THURSDAY, APR. 1 • 1 P.M. CDT

THE NEED FOR EVIDENCE IN SPECTATOR SAFETY AND SECURITY
An Introduction to the National Venue Safety and Security Index

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FOUNDATION OF SECURITY

Scanning
- What is the problem?

Analysis
- What is contributing to the problem?

Assessment
- Did the response work?

Response
- What can we do to improve the problem?
Aim to identify, evaluate, and summarize the findings of all relevant individual studies, thereby making the available evidence more accessible to decision makers.
FINDINGS

In a nutshell...

- Many widespread security related problems identified
- Not specific to a particular country, state or city
- No empirical studies of security problems inside venues
- Majority of empirical studies conducted by criminologists
Security Hypothesis

- Crime and disorder began to decline in the mid-90s
- Not just in the U.S., but globally
- Implementation of security technology
- Empirical evidence provides support
EVIDENCE-BASED PRACTICE

What does it mean?

- Evidence-based practice simply means to take advantage of the *known*, available research findings to help make informed decisions
- Currently (our understanding) is that there are gaps in the evidence-base
- Consider an example
EVIDENCE-BASED RESEARCH

How about the Venue Index?

- Where problem emerge around venues?
- When they emerge?
- Help inform the allocation of resources in game day context
- Assess the need for technologies
- Benchmarking
- Continuous improvement
DATA SOURCES

Where did we find the data?

- ESPN, NFL, Team Websites, Wikipedia, NOAA (NCDC), NOAA (ESRL), EPA
- Crime data from Open Source Government/Police Department Websites
- Issues we ran into
  - No standardized format for reporting
  - No standardized format for file sharing
  - Not every City had the required information, which meant we had to utilize FOIA Requests
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**NCS4**

**The University of Southern Mississippi**
Gathering venue data

- Team is compiling short descriptions of each venue.
- Examples of venue information:
  - Location and surrounding environment
    (e.g., city center, more rural, etc.)
  - Capacity
  - Types of events
  - Transportation and parking
  - Construction history
VENUE SECURITY INDEX

Approach to Analysis

- Bespoke Statistical Programs
  - Non-parametric permutation tests
  - Where
  - When
WHERE?

Cumulative Crime Counts by Distance

3,000 Meter Area around Venue

Count of Crime

Distance from Venue

Type
- Comparison
- Game

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RESEARCH
SEMINAR
SERIES

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

16
WHEN?

Cumulative Crime Counts by Minute

Three hundred sixty minutes before start and three hundred sixty minutes after

Minutes Relative to Start Time

Cumulative Count of Crime

Type of Day
- Comparison
- Game
VENUE SECURITY INDEX

Approach to Analysis

- Econometric Models
  - CRIME = HOUR + DOW + WOY + MONTH + WEATHER + AQI + ERROR
VENUE INDEX ROADMAP

Next Steps....

January 2020

June 2021

September 2021

December 2021

January 2022
VENUE INDEX ROADMAP

Conclusion

- Huge research project
- Annual benchmarks
- Continuous process
- Improved fan experience
- Better, safer, security for spectators driven by evidence
CONTACTS

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