, etc.
  - Socializing: talked to friends and family, visit with others
- Spirituality – prayed, meditated, sung, read bible, exercised faith in God

(Henderson, Roberto & Kamo 2011)

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*Thank you for spending time with me today!*


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