

Information and Communication Technology (ICT) and Emergency Management Communication: Lessons from the 2020 Hurricane-Pandemic Wave

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Introduction

- A pandemic during the Atlantic hurricane season?
- What does this mean for communication and information sharing? A fiasco maybe? Double Trouble –Absolutely!

Research Question

- What are the opportunities and challenges for information and communication technology (ICT) in emergency management communication during the 2020 hurricane-pandemic wave?

Significance of the Study

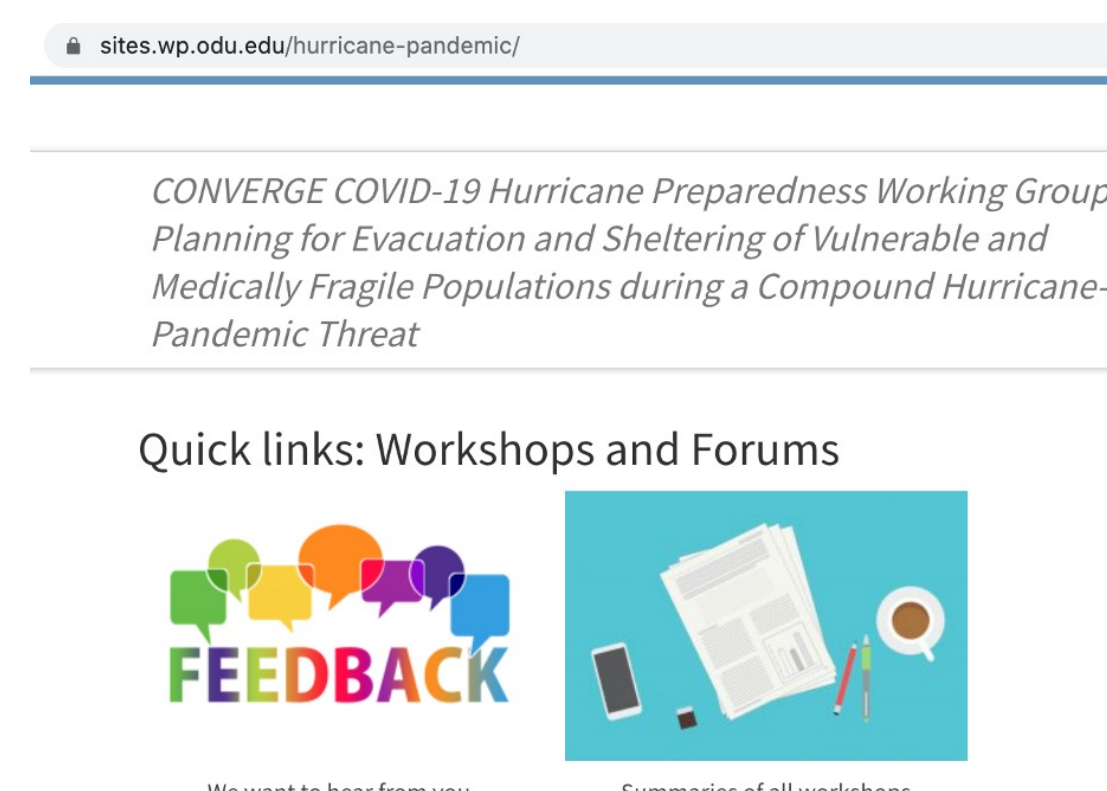
- Disaster planning is cross-cutting, requiring cross-sector approaches to develop guides and strategies
- The most vulnerable groups in society are at risk during disasters: the homeless, unemployed, elderly, etc.
- Cross-sector approaches implemented and sustained during and after disasters: public, private, civilian, non-profits, military, schools, first responders, etc.
- Communicating and information sharing during disasters can help to mitigate against dangerous risks

Methods

- 6 Online Workshops were led by the University of South Florida and Old Dominion University in summer 2020
- 20 States & 17 Universities were represented at the sessions
- 265 Professionals & Experts attended the workshops and shared insights on hurricane-pandemic planning
- Qualitative Data Analysis (QDA) provides for the analyses of lived experiences and examination of the phenomenon
- Constant Comparative Approach (CCA) used for coding and analyzing the workshop summaries



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Results

Expert knowledge informing our ICT-Com Guide

- “Traditional modes of face-to-face outreach not possible with COVID-19 (e.g., shift to online and media communications).” - Workshop 1
- “Ensuring strong communication lines with individuals and groups that can support the efficient delivery of services to all communities.” - Partners and Emergency Management Agency Support Manager, Workshop 1
- “Suggested strategy: Assembling and distributing local-regional contact information for subject matter experts and technology experts.” - Workshop 2
- “Timely, accurate, clear and comprehensive lifesaving and life-sustaining messaging that is accessible to all.” – Digital Communications Specialist, Workshop 3
- “Contribute to actionable research regarding effective risk communication for varied stakeholder groups. Particularly, to identify risk communication that builds stakeholder capacity and resiliency.” - Workshop 4

Discussion

The Practical Steps

- Risk assessment & consultation needed in early stages
- Stakeholder and needs assessment for feasible strategies
- Identifying concerns/ technological gaps from early stages
- Proactive strategy implementation for e-resilience thrust

Implications for Practice

- ICT-Com Guides should be inclusive. Plan for the vulnerable groups in society, e.g., internet access, shelters, necessities
- ICT-Com Guides takes more time and resources during emergencies
- Involving several groups, disciplines, and sectors, e.g., who else needs to be at the table?
- Expert-led and data-driven decisions, e.g., for team-building, implementation and resource pooling
- Proactive risk communication and information sharing, e.g., trustworthy sources and community resources
- ICT tools do not thrive in isolation of human support

Theoretical Underpinnings

- Punctuated Equilibrium Theory (PET) advances that disasters and emergencies such as the hurricane-pandemic wave cause punctuations in the policy and strategy processes (1). These punctuations lead to reactive and exponential policy changes like what we experienced in 2020. ICTs were key enablers of effective communication during the ‘double jeopardy’
- Digital-Era Governance (DEG) advances that ICT-led governance is the order of the day (2). What we saw during the hurricane-pandemic wave was not an anomaly

References

1. Repetto, R., & Speth, J. G. (2008). *Punctuated Equilibrium and the Dynamics of U.S. Environmental Policy*. New Haven, CT: Yale University Press.
2. Dunleavy, P. (2008). *Digital era governance: IT corporations, the state, and e-government*. Oxford: Oxford University Press. No.1, 138-145.

ICT Emergency Management Communication Guide (ICT-Com Guide)

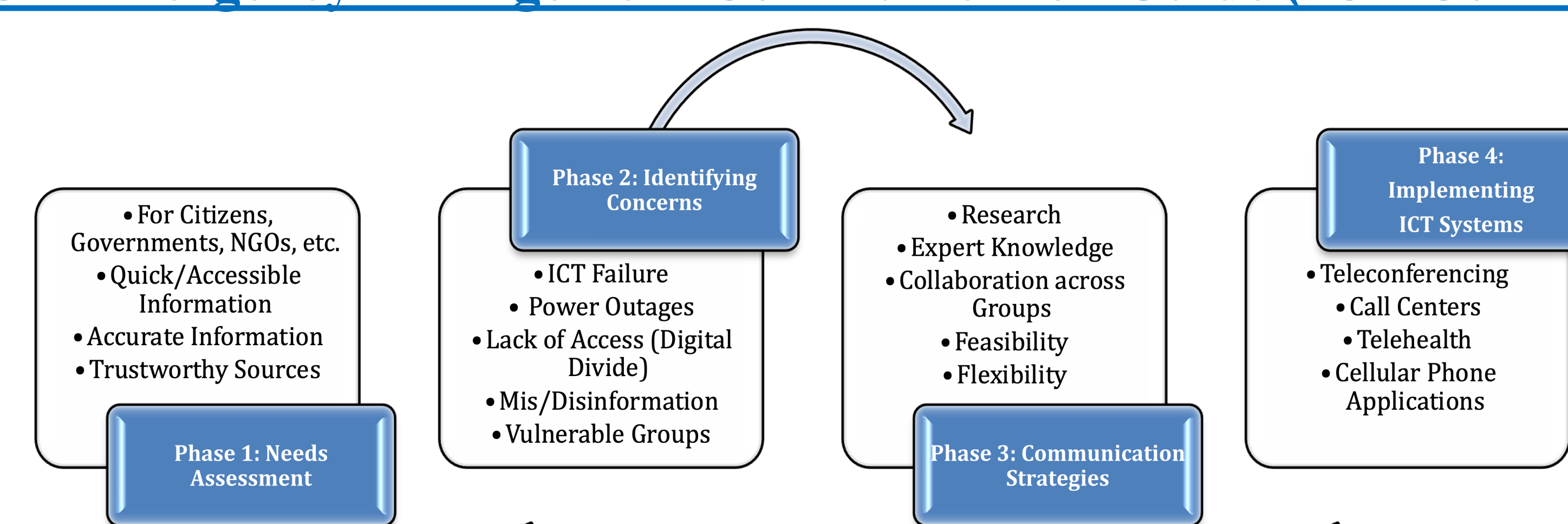


Figure 1: Sequential ICT-Com Guide developed from the Hurricane-Pandemic Workshops

Best Practices

- Flexible and feasible communication plans
- Technological readiness for e-resilience
- The communication barriers must be assessed
- Resourceful plan Bs available for implementation
- Evidence-based and expert-led decisions
- Multi-sector approaches for optimized planning

Areas for Future Research

- Examining the national data for similar communication plans
- Areas for appraisal - Who? Where? How?
- Quantitative study to measure the ICT-Com Guide variables and effectiveness during the hurricane-pandemic wave
- Develop quick guides and best practices for emergency communication, especially for serving vulnerable groups

Conclusions

- The ICT-Com Guide is not exhaustive, static, entirely linear, nor is it a one-size-fits-all model. The guide should be tweaked across various settings for serving different groups and communication needs
- Cross-sector collaboration plays a key role in emergency management communication. Stakeholder analysis and resource pooling are necessary from start to finish
- ICT solutions come with barriers and challenges. Constant appraisal, feasibility tests, and data-driven policies and solutions are necessary

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