State Traffic Records Assessment Program (STRAP)

Comparison tool for the NASEMSO Western Plains Region:

Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming

STRAP highlights:

- National Highway Traffic Safety Administration (NHTSA) Traffic Records Division

- Uniform set of questions are provided to the state's Traffic Records Coordinating Committee, which then sends the questions to appropriate parties with highway safety, EMS, trauma, ED discharge, hospital discharge, etc.

- Answers are reviewed, clarified, and then scored

- Questions are weighted, with point assignment, and then an aggregate score is derived.

STRAP highlights:

- Every state is required to do the assessment every five years if they want to receive MAP 21 funding (Moving Ahead for Progress in the 21st Century)

- There is no requirement that funding allocation be tied to the STRAP assessment

- Results are sent back to the state's TRCC, not necessarily all of the respondents. (You may have to ask…)

- Upcoming 2018 assessments: Indiana, Texas

- Upcoming 2019 assessments: GA, MA, MS, MT, NH, TN, UT, WA

Why do I care?

	Questions	% of Total Questions	Cumulative %
TRCC Management and Strategic Planning	35	8.95%	
Crash	44	11.25%	20.20%
Roadway	38	9.72%	29.92%
Driver	45	11.51%	41.43%
Vehicle	39	9.97%	51.41%
Citation and Adjudication	54	13.81%	65.22%
Injury Surveillance	123	31.46%	96.68%
Data Use and Data Integration	13	3.32%	100.00%
Total	391	100.00%	

- 123 Injury surveillance systems questions, totaling over 31% of the aggregate score
- In all likelihood your systems (particularly EMS and trauma) are boosting your states scores….take some credit for that!!

Results in several products:

PowerPoint presentation

Summary report

Full report

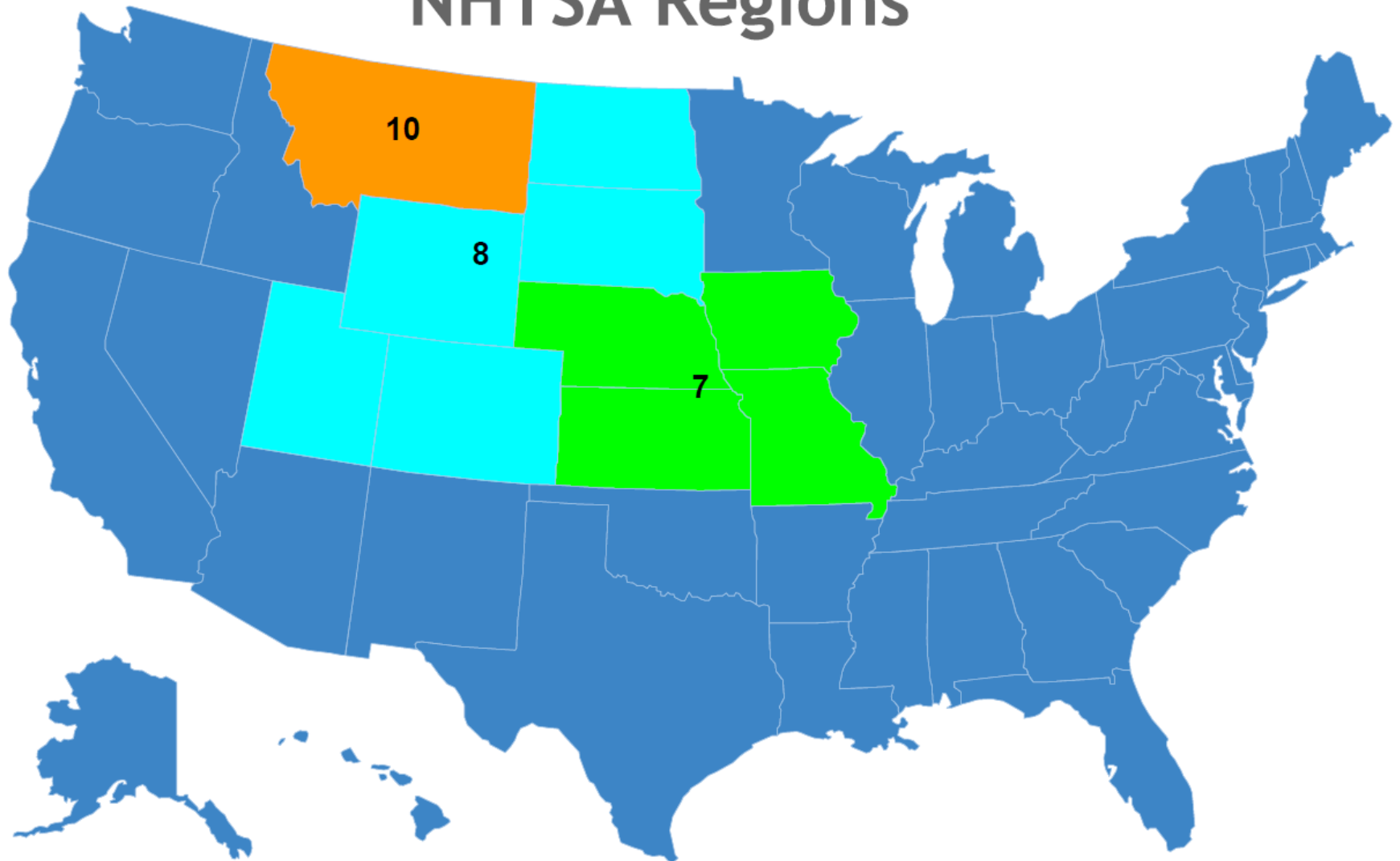Ok. But what does Wyoming look like compared to everyone else?

This is the information captured in the spreadsheet.

Wyoming Traffic Records Assessment Report Out
December 8, 2014

		Wyoming	National Average (N=13)	
Injury Surveillance (Combined)	Applicable Guidelines	87.7%	80.2%	
	Description and Contents	74.5%	76.9%	
	Procedures/ Process flows	73.8%	78.4%	
	Interfaces	61.9%	38.8%	
	Data Dictionaries	60.0%	82.3%	
	Data Quality and Control	58.5%	57.4%	
EMS	Description and Contents	100.0%	75.2%	
	Applicable Guidelines	100.0%	88.5%	
	Procedures/ Process flows	92.3%	84.6%	
	Data Dictionaries	83.3%	88.5%	
	Interfaces	73.3%	41.0%	
	Data Quality and Control	63.4%	56.4%	
Emergency Room	Applicable Guidelines	53.3%	70.3%	
	Procedures/ Process flows	46.7%	70.8%	
	Data Quality and Control	42.3%	55.3%	
	Description and Contents	33.3%	69.2%	
	Data Dictionaries	33.3%	79.5%	
	Interfaces	33.3%	41.0%	
Trauma Registry	Description and Contents	100.0%	83.8%	
	Applicable Guidelines	100.0%	85.0%	
	Procedures/ Process flows	100.0%	80.1%	
	Interfaces	100.0%	41.0%	
	Data Dictionaries	66.7%	84.6%	
	Data Quality and Control	66.7%	65.5%	
Hospital Discharge	Data Dictionaries	83.3%	84.6%	
	Description and Contents	77.8%	82.9%	
	Procedures/ Process flows	66.7%	76.9%	
	Applicable Guidelines	53.3%	70.3%	
	Data Quality and Control	42.3%	55.3%	
	Interfaces	33.3%	33.3%	
Vital Records	Procedures/ Process flows	77.8%	79.5%	
	Description and Contents	66.7%	83.8%	
	Data Quality and Control	61.8%	52.4%	
	Data Dictionaries	33.3%	74.4%	
	Interfaces	33.3%	33.3%	

Western Plains Region
NHTSA Regions

Getting the info….

- Most state EMS offices did not have their own information or had even seen it.
- Not every state had the same products – some of this is due to changes in the NHTSA process/product development
- NHTSA main office had to help…state highway safety offices can choose to share
- Once we (NHTSA and I) were communicating, it still took quite a bit to get the summaries, and then everything had to be hand-jammed into the tool (NHTSA couldn't export the data to Excel….)

It's really just a spreadsheet with a pivot table…

	Questions	% of Total Que	Cumulative %		TRCC, Roadway, Data, Vehicle (combined)	Injury Surveillance	Crash, Driver, Citation (combined)	
TRCC Management and Strategic Planning	35	8.95%		Comparative %	31.97%	31.46%	36.57%	
Crash	44	11.25%	20.20%					
Roadway	38	9.72%	29.92%					
Driver	45	11.51%	41.43%					
Vehicle	39	9.97%	51.41%					
Citation and Adjudication	54	13.81%	65.22%					
Injury Surveillance	123	31.46%	96.68%					
Data Use and Data Integration	13	3.32%	100.00%					
Total	391	100.00%						

	Very Important	Somewhat Important	Less Important
Questions are ranked by three categories	3	2	1

	Meets	Partially meets	Does not Meet
Voting is done by the assessment team. Three ratings can be given	3	2	1

Each question's score is derived by multiplying its rank and rating (very important = 3, somewhat important = 2, and less important = 1; meets = 3, partially meets = 2, and does not meet = 1). The sum total for each module section is calculated based upon the individual question scores. Then, the percentage is calculated for each module section as follows:

Section average (%) = Section total/Section total possible

Source for tables/scoring methodology is the NHTSA "Procedures Manual for State Traffic Records Assessments" October, 2015 https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/tra-procedures-manual-20151021.pdf

About the scoring | Questions and Respondents | Supporting documentation | Systems | State by State summary | Comparison graph | ⊕

Provides summary scoring information

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Description and Contents of the Injury Surveillance System	Suggested Respondents	Question Ranking	Question counts by weight		
			3 (Very Important)	2 (Somewhat Important	1 (Less Important
256.Does the injury surveillance system include EMS data?	SHSO program managers, Traffic Records Coordinator, Dept. of Health, EMS, CODES	3	1		
257.Does the injury surveillance system include emergency department (ED) data?	SHSO program managers, Traffic Records Coordinator, Dept. of Health, EMS, CODES, Hospital Association	3	1		
258.Does the injury surveillance system include hospital discharge data?	SHSO program managers, Traffic Records Coordinator, Dept. of Health, EMS, CODES, Hospital Association	3	1		
259.Does the injury surveillance system include trauma registry data?	SHSO program managers, Traffic Records Coordinator, Dept. of Health, Trauma Registry, CODES,	3	1		
260.Does the injury surveillance system include rehabilitation data?	SHSO program managers, Traffic Records Coordinator, Dept. of Health, Trauma Registry, CODES	3	1		
261.Does the injury surveillance system include vital records data?	SHSO program managers, Traffic Records Coordinator, CODES, Vital Records	3	1 1		
262.Does the injury surveillance system include other data?	CODES, Traffic Records Coordinator	3	1		
263.Does the EMS system track the frequency, severity, and nature of injuries sustained in motor vehicle crashes in the State?	EMS, CODES	3	1		
264.Does the emergency department data track the frequency, severity, and nature of injuries sustained in motor vehicle crashes in the State?	EMS, CODES	3	1		
265.Does the hospital discharge data track the frequency, severity, and nature of injuries sustained in motor vehicle crashes in the State?	Hospital association, CODES, Dept. of Health Prevention Sections	3	1		
266.Does the trauma registry data track the frequency, severity, and nature of injuries sustained in motor vehicle crashes in the State?	Trauma Registry, CODES	3	1		
267.Does the vital records data track the frequency, severity, and nature of injuries sustained in motor vehicle crashes in the State?	Vital Records, CODES, Dept. of Health	3	1		
268.Is the EMS data available for analysis and used to identify problems, evaluate programs, and allocate resources?	SHSO program managers, CODES, EMS	3	1		
269.Is the emergency department data available for analysis and used to identify problems, evaluate programs, and allocate resources?	Hospital Assoc, CODES, Dept. of Health	3	1		
270.Is the hospital discharge data available for analysis and used to identify problems, evaluate programs, and allocate resources?	Hospital Assoc, CODES, Dept. of Health	3	1		
271.Is the trauma registry data available for analysis and used to identify problems, evaluate programs, and allocate resources?	Trauma registry, CODES	3	1		
272.Is the vital records data available for analysis and used to identify problems, evaluate programs, and allocate resources?	Vital Records, CODES, Dept. of Health	3	1		
Applicable Guidelines for the Injury Surveillance System	Suggested Respondent				
273.Does the State have a NEMSIS-compliant statewide database?	EMS, Traffic Records Coordinator, CODES	3	1		
274.Does the State's emergency department and hospital discharge data conform to the most recent uniform billing standard?	Hospital Association, CODES, Dept. of Health	3	1		
275.Does the State's trauma registry database adhere to the National Trauma Data Standards?	Trauma Registry	3	1		
276.Are Abbreviated Injury Scale (AIS) and Injury Severity Scores (ISS) Are Abbreviated Injury Scale (AIS) and Injury Severity Scores (ISS) derived from the State emergency department and hospital discharge data for motor vehicle crash patients?	Hospital Association, CODES, Dept. of Health	2		1	
277.Are Abbreviated Injury Scale (AIS) and Injury Severity Scores (ISS) derived from the State trauma registry for motor vehicle crash patients?	Trauma Registry, CODES	3	1		

Provides current questions and counts by weight

It's really just a spreadsheet with a pivot table…

Provides cross-references to supporting documentation for answers (what info you need to submit to prove your answer.)

Injury Surveillance System Documents	Supports Question(s)
Data dictionaries for Emergency Department and Hospital Discharge databases	274,283,285
Data dictionary for the Trauma Registry	275
State Statutes related to privacy of medical data	280
Data dictionary for the EMS system	281
Data dictionary for the Vital Records dataset	289
Flow chart for EMS data	294
Flow chart for Emergency Department data	295
Flow chart for Hospital Discharge data	296
Flow chart for Trauma Registry data	297
Data access policies for all ISS data	307-311
Data use agreements for all ISS datasets	307-311
Data exchange agreements for ISS data	312-314
Demonstration of submission to NEMSIS and relevant state statutes or regulations	280
State law that supersedes HIPAA	273
Sample Quality Management reports for each component of the ISS system	330,346,362,375,378
State Roadway Data Capability Assessment, Section 4	385
Sample of data specific analysis performed by behavioral program managers for problem ID, program evaluation, priority setting	379
Description of Data Governance policy , including how it supports traffic safety data integration and formal data quality management	380, 382
Documentation of linkage variables between each of the traffic records system's component systems, i.e., crash and driver.	383-389
List of analytical resources available to decision-makers and which decision-makers have access	390
List of analytical resources available to the public	391

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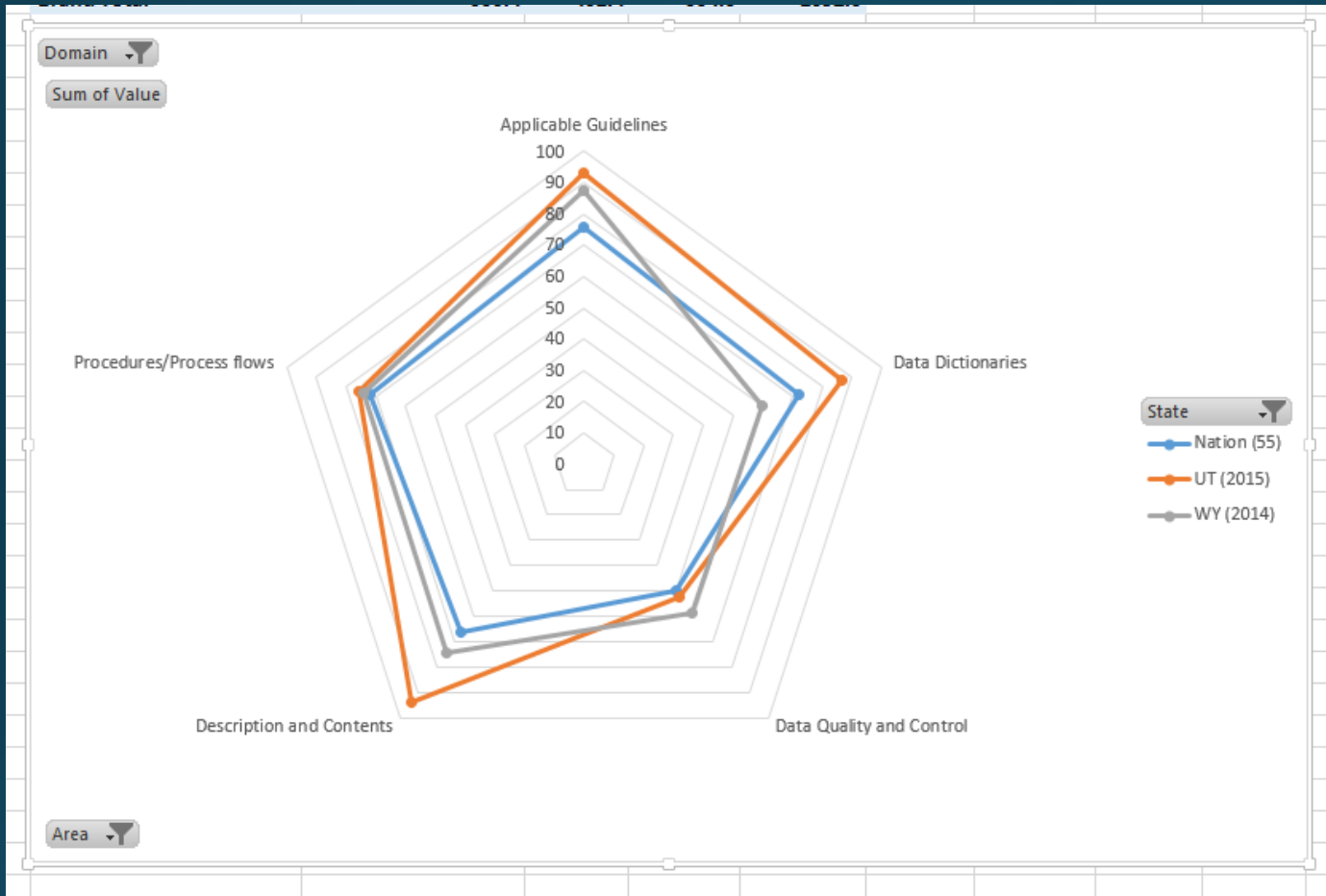|		WY (2014)	CO (2015)	IA (2015)	NE (2015)	UT (2015)	KS (2015)	MO (2016)	ND (2016)	MT (2017)	National Avg. N=55
Injury Surveillance (Composite Score)	Applicable Guidelines	87.7	80.7	82.5	100	93	78.9	87.7	82.5	73.7	75.6
	Data Dictionaries	60	73.3	76.7	66.7	86.7	53.3	63.3	60	93.3	72.3
	Data Quality and Control	58.5	50	40.7	54.3	52.2	42.1	48.4	39.7	44.7	50
	Description and Contents	74.5	80.4	82.4	92.2	94.1	64.7	52.9	56.9	68.6	66.5
	Interfaces	61.9	33.3	61.9	61.9	33.3	71.4	81	33.3	33.3	40.2
	Procedures/Process flows	73.8	80.3	68.9	82	75.4	55.7	83.6	54.1	68.9	72
EMS	Applicable Guidelines	100	83.3	100	100	100	83.3	100	100	91.7	87.6
	Data Dictionaries	83.3	66.7	83.3	50	100	83.3	66.7	100	83.3	80.6
	Data Quality and Control	63.4	65.9	57.7	70.7	60.2	43.1	56.1	41.5	40.7	52.3
	Description and Contents	100	77.8	88.9	88.9	100	33.3	77.8	55.6	55.6	65.9
	Interfaces	73.3									
	Procedures/Process flows	92.3	92.3	84.6	84.6	100	100	100	84.6	69.2	81
Emergency Department	Applicable Guidelines	53.3	100	100	100	100	33.3	100	33.3	66.7	75.2
	Data Dictionaries	33.3	66.7	83.3	66.7	100	33.3	66.7	33.3	100	65.8
	Data Quality and Control	42.3	39	33.3	46.3	51.2	33.3	48	33.3	38.2	46.8
	Description and Contents	33.3	66.7	77.8	100	100	100	66.7	33.3	55.6	61.6
	Interfaces	33.3									
	Procedures/Process flows	46.7	73.3	60	73.3	66.7	33.3	80	33.3	60	65.6
Trauma Registry	Applicable Guidelines	100	76.2	100	100	100	100	85.7	100	81	77.5
	Data Dictionaries	66.7	100	83.3	83.3	100	83.3	83.3	100	83.3	74.2
	Data Quality and Control	66.7	47.2	35.8	63.4	64.2	48.8	56.1	48.8	56.9	51.7
	Description and Contents	100	77.8	100	88.9	100	100	33.3	88.9	88.9	71.9
	Interfaces	100									
	Procedures/Process flows	100	75	66.7	100	88.3	58.3	91.7	75	58.3	69.1
Hospital Discharge	Applicable Guidelines	53.3	33.3	33.3	100	33.3	33.3	33.3	33.3	33.3	44.2
	Data Dictionaries	83.3	66.7	83.3	66.7	100	33.3	66.7	33.3	100	72.7
	Data Quality and Control	42.3	39	33.3	46.3	51.2	33.3	48	33.3	38.2	46.8
	Description and Contents	77.8	88.9	88.9	100	88.9	55.6	66.7	33.3	88.9	70.9
	Interfaces	33.3									
	Procedures/Process flows	66.7	66.7	66.7	83.3	66.7	50	83.3	33.3	66.7	72
Vital Records	Data Dictionaries	33.3	66.7	50	66.7	33.3	33.3	33.3	33.3	100	68.2
	Data Quality and Control	61.8	48	35.8	36.6	33.3	43.1	33.3	35	43.1	49.3
	Description and Contents	66.7	100	88.9	100	100	55.6	33.3	77.8	77.8	72.7
	Interfaces	33.3									
	Procedures/Process flows	77.8	100	66.7	66.7	55.6	33.3	55.6	44.4	100	73.5

SD declined

Scores by system, by state, and by 55 state avg. (minus Texas)

It's really just a spreadsheet with a pivot table…

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	State Traffic Records Assessment (STRAP) EMS/Injury Surveillance Systems												
2		WY (2014)	CO (2015)	IA (2015)	NE (2015)	UT (2015)	KS (2015)	MO (2016)	ND (2016)	MT (2014)	N=55		
3	Applicable Guidelines	87.7%	80.7%	82.5%	100.0%	93.0%	78.9%	87.7%	82.5%	73.7%	75.6%	SD Not Available	
4	Data Dictionaries	60.0%	73.3%	76.7%	66.7%	86.7%	53.3%	63.3%	60.0%	93.3%	72.3%		
5	Data Quality Control Programs	58.5%	50.0%	40.7%	54.3%	52.2%	42.1%	48.4%	39.6%	44.7%	50.0%		
6	Description and Contents	74.5%	84.3%	82.4%	92.2%	94.1%	64.7%	52.9%	56.9%	68.6%	66.5%		
7	Interfaces	61.9%	33.3%	61.9%	61.9%	33.3%	71.4%	81.0%	33.3%	33.3%	40.2%		
8	Procedures / Process Flow	73.8%	80.3%	68.9%	82.0%	75.4%	55.7%	83.6%	54.1%	68.9%	72.0%		
9	Overall	65.7%	64.4%	58.3%	69.1%	68.0%	51.8%	59.8%	49.1%	58.6%	59.9%		
10													
11													
12													
13													
14	State high score												
15	State low score												
16	Highest overall												
17													
18													
19													

High and low scores by state

It's really just a spreadsheet with a pivot table…

Pivot table allows comparison between states with multiple variables:
1) State by state and 55 national avg.
2) System (domain) (ED, EMS, trauma, etc.)
3) Area (guidelines, data dictionary, QI, etc.)

If you want your stuff:

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Hope that wasn't too painful!

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