

Flood impacts on healthcare facilities and disaster preparedness – A systematic review

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Introduction

- **Floods** pose significant threats to human health, including fatalities, damage to **healthcare facilities (HCFs)**, and disruptions to health services.
- We systematically reviewed scientific articles:
 - What are the **critical impacts of floods** on HCFs?
 - What are the **risk management measures** implemented by HCFs?



Memorial Medical Center – August 2005, New Orleans, USA
Source: Nurseslabs



Flooded nursing home – July 2021, NL
Source: Sevagram



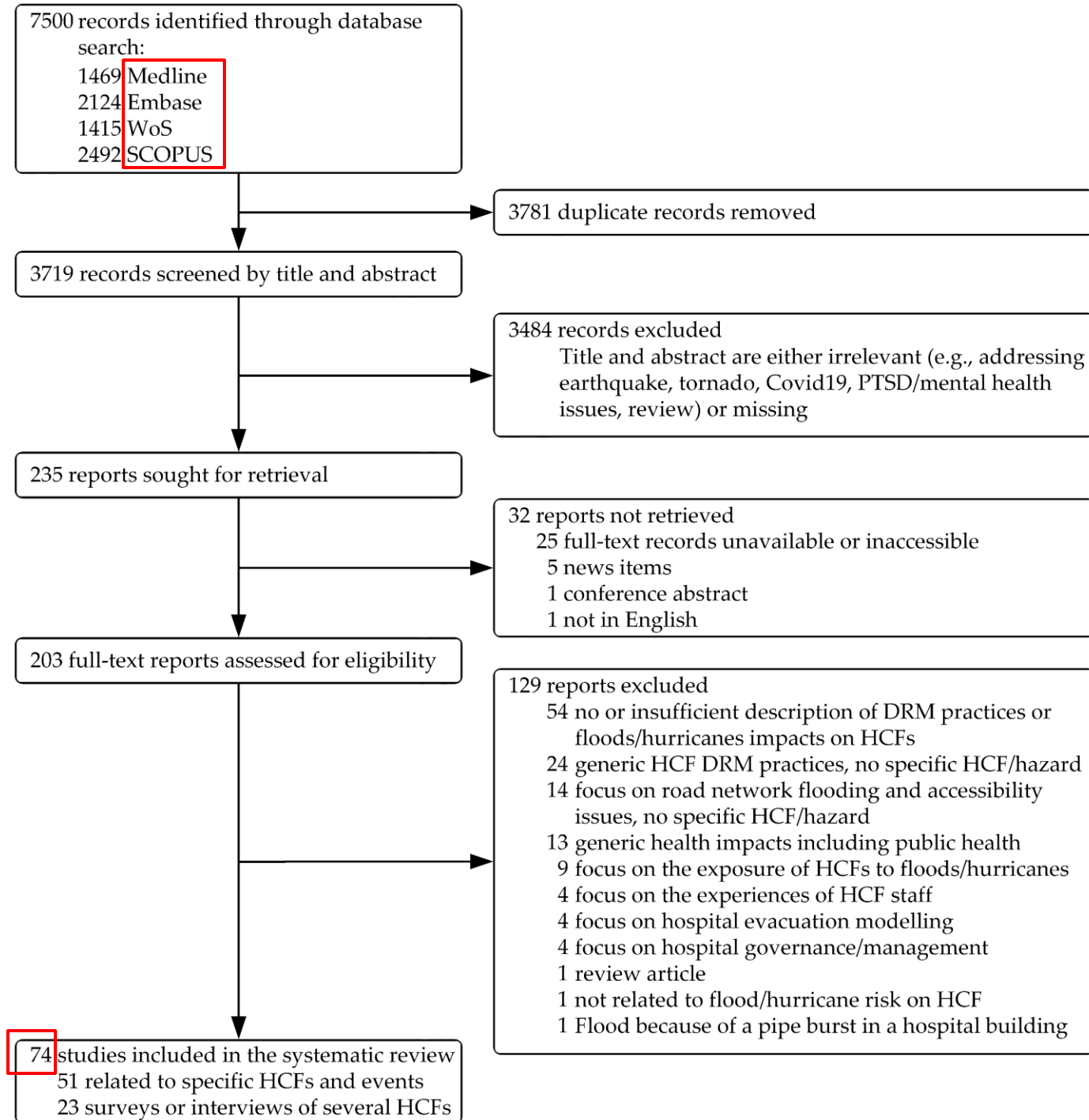
Radiology practice – July 2021, DE
Source: Rheinisches Ärzteblatt

Search strategy

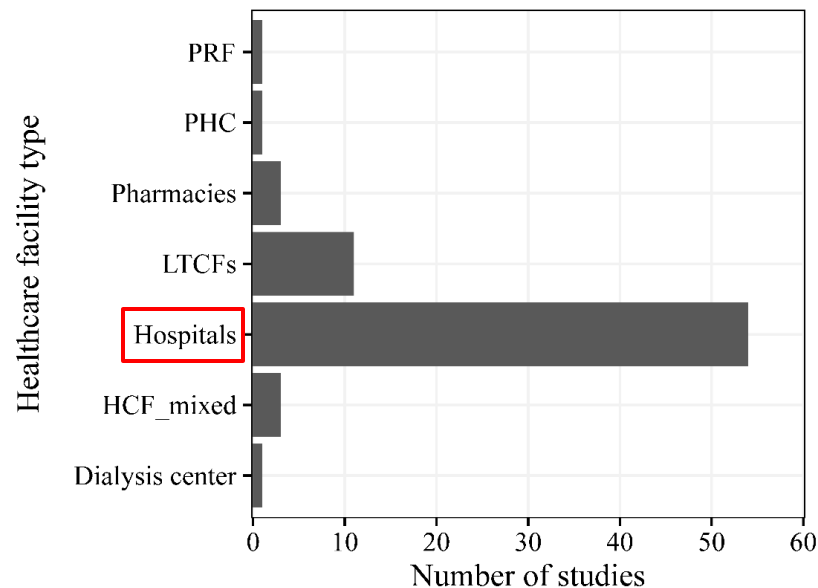
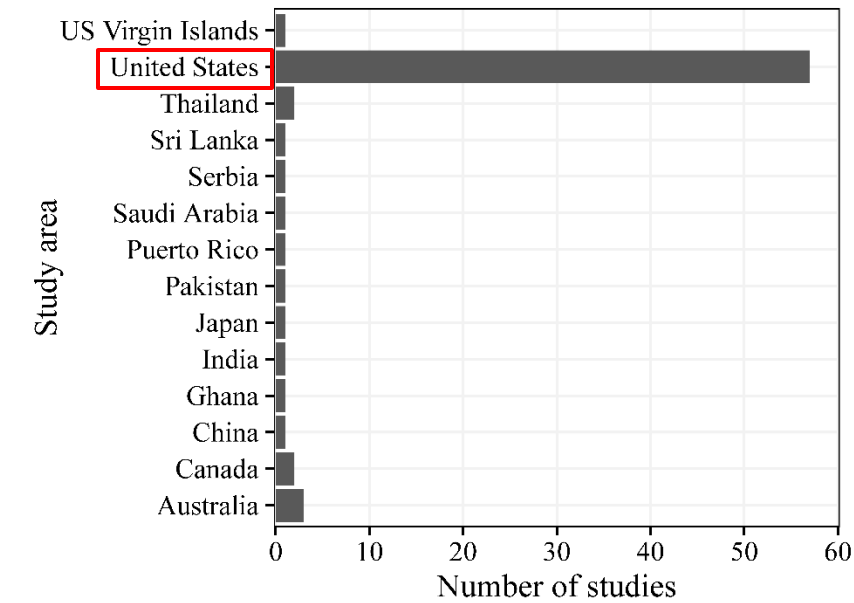
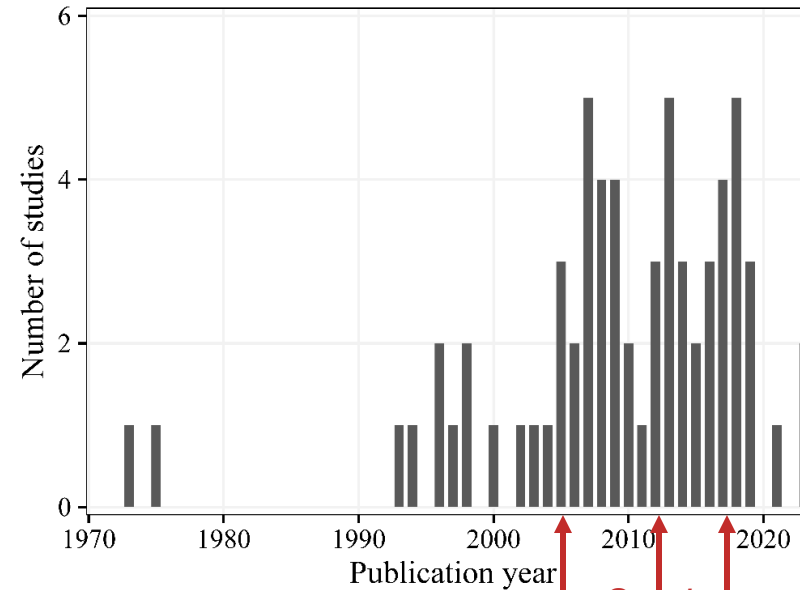
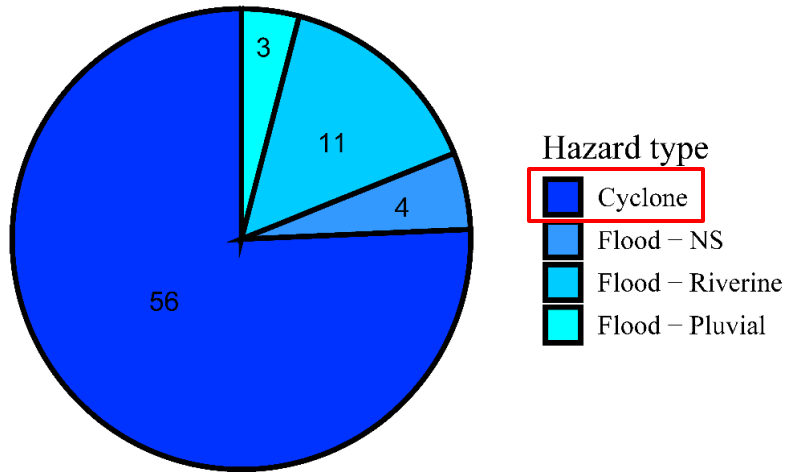
- **Publication Year** –
up to 20 November 2023
- Exclude by **Language** –
non-English records

Hazard	Healthcare facilities	Disaster risk management
Flood	Health(care) facility	Preparedness
Cyclone	Hospital	Planning
Hurricane	Nursing home	Mitigation
Typhoon	Care home	Recovery
Tropical Storm	Assisted living facility	Response
	Pharmacy	Adaptation
	Clinic	Resilience

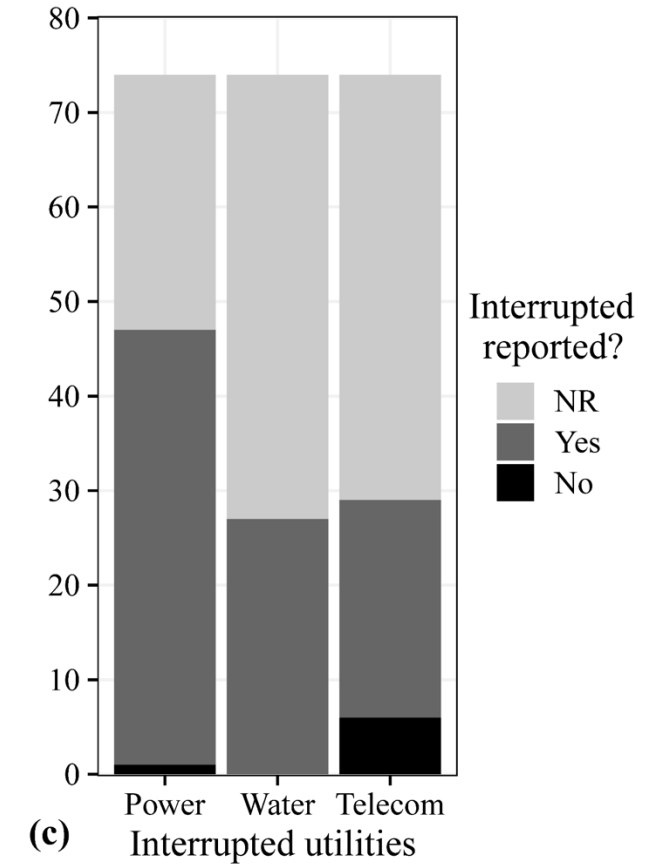
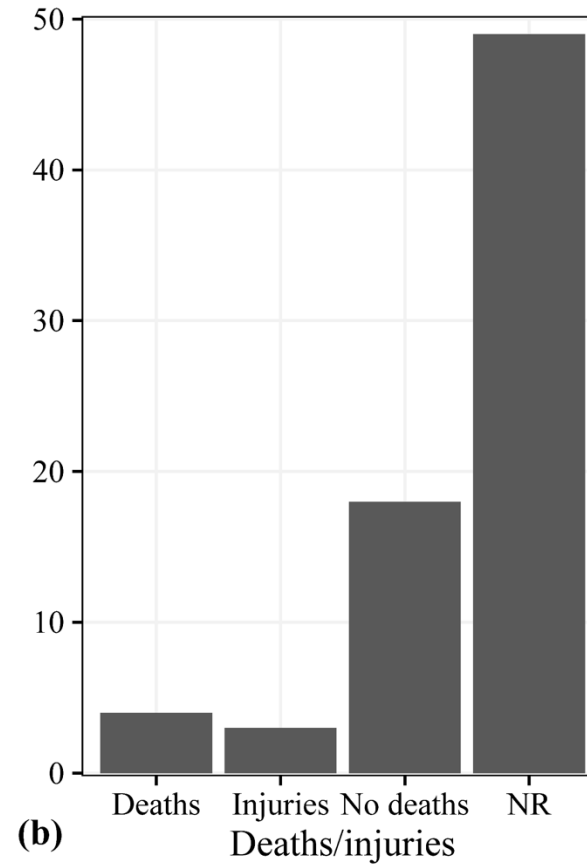
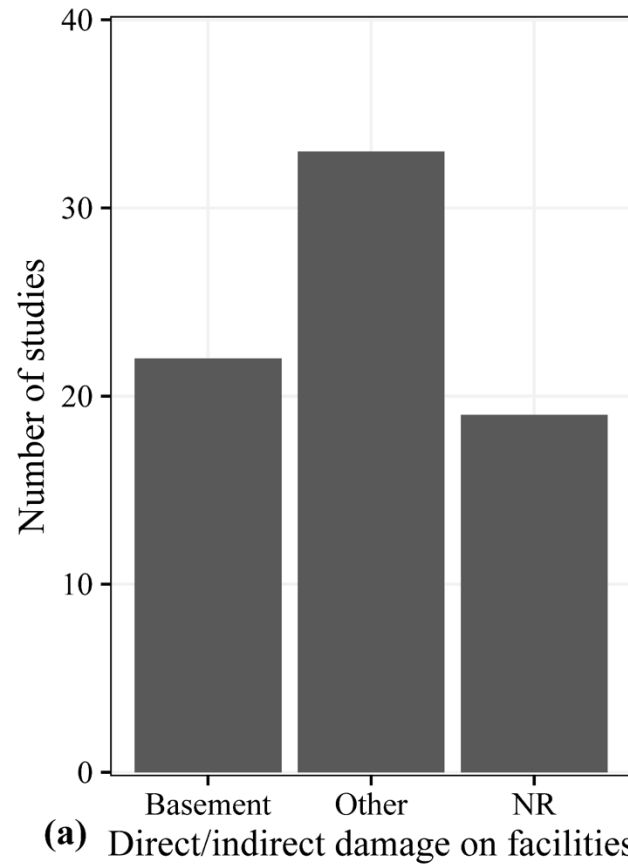
Results



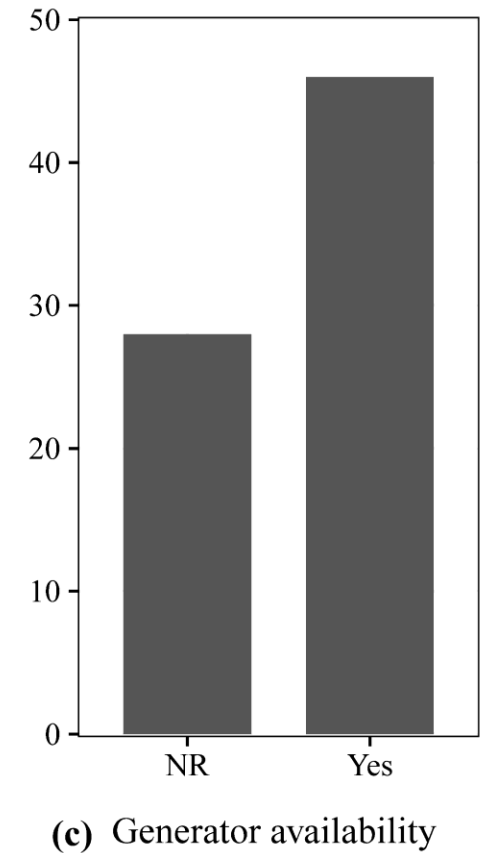
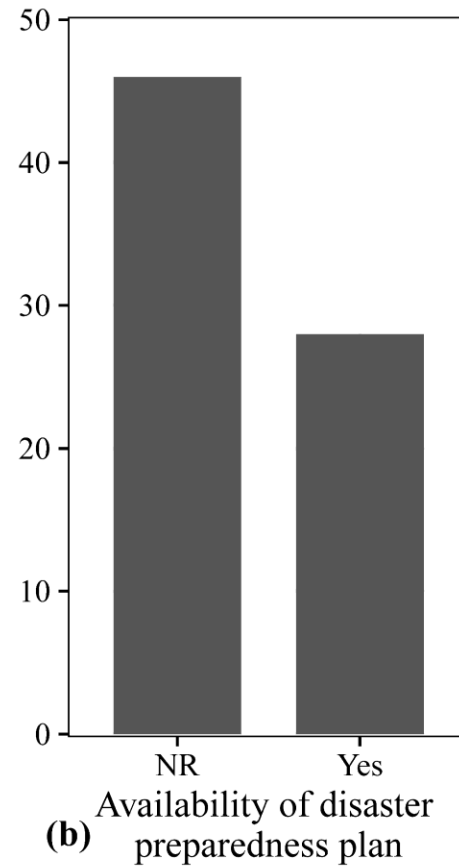
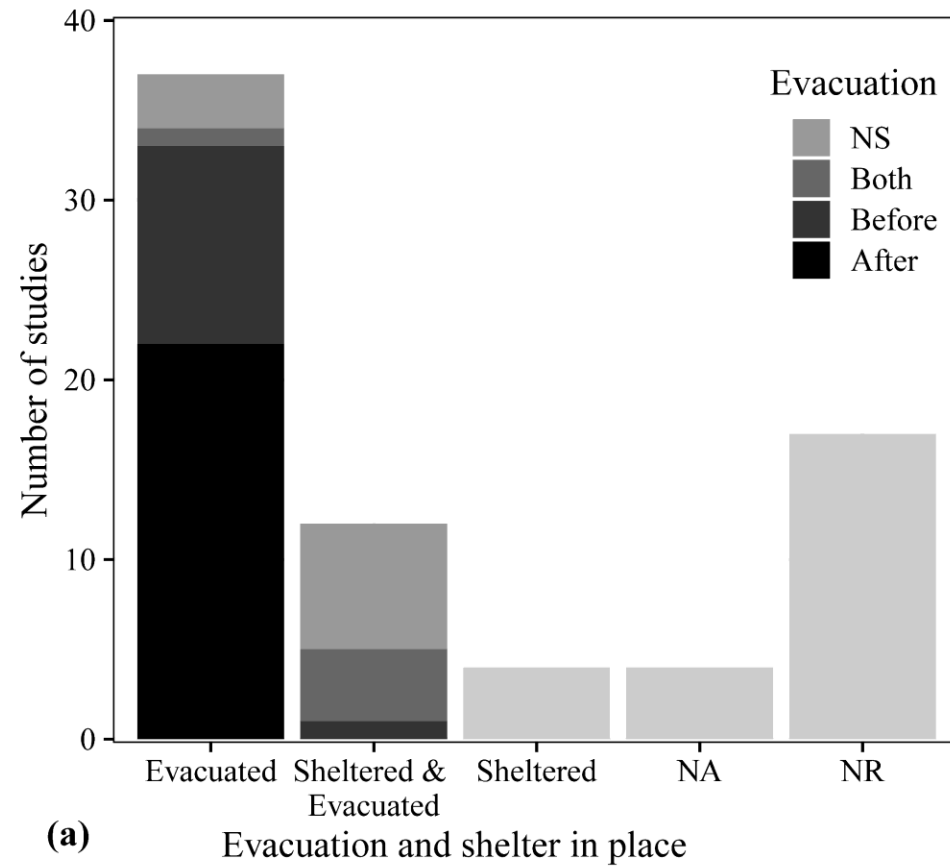
Result - characteristics of included studies



Result – reported impacts



Result – risk reduction measures



Conclusions

- Inconsistencies in the flood preparedness of HCFs - **protocols and standards**
- Flood preparedness is a multifaceted process involving various factors - organize **large-scale emergency drills**
- HCF **building codes** can help ensure the safe design, use and adaptation of the facilities
- More publications from **flood-prone countries** and on **non-hospital facilities** are needed to strengthen global evidence



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