Mode of Transportation
ASTR 2005-2008

This analysis included only those who were transported directly from the scene of injury to the reporting hospitals (67,105). Patients who presented to a Trauma Center by private vehicle were excluded as were those with missing transportation information (13,496) and those who were transferred from other hospitals (15,501).

Table 15: An Analysis of Patient Mode of Transport Stratified by Standard Trauma Scoring Systems and Discharge Status.

.	Transport	Statewide (67,105)	Central (39,517)	Western (3,679)	Northern (4,800)	Southeastern (12,223)
		% (p-value)				
ISS						
0-8	A	52.1 ****	54.2 ****	45.5 ****	45.2 ****	46.6 ****
	G	65.4	62.8	79.2	57.4	70.6
9-15	A	24.0	24.2	27.2	26.9	21.6
	G	19.9	20.9	15.5	26.4	16.0
16-24	A	12.4	12.1	12.1	14.1	13.6
	G	7.7	8.6	3.1	9.4	6.2
>24	A	11.5	9.6	15.2	13.7	18.3
	G	7.0	7.7	2.3	6.8	7.2
RTS Scene >=4						
	A	96.4 **	96.2	94.3 ****	97.5	95.9 ****
	G	96.9	96.3	98.4	98.4	97.6
RTS ED >=4						
	A	94.4 ****	94.6 ****	91.2 ****	92.2 ****	95.3 ****
	G	96.7	96.1	98.6	96.8	97.7
PS >0.90						
	A	88.1 ****	89.7 ****	81.5 ****	84.9 ****	83.9 ****
	G	92.9	92.2	97.1	90.6	93.7
Discharged from ED or Hospital within 24 hrs						
	A	43.2 ****	44.5 ****	33.5 ****	35.4****	41.8 ****
	G	56.8	52.2	72.9	50.4	66.9

* p<0.05 ** p <0.01 *** p<0.001 ****p<0.0001

A= Air transport G= Ground transport
RTS= Revised trauma score
PS= TRISS derived probability of survival
LOS= Length of stay
Missing data were excluded from analysis

Of the 67,105 patients transported from the scene of injury to a facility participating in the ASTR, 16,086 (24%) patients were transported by air ambulance and 51,019 patients were transported by ground ambulance.

Of all patients transported by air ambulance, 52% had an ISS <9, 43% were discharged home from the ED or from the hospital within 24 hours.

Of all patients transported by ground ambulance, 65% had an ISS <9, 57% were discharged home from the ED or from the hospital within 24 hours.

Table 16 suggests that there may be an increased survival rate among severely injured trauma victims transported by air ambulance. The absence of clear benefit associated with air transport for mildly injured victims (52%) raises questions about the structure of the pre-hospital transport system in Arizona.

Table 16: Mortality Rates for Patients Transported by Air and Ground Ambulance Stratified by Standard Trauma Scoring Systems

	Air Mortality Rate % (n)	Ground
ISS Groups		
0-8 (40,215)	0.5%	0.4%
9-15 (13,512)	0.9%**	1.5%
16-24 (5,748)	2.9% ****	5.3%
>24 (5,231)	28.3% ****	39.2%
RTS Scene		
>=4 (54,526)	1.8% ****	1.3%
<4 (1,806)	56.9% ****	74.3%
RTS ED		
>=4 (62,981)	1.4% *	1.1%
<4 (2,505)	45.7% ****	73.6%
PS		
>0.90 (58,345)	0.3%	0.3%
<=0.90 (5,257)	29.4% ****	45.2%

* p<0.05 ** p <0.01 *** p<0.001 ****p<0.0001