

Understanding The Use Of Crisis Informatics Technology Among Older Adults

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EMERGENCY



WILDFIRE



TORNADO



FLOOD

Social Media



Safety Check has been activated
in your area

Taylor, several people in your area have marked themselves safe during The Carr Fire. We wanted to make sure you're ok, too. Mark yourself safe to share a post with friends or [learn more about the incident](#).

⚠ What Happened
Wildfire

🕒 When
July 23, 2018

DOESN'T APPLY TO ME

I'M SAFE

What are Twitter Alerts?

[Learn more](#)



During a crisis or emergency,
FEMA will send you Twitter Alerts.



Alerts from FEMA will be updates
with time-sensitive, critical
information related to the unfolding
event.

Crisis Apps

Mobile apps that provide specific features & functions needed during crises, emergencies, or disasters



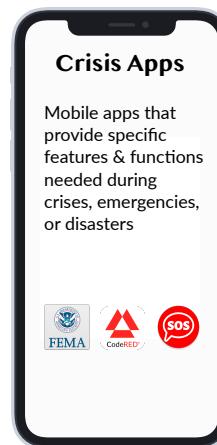
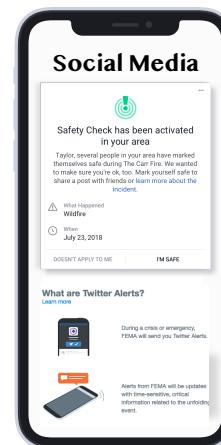
FEMA



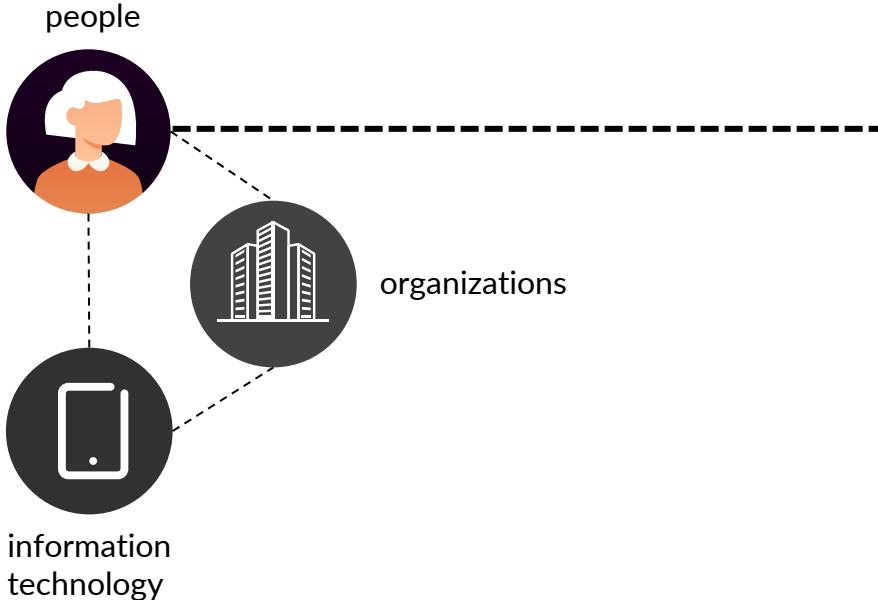
CodeRED®



Crisis Informatics



Crisis Informatics

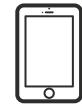


*How specific populations
(e.g., older adults) use
crisis informatics technologies?*

67% older adults
use the Internet



42% older adults
own smartphones



EMERGENCY

Sense of **control and dignity** may be threatened during emergency evacuation



RESEARCH QUESTIONS

How have **older adults** used **crisis apps** & what are their perspectives on using such tools in the future?

To what extent do existing crisis apps address **older adults' values** during emergency situations?

METHODS

*A qualitative study
with 16 older adults*



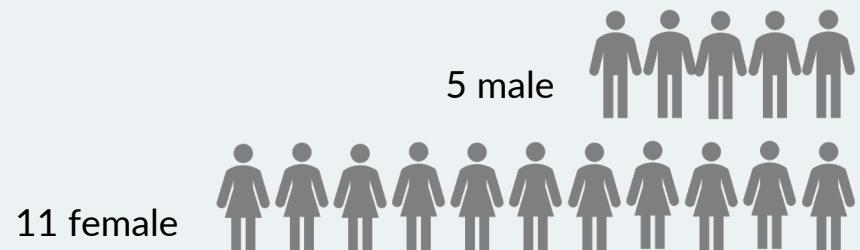
PARTICIPANTS

A median age of 76.5 years old ($IQR = 10.5$)

12 out of 16 owned smartphones



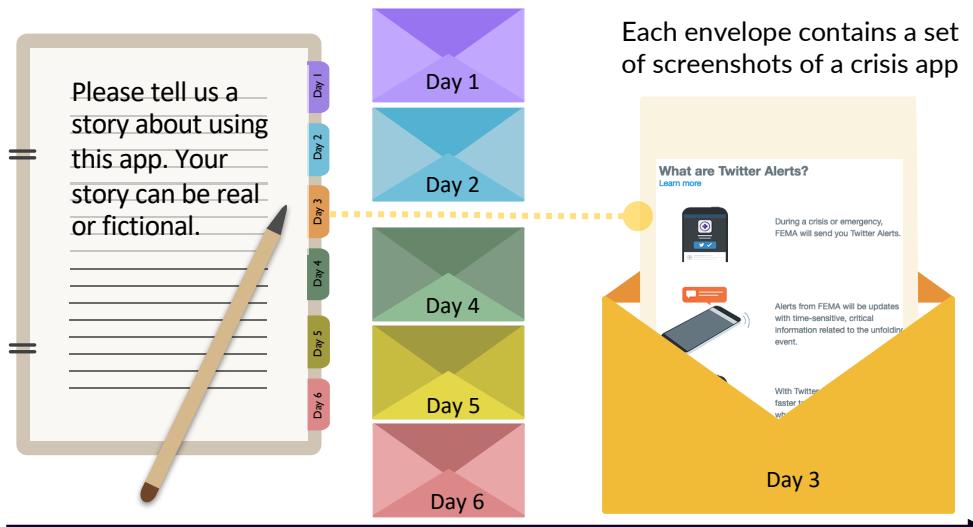
All were affected by a gas explosion emergency



STUDY DESIGN



Session 1: Interviews



*Between Session 1 & 2:
Exploratory Diary Activities*

Each envelope contains a set of screenshots of a crisis app



Session 2: Interviews



FINDINGS

How did our participants *first* learn about the gas explosion?

Half participants: through **interpersonal channels** 

5 participants : through **Reverse 9-1-1** 

3 participants : through **crisis apps** 



Lack of Awareness and Engagement

Only $\frac{1}{4}$ participants were aware of crisis apps



Older Adults Acknowledged The Usefulness of Technology-driven Alerts



Crisis apps could help people stay on top of crisis situations & react properly

They were willing to consider using these technologies

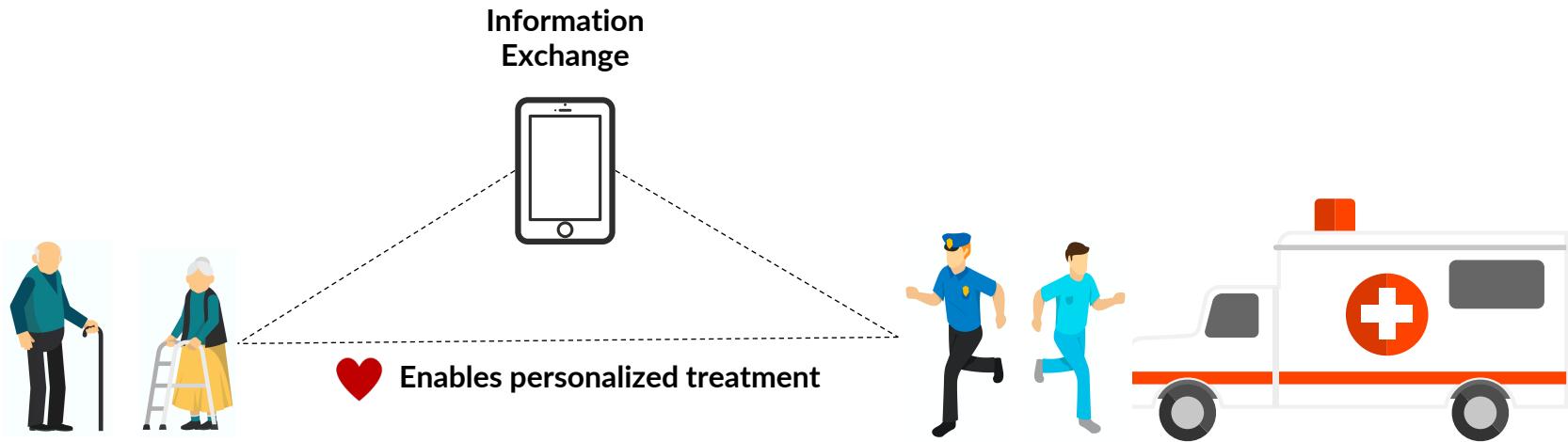
Privacy & Information Security Concerns

Trust issues with the platforms

Older adults' vulnerability to misinformation in times of crisis



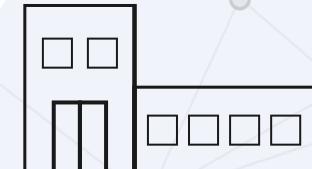
Supporting Connections to First Responders and Personalized Treatment Provides Reassurance



Moving Forward & Design Implications

Promoting Awareness and Engagement

Leveraging community-based organizations to increase awareness of and engagement with new tools (e.g., crisis apps)



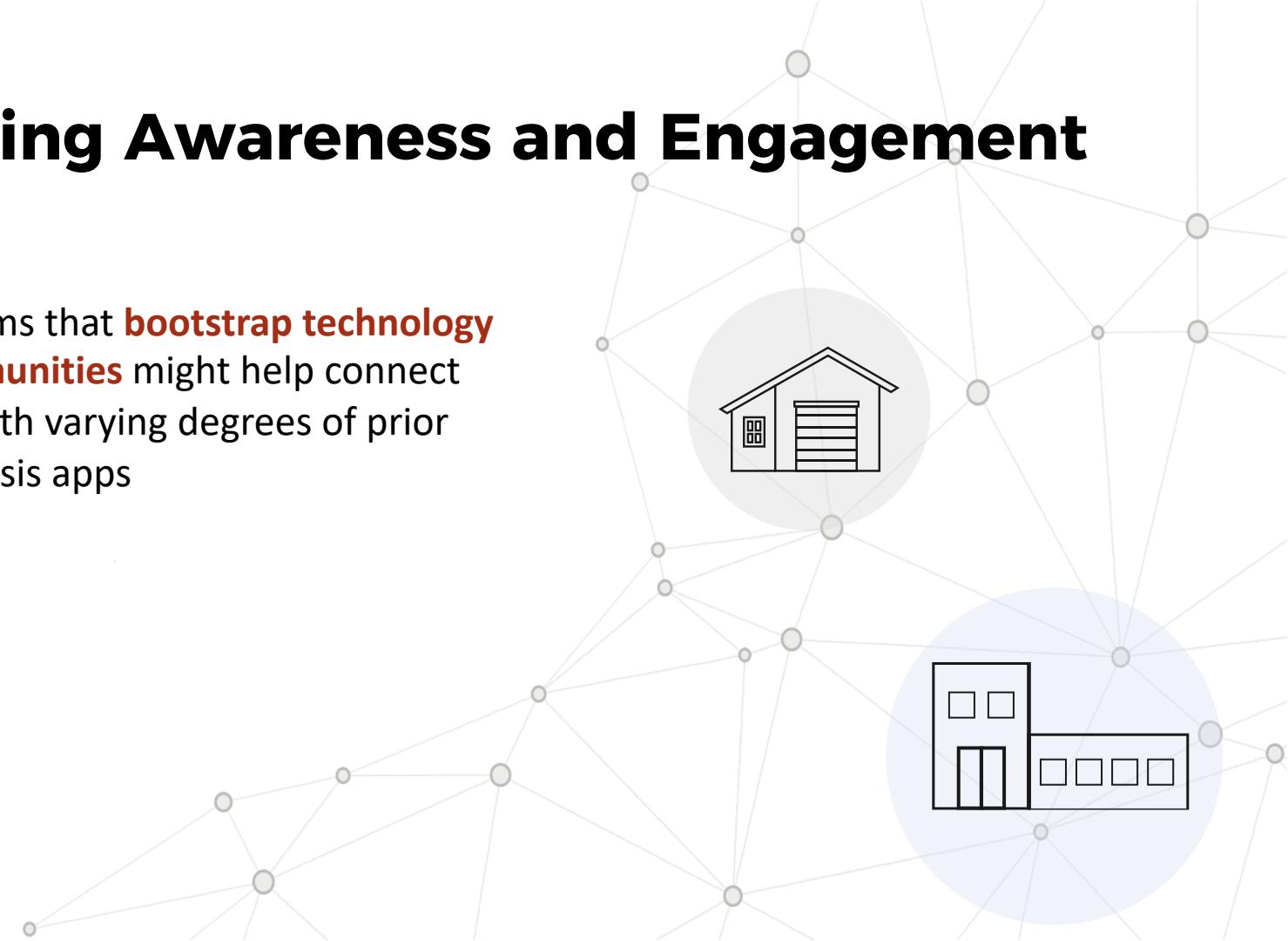
Promoting Awareness and Engagement

Design tools to **connect**
older adults and neighborhood organizations



Promoting Awareness and Engagement

Design platforms that **bootstrap technology**
learning communities might help connect
older adults with varying degrees of prior
exposure to crisis apps



Addressing Human Values as Design Goals

Open Research Questions

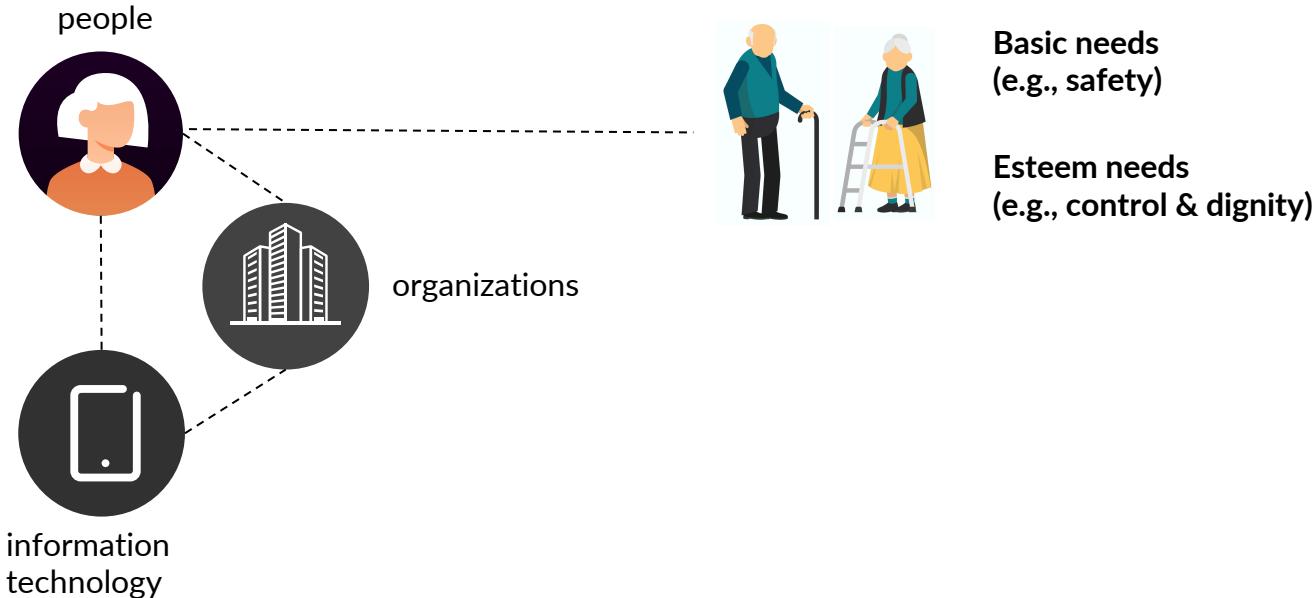
How sense of control and dignity can be impacted **when technology fails to work** as expected or **when trust in such tools are low?**

Can the **same technology** be used to **address multiple populations?**

Crisis Informatics

X

Older Adults



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