Intermediate/Advanced Reporting Using State Bridge (VPHIB)

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Objectives

- Provide a brief overview of the descriptive statistics used to summarize large amounts of data
- Describe the strengths and limitations of data from the Virginia Pre Hospital Information Bridge (VPHIB)
- Demonstrate how to use the Report Writer 2.0 tool in VPHIB to
  - Create and edit transactional reports
  - Share reports
  - Schedule reports for future delivery

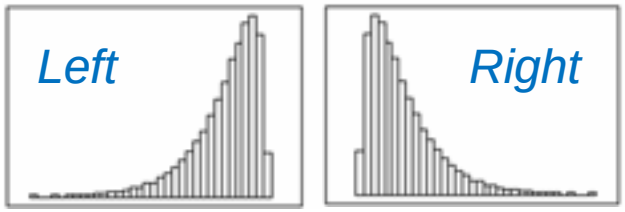
Numbers are Numbers – NOT!

- Groups of numbers (*distributions* or *probability distributions*) don't always look the same

- "Bell shaped curve" or *Normal distribution*
  - Very common (mean +/- standard deviation)
  - Not the only way numbers like to congregate!

- *MANY* other distributions exist, but you don't need to know about them *BUT* . . .
  - You should be aware of two other common distributions, *left skewed* and *right skewed*

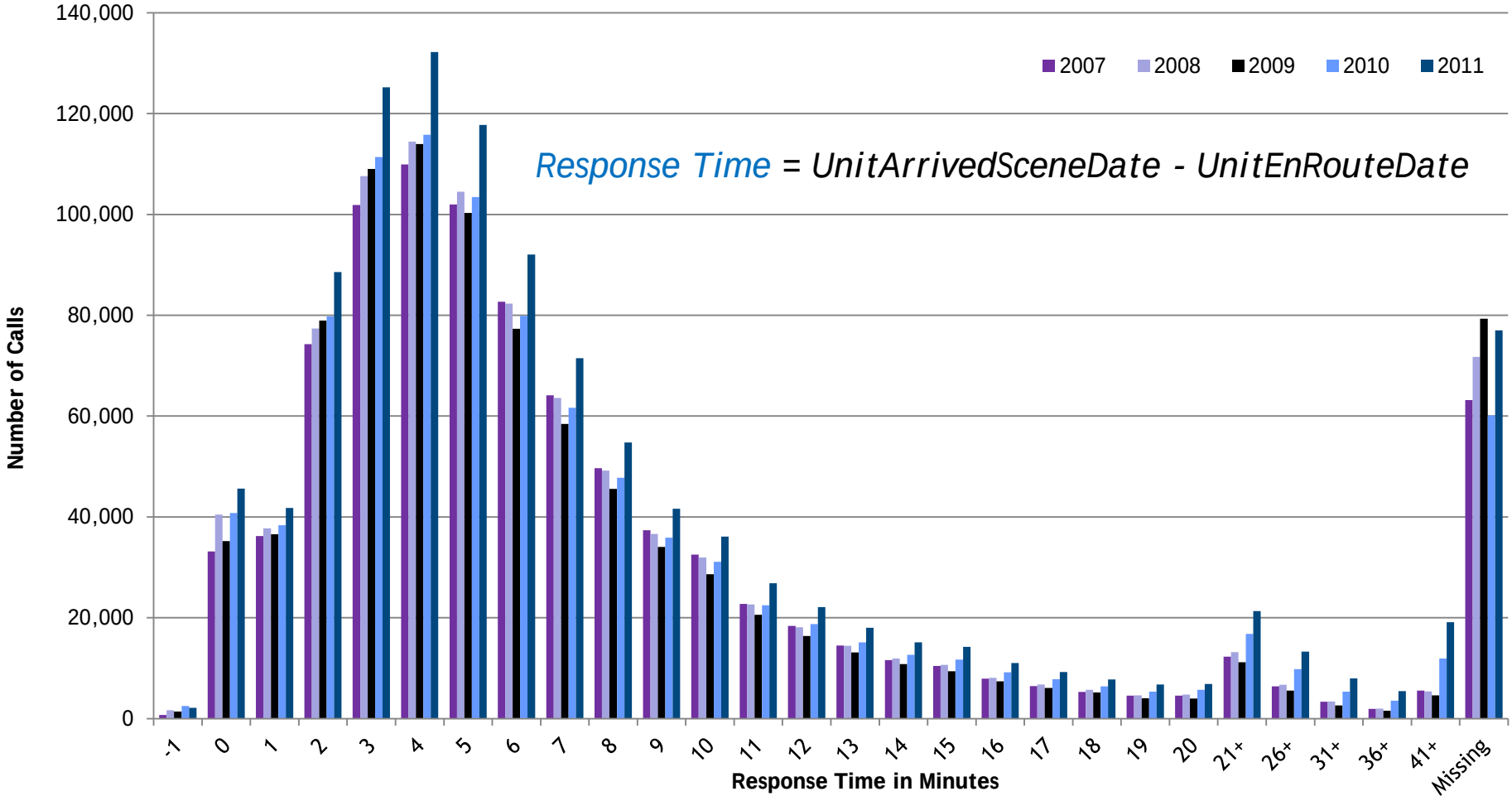
Skewed Distributions



- *Skewness* is a measure of asymmetry
  - Named for the location of the *tail* of the distribution
- Right skewed data are very common in health care
  - Characterized by *asymmetry*
  - Measure of *central tendency* (middle) = *median*
  - Measure of *spread* (variability) = *inter-quartile range (IQR)* represents middle 50% of the data
    - 75th percentile value – 25th percentile value

- Let's apply our new found knowledge to some actual Virginia EMS data . . .

Example: Distribution of VPHIB Data*



** Includes all reported calls, regardless of call type or destination*

Example: Statistics for VPHIB Data*

Response Time in Minutes (UnitArrivedSceneDate - UnitEnRouteDate)					
	2007	2008	2009	2010	2011
N Calls	860,368	885,636	842,018	910,883	1,054,323
N Missing Values	63,197	71,742	79,339	60,132	76,995
Minimum	-1,439.0	-1,439.0	-525,585.0	-4,733,277.1	-527,032.0
01st Percentile	0.0	0.0	0.0	0.0	0.0
05th Percentile	1.0	1.0	1.0	0.9	1.0
10th Percentile	2.0	2.0	2.0	2.0	2.0
25th Percentile	3.0	3.0	3.0	3.0	3.0
Median	**5.0**	**5.0**	**5.0**	**5.0**	**5.0**
75th Percentile	8.0	8.0	8.0	8.7	9.0
90th Percentile	13.0	13.0	13.0	15.0	16.0
95th Percentile	18.0	18.0	17.0	21.0	24.0
99th Percentile	34.0	33.0	31.0	46.3	55.0
Maximum	1,439.0	1,439.0	1,471.0	3,682,086.2	4,207,687.5
Average	7.5	5.8	4.9	16.3	18.8
Standard Deviation	63.7	77.5	577.3	6,696.8	5,327.8

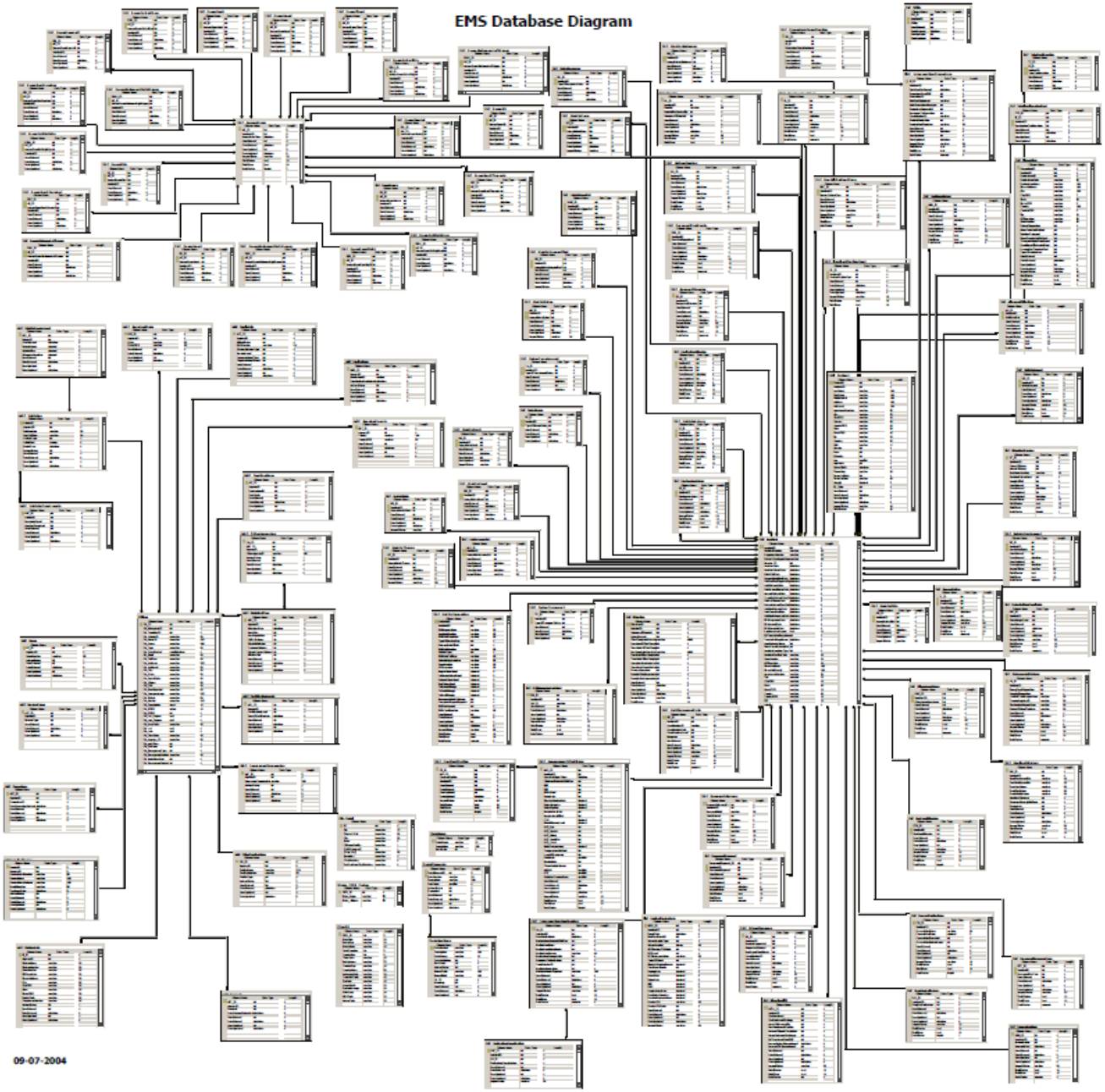
** Includes all reported calls, regardless of call type or destination*

Virginia Pre Hospital Information Bridge

- EMS data submission is mandated by the Code of Virginia § 32.1-116.1 and EMS regulations
- Current minimum dataset (VPHIB) was officially adopted on February 6, 2010 by the State Board of Health
- All EMS responses are required to be submitted to OEMS *WITHIN 30 DAYS* in the format prescribed by OEMS
- Agencies may submit above and beyond this minimum dataset if desired to collect further information on an agency, locality, or regional level

VPHIB Characteristics

- Strengths
  - Potentially rich source of information
  - Includes all aspects of patient care by all levels of EMS personnel
- Limitations
  - Older data (pre mid-2010) not as complete
  - Not all agencies submit data in a timely manner
  - Difficult to follow a patient across time
  - Known flaws in several data fields
  - Probable unknown flaws in other data fields

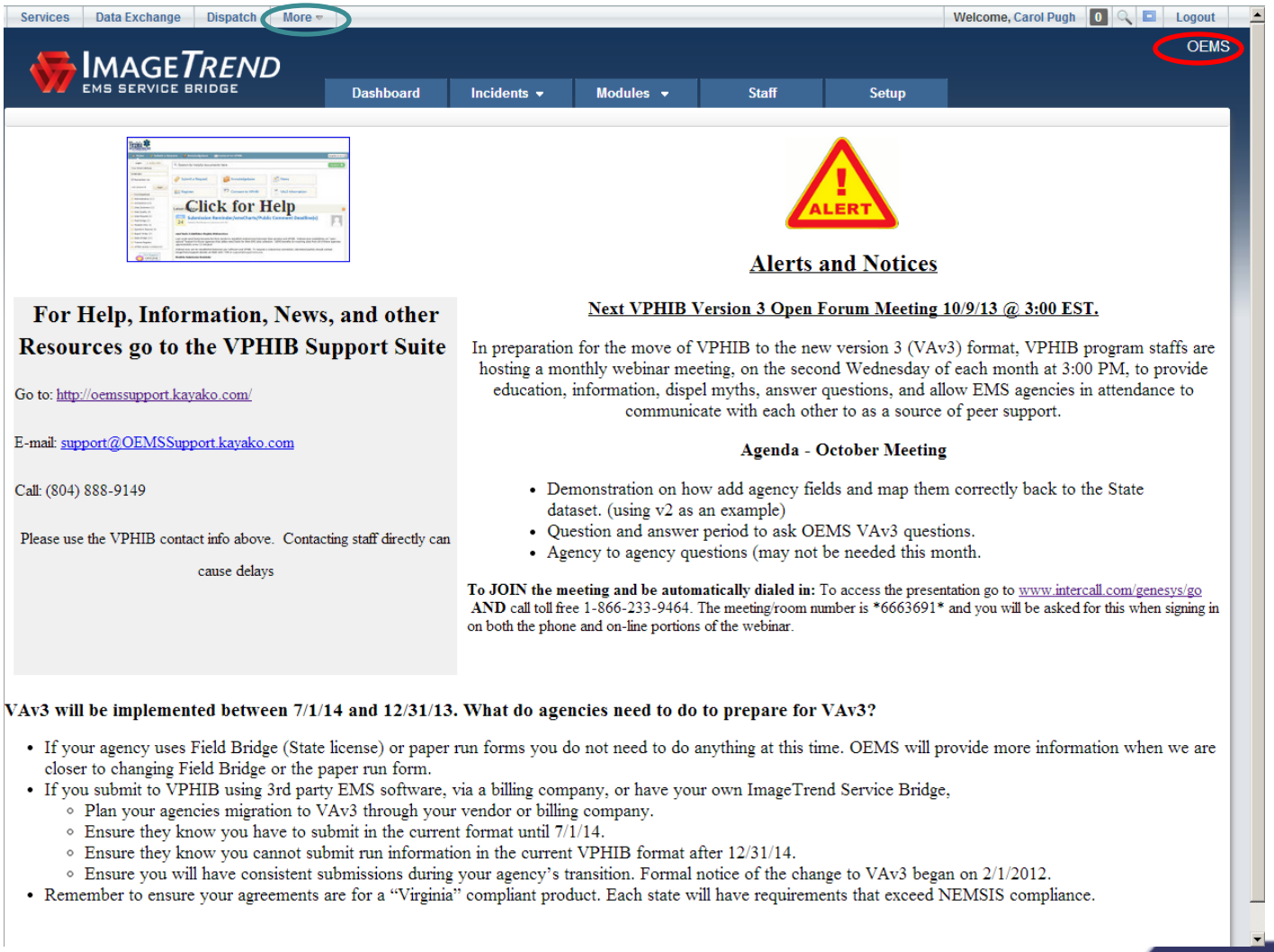


VPHIB Database Diagram

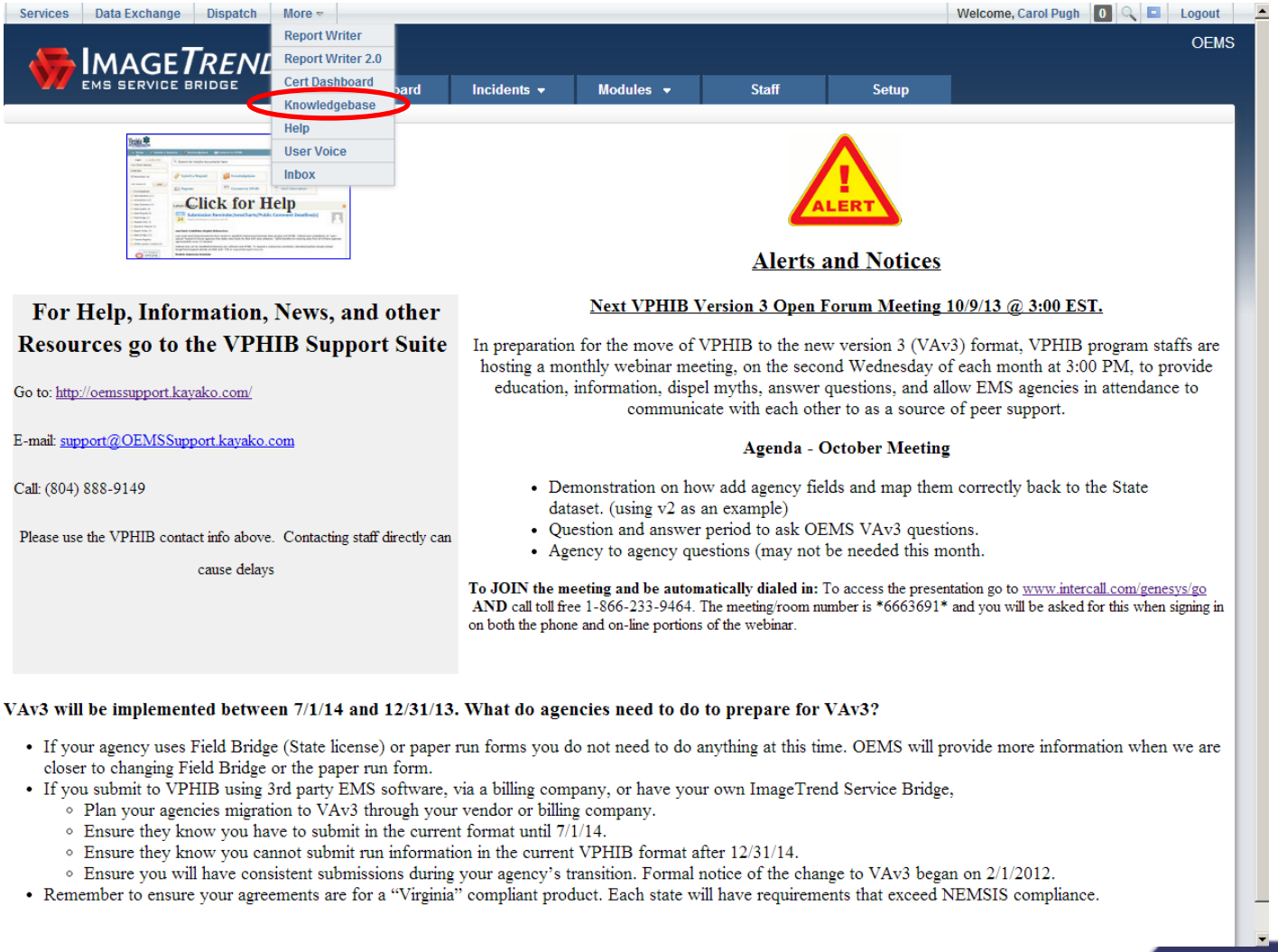
Note: *Many of the tables are truncated!*

https://vphib.vdh.virginia.gov/

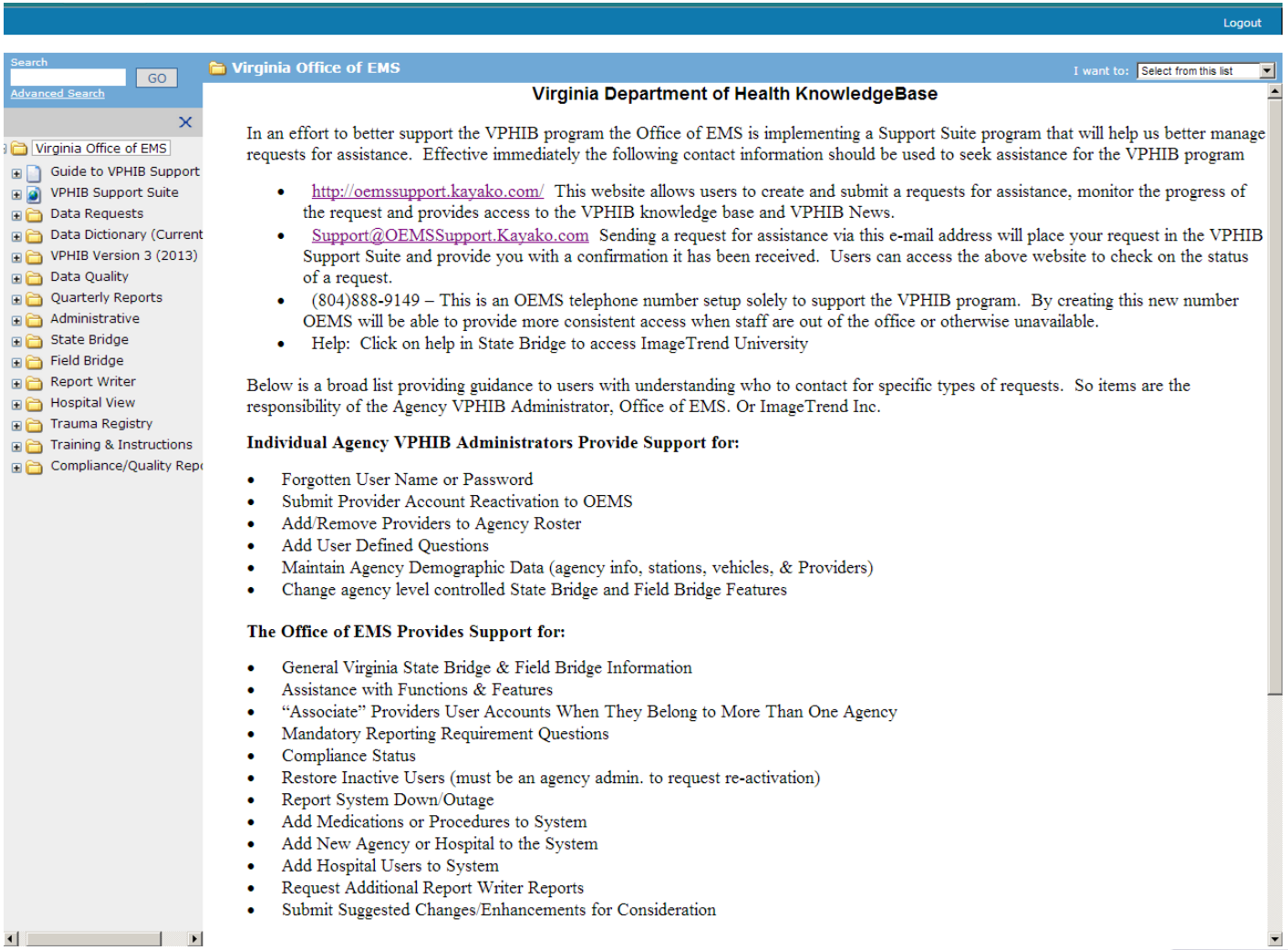
Introduction to VPHIB Resources - 1



Introduction to VPHIB Resources – 2



Introduction to VPHIB Resources – 3a



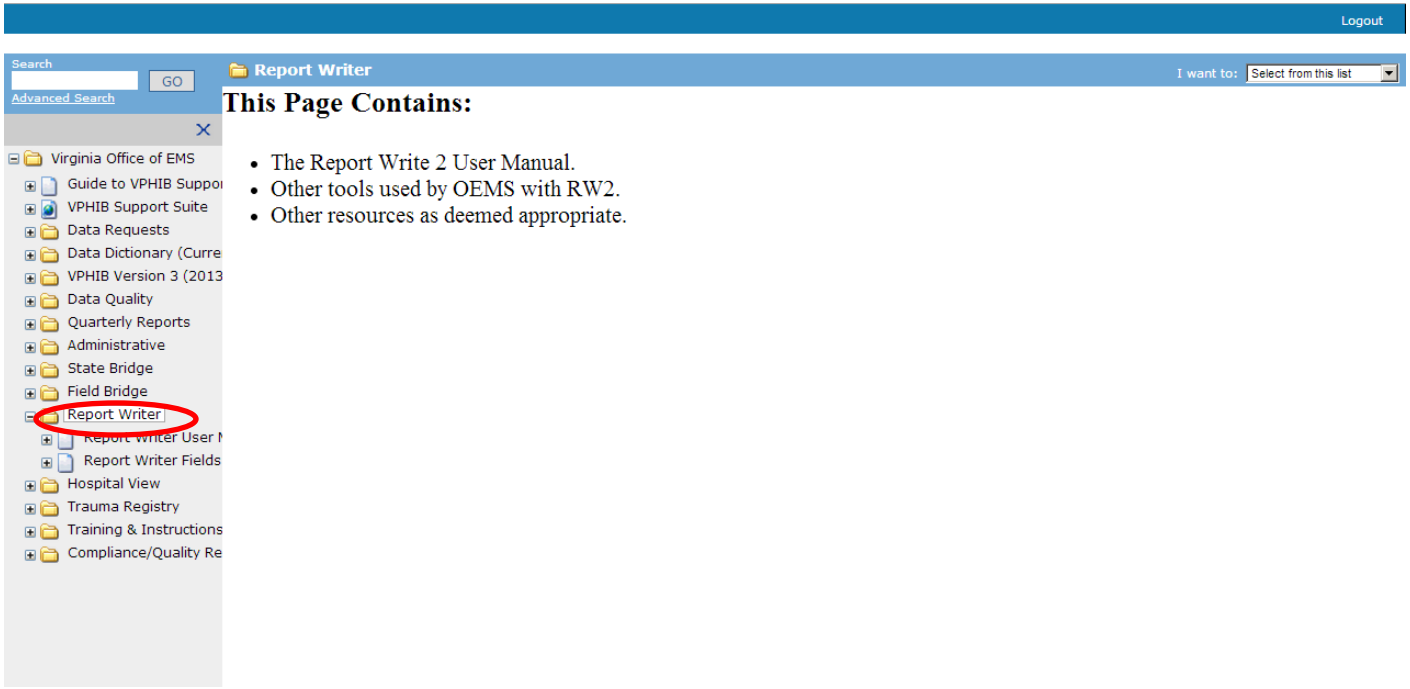
Introduction to VPHIB Resources – 3b

ImageTrend Inc. Provides Support for:

- Data Exchange Setup or Problems from 3rd Party Vendor Software of Self-Purchased ImageTrend Service Bridge
- Field Bridge Posting Errors
- Field Bridge Trouble Shooting
- "Application Exception" Errors
- Billing Interface Setup or Problems
- Web Browser Issues
- Obtain/Purchase Other ImageTrend Products

Contact Info for ImageTrend Support are:
Help: Click on help in State Bridge to access ImageTrend University
ImageTrend Support Site: http://support.imagetrend.com
Telephone at (888)469-7789

Introduction to VPHIB Resources - 4



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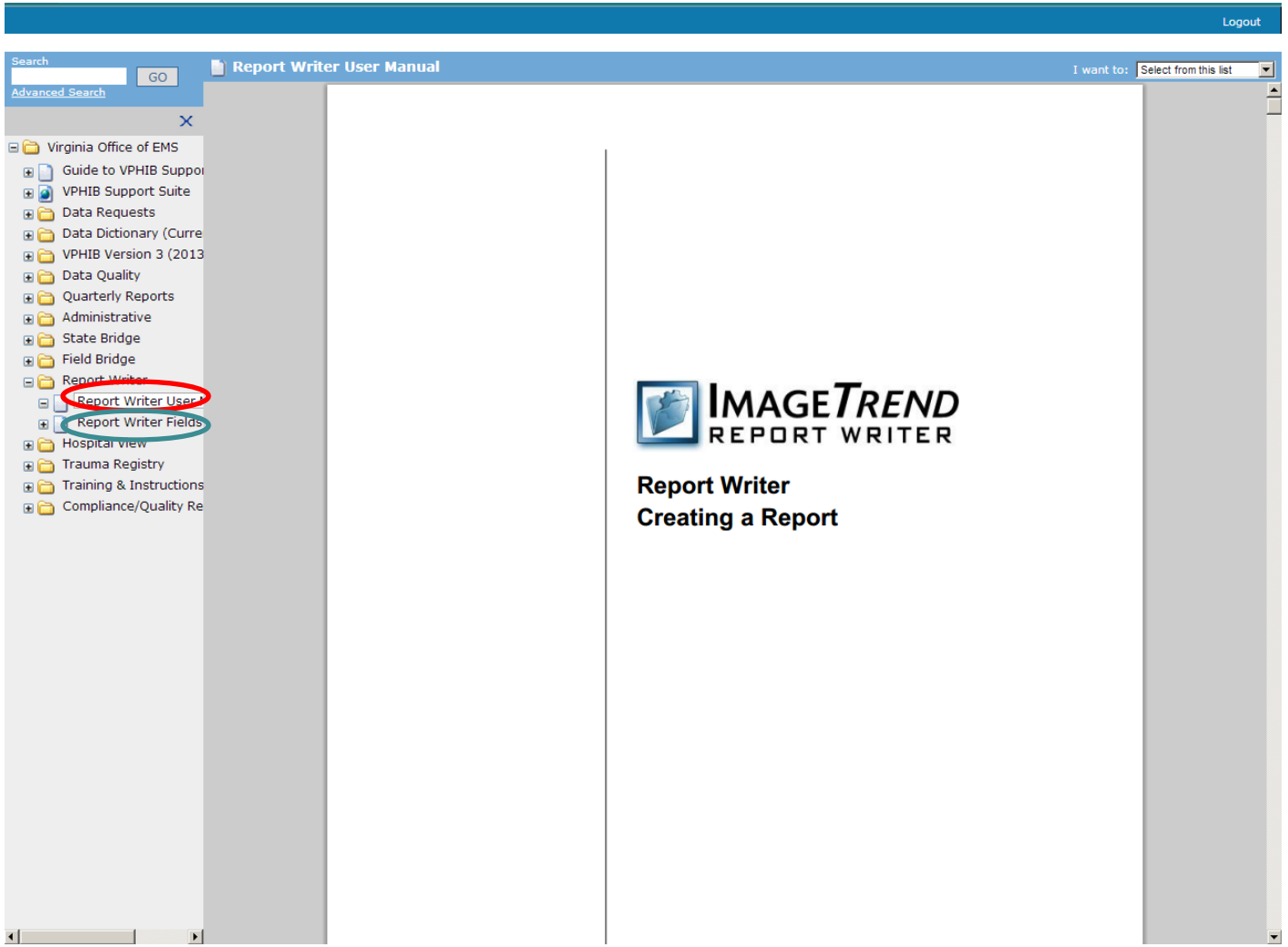

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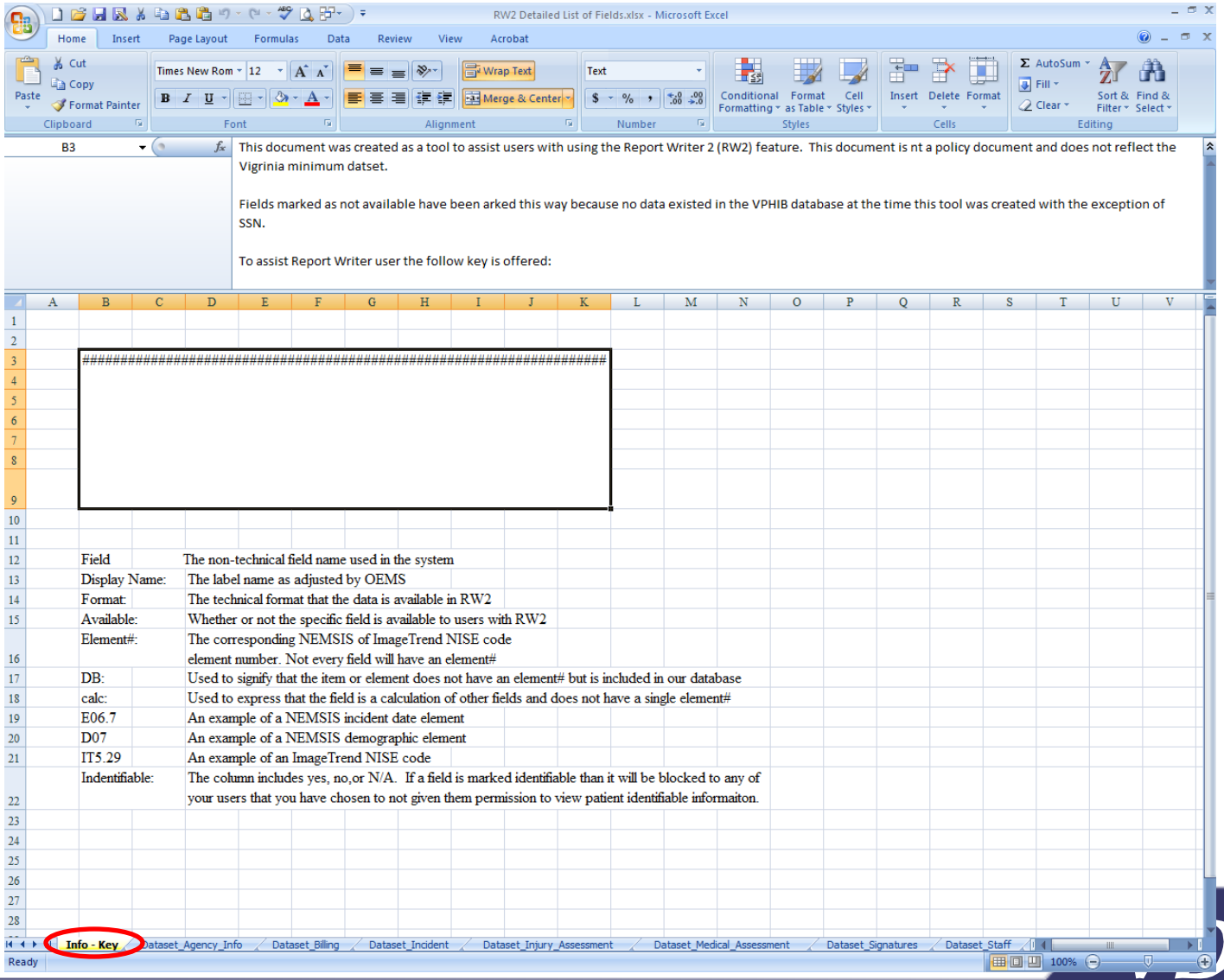

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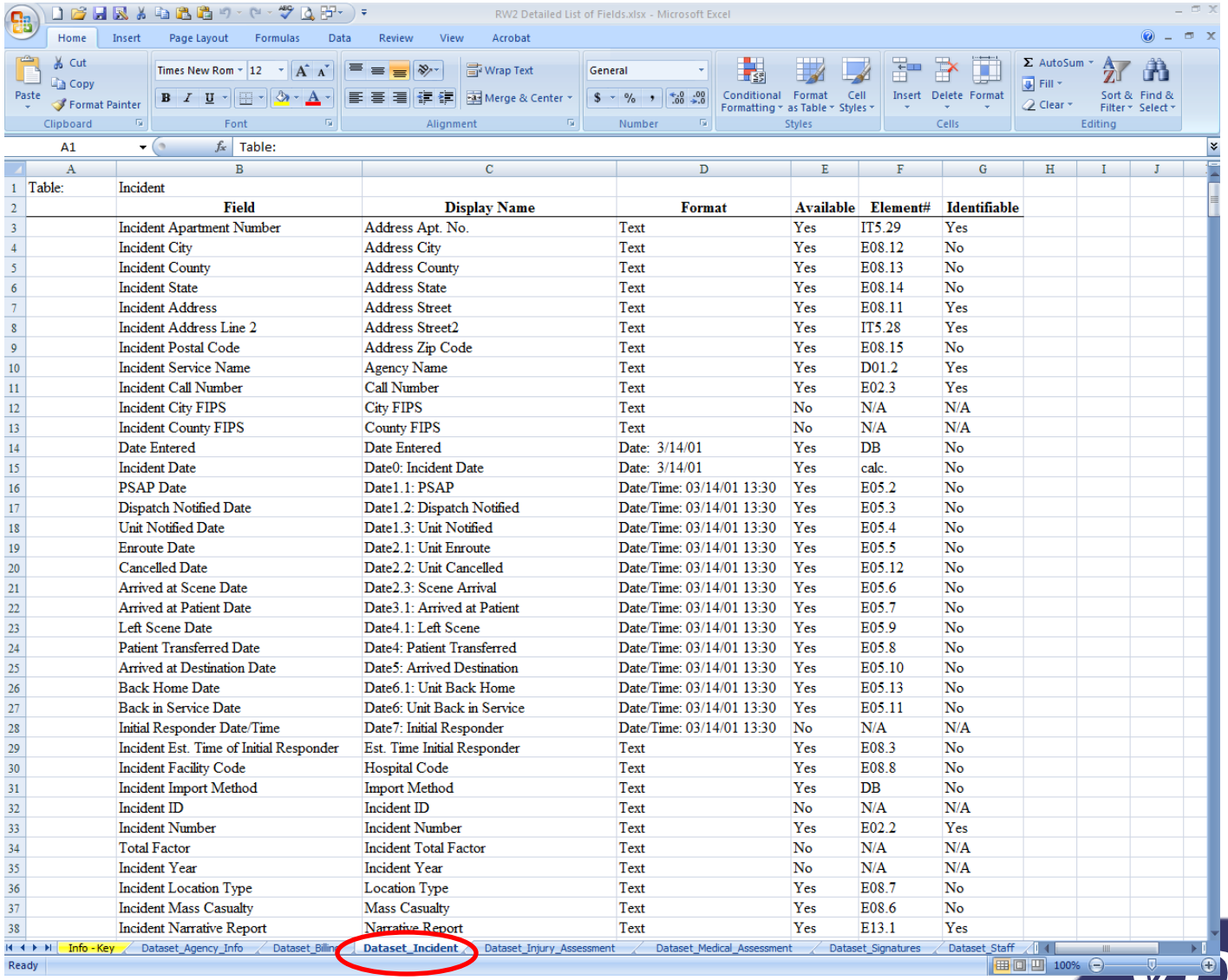

RW2 Detailed List of Fields.xlsx - Microsoft Excel

Table: Incident

Field	Display Name	Format	Available	Element#	Identifiable
Incident Apartment Number	Address Apt. No.	Text	Yes	IT5.29	Yes
Incident City	Address City	Text	Yes	E08.12	No
Incident County	Address County	Text	Yes	E08.13	No
Incident State	Address State	Text	Yes	E08.14	No
Incident Address	Address Street	Text	Yes	E08.11	Yes
Incident Address Line 2	Address Street2	Text	Yes	IT5.28	Yes
Incident Postal Code	Address Zip Code	Text	Yes	E08.15	No
Incident Service Name	Agency Name	Text	Yes	D01.2	Yes
Incident Call Number	Call Number	Text	Yes	E02.3	Yes
Incident City FIPS	City FIPS	Text	No	N/A	N/A
Incident County FIPS	County FIPS	Text	No	N/A	N/A
Date Entered	Date Entered	Date: 3/14/01	Yes	DB	No
Incident Date	Date0: Incident Date	Date: 3/14/01	Yes	calc.	No
PSAP Date	Date1.1: PSAP	Date/Time: 03/14/01 13:30	Yes	E05.2	No
Dispatch Notified Date	Date1.2: Dispatch Notified	Date/Time: 03/14/01 13:30	Yes	E05.3	No
Unit Notified Date	Date1.3: Unit Notified	Date/Time: 03/14/01 13:30	Yes	E05.4	No
Enroute Date	Date2.1: Unit Enroute	Date/Time: 03/14/01 13:30	Yes	E05.5	No
Cancelled Date	Date2.2: Unit Cancelled	Date/Time: 03/14/01 13:30	Yes	E05.12	No
Arrived at Scene Date	Date2.3: Scene Arrival	Date/Time: 03/14/01 13:30	Yes	E05.6	No
Arrived at Patient Date	Date3.1: Arrived at Patient	Date/Time: 03/14/01 13:30	Yes	E05.7	No
Left Scene Date	Date4.1: Left Scene	Date/Time: 03/14/01 13:30	Yes	E05.9	No
Patient Transferred Date	Date4: Patient Transferred	Date/Time: 03/14/01 13:30	Yes	E05.8	No
Arrived at Destination Date	Date5: Arrived Destination	Date/Time: 03/14/01 13:30	Yes	E05.10	No
Back Home Date	Date6.1: Unit Back Home	Date/Time: 03/14/01 13:30	Yes	E05.13	No
Back in Service Date	Date6: Unit Back in Service	Date/Time: 03/14/01 13:30	Yes	E05.11	No
Initial Responder Date/Time	Date7: Initial Responder	Date/Time: 03/14/01 13:30	No	N/A	N/A
Incident Est. Time of Initial Responder	Est. Time Initial Responder	Text	Yes	E08.3	No
Incident Facility Code	Hospital Code	Text	Yes	E08.8	No
Incident Import Method	Import Method	Text	Yes	DB	No
Incident ID	Incident ID	Text	No	N/A	N/A
Incident Number	Incident Number	Text	Yes	E02.2	Yes
Total Factor	Incident Total Factor	Text	No	N/A	N/A
Incident Year	Incident Year	Text	No	N/A	N/A
Incident Location Type	Location Type	Text	Yes	E08.7	No
Incident Mass Casualty	Mass Casualty	Text	Yes	E08.6	No
Incident Narrative Report	Narrative Report	Text	Yes	E13.1	Yes

Info - Key | Dataset_Agency_Info | Dataset_Billing | Dataset_Incident | Dataset_Injury_Assessment | Dataset_Medical_Assessment | Dataset_Signatures | Dataset_Staff

Ready

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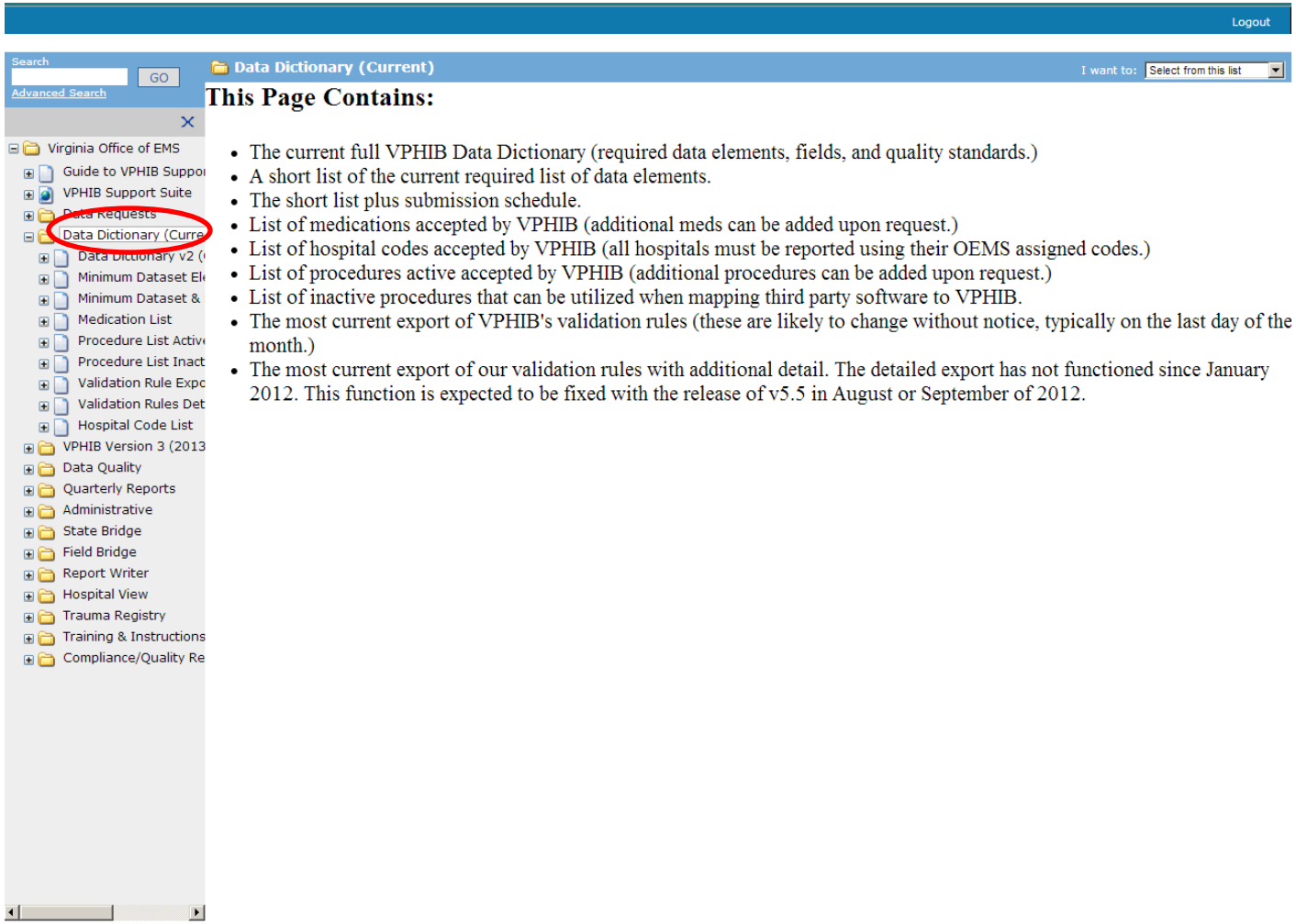
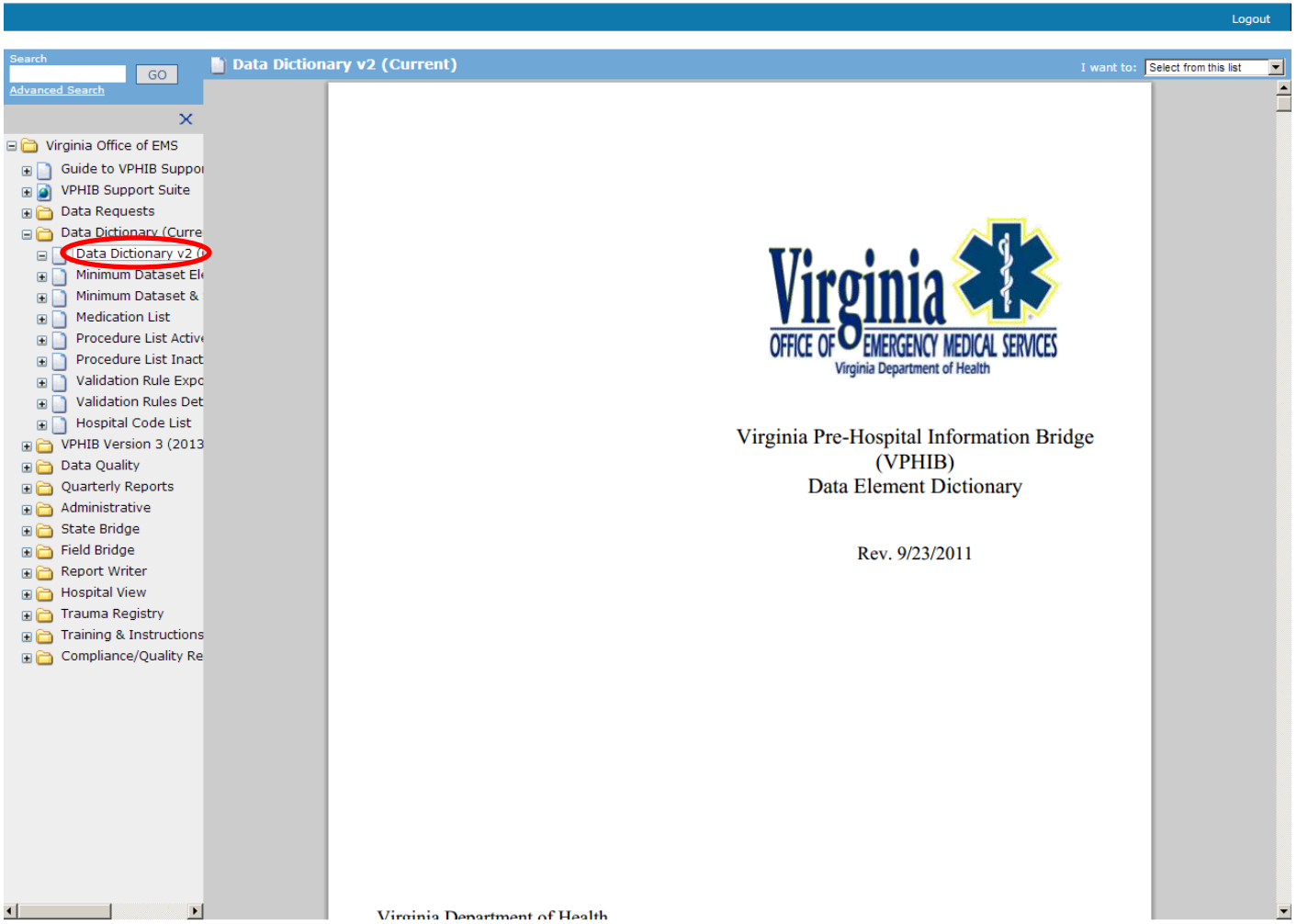
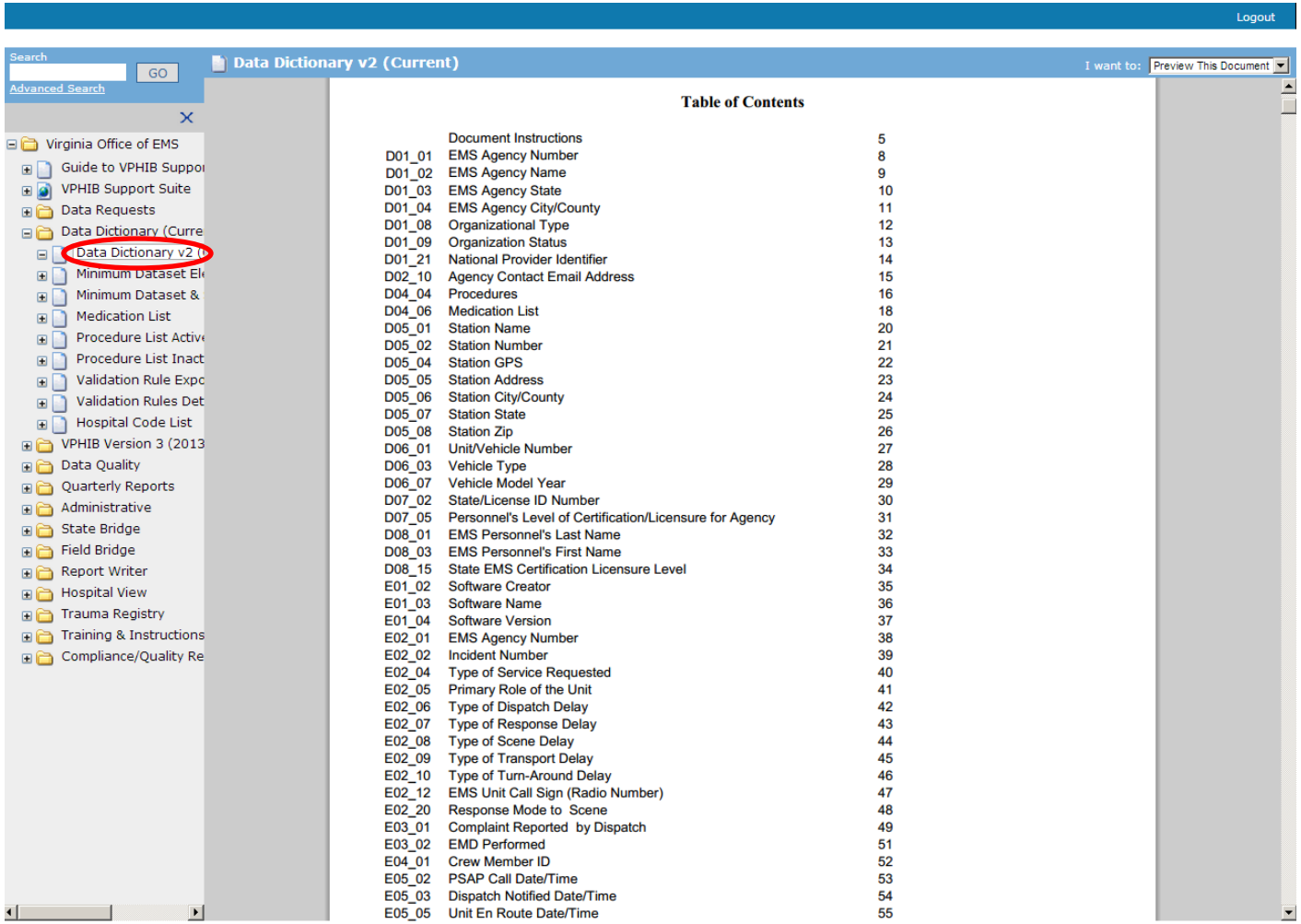
Introduction to VPHIB Resources - 8



Introduction to VPHIB Resources - 9



Introduction to VPHIB Resources - 10



Introduction to VPHIB Resources - 11

TYPE OF SERVICE REQUESTED

E02_04

Required to be reported in VA – Yes
National Element - Yes

Definition

The type of service or category of service requested of the EMS service responding for this specific EMS incident.

Field Values

30 911 Response (Scene) (Default)
40 Interfacility Transfer (scheduled)
50 Mutual Aid
410000 Interfacility Transfer (unscheduled)
410002 Flagdown/Walk-in Non-emergent
35 Rendezvous/Intercept
45 Medical Transport
55 Standby
410001 Flagdown/Walk-in Emergent

Introduction to VPHIB Resources - 12

INCIDENT/PATIENT DISPOSITION

E20_10

Required to be reported in VA – Yes
National Element - Yes

Definition

Type of disposition treatment and/or transport of the patient.

Field Values

4815 Cancelled
4825 No Patient Found
4835 Patient Refused Care
4845 Treated, Transferred Care
4855 Treated, Referred to Law Enforcement
804003 Standby Only – No Patient Contacts
4820 Dead at Scene
4830 No Treatment Required
4840 Treated and Released
4850 Treated, Transported by EMS
4860 Treated, Transported by Private Vehicle

Introduction to VPHIB Resources - 13

CAUSE OF INJURY

E10_01

Required to be reported in VA – Yes
National Element - Yes

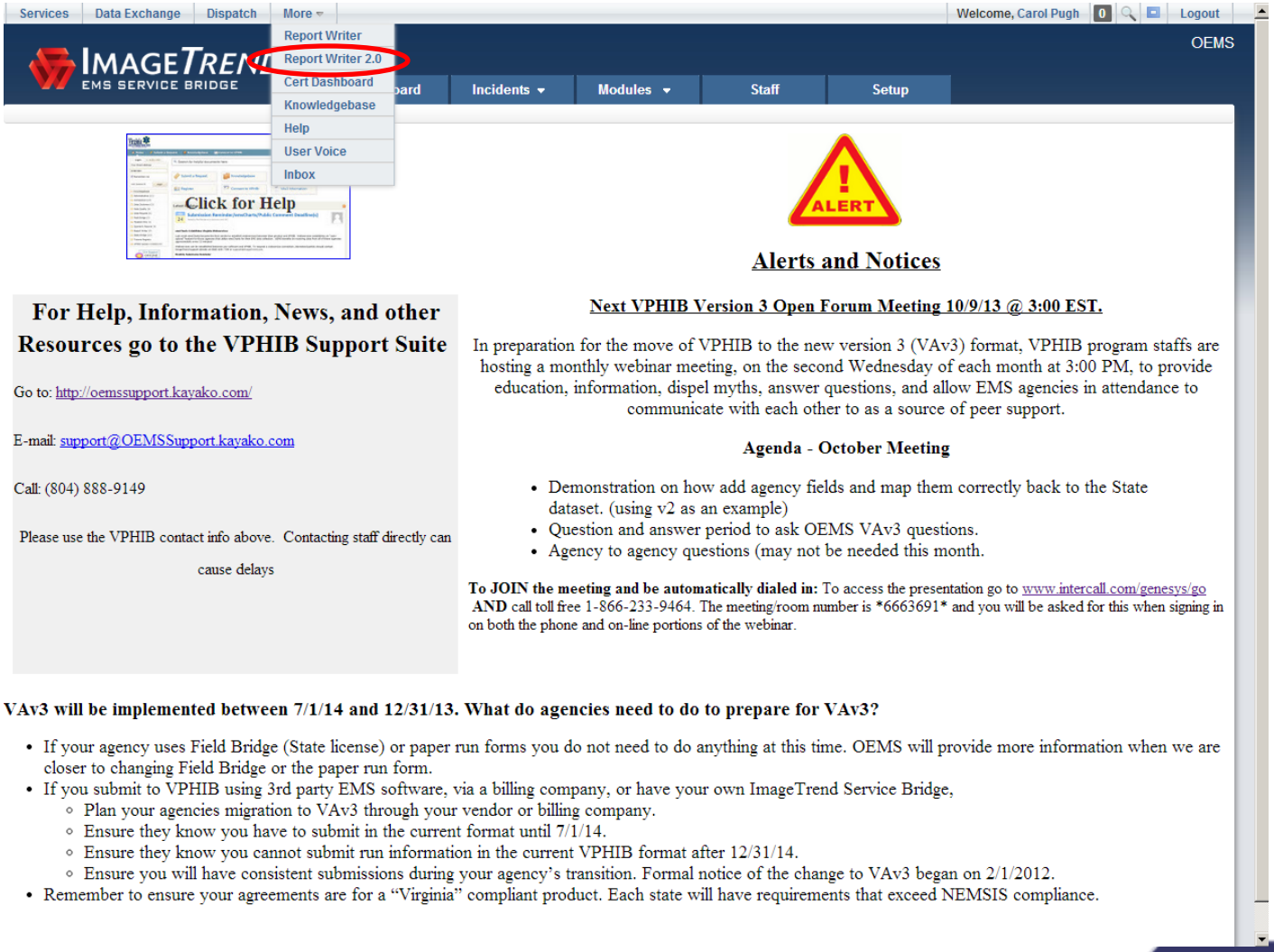
Definition

The category of the reported/suspected external cause of the injury

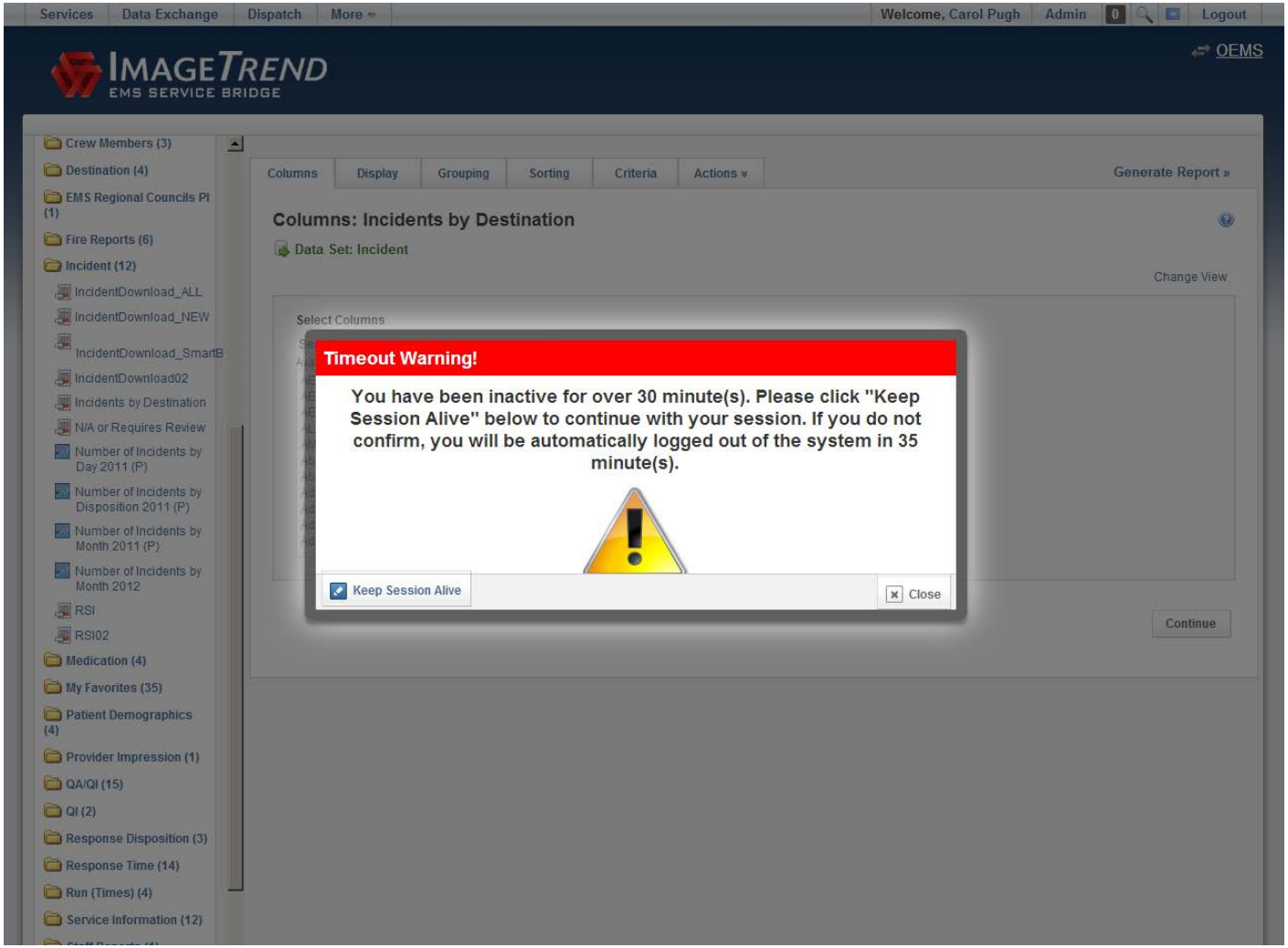
Field Values

-25	Not Applicable	-20	Not Recorded
-15	Not Reporting	-10	Not Known
-5	Not Available	1885	Bites (E906.0)
9500	Aircraft related accident (E84X.0)	9505	Bicycle Accident (E826.0)
9515	Chemical poisoning (E86X.0)	9520	Child battering (E967.0)
9525	Drowning (E910.0)	9530	Drug poisoning (E85X.0)
9535	Electrocution (non-lightning) (E925.0)	9540	Excessive Cold (E901.0)
9545	Excessive Heat (E900.0)	9550	Falls (E88X.0)
9555	Fire and Flames (E89X.0)	9560	Firearm assault (E965.0)
9565	Firearm injury (accidental) (E985.0)	9570	Firearm self inflicted (E955.0)
9575	Lightning (E907.0)	9580	Machinery accidents (E919.0)
9585	Mechanical Suffocation (E913.0)	9590	Motor Vehicle non-traffic accident (E82X.0)
9595	Motor Vehicle traffic accident (E81X.0)	9600	Motorcycle Accident (E81X.1)
9605	Non-Motorized Vehicle Accident (E848.0)	9610	Pedestrian traffic accident (E814.0)
9615	Radiation exposure (E926.0)	9620	Rape (E960.1)
9625	Smoke Inhalation (E89X.2)	9630	Stabbing/Cutting Accidental (E986.0)
9635	Stabbing/Cutting Assault (E966.0)	9640	Struck by Blunt/Thrown Object (E968.2)
9645	Venomous stings (plants, animals) (E905.0)	9650	Water Transport accident (E83X.0)
580000	Assault	580006	Burn - Hot Substance
580026	Burns-Chemical	580028	Burns - Thermal
580019	Elder Abuse/Neglect	580002	Entrapped (Non-MVC)
580004	Explosion	580005	Foreign Body Entering Eye/Orifice
580001	MVC - ATV	580017	MVC vs. Large Animal
580010	Overexertion	580009	Other Injury

Creating a Transactional Report - 1

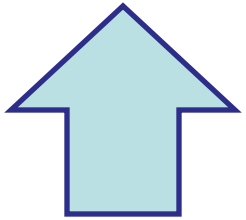


Creating a Transactional Report - 2

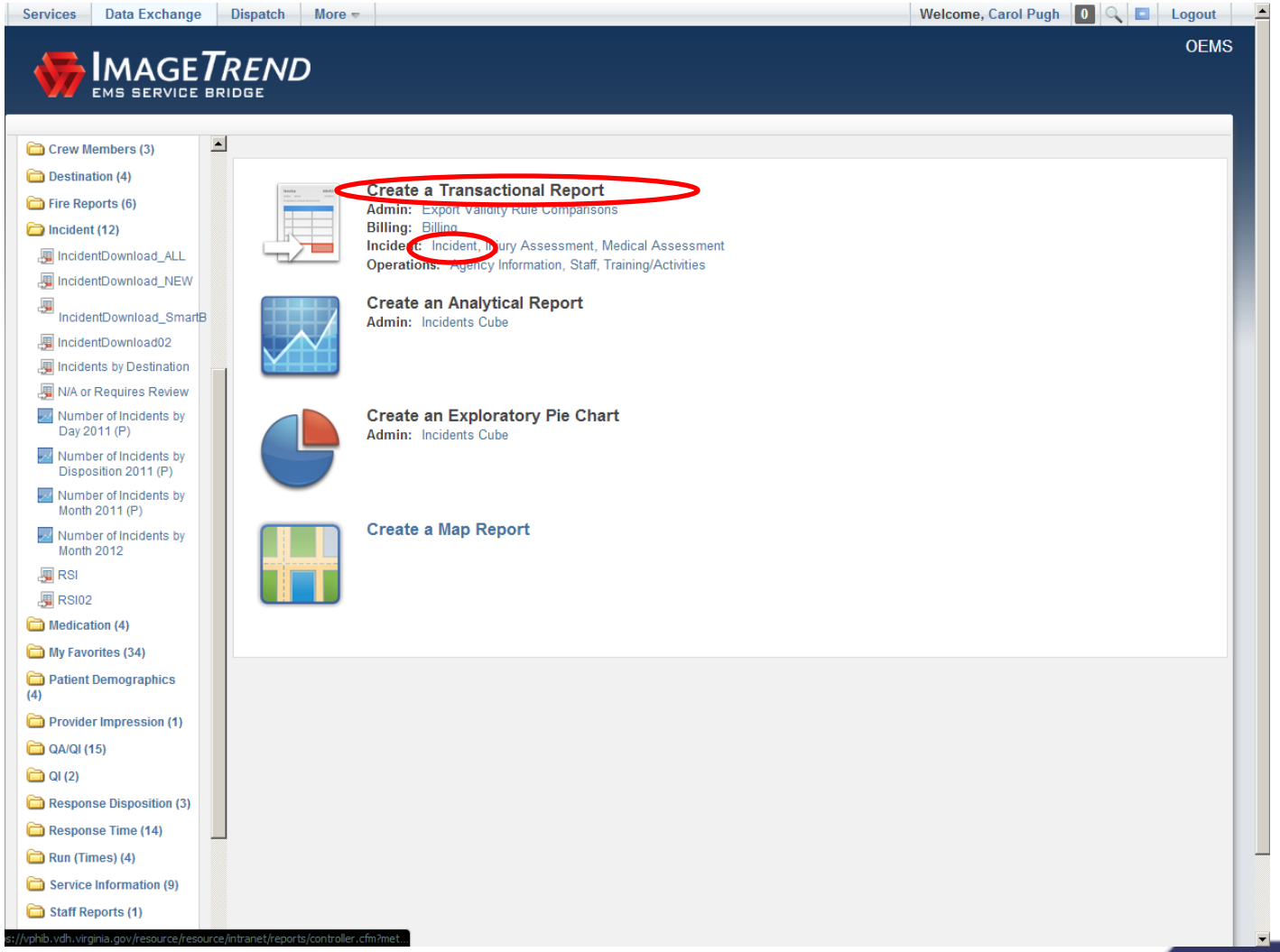


Creating a Transactional Report - 4

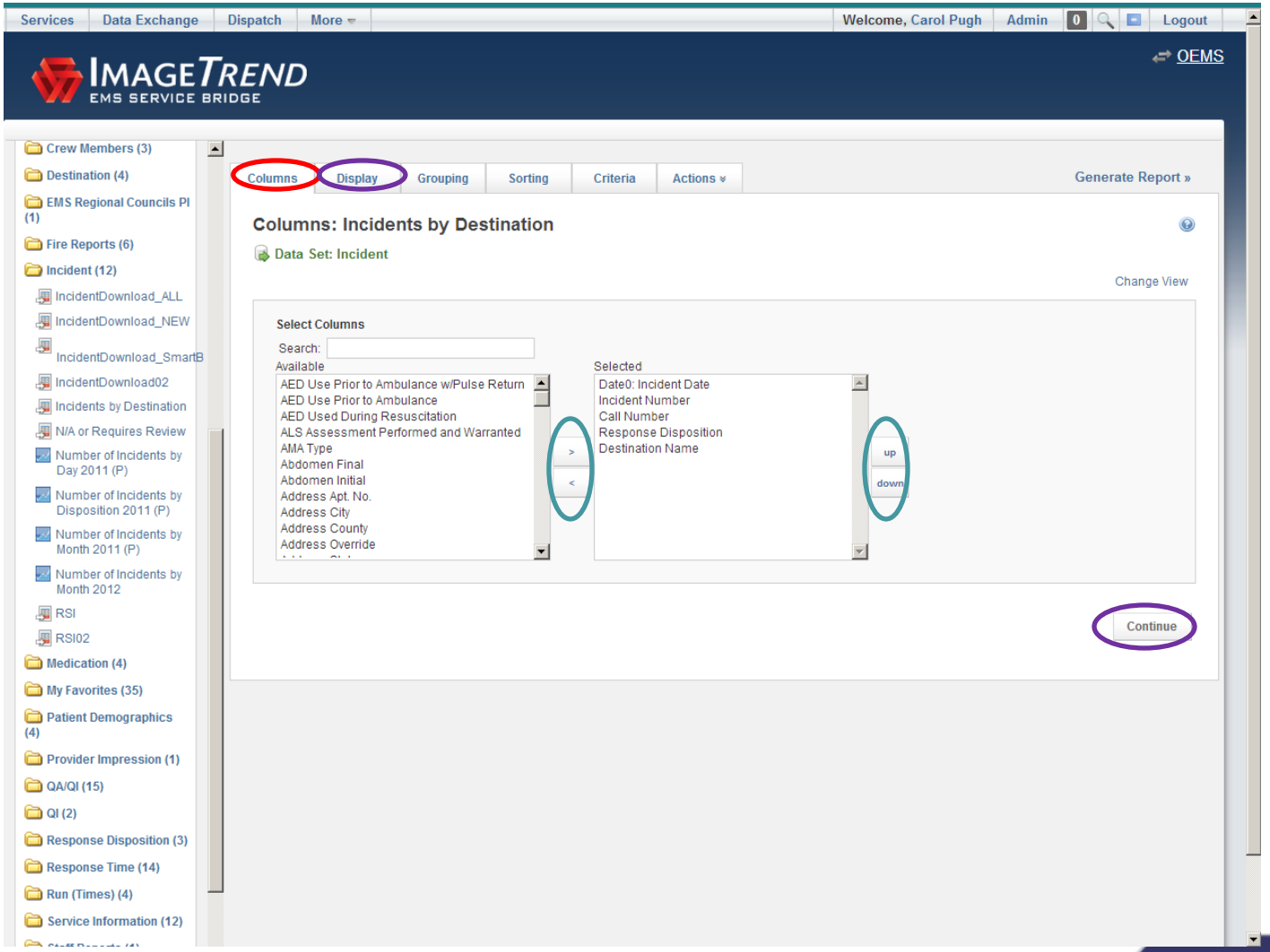
https://vphib.vdh.virginia.gov/reportwriter/



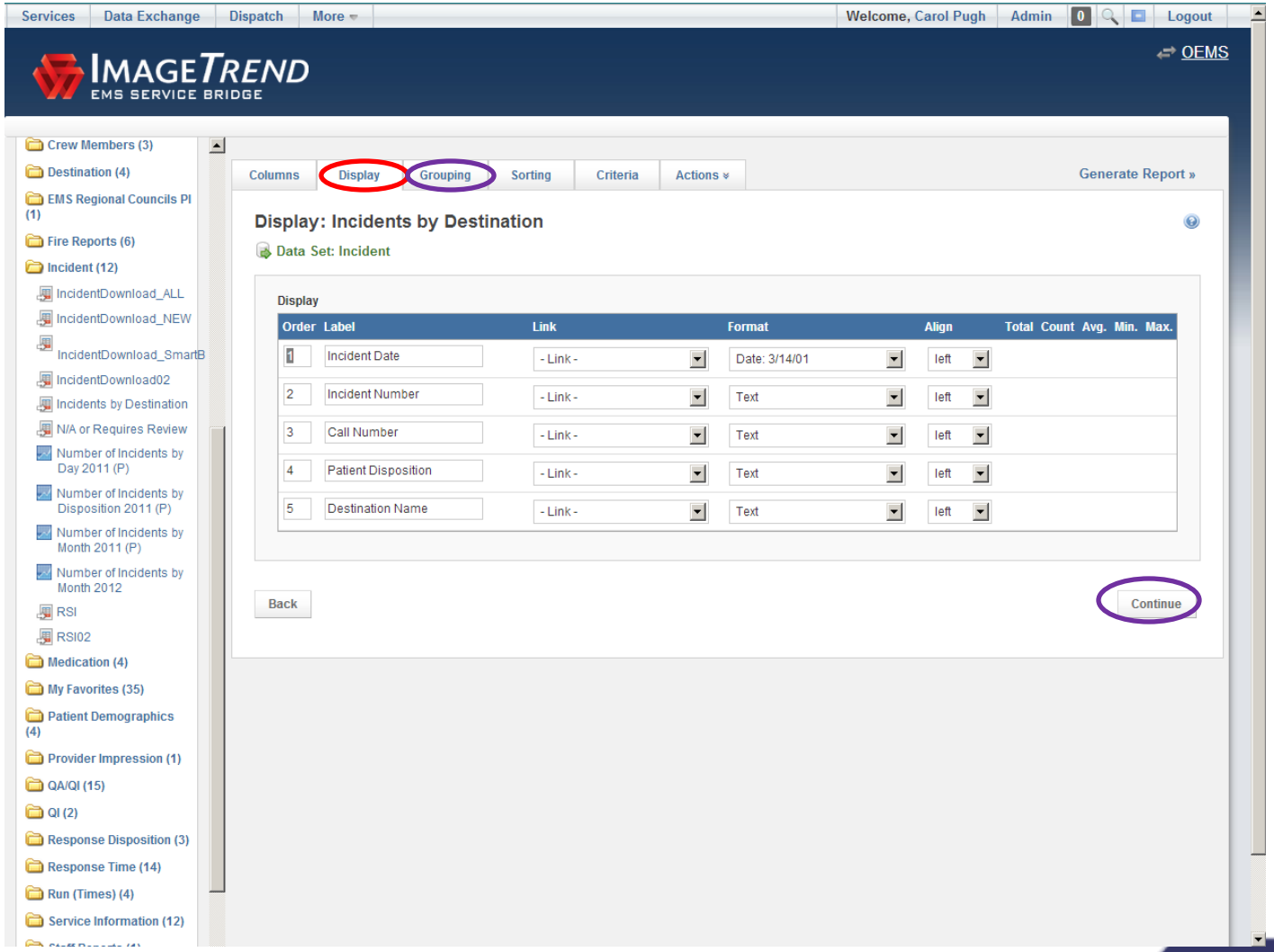
Creating a Transactional Report - 5



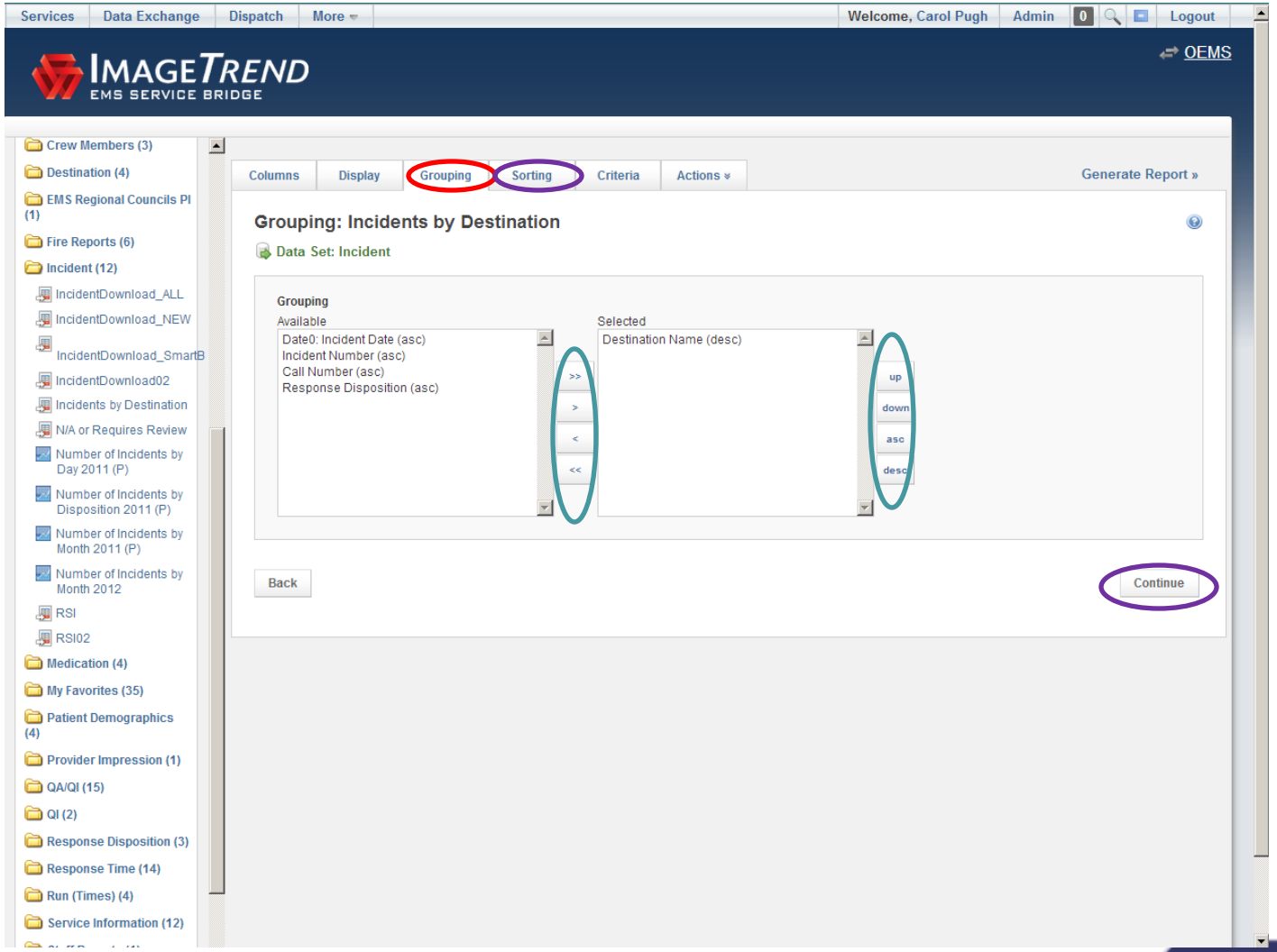
Creating a Transactional Report - 6



Creating a Transactional Report - 7



Creating a Transactional Report - 8



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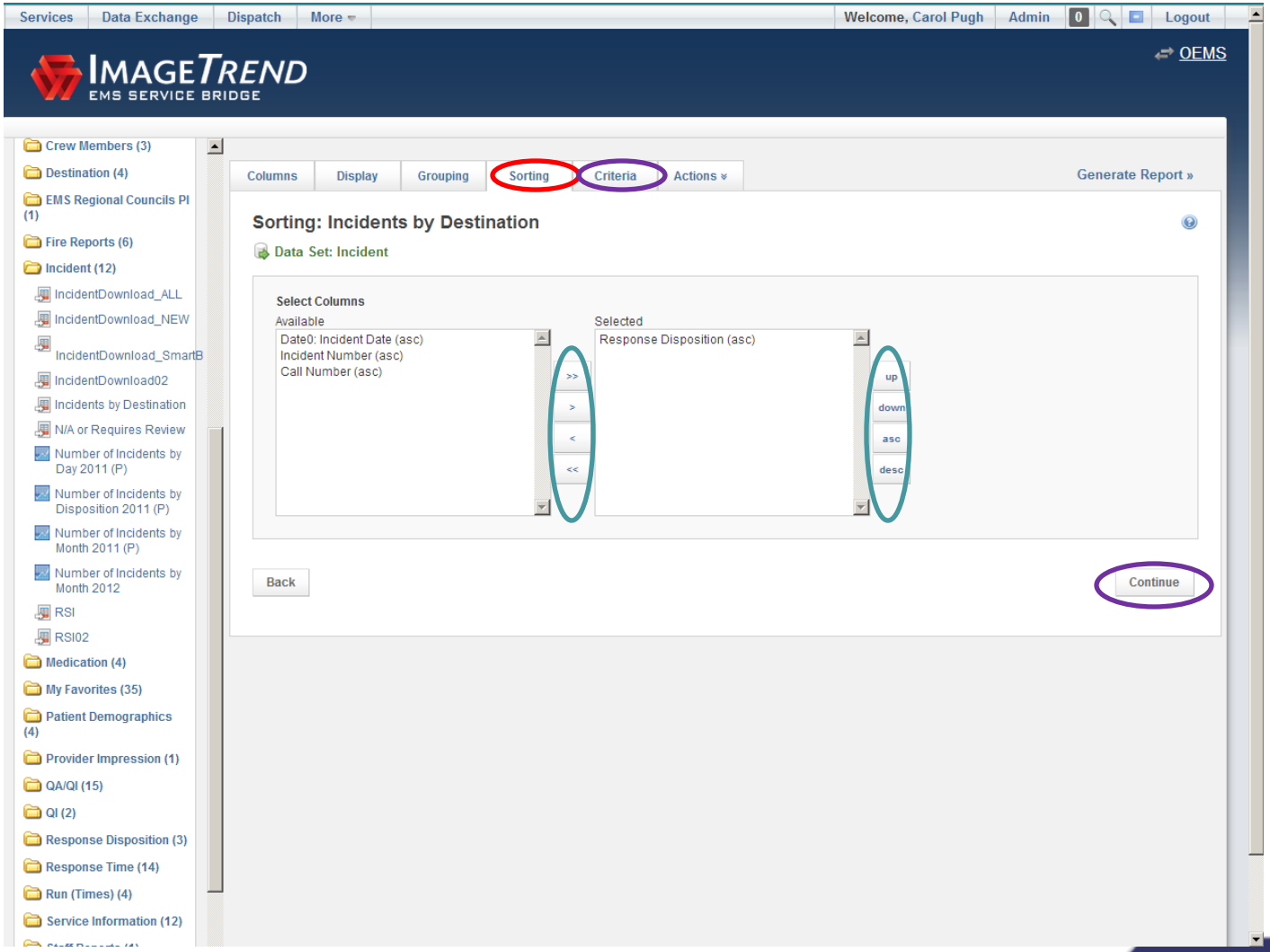
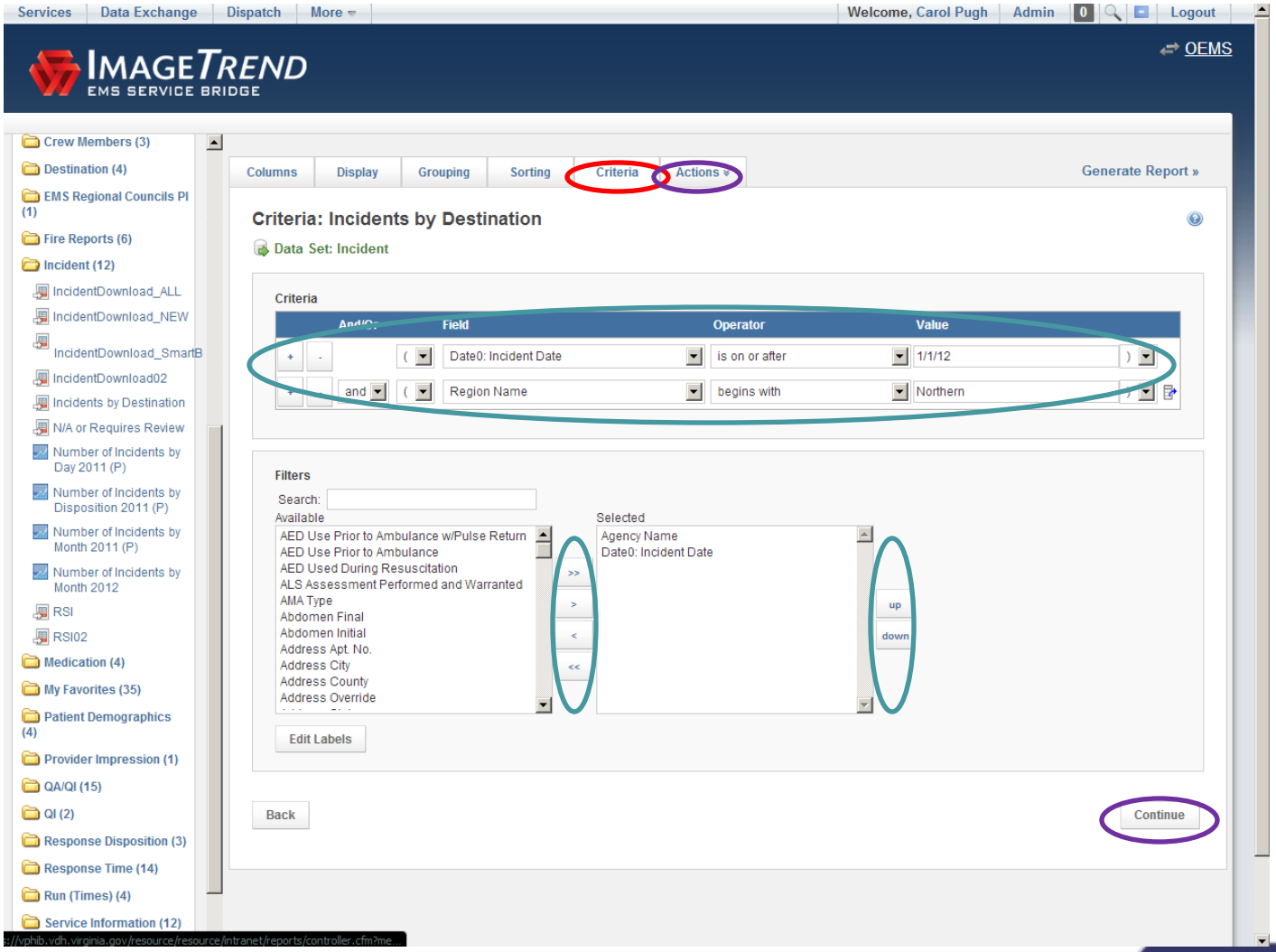
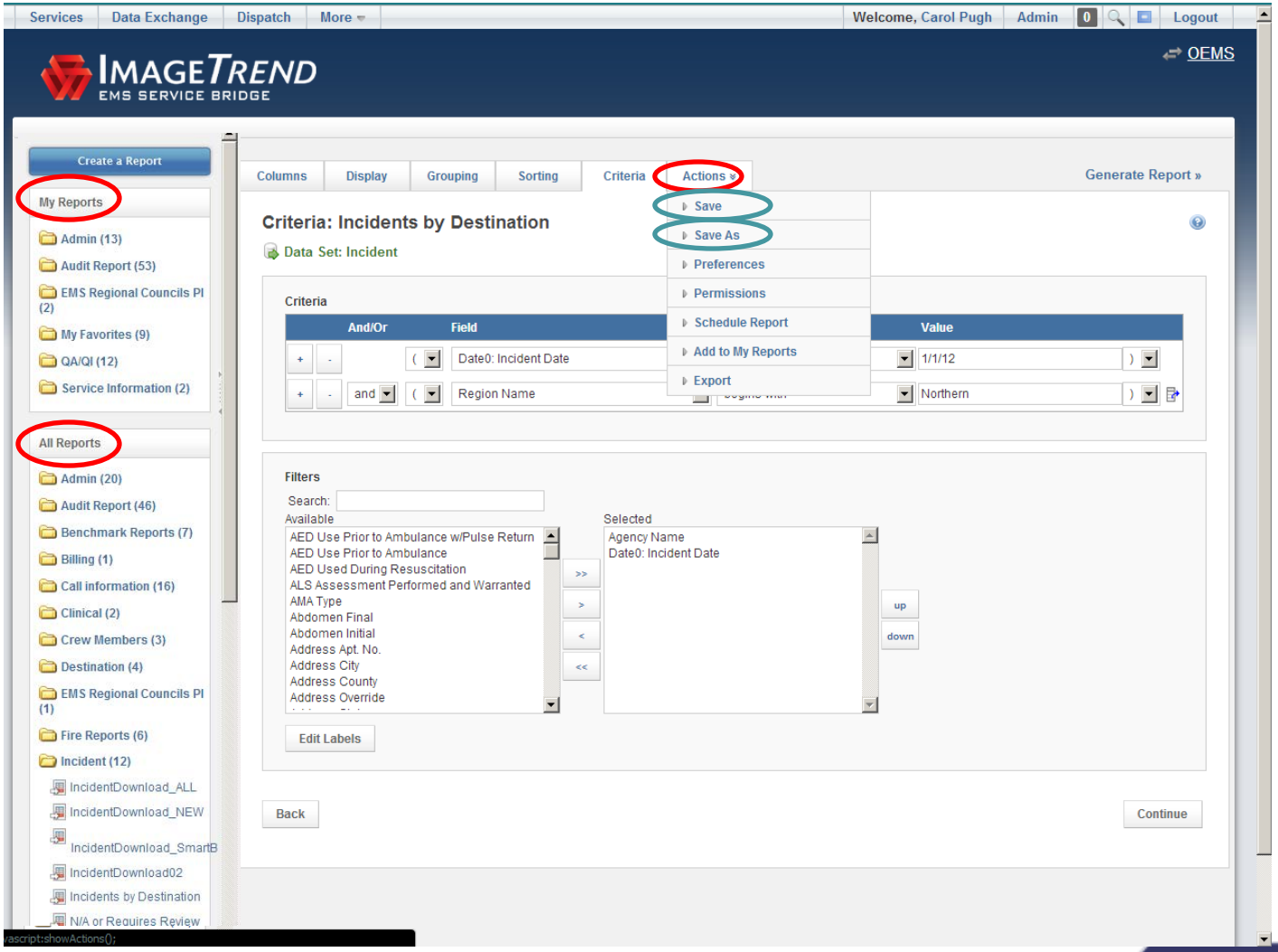
Creating a Transactional Report - 9



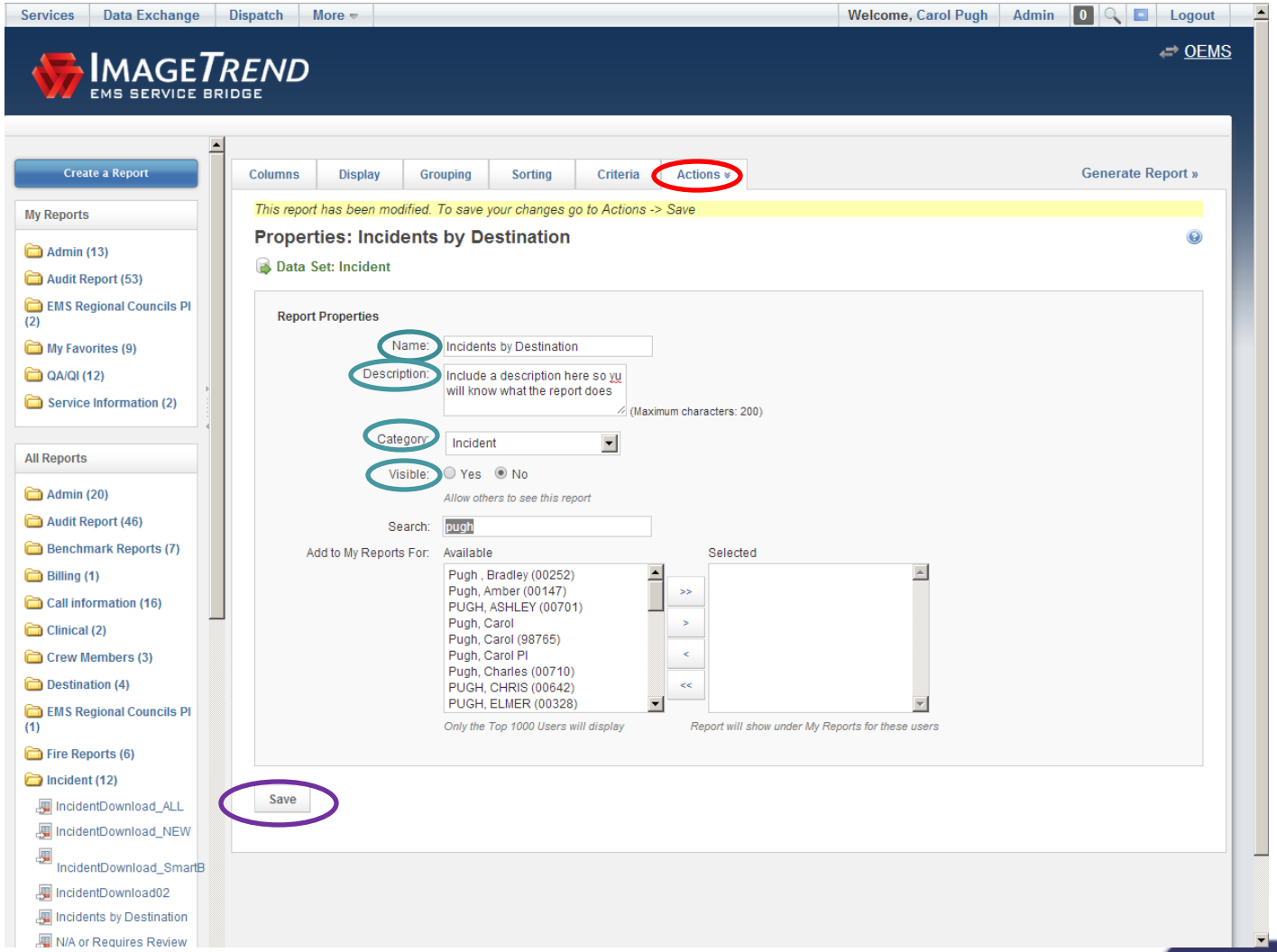
Creating a Transactional Report - 10



Creating a Transactional Report - 11



Creating a Transactional Report – 12a



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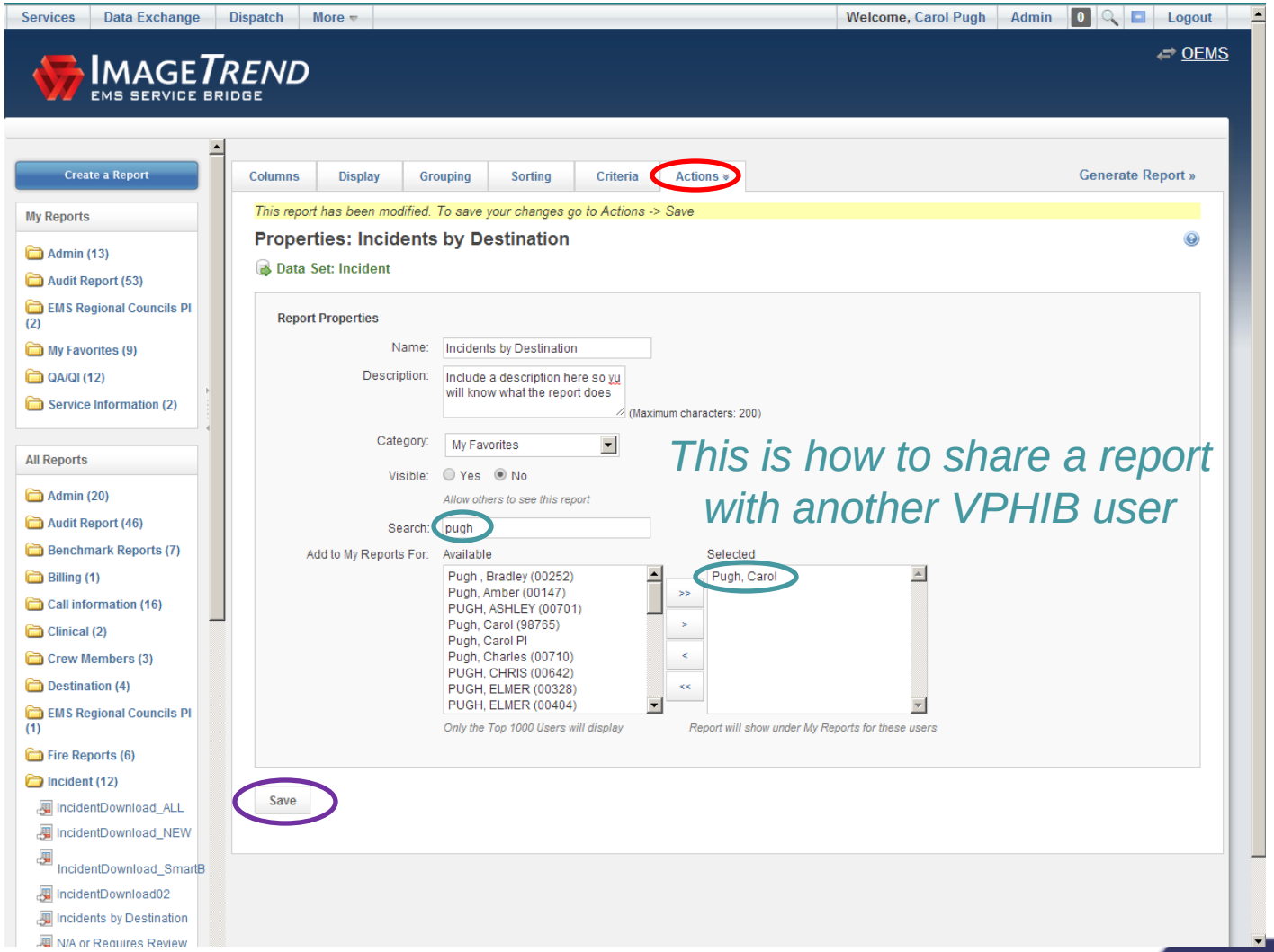
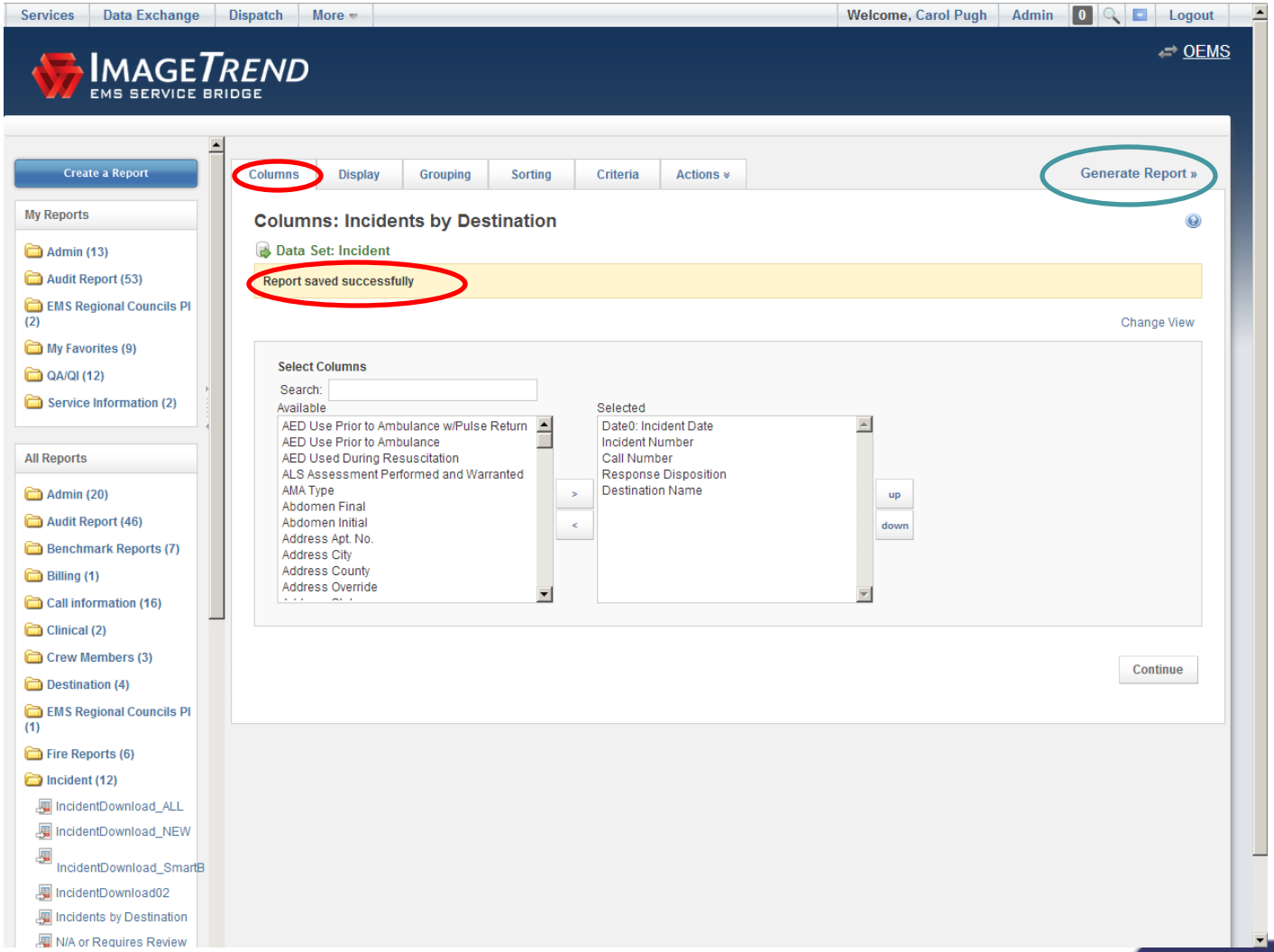
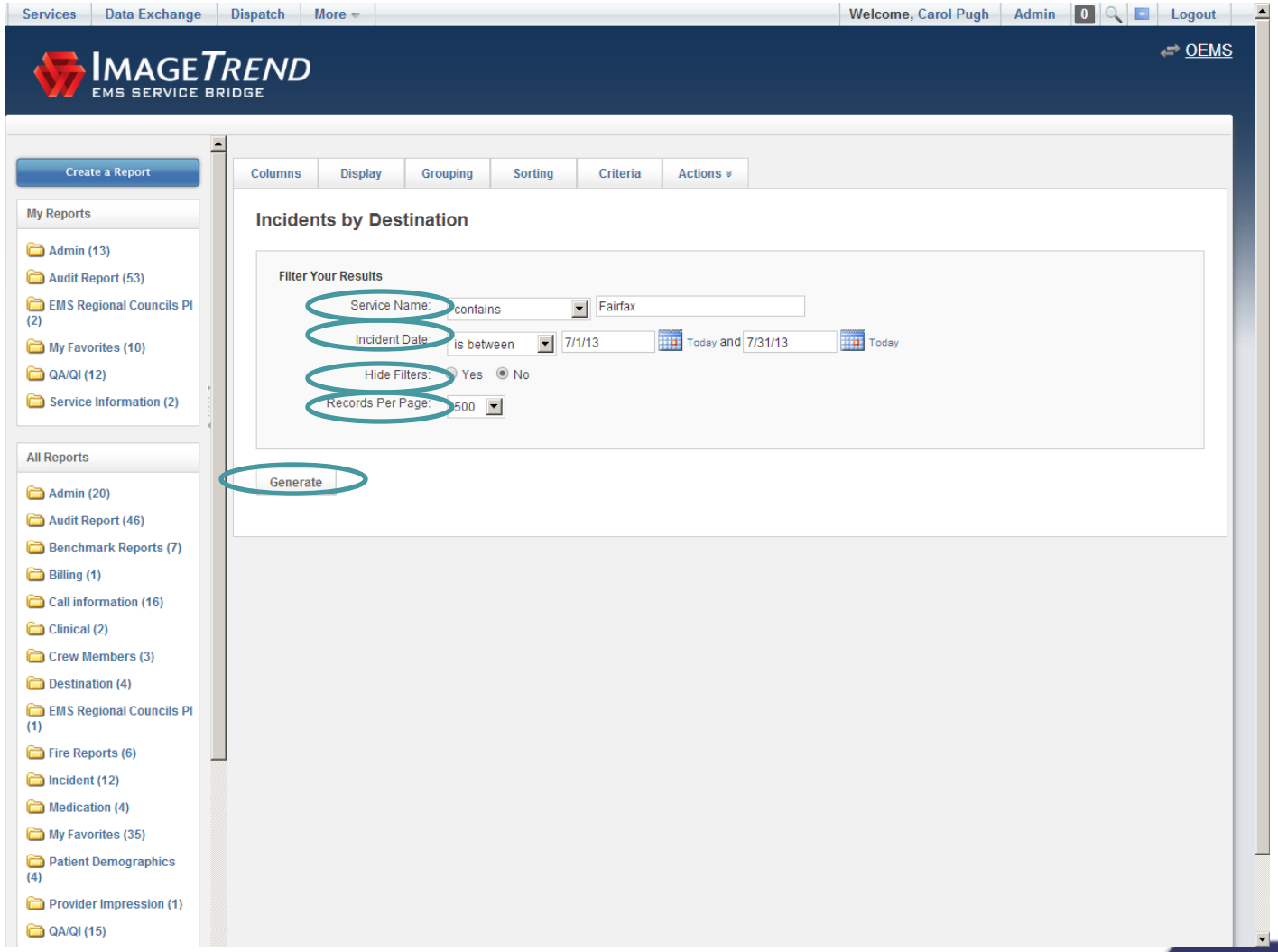
Creating a Transactional Report – 12b



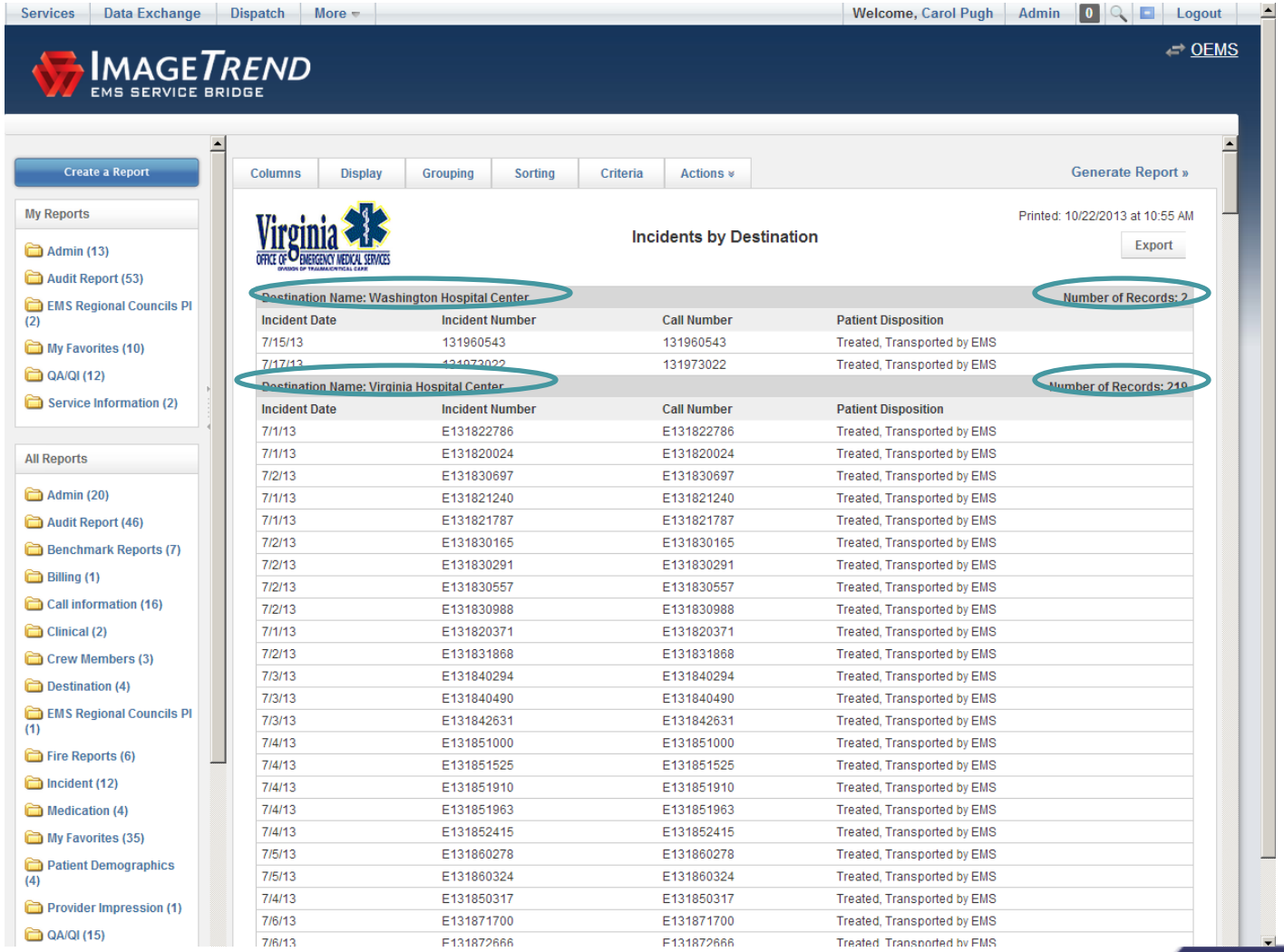
Creating a Transactional Report - 13



Using an Existing Report - 1



Using an Existing Report - 2



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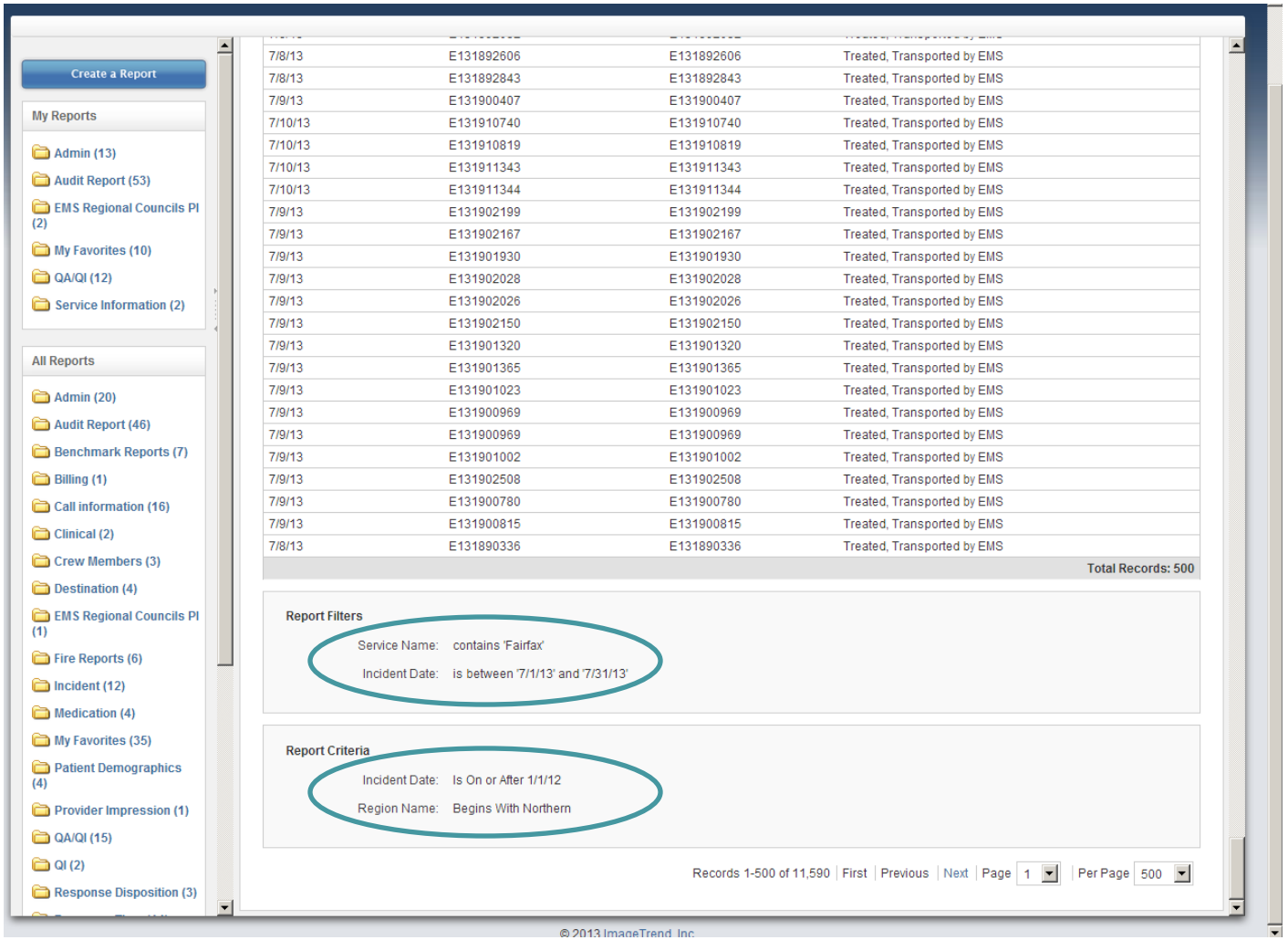
Using an Existing Report - 3



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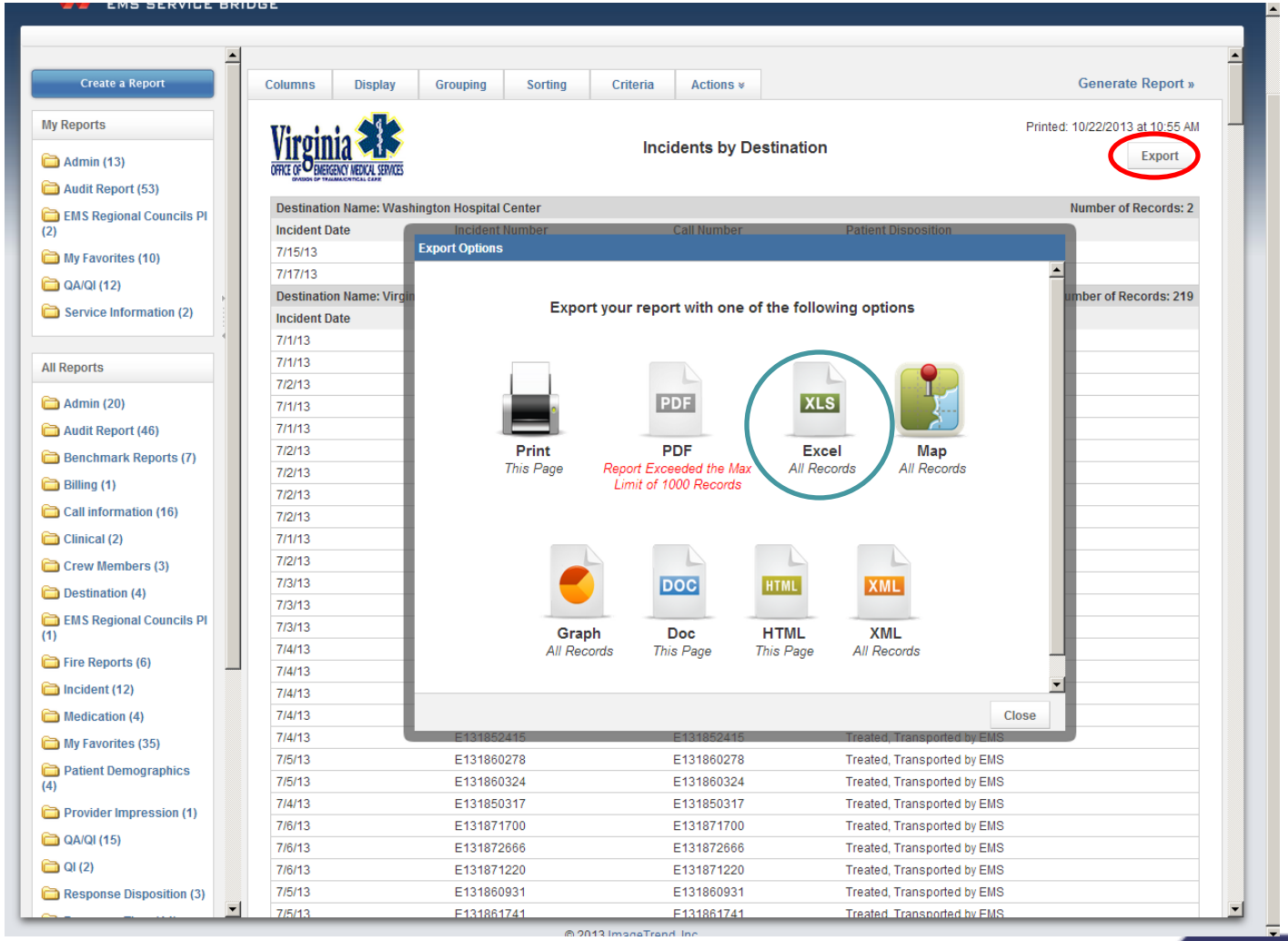
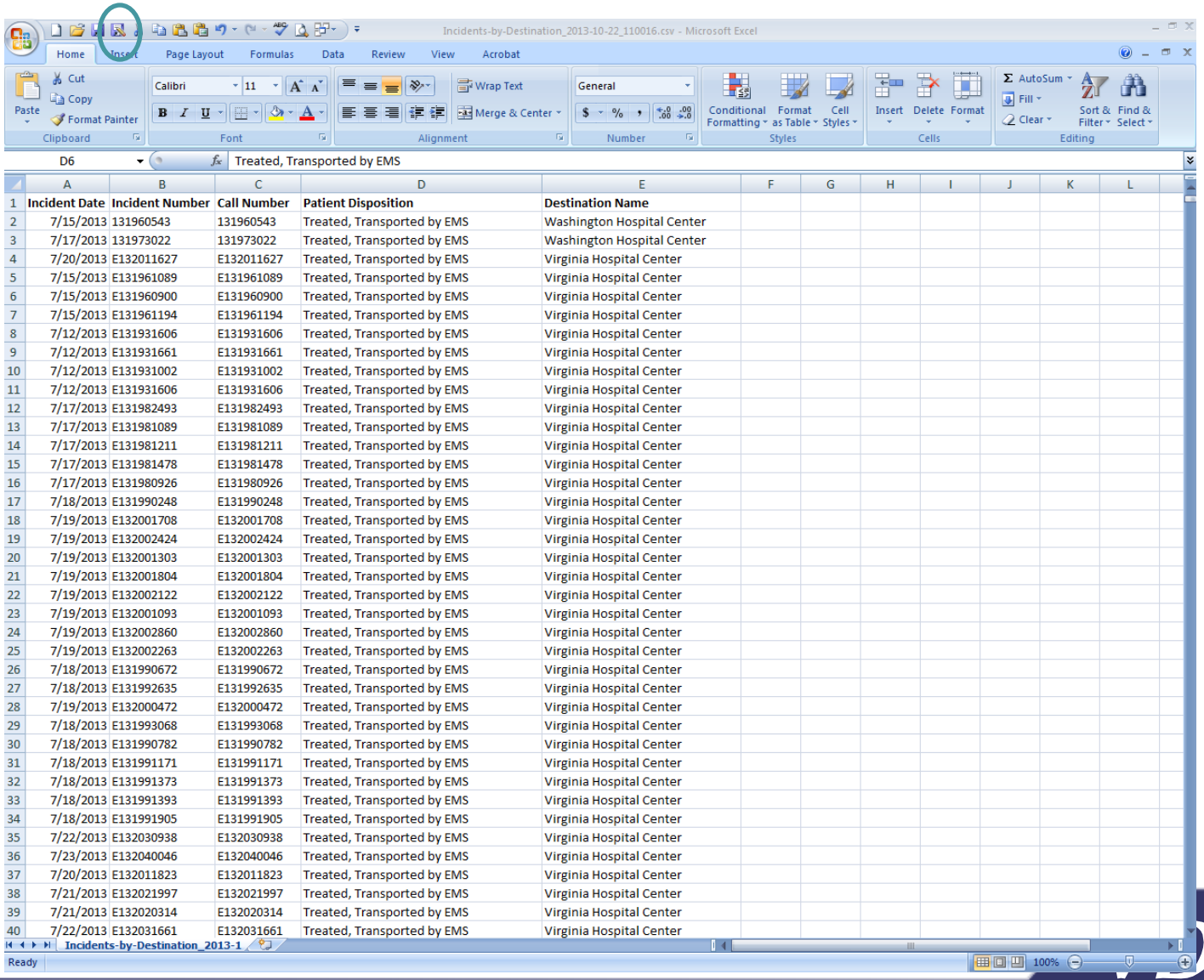
Using an Existing Report - 4

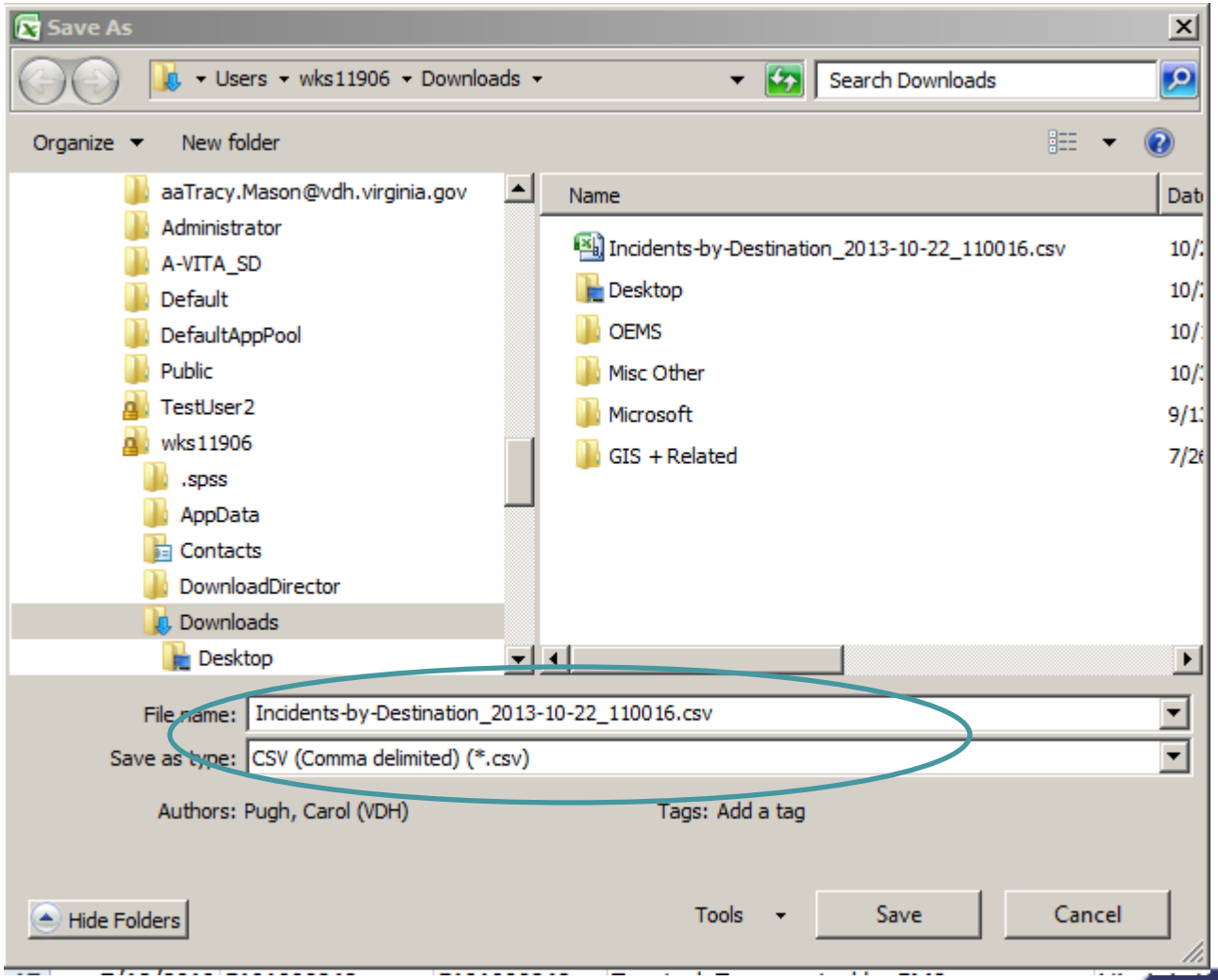


Using an Existing Report - 5

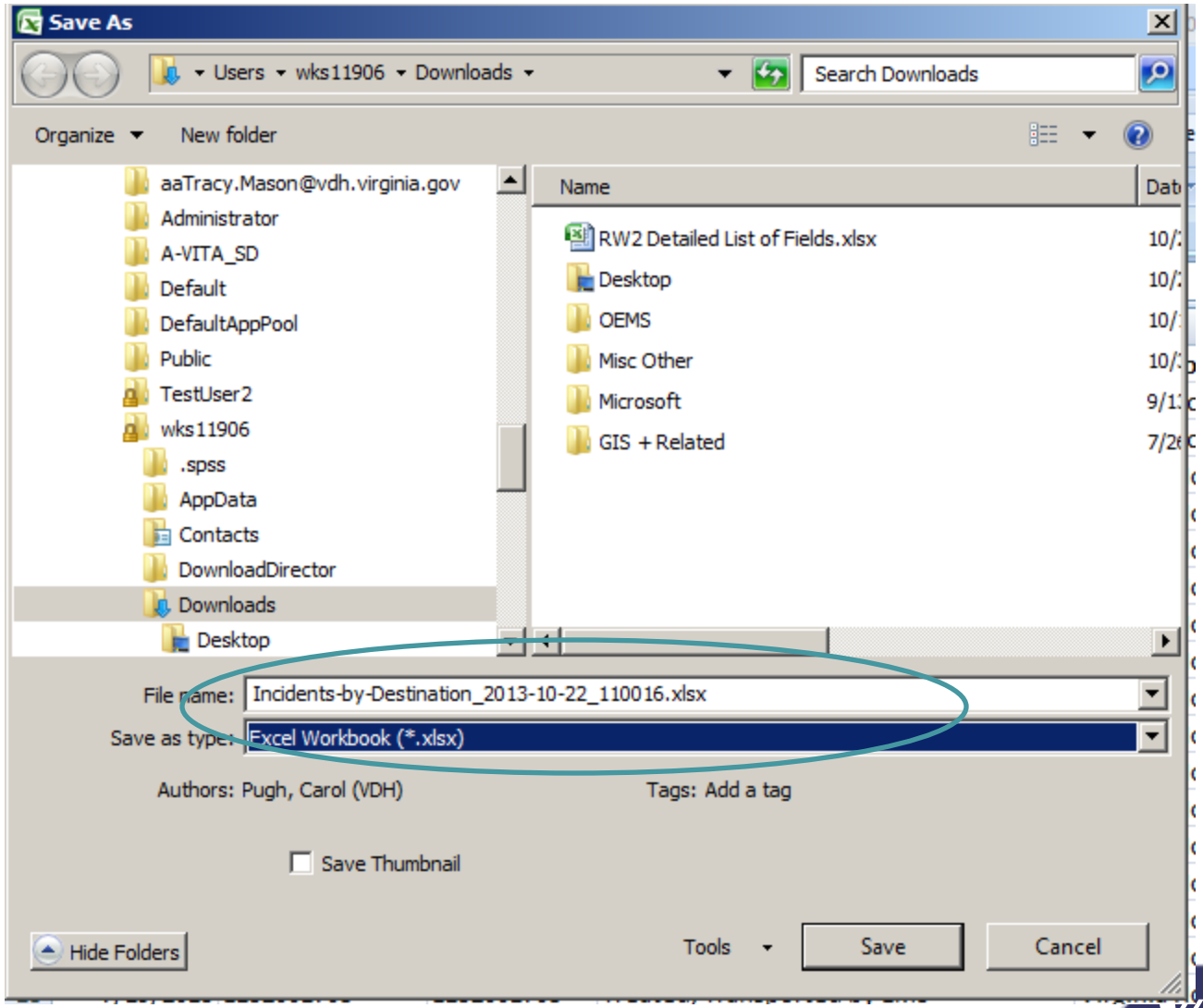


	A	B	C	D	E
1	Incident Date	Incident Number	Call Number	Patient Disposition	Destination Name
2	7/15/2013	131960543	131960543	Treated, Transported by EMS	Washington Hospital Center
3	7/17/2013	131973022	131973022	Treated, Transported by EMS	Washington Hospital Center
4	7/20/2013	E132011627	E132011627	Treated, Transported by EMS	Virginia Hospital Center
5	7/15/2013	E131961089	E131961089	Treated, Transported by EMS	Virginia Hospital Center
6	7/15/2013	E131960900	E131960900	Treated, Transported by EMS	Virginia Hospital Center
7	7/15/2013	E131961194	E131961194	Treated, Transported by EMS	Virginia Hospital Center
8	7/12/2013	E131931606	E131931606	Treated, Transported by EMS	Virginia Hospital Center
9	7/12/2013	E131931661	E131931661	Treated, Transported by EMS	Virginia Hospital Center
10	7/12/2013	E131931002	E131931002	Treated, Transported by EMS	Virginia Hospital Center
11	7/12/2013	E131931606	E131931606	Treated, Transported by EMS	Virginia Hospital Center
12	7/17/2013	E131982493	E131982493	Treated, Transported by EMS	Virginia Hospital Center
13	7/17/2013	E131981089	E131981089	Treated, Transported by EMS	Virginia Hospital Center
14	7/17/2013	E131981211	E131981211	Treated, Transported by EMS	Virginia Hospital Center
15	7/17/2013	E131981478	E131981478	Treated, Transported by EMS	Virginia Hospital Center
16	7/17/2013	E131980926	E131980926	Treated, Transported by EMS	Virginia Hospital Center
17	7/18/2013	E131990248	E131990248	Treated, Transported by EMS	Virginia Hospital Center
18	7/19/2013	E132001708	E132001708	Treated, Transported by EMS	Virginia Hospital Center
19	7/19/2013	E132002424	E132002424	Treated, Transported by EMS	Virginia Hospital Center
20	7/19/2013	E132001303	E132001303	Treated, Transported by EMS	Virginia Hospital Center
21	7/19/2013	E132001804	E132001804	Treated, Transported by EMS	Virginia Hospital Center
22	7/19/2013	E132002122	E132002122	Treated, Transported by EMS	Virginia Hospital Center
23	7/19/2013	E132001093	E132001093	Treated, Transported by EMS	Virginia Hospital Center
24	7/19/2013	E132002860	E132002860	Treated, Transported by EMS	Virginia Hospital Center
25	7/19/2013	E132002263	E132002263	Treated, Transported by EMS	Virginia Hospital Center
26	7/18/2013	E131990672	E131990672	Treated, Transported by EMS	Virginia Hospital Center
27	7/18/2013	E131992635	E131992635	Treated, Transported by EMS	Virginia Hospital Center
28	7/19/2013	E132000472	E132000472	Treated, Transported by EMS	Virginia Hospital Center
29	7/18/2013	E131993068	E131993068	Treated, Transported by EMS	Virginia Hospital Center
30	7/18/2013	E131990782	E131990782	Treated, Transported by EMS	Virginia Hospital Center
31	7/18/2013	E131991171	E131991171	Treated, Transported by EMS	Virginia Hospital Center
32	7/18/2013	E131991373	E131991373	Treated, Transported by EMS	Virginia Hospital Center
33	7/18/2013	E131991393	E131991393	Treated, Transported by EMS	Virginia Hospital Center
34	7/18/2013	E131991905	E131991905	Treated, Transported by EMS	Virginia Hospital Center
35	7/22/2013	E132030938	E132030938	Treated, Transported by EMS	Virginia Hospital Center
36	7/23/2013	E132040046	E132040046	Treated, Transported by EMS	Virginia Hospital Center
37	7/20/2013	E132011823	E132011823	Treated, Transported by EMS	Virginia Hospital Center
38	7/21/2013	E132021997	E132021997	Treated, Transported by EMS	Virginia Hospital Center
39	7/21/2013	E132020314	E132020314	Treated, Transported by EMS	Virginia Hospital Center
40	7/22/2013	E132031661	E132031661	Treated, Transported by EMS	Virginia Hospital Center

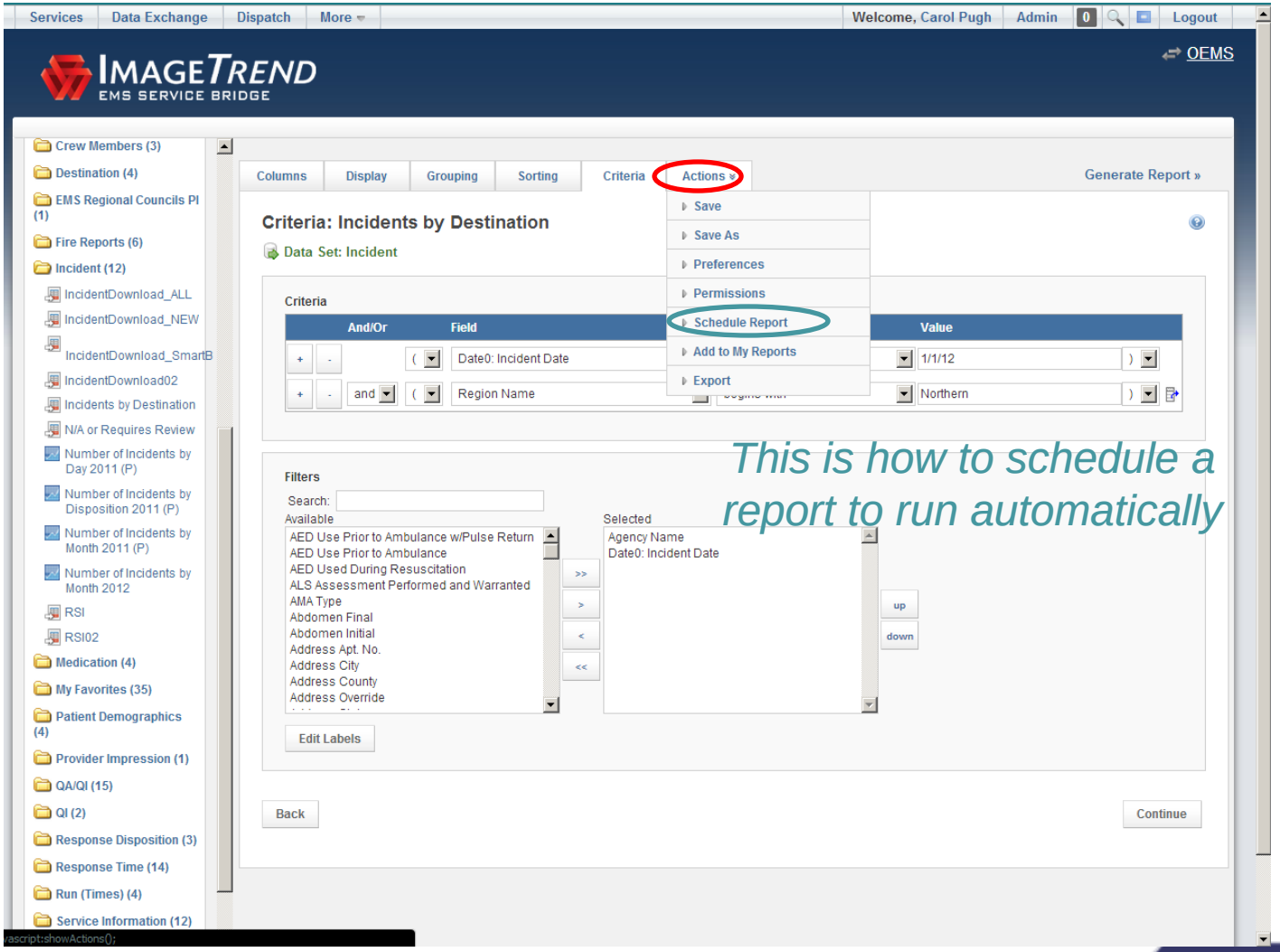
Using an Existing Report - 6



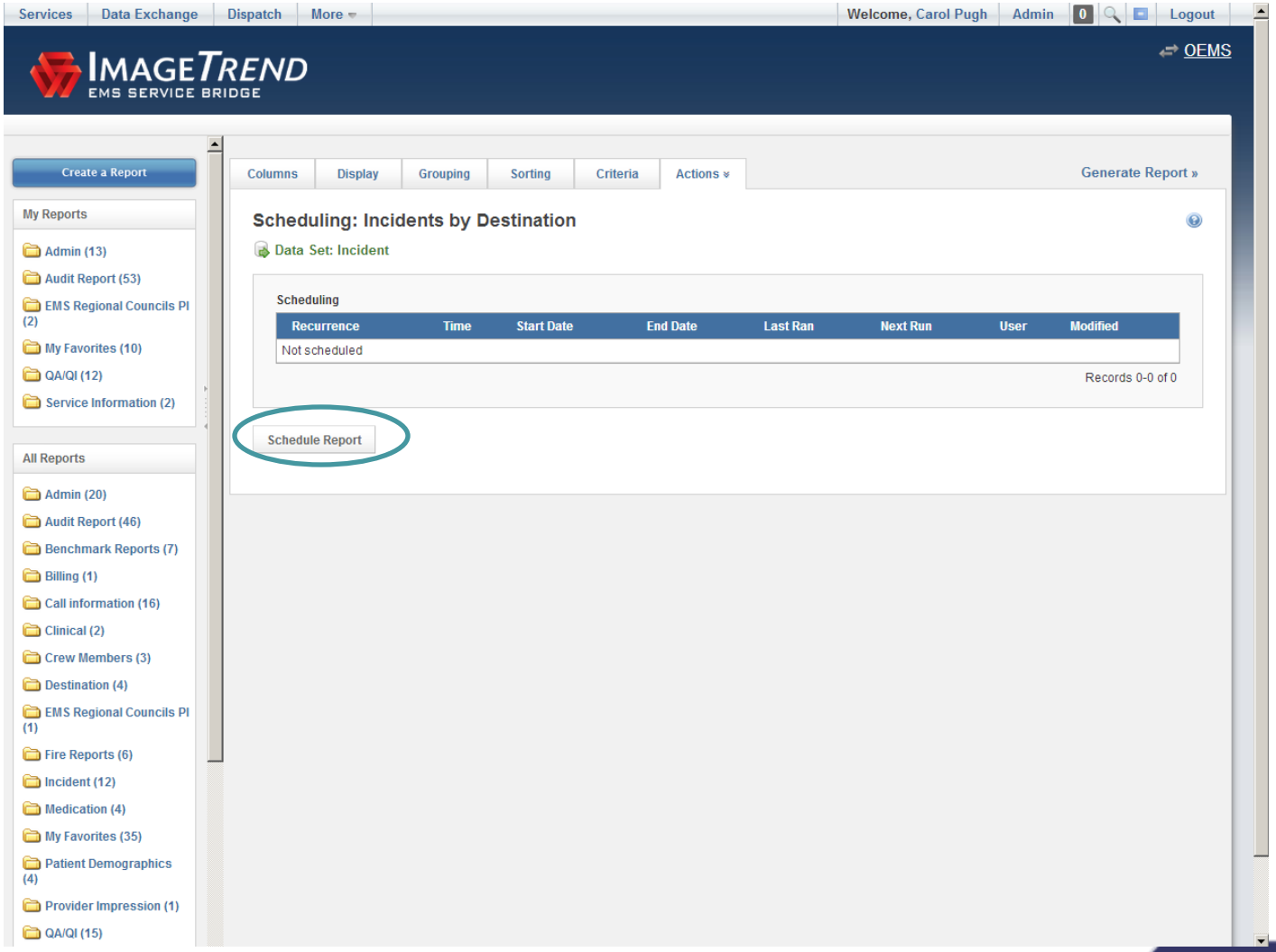
Using an Existing Report - 7



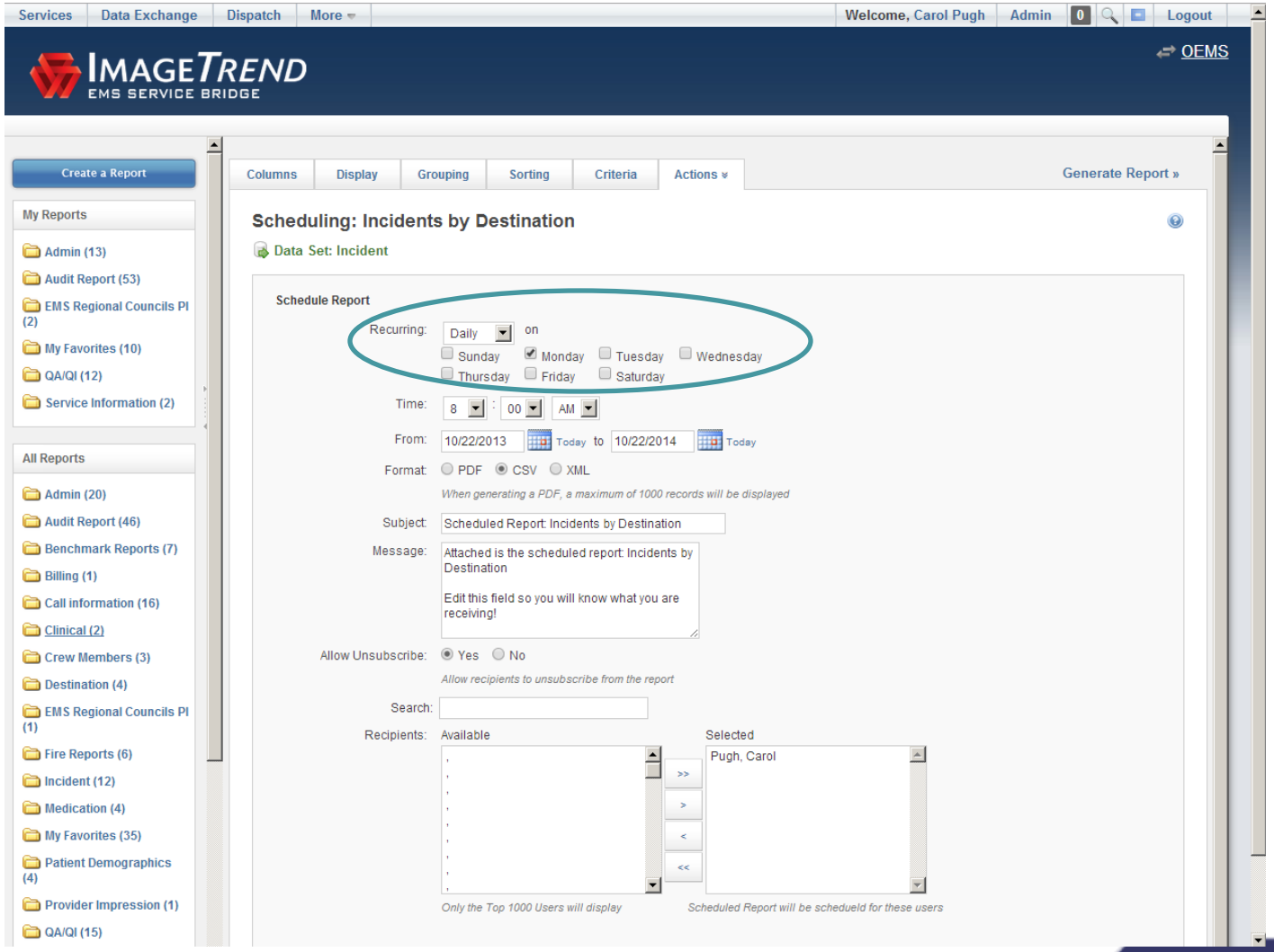
Scheduling a Report - 1



Scheduling a Report - 2



Scheduling a Report - 3



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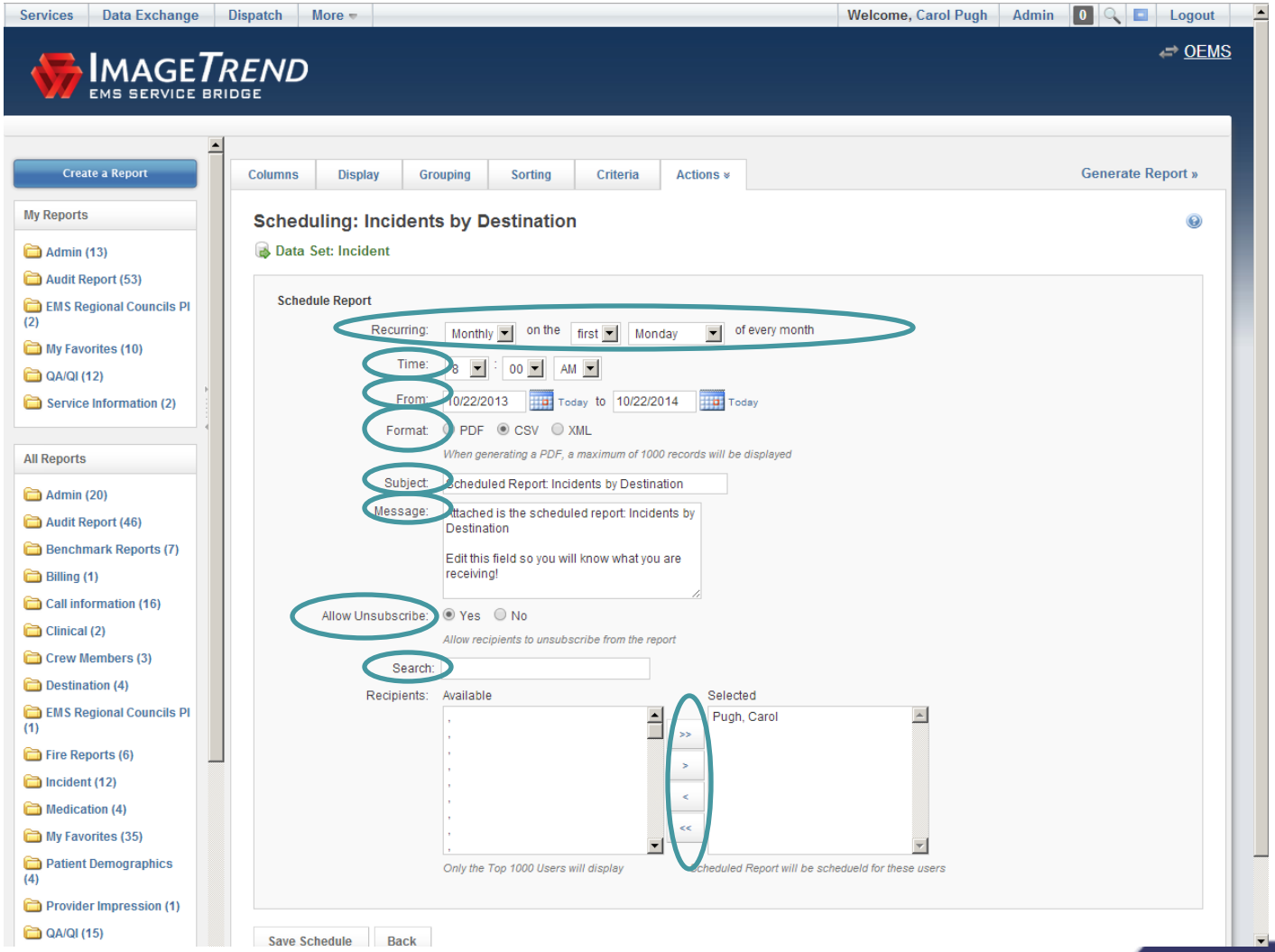
Scheduling a Report - 4



Final Thoughts - 1

- Some data items come from *"one to one"* matches with the incident data table
  - Patient demographics
  - Incident characteristics (type of service, patient disposition)
- Other data items come from *"one to many"* matches which can result in unintentional duplicate records
  - Vital signs
  - Procedures (and complications)
  - Medications (and complications)

Final Thoughts - 2

- The interface can be glacial in its speed
  - Best to think of this as a data extraction tool rather than a report writer
  - Use at “off” times (evenings, weekends) makes things move more quickly
  - Schedule reports to deliver the data to your Email Inbox

Questions?

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