Trauma Registry Training

Exercises

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For a copy of the Data Dictionary, please follow the below address.

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<td></td>
</tr>
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<td></td>
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<td></td>
</tr>
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<td>6</td>
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<td></td>
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Preface

This exercise manual is written for anyone who wants to learn Report Writer but is specifically written for Level III hospitals preparing for their American College of Surgeons (ACS) site visit. The questions were chosen to reflect the types of questions that the ACS might ask and to cover the range of basic functions that are used in report writer to analyze these questions.

This document was written so that a person can teach him or herself how to use report writer. Questions are listed and their solutions are presented by showing screen shots from report writer and covering each step that must be completed. The final solutions reflect findings from the training image data base. However, the solutions do not cover setting up the initial ACS filter query. This is covered in the overview document “Report Writer Training Guide: A Reference”.

In preparing for an ACS visit, an analyst should allow plenty of time to analyze the questions that are sent to the hospital prior to the visit. An analyst will need to be familiar with the trauma registry data (e.g., variable names and options available in collector — know and use your Data Dictionary!); and to be comfortable using ICD-9 diagnosis codes, ICD-9 E-codes, procedure codes and AIS predot and post dot codes. On the other hand, no one can know everything … so if you have a question, do not hesitate to call either the State Trauma Program Office or Digital Innovation for help with coding questions. Registrars and Nurse Coordinators at the Level I and Level II hospitals are also a wonderful resource to use.

It is recommended that you try to solve each problem sequentially as later questions presume that you know how to perform simple functions. For questions 1-9, the solutions are presented starting on page19. The Table of Contents shows the page numbers where these solutions can be found. For questions 10-13, the solutions follow the question.

One function that is NOT covered in this manual is downloading findings (results) into Excel. This will be covered in a subsequent manual.

As with any data analysis program, the more you use Report Writer, the more facile you will become. As you become more skilled, you may find that there could be multiple ways to reach a solution. In the meantime, keep trying—ask questions and always test your answers by reviewing your cases.
**Exercises**

The exercises below are sample questions that the American College of Surgeons has asked hospitals to answer during their site visit.

**Question 1.** How many spinal cord injuries do you have in your registry?

This problem requires that you define spinal cord injuries with a query. The most specific way to define spinal cord injury is with the AIS predot codes. See Appendix 1 for a copy of the AIS codes for the spinal region. When choosing your data elements in your query from the Anatomical Diagnosis tab, you will want to use the ANY(PREDOT_Codes). Be sure and use the Q option!

![Data Elements](image.png)

To define spinal cord injury, you have to decide whether or not to include Nerve root or plexus injuries. For example do you want to include brachial plexus injuries, cervical, thoracic or lumbar nerve root injuries, or cauda equina injuries? For this exercise, do not use nerve root or plexus injuries.

- Remember, Appendix 1 contains AIS–98 codes. The trauma registry will begin using AIS –2005 in 2010. **You will need new AIS predot codes to define spinal cord injuries when the registry begins using AIS 2005!**
- Even if you don’t enter AIS predot codes in your registry, they are there. Collector automatically maps AIS codes from ICD-9 diagnosis codes when you click the tricode button.
Question 2. How many spinal cord injuries have neurological deficits?

For this exercise, do not include neurological deficits from nerve root or plexus injuries. You will need to decide whether or not to include these injuries for an ACS visit, though. This query will be a subset of the previous query. Use PREDOT_CODES.

Remember, Appendix 1 contains AIS–98 codes. The trauma registry will begin using AIS –2005 in 2010. You will need new AIS predot codes to define spinal cord injuries when the registry begins using AIS 2005!
Assume that any cord laceration NFS would cause a neurologic deficit, but cord contusions NFS do not.

Question 3. How many spinal cord injuries were transferred out?

Question 4. How many trauma calls per month?

For this question, you have to define trauma calls and figure out how to display the information by month. Defining trauma calls is a query. To have the number of trauma calls displayed by eda month, you have to use a gather for eda month.

Question 5. How many trauma calls per month were treated by an orthopedic surgeon in the ED? Which orthopedic surgeons took these calls?

Question 6. How many trauma surgical cases do you have per year? For this question, define trauma cases using the ACS filter.

Question 7. What percent of your trauma patients sustained blunt force injuries?
What percent of your trauma patients sustained penetrating injuries?
What percent of your trauma patients sustained thermal injuries?
**Question 8.** Suppose you were asked to produce the following table

<table>
<thead>
<tr>
<th>ISS</th>
<th>Number</th>
<th>Admitted to Trauma Service</th>
<th>Deaths</th>
<th>% Mortality (from admitted to trauma service)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;=25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Unfortunately, our training image does not have any data to calculate admitted to trauma service. So.....for this exercise, practice developing the table below. In the answer section of this document, strategies for developing both tables will be presented.

<table>
<thead>
<tr>
<th>ISS</th>
<th># all patients</th>
<th>All deaths</th>
<th># Trauma Calls</th>
<th>% mortality (from trauma calls)</th>
<th>% mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;=25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Question 9.** Suppose you were asked to produce the following table

<table>
<thead>
<tr>
<th>ISS</th>
<th># all pediatric pts</th>
<th>All pediatric deaths</th>
<th># Trauma Calls for Pediatric pts</th>
<th>% pediatric mortality (from trauma calls)</th>
<th>% Pediatric mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;=25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Question 10. Suppose you were asked to produce the following table.

<table>
<thead>
<tr>
<th>Grade of Spleen Injury</th>
<th># Splenic Injuries</th>
<th># Undergoing (IR) Embolization</th>
<th># of splenorrhaphy</th>
<th># splenectomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade III</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

You will approach this problem the same way you did question 8. All you need to do is to create some new queries!

**Codes for Splenic Injuries**—use ANY(PREDOT_CODES)

These are AIS 98 codes

544210—contusion (hematoma) NFS
544212—subcapsular, <50% surface area; intraparenchymal, nonexpanding, <5cm in diameter; minor; superficial; (OIS Grade I or II).
544214—subcapsular, >50% surface area or expanding; ruptured subcapsular or parenchymal; intraparenchymal >5cm in diameter or expanding; major (OIS Grade I or II).

544220—laceration NFS
544222.................simple capsular tear ≤ 3 cm parenchymal depth; no major (i.e., trabecular) vessel involvement; minor; superficial; (OIS Grade I or II)
544224.................No hilar or segmental parenchymal disruption or destruction; > 3 cm parenchymal depth or involving major (i.e., trabecular) vessels; moderate (OIS Grade III)
544226.................Involving segmental or hilar vessels producing major devascularization of >25% of spleen but no hilar injury; major (OIS Grade IV)
544228.................Hilar disruption producing total devascularization; tissue loss; avulsion; stellate; massive; (OIS Grade V)

544299 Spleen NFS
544240 rupture (‘fracture’) NFS

**Grade of Spleen injury (Codes)**

<table>
<thead>
<tr>
<th>Grade I or II</th>
<th>Grade III</th>
<th>Grade IV</th>
<th>Grade IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>544212</td>
<td>544224</td>
<td>544226</td>
<td>544228</td>
</tr>
<tr>
<td>544214</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>544222</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Query for Spleen Injuries

To create variable for Grade of Spleen Injury

Create your coded variable for Grade of spleen injury as shown below.

Codes for Spleen Grades can be found on the previous page & are shown below in column 2.
Procedure Codes for Splenectomy

41.2  Splenotomy
41.43  Partial Splenectomy
41.5    Total Splenectomy

Query for Total Splenectomy

If you want to include partial splenectomy, you can add 41.43 to the list of numbers in column 2. Be sure and separate procedure numbers with commas.

Procedure codes for Splenorrhaphy

41.42  Excision of lesion or tissue of spleen
41.95  Repair & plastic operations on spleen

Creating a Query for IR embolization of the spleen
There is not a good procedure code for IR embolization of spleen since this is a relatively new procedure.

You can use procedure code 38.86 (other surgical occlusion of vessels, abdominal arteries) OR 39.79 (other endovascular repair (of aneurysm) of other vessels—includes coil embolization or occlusion) for IR embolization. If you use these codes, you will need to review the patient charts to see if the patients actually had of the spleen.
Using your queries and coded variable

1. Click the gather button to get this screen

2. Click the “Data Element” Button

3. Select coded variable tab

4. Highlight & Select Spleen_Grade

Don’t forget to put your ACS filter here
Type the name of this gather

This is the coded variable

Click “Save” then click “use”

How to Set up the statistics report

2. Name statistics re-

*** 1. Be sure and check this box

Use CNT subset here

These are queries

Save and use
Results of statistics report for spleen injuries

**Question 11.** How many orthopedic operative procedures are performed within 24 hours of admission?

**Procedure codes for operations on musculoskeletal system**
ANY(PX_PR) 76.01 to 84.99

Use “each” b/c you want both orthopedic procedures and performed in OR

Any(PX_LC)=2 indicates procedure was performed in OR

* Add the ACS filter query to the 2 queries above using the “ADD” button.

Save and use

Report writer can NOT subtract dates (i.e. procedure state date/time—eda date/time); therefore, you will have to pull each of the records that meet the above query and review the dates and times.

See p. 17-18 on how to do display patient records with a data table.
Question 12. How many complex pelvis and acetabular cases performed at this institution during the reporting year. If there are cases transferred out, explain. 

There are no data in training image for complex pelvis & acetabular fractures so no finding are presented.

Predot codes for complex pelvis and acetabular cases (AIS 98).
AIS 98 does not capture these cases as well as AIS 2005.

852606- Pelvis Fx with substantial deformation and displacement with associated vascular disruption or with major retroperitoneal hematoma “open book” fracture
852608 same as above with blood loss ≤ 20% by volume

Save and use this query.

You could refine this query by running a data table report on the procedures that these patients received in the OR. From this list of procedures, you could choose relevant surgical codes for repair of complex pelvic & acetabular fractures to measure cases treated at your hospital.

Gather by dis_to to see if any complex pelvic fracture cases were transferred to an acute care facility. (OR you can add a query ANY (PX_LC=2) (Any procedure performed in Ort to the query above) Be sure and check cases)

The cases not transferred out (dis_to <> 7) should have been treated at your institution IF you only use dis_to=7 as acutely transferred to another hospital. Review the cases of dis_to not equal to 7 to see if this is the case. You would also want to review dis_to=7 to make sure there was not a case that was treated but discharged to an acute care facility.
Question 13. Complete the following table for trauma patient admissions. Remember: your ACS filter will give you only trauma admissions.

<table>
<thead>
<tr>
<th>ED Disposition</th>
<th>Total number</th>
<th>Admitted to Trauma Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED to OR</td>
<td>104 (training image #’s)</td>
<td></td>
</tr>
<tr>
<td>ED to ICU</td>
<td>6 (training image #’s)</td>
<td></td>
</tr>
<tr>
<td>ED to Floor</td>
<td>27 (training image #’s)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>137 (training image #’s)</td>
<td></td>
</tr>
</tbody>
</table>

These are queries

Run this report to get #’s for the total number of trauma admissions (using the training image).

There is no data in the training image for trauma service. See pp. 47-51 to see how to analyze trauma service.

How to set up report “ED discharge”

These are queries
**Question 14.** How many geriatric trauma patients (age $\geq$ 65 years old) are admitted following a fall from standing?

**Use the following e-codes (Any (E_CODE ) to define falling from standing.** (construct a query).

- 885.9  Fall on same level from slipping, tripping, or stumbling—fall from other slipping, tripping, or stumbling.
- 888  Other and unspecified fall (fall on same level NOS or accidental fall NOS)
- 888.0  Fall resulting in striking against sharp object
- 888.1  Fall resulting in striking against other object
- 888.8  Other fall
- 888.9  Unspecified fall

*Note The 888 codes above are not specific are probably capture ONLY falls from standing. Therefore, you may want to review your records after you count.

First, construct a separate query for fall from standing and for age $\geq$ 65.

Next, (on following page, combine these queries).
This is how you combine the two queries you just made and the ACS filter.

1. Specify records or time period you want to analyze

2. Click OK

These are queries so No information in operator or column 2. Don’t forget the ACS filter!

Use “each” because you want falls and pts. >=65 years old.

The ACS filter only includes admitted patients.

Use “count” if you only have a query

Use "add" to insert queries.

2. Give this new query a name & description

Save and use

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If you wanted **to pull the records from the results** you found from the count on the previous page, run a report with patient name, trauma number & medical record number.

1. Click “add” then “field” and choose variables from the data element list.
2. Click OK

Do this 3 times.
Click "Run since this is a report"

Specify records or time period

Click OK
**Question 1.** Consider using this query to extract spinal cord injuries in your registry. This query does NOT include plexus and nerve root injuries. **Remember to save your query because you will need to use this with the ACS filter.**

Save your spinal cord query, then click use. Clear this query. Then create another query that will combine your ACS filter and this spine query. Why? Because the Spine query has an **OR** statement between the predot definitions, and this query will use the each feature. Remember, for ACS visits, you have to include the ACS filter to answer most questions.

Click save before clicking the “use”

Use “each” because you want to include both the ACS filter & spinal cord queries.

Use “one or more” here because any of these codes are valid.
You are now ready to count the number of spinal cord injuries that meet ACS criteria! Since you have a query, you use the count button.

You can specify a count either with a range of trauma numbers or with a range of EDA arrival dates. This query selected 2, so the number of spinal cord injuries meeting ACS criteria will have eda arrival dates between 01/01/1980 and 12/31/2099. You can change this range before you count.

Once you click o.k., you will get the count.

It may be hard to see, but this count shows that you have 10 patients with spinal cord injuries that meet ACS criteria.
1. (continued) Suppose you wanted to include nerve root and plexus injuries in your definition of spinal cord injuries. You would use the following AIS predot codes for defining spinal cord injuries. And spinal cord injuries with neurologic deficits. The nerve root and plexus injuries are underlined.

**Spinal Cord injury**
The nerve root and plexus injuries (PREDOT Codes) are underlined. Include all the codes listed below if you want to include nerve root & plexus injuries in your spinal cord injury definition.

640200 to 640276 (Cervical cord contusions and lacerations)  
630260 to 630266 (Cervical nerve root injuries)  
630210 to 630226 (Brachial plexus specified injuries)  
630299 (Brachial plexus injury NFS)  

640400 to 640468 (Thoracic cord contusions and lacerations)  
630402 to 630499 (Thoracic nerve root injuries)  

630600 to 630638 (Cauda equina injuries)  
640600 to 640668 (Lumbar cord contusions and lacerations)  
630660 to 630699 (Lumbar nerve root injuries)  

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**Question 2. (answer) Queries for spinal cord injuries with neurologic deficits. Nerve root & plexus codes in red. Do not use the codes that are underlined below for this exercise.**

**Spinal Cord injury with neurological deficits**
Codes with nerve root and plexus injuries (PREDOT Codes)

640210 to 640236 (Cervical cord contusion with incomplete/complete cord syndrome)  
640242 to 640276 (Cervical cord laceration with incomplete/complete cord syndrome)  
640240 (Cervical cord laceration NFS—include this code because laceration to spinal cord is clinically considered to have some type of neurological deficit)  

640410 to 640428 (Thoracic cord contusion with incomplete/complete cord syndrome)  
640442 to 640468 (Thoracic cord laceration with incomplete/complete syndrome)  
640400 (Thoracic cord laceration NFS—include because lacerations are considered clinically to have neurologic deficits)  

640610 to 640629 (Lumbar cord contusions with incomplete/complete cord syndrome)  
640642 to 640668 (Lumbar cord laceration with incomplete/complete cord syndrome)  
640640 (Lumbar cord laceration NFS—include this code as any laceration is clinically considered to have neurologic deficits)  
630620 to 630638 (Cauda equina syndrome with neurologic deficit)
Question 2 Answer (continued). Use the following query if you do not include nerve root or plexus injuries in defining spinal cord injuries with neurologic deficits. Remember to save and use this query with the ACS filter. To find the number of patients with spinal cord injuries with neurologic deficits use the count button.

Making another query with two saved queries. Save and use this query.
Use the count button to obtain the number of spinal cord injured patients with neurologic deficits. You may specify the eda time period for these patients when you click the count button.

Specify the patients you want to analyze in the blue box to the left, Click o.k. to get your results.

As you can see below, you have 7 patients that had spinal cord injuries with neurologic deficits. (This analysis did not include nerve root or plexus injuries).
Question 3. Answer—How many spinal cord injuries were transferred out?

First, you already have a query that defines spinal cord injuries and you have the ACS filter. The next step is to define transferred out. The ACS is referring to acute transfers to another acute care facility. Use discharge to =7 (discharged to an acute care facility).

You want each, because you want patients who meet ACS criteria & have spinal cord injuries & were discharged to another acute care facility.

First save, then use this query

Click count to find the number of patients with spinal cord injuries who are transferred out. You should have one patient.
Another way to get the answer to question 3 is to use a gather.

**Step one:** Use your spinal cord injury query. (You know how to do this.)

**Step two:** Use the “discharge to” data element under GATHER.
   To do this, click the gather button and click ADD

When you see this box, click Gather Spec

Click this data element button

Give this gather a name, then Click “save” and then click “use”
Here you can see that one spinal cord injured patient who met ACS criteria was discharged to an acute care hospital.
Question 4. Answer—How many trauma calls do you have per month?

To gather your trauma calls per month, double click the Gather button.

Double click on **BY_MONTH_EDA**.

The next step is to create your query. For this you need to define trauma calls. You can do this by using the field “ED_STATUS”. Option 1 = full trauma activation, 2= Partial trauma activation and 3= NFS trauma activation. You will need to save this query and then add it to the ACS filter before you run this count.
If you forgot how to make a query: Click query, then the add button. Click column1 and from the data element menu in the “This facility—ED assessments” section, choose ED_status (See picture below). Click o.k and save and use this query. I named this query TRAUMA_CALLS.

Next, you need to combine the two queries. Remember, you click on the Query button, Click the “add” button. When you click on the “column1” button, click on the “query” button”. You do this twice so you can put in the ACS_Filter query and the Trauma_Calls query. I saved this query as ACS_TRAUMA_CALL. After you save this query, click the “USE” button.
Here you have combined both the query and the gather variables. Now you are ready to count!

This result shows that you had 70 trauma calls in September; 60 trauma calls in October, and 82 trauma calls in November.
**Question 5 Answer.** How many trauma calls per month were treated by an orthopedic surgeon in the ED? Which orthopedic surgeons took these calls?

For this question, 1) you need to set up a gather to look at trauma orthopedic surgeon ID’s by month and 2) set up a query to select out the trauma calls.

Click save and use for the gather above. Then add your ACS_TRAUMA_CALL query as shown below. The next step is to click “COUNT”.

![Diag](image.png)
The findings below show, for example, that orthopedic surgeon # 56902 was involved in 10 trauma calls in September, 0 trauma calls in October, and 3 trauma calls in November.

Orthopedic surgery was involved in 24 trauma calls in September, 22 trauma calls in October, and 32 trauma calls in November.

n/v means not valued which would mean that no orthopedic surgeon was coded for these cases.

**Question 6 Answer.** How many trauma surgical cases do you have per year?

For this question, 1) you need to set up a query to look at surgery trauma cases. To do this, surgery is defined as any procedure performed in the operating room (OR).
Defining a trauma case is the next decision you have to make. The ACS filter is one way to define a trauma case.

Depending on your hospital, you might want to define trauma cases as cases managed by the surgery service or trauma surgery service (as opposed to orthopedics, for example). You could use fields such as ADM_SER=27 and/or 10 (trauma service and/or general surgery) or ED_ADMIT (choose physician codes in your department for patients who die in the ED).

For this example, we used the ACS filter to define traumas.
When you count using this query, you should get 94 patients. Recall, that using the ACS filter alone, there were 225 ‘trauma’ patients.

**Question 7 Answer.** First, click the report button, then click the ADD button, then click the statistics report button.

1. To calculate the % of all trauma patients with blunt injuries, use PCS in the statistics box.

2. Put the query “Blunt_inj” in the subset field.

3. Click the OK button
Click Add to add another column to the table.

It is important to check this box.

To add % penetrating injuries:

1. Choose PCS statistic
2. Click subset button & choose penetrating query
3. Write a description
4. Click OK

Click Add to add another column to this table for thermal injuries.
To add % thermal (burn) injuries
1. choose PCS statistic
2. Click subset button & choose penetrating query
3. Write a description
4. Click “OK”

The Burn Injury query is added here.

1. Type a name and report title
2. Click Save
3. Click Use
1. Specify your patients either by trauma number or EDA Date

2. Click OK

When you are finished reviewing this output, click the “x” above.
Question 8 Answer. For this question, you will need to: 1) create a coded variable for the ISS levels & use as a gather, 2) create queries for deaths & trauma calls and use these in a statistics report & 3) put the ACS filter in as a query.

First create a coded variable. You will then be able to use as a gather.
1. Under anatomical diagnoses, choose ISS
2. Click Select
To create the 1st category for the ISS, choose “between “ for the operator.

To indicate that you want an ISS between 0 and 9 use a comma in column 2

Write in the text box 0 to 9

Then click OK

Click the Add button to add the second category of ISS and continue for the 4 levels

1. This is what your coded variable should look like when you add the 4 categories. Notice the 4th category has a >= (greater than or equal to).

2. Give this coded variable a name & description, then save and close.
The next step is to create your queries to be used in your statistics report. The first query you should have — deaths. This query you developed for the ACS filter SO we won’t do it again here.

The query for trauma calls is below.

(Click the query button, then the add button. When you click column 1, choose this facility (ED data), this facility Emergency department/Admission, and ED status)

1. Type in = for the operator.
2. Under column 2, type in ANY(1,2,3).

Last, Click the “select” button

2. Type in the name of query and description. Then click save below.

The next step is to create your table. See the next page for directions.
1. Make sure the user report button is chosen

2. Click the report button

Click the add button

1. click the statistics report
2. click the Add button

This statistic defines a column in your table for # of patients (you will define which patients later)
1. Choose CNT, Count Subset,
2. Type all patients in the description
3. Click Ok.
Click Add

1. Choose count subset

2. Click the subset button

Choose the ACS_DEATHS from the query list (see below)

3. Type in the description

4. Click ok

This statistics editor window defines a column in your table for all deaths. (You will define which patients you will analyze later).

3. Click the select button

1. Click the query tab

2. Choose ACS_DEATH query,
Click the “ADD” button on the statistics screen. In the screen below, fill in the statistic field, the subset field and the description field as shown. Last, click the “OK” button.

This statistics editor window defines a column in your table for all trauma calls.

NOTE: “TRAUMA_CALLS is a query. You will need to click on the query button and choose this query after you click on the “subset” button.

Click the “ADD” button, to add another column to the table. The screen shot below shows how to calculate the % of deaths for patients where a trauma response was activated. Fill in the fields as shown below. Click the “ok” button when you are done.

Click the “ADD” button on the statistics editor screen to add another column to the table for % of all trauma deaths. This is the last step.

Suppose you wanted to calculate the % of all trauma deaths. The information on the next page will show you how to set up this calculation.

Click the “ADD” button on the statistics editor screen to add another column to the table for % of all trauma deaths.
To calculate the % of all trauma patients who died, put your “death” query in the subset field below. In this example, the death query is named “ACS_DEATHS”.

**Note:** In this case, you use PCS in the statistic box NOT PSS as in the previous example!

Be sure and put the death query in the “subset” box NOT the “Data Element” box

The last step is to click the “OK” button.

The screen shot below shows how your statistics editor should look like now.

Give this report a name and report title. Click the “save” button, then click the “use” button.

Note: PSS and PCS are

CNT is count
Question 8 Putting it all together.
The final report writer window will look like the image below.

Click the Query button, then double click on your saved ACS query. This query is called “ACS_Filter”

Click on the gather button, then double click on ISS_Levels

Last, click the “run” button

Specify your patients either by Trauma Number or EDA Date and click the OK button. In this view, patients are defined by the EDA Dates from 01/01/1980 to 12/31/2099. Define the patients you want to analyze here.

Last, click the “OK” button.
Report Writer generates a table that looks like this.

<table>
<thead>
<tr>
<th>ISS</th>
<th># all patients</th>
<th>All Deaths</th>
<th># Trauma Calls</th>
<th>% mortality from trauma calls</th>
<th>% mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 9</td>
<td>114</td>
<td>1</td>
<td>106</td>
<td>0.943%</td>
<td>0.877%</td>
</tr>
<tr>
<td>10 to 15</td>
<td>52</td>
<td>1</td>
<td>50</td>
<td>2%</td>
<td>1.9%</td>
</tr>
<tr>
<td>16 to 24</td>
<td>28</td>
<td>2</td>
<td>27</td>
<td>7.4%</td>
<td>7.1%</td>
</tr>
<tr>
<td>&gt;= 25</td>
<td>31</td>
<td>15</td>
<td>30</td>
<td>46.7%</td>
<td>48.4%</td>
</tr>
</tbody>
</table>

TOTAL

Note: The report writer table does not give totals. You can either add the totals up yourself or run a another analysis to give you the totals (e.g. clear the gather part of the analysis).

Click “Run” to get the output below.
Suppose you wanted to create the table below?

No data will be presented since the training image does not have data for admitting service.

<table>
<thead>
<tr>
<th>ISS</th>
<th>Number</th>
<th>Admitted to Trauma Service</th>
<th>Deaths</th>
<th>% Mortality (from admitted to trauma service)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;=25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The steps for creating this data are as follows:

1. Create a query for “Admitted to trauma service”.
2. Construct the statistics report
3. Run statistics report with the ISS gather and the ACS_filter query

To construct the “Admitted to Trauma Service” query, Click the query button, then click the “Add” Button

Click Column 1 and choose ADM_SER from the ED list.

Put 27 in column 2 IF trauma surgery defines your trauma service.

Look in your data dictionary to choose the appropriate category or categories to define your trauma service.
Next, construct the statistics table. The number of patients & the number of deaths will be developed like the last example.

Admitted to trauma service will be added to the statistics table like the trauma calls example.
1. Highlight the query “Admit_trauma_Ser” from the query list
2. Click the Select Button
3. Click the “OK” button.

To create a column for all patients, fill in the fields as shown here.

Click Add, then click the “add” button to add another column to the table.
Click Add to add another column to the statistics table.

This is how you create the column for All deaths.

Click the OK button

Then click “Add” to add the next column

This is how you create the column for % deaths admitted to trauma service

Click the OK button

Then click “Add” to add the next column
To obtain the numbers for admitted to trauma service,
1. Add to the query field above (“ACS_FILTER)
2. Add “ISS_Levels” to the Gather field above.
3. Click the “RUN” button.
Question 9 Answer.
This question is easy to answer if you have the gather, query and table set up for all patients in question 8. All you have to do is to add a pediatric query to the existing query.

<table>
<thead>
<tr>
<th>ISS</th>
<th># all pediatric pts</th>
<th>All pediatric deaths</th>
<th># Trauma Calls for Pediatric pts</th>
<th>% pediatric mortality (from trauma calls)</th>
<th>% Pediatric mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;=25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Modify the existing analysis by adding a pediatric query to the ACS filter to obtain numbers for the table above.

![Image of Run Report window]

Add a pediatric query to the ACS_filter to get pediatric numbers

Step 1: Clear the ACS_Filter query

Step 2: Click on the query button and click “Add”

Step 3: Click on Column1,

Step 4: Choose the query tab, and Select ACS_filter

![Image of User Query Editor window]
1. Click the “add” button. From the query tab add the next query “Age_Less_than_15”

2. Name this new query and give it a description

3. Click Save

4. Click Use

The table below shows the frequencies and percentages in each ISS category for pediatric patients.