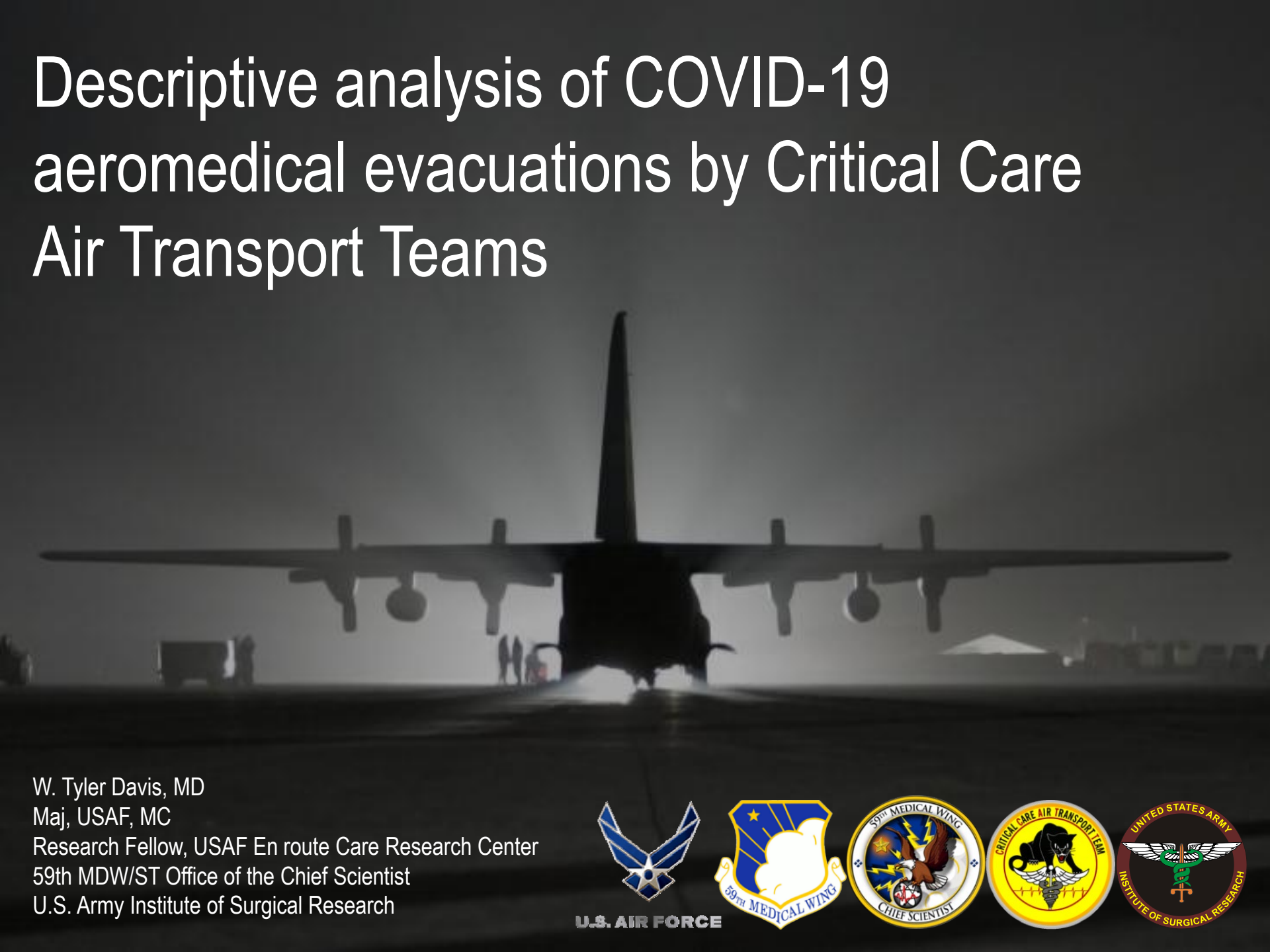
Descriptive analysis of COVID-19 aeromedical evacuations by Critical Care Air Transport Teams



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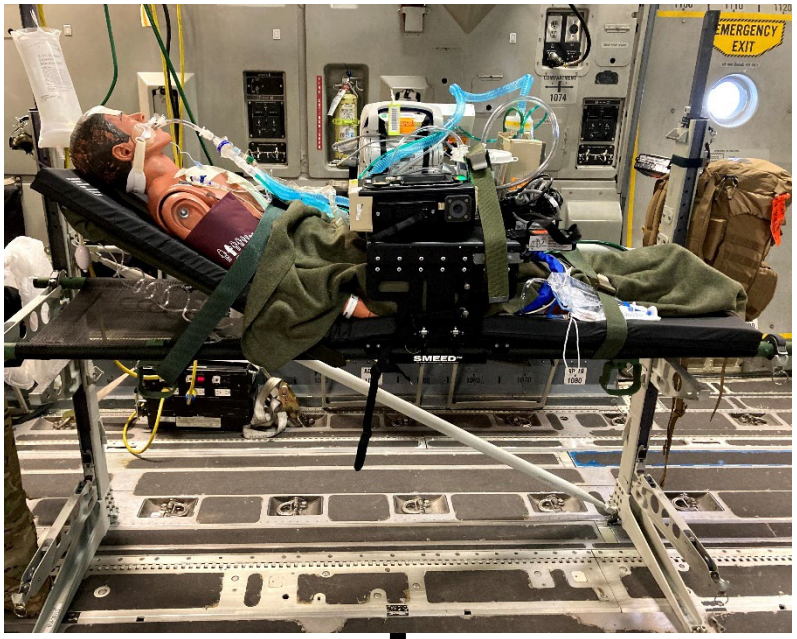
Disclaimer Statement

The opinions expressed on this document are solely those of the author and do not represent an endorsement by or the views of the United States Air Force, the Department of Defense, or the United States Government.

This study was conducted under a protocol reviewed and approved by the USAF 59th Medical Wing IRB and in accordance with the approved protocol.

Background

- Global patient movement during pandemic
- In-flight risk of disease transmission
- Biocontainment units



https://usdefensestory.com/new-kid-on-the-block-negatively-pressurized-conex-npc-arrives-at-ramstein/

Objectives

- Describe characteristics of patients with COVID-19 transported by CCATT
- Describe in-flight events
- Discuss in-flight interventions

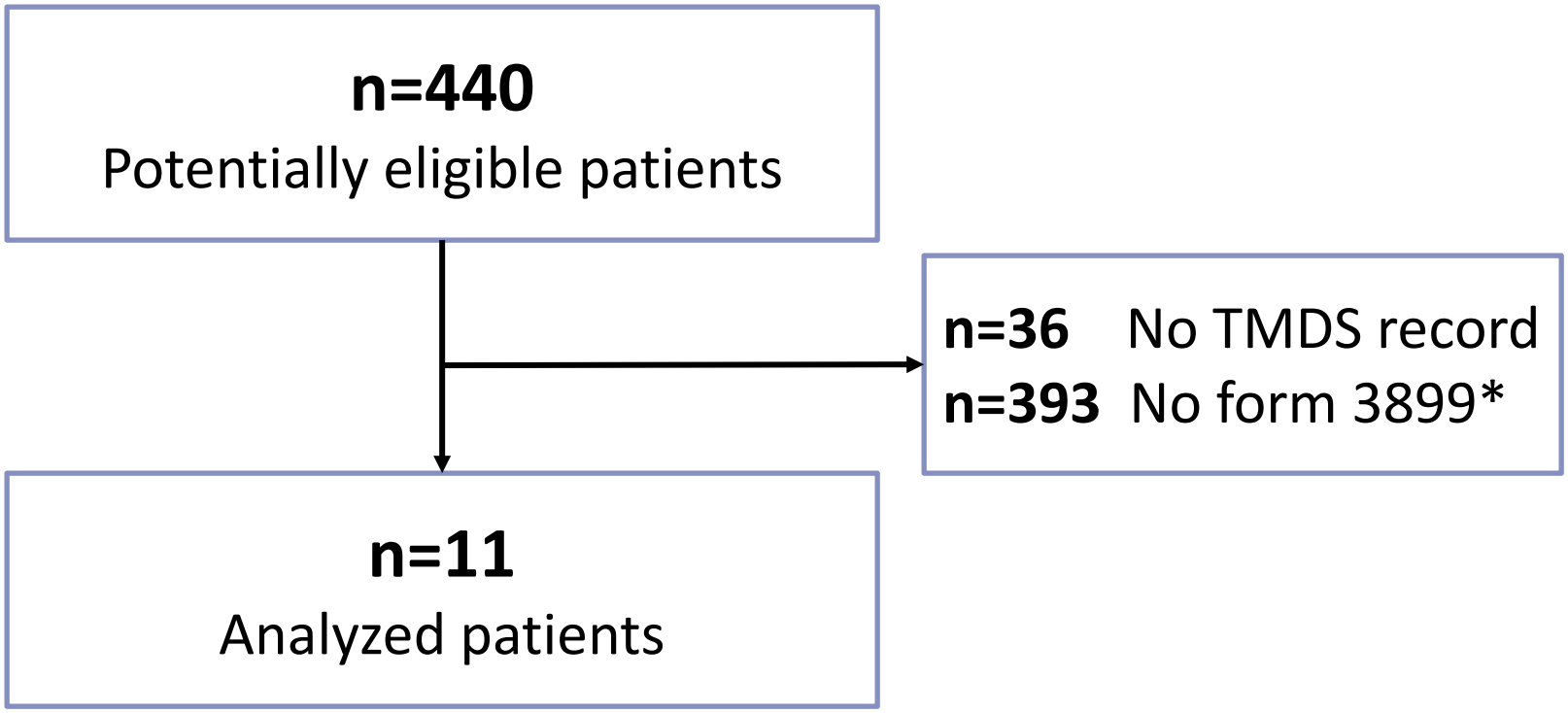
Methods

- Retrospective chart review
- April – December 2020
- Inclusion Criteria
  - COVID-19 diagnosis
  - Transport by CCATT
  - CCATT medical record available

Methods

1. Query CCATT pilot unit
2. Search TMDS
3. Identify eligible patients
4. Abstract PMR & CCATT record
5. Descriptive and qualitative analyses

Patient Flow Diagram



*Form 3899 generated only if CCATT was primarily responsible for care

Patient and Flight Characteristics

	Analyzed Patients (n=11)
Male	11 (100%)
Age (median)	53 years (range: 37 to 64 years)
Pre-transport symptom duration	7 days (range: 2 to 11 days)
Underlying Medical Conditions	
Diabetes	2 (18%)
Former smoker	1 (9%)
None	8 (82%)
Biocontainment Unit	
TIS	8 (73%)
NPC	2 (18%)
Unknown	1 (9%)

In-flight Interventions

	Analyzed Patients (n=11)
Oxygen Supplementation	
Nasal cannula/Face mask	4 (36%)
Mechanical Ventilation	7 (64%)
Medications Administered	
Sedatives	7 (64%)
Vasopressors	4 (36%)
DVT prophylaxis	11 (100%)

Case Summaries: Non-intubated

1. In-flight chest pain
2. Awake prone positioning

https://www.porthosp.nhs.uk/departments/learning%20and%20development/Upskilling%20COVID-19/ITU%20Upskilling/ Ventilation %20in%20Critical%20Care%20working%20draft%2015-03-20.pdf

Case Summaries: Intubated

1. Flight line transfer of care
2. POCUS in-flight
3. Patient-ventilator asynchrony
4. Increasing ventilator support

Discussion

- En route critical care transitioned to TIS/NPC
- COVID-19 cohort older than prior studies
- Frequent patient-ventilator asynchrony

Limitations

- Incomplete inclusion of CCATT patients
- Data capture in medical record
- Post-flight outcomes unavailable

Conclusion

- CCATT was an effective tool for air transport of critically ill patients with COVID-19

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Acknowledgements:

Funding Support: Air Force Medical Service

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