

# DETERMINING APPROPRIATE EMS TRANSPORT TO A FREE-STANDING EMERGENCY DEPARTMENT USING

## THE RAPID EMERGENCY MEDICINE SCORE (REMS)

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### INTRODUCTION

INAPPROPRIATE TRANSPORT TO FREE-STANDING EMERGENCY DEPARTMENTS (EDS) CAN DELAY CARE AND INCREASE COSTS PASSED ONTO PATIENTS DUE TO TRANSFER.

YET TOOLS TO GUIDE EMS TRANSPORT DECISIONS TO FREE-STANDING EDS ARE LIMITED

### OBJECTIVE

TO EVALUATE THE ASSOCIATION BETWEEN PREHOSPITAL REMS AND PATIENT TRANSFER FOLLOWING EMS TRANSPORT TO A FREE-STANDING ED.

#### REMS SCORING PARAMETERS

AGE IN YEARS  
MEAN ARTERIAL PRESSURE IN MMHG  
HEART RATE IN ONE MINUTE  
RESPIRATORY RATE IN ONE MINUTE  
OXYGEN SATURATION  
GLASGOW COMA SCALE

### METHODS

#### DESIGN, POPULATION & SETTING

THIS RETROSPECTIVE CO-HORT STUDY WAS CONDUCTED AT A SURBURBAN FIRE-BASED EMS AGENCY IN INDIANA.

#### INTERVENTION & MEASURES

THE PRE-EXISTING RAPID EMERGENCY MEDICINE SCORE (REMS) WAS UTILIZED TO ASSESS TRANSPORT APPROPRIATENESS.

#### DATA COLLECTION & ANALYSIS

FROM JANUARY 1, 2021, to DECEMBER 31, 2021, A TEAM OF FIRE AND HOSPITAL PERSONNEL REVIEWED 100% OF TRANSPORTS TO THE FREE-STANDING EMERGENCY DEPARTMENT.

A WILCOXON RANK SUM TEST WAS USED TO COMPARE FIRST PREHOSPITAL REMS VALUES FOR THE TRANSFERRED AND NON-TRANSFERRED PATIENTS.

LOGIC REGRESSION MODELING WAS USED TO ESTIMATE THE ODDS RATIO (OR) and 95% CONFIDENCE INTERVAL (95%CI) FOR TRANSFER AMONG PATIENTS WITH FIRST PREHOSPITAL REMS >5.

### CONCLUSIONS

OVER 1-in-10 PATIENTS TRANSPORTED BY EMS TO A FREE-STANDING ED WERE LATER TRANSFERRED

PREHOSPITAL REMS VALUES MAY HELP INFORM EMS TRANSPORT TO A FREE-STANDING ED or DIRECT TO A HOSPITAL-BASED ED.

ADDITIONAL NON-PHYSIOLOGICAL FACTORS SHOULD BE WIEGHED IN THE DESTINATION DECISION.

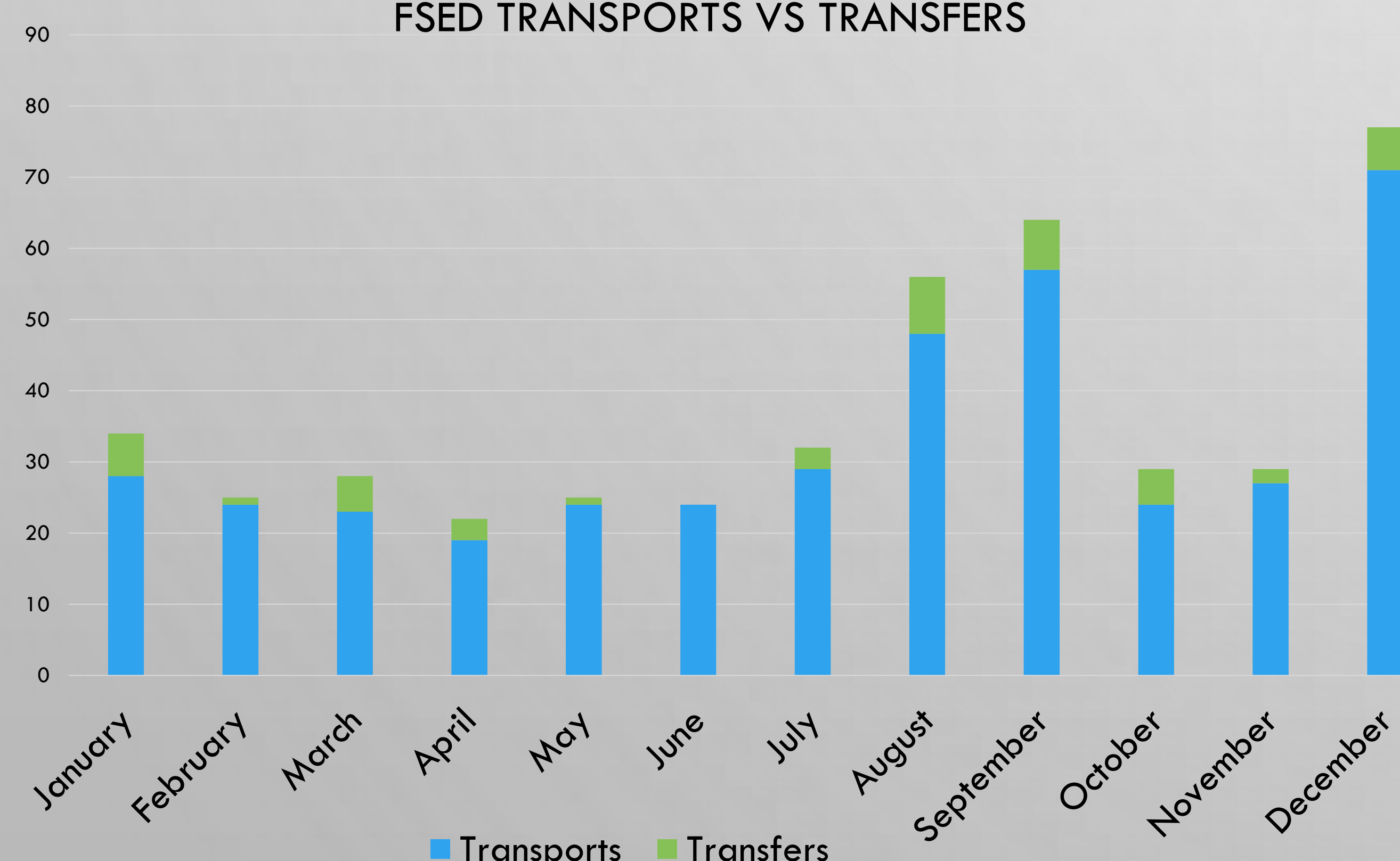
#### LIMITATIONS

THIS RESEARCH INCLUDE SINGLE-CENTER RETROSPECTIVE DATA.

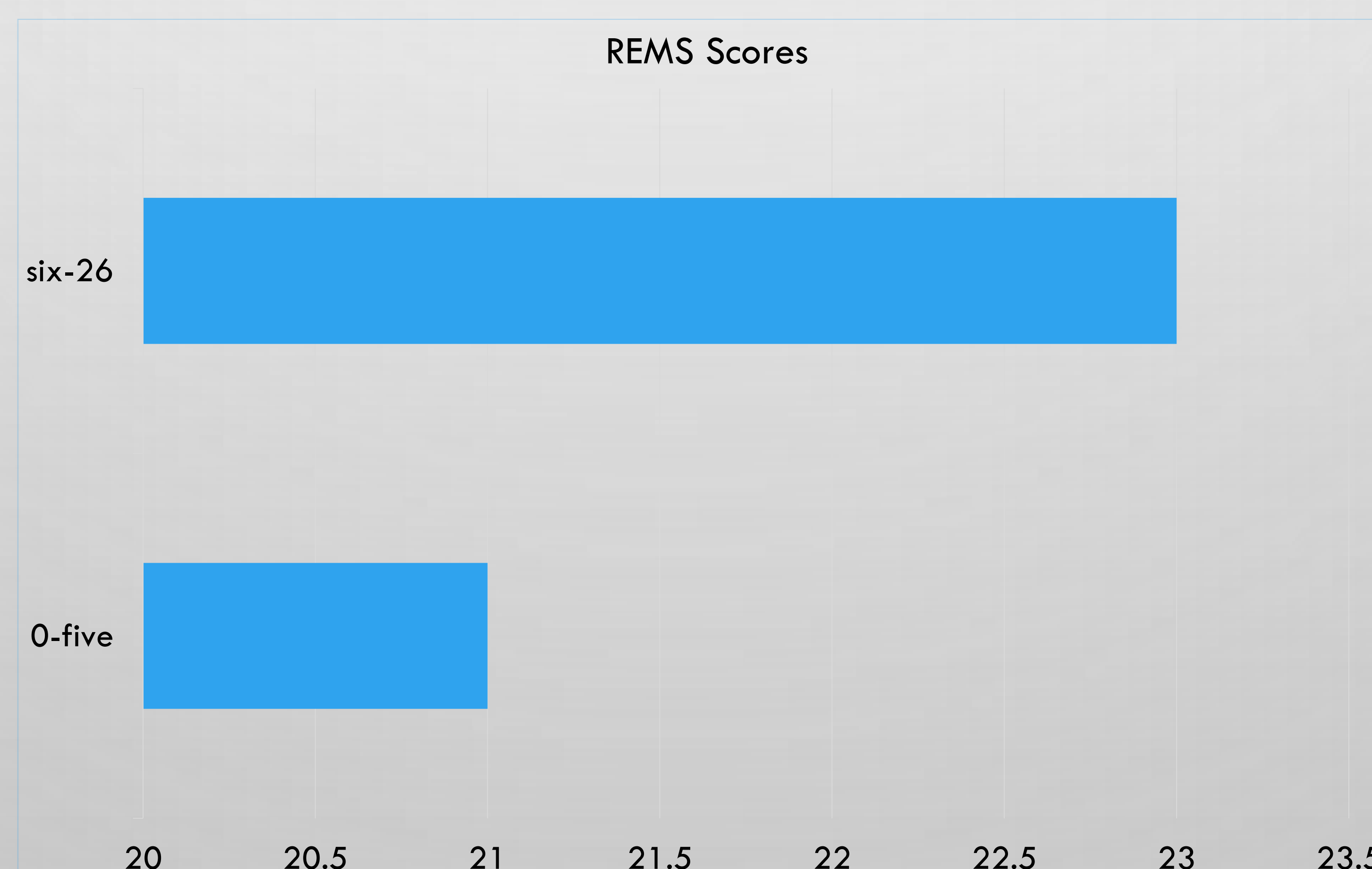
FURTHER PROSPECTIVE WORK IS NEEDED TO CONFIRM SUSTAINABILITY OF OBSERVED IMPROVEMENTS IN THIS STUDY.

### RESULTS

FSED TRANSPORTS VS TRANSFERS



REMS Scores



OF THE 42 TRANSFERRED PATIENTS WITH REMS DATA AVAILABLE, OVER HALF (55%, n=23) HAD A FIRST PREHOSPITAL REMS >5. PATIENTS WITH REMS >5 HAD NEARLY 4-FOLD INCREASED ODDS OF TRANSFER COMPARED TO PATIENTS WITH REMS OF 5 OR LOWER (OR: 3.93, 95% CI: 2.00-7.71).