ADMINISTRATIVE REPORT

March 2010

March Treasurer's Report:
Attached.

Trauma Commission Procurements, Grants and Contracts Update
March update report attached.

Grady Health System Report and Request
Request for No-Cost Extension of FY 2009 Trauma Center Capital Equipment Grant: Request and supportive documentation attached.

Georgia Readiness Costs Determination UPDATE Report
Preliminary report: Greg Bishop will present.

Performance Based Payments Program Report
Recommendations to the full Commission: Greg Bishop will present.

Georgia Trauma Care Network Commission

Treasurer's Report

February 28, 2010

Encumbered Balance

Beginning Balance		$ 23,000,000.00
	Actually Spent YTD	**Encumbered & Not Spent YTD**
Expenditures:		
Classic Party Rental	$ 405.50	
National Trauma Foundation Care Membership Dues	1,500.00	
Bishop & Associates	110,850.00	135,100.00
* Bishop & Associates		245,950.00
Floyd Healthcare MGMT		534,036.00
Fulton Dekalb Hospital Authority		4,210,054.00
Tenet Health System GB INC		1,016,942.00
* Tenet Health System GB INC		517,018.00
Childrens Healthcare of Atlanta		515,814.00
Gwinnett Hospital System INC		839,959.00
John D Archibold Memorial Hospital		565,373.00
Hamilton Medical Center		502,450.00
Medical College of Georgia		1,373,328.00
The Medical Center of Central Georgia		1,126,371.00
North Fulton Medical Center		612,115.00
Morgan Memorial Hospital		27,000.00
The Medical Center, Inc		557,544.00
Memorial Health University		1,782,598.00
Monroe HMA, Inc.		27,000.00
Total	$ 112,755.50	$ 14,588,652.00
Total Encumbered		$ 14,701,407.50
Ending Available Balance, February 28, 2010, FY 2010		**$ 8,298,592.50**

* Potential Error

Georgia Trauma Care Network Commission

Treasurer's Report

February 28, 2010

Fund Balance		
Beginning Balance		$ 13,168,892.38
Revenues:	$1,916,666.66	
Total Revenues		$1,916,666.66
Expenditures:		0.00
Total Expenditures		0.00
Ending Balance, February 28, 2010		$ 15,085,559.04

Trauma Commission FY 2010 Budget Procurements, Grants and Contracts Update Worksheet					
Budget Item	**GTCNC FY 2010 Approved Budgeted Amount**	**Status**	**Jim Pettyjohn 14 February 2010**	**Curtis Chronister 5 March 2010**	**Jim Pettyjohn 15 March 2010**
Center for Healthcare OrganizationTransformation Membership	**$ 50,000**	**Pending**		**Awaiting clarification from GTRC as to what information they will want to collect in order to ensure data collected is not proprietary in nature or in violation of HIPPA. Once received, the Contract Authorization Request (CAR) will be sent to budget then on to contracts for processing.**	
EMS Vehicle Equipment Replacement Grants Program	**$ 2,125,000**	**Pending**	Application and instructions complete….to have been posted to www.gtcnc.org on15 February. Hold on posting per Dana Greer (12 Feb) until DCH grants P&P addressed. C. Chronister to detail specifics.	**Pending post to DCH website. Expected to be post by 18 March 2010.**	**Finalizing Grant Documents. Proposed posting 18 March.**
GAEMS sole source/ sole brand Contract for first responder training and trauma-related equipment for 911 zone ambulances.	**$ 676,900**	**Pending**		**CAR will be sent to budget then to contracts for processing on Monday, 15 March 2010.**	
GPT matching funds Grant	**$ 200,000**	**Pending**		**Awaiting sole source/brand justification from Telemed. Once received, DCH will process and post to website.**	
New Trauma Center Startup Grants	**$ 1,000,000**	**Pending**	On 12 February per Dana Greer, hold on verbal communications (Q&A) with applicants, all questions for potential applicants to be in writing and grants program must be approved by DCH. C. Chronister to detail specifics.	**Pending post to DCH website. Expected to be post by 18 March 2010.**	**Finalizing Grant Documents. Proposed posting 18 March.**
OEMS/T 3% Allocation	**$ 655,000**	**Pending**		**NO CHANGE.** Positions not yet requested: Trauma Nurse, IT Position, and PT EMS Med Director **(A determination needs to be made as to how much money will not be spent that was allocated for these positions based on the time when these positions will actually be filled. These funds will then be redirected to the uncompensated trauma care fund or as the Trauma Commission directs.)**	
Regional EMS Agreement	**$ 100,000 for FY 2010 and 5 $100,000 awards for FY 2011**	**Pending**	Awaiting AG's Office opinion as to most appropriate entity for Commission to contract with (District Health Office??) Alex Sponseller to report during 18 Feb Commission meeting.	**NO CHANGE - WILL CONTINUE TO WORK.** I am working to see what alternatives exist to get this moving forward. One possibility is to develop a grant for each of the Regions, fund the 5 for this year, then have them invoice through the Trauma Commission for signature then back to DCH for payment. This can be accomplished by assigning a vendor number to those identified as members of the Regional Committees.	
Web-based Registry Support	**$ 49,550**	**Pending**		**Renee Morgan is recommending the TC re-allocate these funds.**	
Website Design	**$15,000 (Reduced to $4,995)**	**Pending**		**Request for purchase sent to OIT for their review and approval.**	
Communications Center Lead Position	**$ 100,000**	**Human Resources**	Revised update on this position to be provided by C. Chronister.	**Request pending Dr. Edwards signature.**	**Job Description posted to www.gtcnc.org with f/u instructions to contact K. Dixon**
Broselow and Lutin System	**$ 200,000**	**Contract**		**CAR being sent to budget then to contracts for processing.**	

Trauma Commission FY 2010 Budget Procurements, Grants and Contracts Update Worksheet

Budget Item	GTCNC FY 2010 Approved Budgeted Amount	Status	Jim Pettyjohn 14 February 2010	Curtis Chronister 5 March 2010	Jim Pettyjohn 15 March 2010
Trauma Centers and Physician Funding Contract (readiness and uncompensated care)	$ 14,153,600	Contract		The following contracts are with Dr. Medows waiting for her signature. Once signed, these contracts will go back to procurement for return to the respective hospitals. Once received, the hospitals can then begin to bill and invoice. CHOA - Egleston; CHOA - Scottish Rite; Floyd Medical Center; Grady Health System; Archbold Memorial Hosptial; Walton Regional Medical System; Morgan County Hospital Authority	
MCG Health Inc. contract for FY 2010 EMS Uncompensated Care Reimbursement Program		Contract		Seeking input from procurement on how to expedite this request.	
Federal Stimulus Funding Solicitation	no funds	Pending	C. Chronister to investigate status. Original email request with required documents sent to R. Morgan on 23 October forwarded to C. Chronister. .		Not Completed. C. Chronister requested to locate FRI and provide update.
Commission Travel/Per diem	$ 10,000	Pending		Renee is the POC for this item.	15 March: R. Morgan continues to work to complete process. Members not receiving stipends

Complete - Business related to item closed
Procurement - In procurement process or pending decision from DCH Procurement to begin process
Contract - In contract approval process, which could include a legal decision, drafting of contract or approval process of final cotnract
Human Resources - In HR process for approval
Pending - None of the above or tabled or pending a decision from other than DCH Procurement, DCH Contracts or DCH Human Resources.

FY 2010 Completed				
B+A Amendment and Commission administrator combined	$ 245,970	Complete		
Conference Call Account	$ 7,200	Complete		
Administrative Assistant	$ 50,000	Complete		Carol Dixon accepted the position and will begin work on 9 March 2010.
Trauma Center Association of America a/k/a National Foundation for Trauma Care	$ 1,500	Complete		

FY 2011 Procurements, Grants and Contracts				
Budget Item	**Budgeted Amount**	**Status**	**Jim Pettyjohn 14 February 20010**	**Curtis Chronister 26 February 2010**
Professional services contract for J. Pettyjohn as Commission administrator **FY 2011 Contract** **(01 July 2010 - 30 June 2011)**	**$ 138,000**	**Pending**	Notified C. Chronister and Dana Greer to work directly with Dr. Ashley and or Commission member representatives on this contract.	**UPDATE:** Will send contract request to DCH procurement **NLT 17 March 2010.**
Communications Center Software	**up to 1,000,000**			This will need to be drafted into a contract with GTRI for FY 2011. Drafting of this contract should begin no later than 26 March 2010.

Note: on 25 February, DCH agreed to add Dr. Ashley as a signatory on all Trauma Commission Contracts

Grady

Fran Lewis, RN, MN
Trauma Program Manager
80 Jesse Hill Jr. Drive S.E.
Atlanta, GA 30303

March 8, 2010

Georgia Trauma Care Network Commission
c/o Dennis Ashley, MD, Chairperson
Trauma Services
MCCG
777 Hemlock Street
MSC 103
Macon, GA 31201

Dear Members of the Trauma Commission:

Grady Memorial Hospital would like to thank you for the funding that was made available in the form of the Capital Grant (DHR Contract # 427-93-0909-1249-99) in 2009. Though we are moving forward with the three (3) projects as planned, our Project Manager has predicted that there might possibly be a small amount of money remaining in one of the projects upon its completion. We are asking that if this is the case, that it be possible to place that amount of money into one of the other two projects.

Again, we thank you for making these advancements in trauma care at Grady possible. If you have questions, you may contact me at 404-616-4584

Sincerely

Fran H. Lewis, RN, MN
Trauma Program Manager

Grady

Calvin Thomas IV
Senior Vice President Operations
80 Jesse Hill Jr. Drive S.E.
Atlanta, GA 30303

March 8, 2010

Georgia Trauma Care Network Commission
c/o Dennis Ashley, MD, Chairman
MCCG
Trauma Services
777 Hemlock Street
MSC 103
Macon, GA 31201

Dear Members of the Trauma Commission:

On behalf of the Grady Memorial Hospital and its Board of Directors, I would like to thank you for funding the Capital Grant that we received in 2009. Due to unforeseen construction delays and new regulatory compliance standards that must be followed, these three (3) projects will not be completed by the original completion date. As a result, all of the money will not be encumbered by March 31st, 2010 as stipulated by the contract.

We therefore request a no-cost extension of the contract (DHR Contract # 427-93-0909-1249-99 for $2,600,000.00).We feel that we will have all three projects completed by this time and look forward to caring for the trauma patients of our area in a much more efficient manner.

All of the necessary pre-construction documents, including a Certificate of Need have been procured. Accompanying this letter you will find the proposed construction plan developed by the Grady Project Manager. If you have questions concerning our projects, please do not hesitate to call me at 404-616-4886.

Thank you again for the funding and we look forward to working with you in the future.

Sincerely,

Calvin Thomas IV
Senior Vice President of Operations

INTEROFFICE MEMORANDUM

To: **Fran Lewis**
Trauma Program Manager – Grady health System

From: **George Smith**
Architectural Project Manager / Facilities Development

Subject: **STATE TRAUMA FUND SCHEDULE**

Date: 1/22/2010

cc: Craig Tindall, Senior Vice-President, Operations and Facilities;
Mark Mack, Director, Facilities Development (interim);
File

Following is a narrative supplementing/expanding the attached schedule.

1. **TRAUMA CENTER EXPANSION - $1,000,000**
    a. Supplemented by Marcus Funds – next installment due November, 2010;
    b. Requires relocation of Anatomic Pathology Offices, Histology Lab, and Main Outpatient Pharmacy;
        i. Pharmacy project is a separate effort, phased with other Pharmacy initiatives – slated for completion late April, 2010;
        ii. Pathology and Histology included in overall project;
    c. A/E team engaged and working on design for both the Pathology/Histology relocation and the Trauma Center Expansion;
    d. Project anticipated to coordinate with cash flow, with State funds completing design, construction of Pathology and Histology relocation spaces, and abatement of project area on Ground Floor, C-wing, in anticipation of demolition and construction/completion of the project;

2. **7-D CONNECTOR & WAITING ROOMS - $1,000,000**
    a. Construction documents due mid-February;
    b. Engineering effort proved to be more complex than anticipated, leading to prolonged design phase;

3. **TRAUMA EDUCATION CENTER - $600,000**
    a. Requires relocation of Main Outpatient Pharmacy as the Auditorium currently functions as Pharmacy Waiting Room;
    b. Pharmacy project is a separately funded effort slated for completion late April, 2010;
    c. Revised design team proposal under review with anticipated release early February;

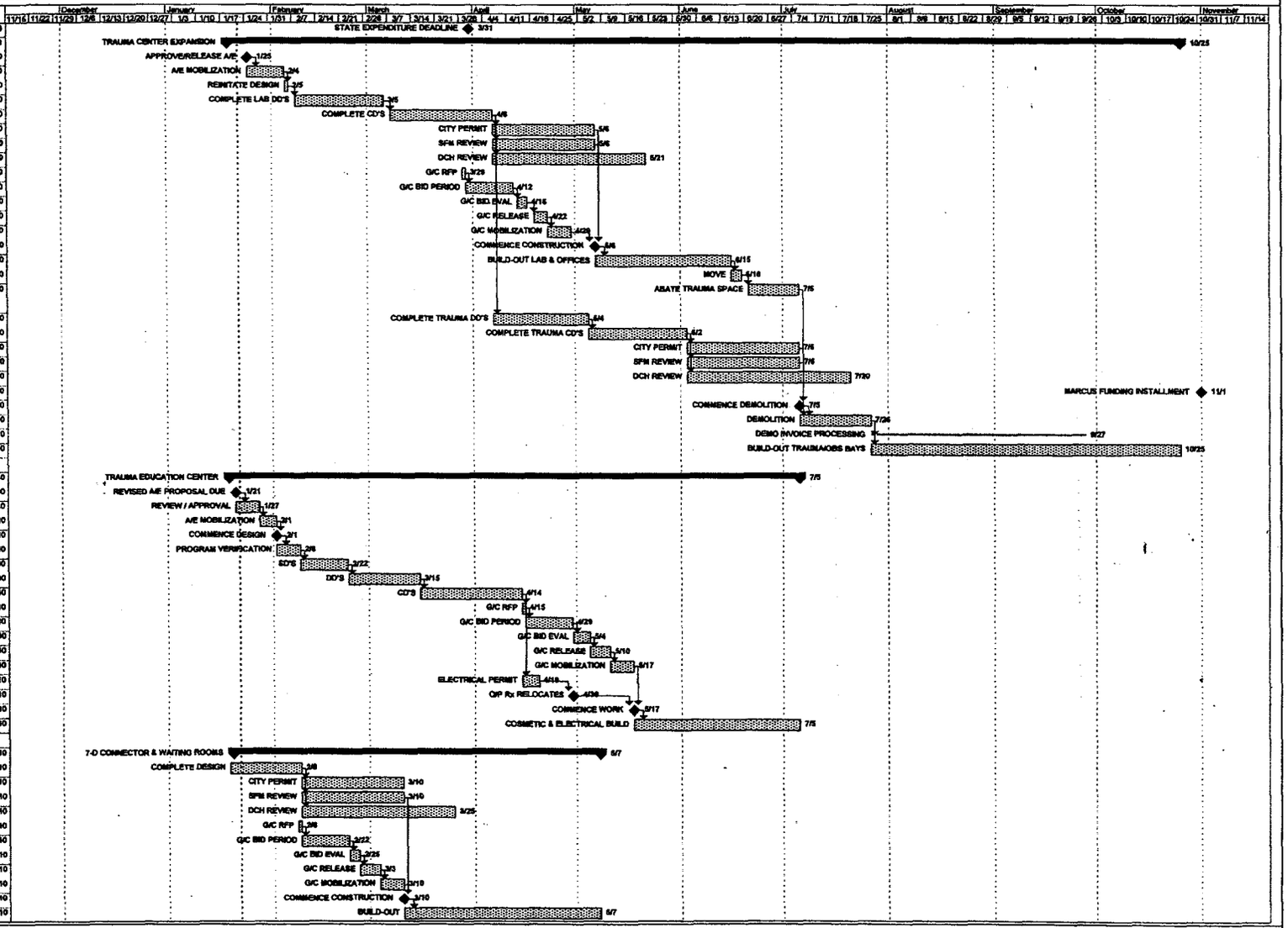
Please let me know if I can provide any additional information.

FACILITIES DEVELOPMENT
(V): 404-616-3228
(F): 404-616-3355
(e): gcsmith@gmh.edu

STATE TRAUMA FUND PROJECTS

(TRAUMA CENTER EXPANSION / TRAUMA EDUCATION CENTER / ICU CONNECTOR & WAITING ROOMS)

ID	Task Name	Duration	Start
1	STATE EXPENDITURE DEADLINE	0 days	Wed 3/31/10
2	TRAUMA CENTER EXPANSION	197 days?	Tue 1/19/10
3	APPROVE/RELEASE A/E	0 days	Mon 1/25/10
4	A/E MOBILIZATION	9 days	Mon 1/25/10
5	REINITATE DESIGN	1 day?	Fri 2/5/10
6	COMPLETE LAB DD'S	20 days	Mon 2/8/10
7	COMPLETE CD'S	22 days	Mon 3/8/10
8	CITY PERMIT	22 days	Wed 4/7/10
9	SFM REVIEW	22 days	Wed 4/7/10
10	DCH REVIEW	33 days	Wed 4/7/10
11	G/C RFP	1 day?	Mon 3/29/10
12	G/C BID PERIOD	10 days	Tue 3/30/10
13	G/C BID EVAL	3 days	Wed 4/14/10
14	G/C RELEASE	4 days	Mon 4/19/10
15	G/C MOBILIZATION	5 days	Fri 4/23/10
16	COMMENCE CONSTRUCTION	0 days	Thu 5/6/10
17	BUILD-OUT LAB & OFFICES	27 days	Fri 5/7/10
18	MOVE	3 days	Wed 6/16/10
19	ABATE TRAUMA SPACE	10 days	Mon 6/21/10
20			
21	COMPLETE TRAUMA DD'S	20 days	Wed 4/7/10
22	COMPLETE TRAUMA CD'S	20 days	Wed 5/5/10
23	CITY PERMIT	22 days	Thu 6/3/10
24	SFM REVIEW	22 days	Thu 6/3/10
25	DCH REVIEW	33 days	Thu 6/3/10
26	MARCUS FUNDING INSTALLMENT	0 days	Mon 11/1/10
27	COMMENCE DEMOLITION	0 days	Mon 7/5/10
28	DEMOLITION	15 days	Tue 7/6/10
29	DEMO INVOICE PROCESSING	44 days	Tue 7/27/10
30	BUILD-OUT TRAUMA/OBS BAYS	84 days	Tue 7/27/10
31			
32	TRAUMA EDUCATION CENTER	118 days?	Tue 1/19/10
33	REVISED A/E PROPOSAL DUE	0 days	Thu 1/21/10
34	REVIEW / APPROVAL	5 days	Thu 1/21/10
35	A/E MOBILIZATION	3 days	Thu 1/28/10
36	COMMENCE DESIGN	0 days	Mon 2/1/10
37	PROGRAM VERIFICATION	5 days	Tue 2/2/10
38	SD'S	10 days	Tue 2/9/10
39	DD'S	15 days	Tue 2/23/10
40	CD'S	22 days	Tue 3/16/10
41	G/C RFP	1 day?	Thu 4/15/10
42	G/C BID PERIOD	10 days	Fri 4/16/10
43	G/C BID EVAL	5 days	Fri 4/30/10
44	G/C RELEASE	4 days	Wed 5/5/10
45	G/C MOBILIZATION	5 days	Tue 5/11/10
46	ELECTRICAL PERMIT	5 days	Thu 4/15/10
47	O/P Rx RELOCATES	0 days	Fri 4/30/10
48	COMMENCE WORK	0 days	Mon 5/17/10
49	COSMETIC & ELECTRICAL BUILD	55 days	Tue 5/18/10
50			
51	7-D CONNECTOR & WAITING ROOMS	78 days?	Wed 1/20/10
52	COMPLETE DESIGN	15 days	Tue 1/19/10
53	CITY PERMIT	22 days	Tue 2/9/10
54	SFM REVIEW	22 days	Tue 2/9/10
55	DCH REVIEW	33 days	Tue 2/9/10
56	G/C RFP	1 day?	Mon 2/8/10
57	G/C BID PERIOD	10 days	Tue 2/9/10
58	G/C BID EVAL	3 days	Tue 2/23/10
59	G/C RELEASE	4 days	Fri 2/26/10
60	G/C MOBILIZATION	5 days	Thu 3/4/10
61	COMMENCE CONSTRUCTION	0 days	Wed 3/10/10
62	BUILD-OUT	42 days	Thu 3/11/10



Project: STATE TRAUMA PROJECTS
Date: Fri 1/22/10

Task | Milestone | Rolled Up Task | Rolled Up Progress | External Tasks | Group By Summary
Progress | Summary | Rolled Up Milestone | Split | Project Summary | Deadline

GTCNC CY 2008 READINESS COST SURVEY RESULTS SUMMARY
March 18, 2010

PROJECT DESCRIPTION & GOAL

The goal is to produce a rigorous and transparent methodology to measure the financial requirements for maintaining Georgia's trauma centers. This will provide accurate and credible data to the State Legislature regarding the costs of trauma care. This project also has national implications.

Trauma patient treatment costs are relatively well defined by standardized hospital cost-accounting systems coupled with an established methodology that enables severity adjusted comparisons of such costs among trauma centers. The costs required by trauma center regulations to maintain essential infrastructure and capacity to provide emergent services on a 24/7 basis are not well defined. These are non-patient care costs the hospital would not have to pay if it were not a trauma center. They are described as trauma center readiness costs.

The GTCNC's Trauma Care Economic Subcommittee developed a new methodology to assess such costs, based upon previous trauma center readiness cost surveys in Georgia and Florida, and using the American College of Surgeon's standards for trauma centers[1] (which Georgia has adopted). Financial and program managers from all Georgia trauma centers then participated in two meetings to review and refine the methodology – a webinar held in conjunction with the Georgia Hospital Association, and a Readiness Cost Summit, a face-to-face meeting held in Atlanta.

The survey instrument, with instructions based upon the Committee's methodology and results of meetings with trauma centers, was then prepared and then distributed. All trauma centers then completed the surveys based upon calendar year 2008 costs. This report summarizes the results and implications.

READINESS COST SURVEY RESULTS

The summarized results of the survey are as follows:

Readiness Cost Category	LI Total	LI Average	L2 Total	L2 Average	New, LIII & LIV	Georgia Totals
Administrative	2,431,530	607,883	3,339,644	371,072	221,522	**$5,992,696**
Medical Staff	18,003,208	4,500,802	12,836,008	1,426,223	1,198,120	**$32,037,336**
In House OR	1,744,231	436,058	2,284,553	253,839	405,646	**$4,434,430**
Education/Outreach	222,518	55,630	1,437,046	159,672	115,599	**$1,775,163**
Georgia Totals	**$22,401,487**	**$5,600,372**	**$19,897,251**	**$2,210,806**	**$1,940,887**	**$44,239,625**

[1] ACS Resource for Optimal Care of the Injured Patient: 1999 and ACS Re-verification documentation.

A more detailed summary of results is attached. The CY 2008 results total $44.2 million, compared to $46.3 million in CY 2007, and $44.0 million in CY 2006. These surveys used a broader definition of readiness costs, but took a less rigorous approach (see attached).

While a full comparison between 2008 results with 2006/2007 is not possible due to different cost categories, a few comparisons are possible. For example, in-house OR costs totaled $4.4 million in CY 2008, versus $5.8 million in both CY 2006 and 2007. This was due to a more rigorous definition of the costs a trauma center should include.

Another comparison can be made regarding trauma center costs for maintaining medical staff support, which were $22.4 million in CY 2006, $25.1 million CY 2007, and $32.0 million in CY 2008. The increase in 2008 reflects in part the funding the GTCNC provided to trauma centers for this purpose in 2008.

Survey Instrument

The survey instrument is attached, and it includes the guidelines for determining trauma center readiness costs that were developed by the Committee and vetted by the trauma center representatives. This new methodology is expected to attract the attention of other states as they address their trauma centers' costs.

POTENTIAL DEFICIENCIES

Due to very poor financial performance in previous years, most of Georgia's trauma centers have not been able to maintain full support for their programs. This survey provides evidence of this in the following areas:

Readiness Cost Category	Georgia Totals	Outliers	Average w/o Outliers	No Cost
Education & Outreach				
Injury Prevention	$1,030,620	2	$7,414	7
Community Outreach	$263,492	1	$246	11
Professional Outreach	$35,170	1	$1,474	7
Outlying Hosp. Education	$520		$37	14
Administrative				
Trauma Program Manager	$1,132,730		$78,556	
Outreach Coordinator	$194,556	2	$5,046	8
Injury Prevention Coordinator	$85,558	1	$598	12

The table shows the average expenditure by trauma centers when 1-2 outliers (who spend substantial amounts) are removed. It also shows the number of trauma centers that report no costs in the category.

Injury prevention and outreach activities, required by trauma center regulations, clearly received very little support in CY 2008. The amount for the Trauma Program Manager position (or Trauma Administrative Director or Trauma Coordinator), the key management position in a trauma center, includes benefits, which if removed, leaves a salary of $62,845 compared to a CY 2007 national trauma center average of $82,164[2]. This indicates an increased investment in trauma center management may be appropriate, perhaps combined with training (this survey process turned into a statewide seminar on trauma center finance for the trauma program managers).

Use in Performance Based Payment

This annual GTCNC readiness cost survey can be considered a support mechanism for the proposed performance based payment program being considered by the GTCNC in that it discerns whether a trauma center is actually allocating resources to functions required by Georgia trauma center standards such as outreach, education, injury prevention, registrars, etc. This information can be added to the review process as a means of rewarding trauma centers for providing appropriate support to such functions.

[2] From the National Foundation for Trauma Care's Trauma Center and ED Staff Survey – December 2007

GTCNC CY 2008 Readiness Cost Survey Results Summary

18-Mar-10

	LI Total	LI Average	L2 Total	L2 Average	New, LIII & LIV	Georgia Totals
Administrative						
Senior Administrative Support	169,440	42,360	650,028	72,225	24,800	**844,268**
Trauma Program Manager	353,438	88,360	667,792	74,199	111,500	**1,132,730**
State/Regional Participation	1,917	479	10,195	1,133	500	**12,612**
Trauma Center Staff Support	-	-		-		**-**
Outreach Coor.	12,704	3,176	181,852	20,206		**194,556**
Case Mngt/DC Plng	698,941	174,735	575,143	63,905	10,825	**1,284,909**
Injury Prev. Coor.	80,558	20,140	5,000	556		**85,558**
Research/PI Coor.	160,020	40,005	4,316	480		**164,336**
Trauma Registrar	339,161	84,790	334,532	37,170	19,233	**692,926**
Secretarial Staff	191,101	47,775	99,833	11,093		**290,934**
Trauma Med Director	186,041	46,510	340,731	37,859	20,664	**547,436**
Part. In S/R Activities	9,575	2,394	1,000	111		**10,575**
ED Medical Director	77,305	19,326	206,877	22,986	25,000	**309,182**
ICU Surgical Director	66,594	16,649	158,909	17,657		**225,503**
Orthopedic Liaison	51,100	12,775	22,680	2,520		**73,780**
Neurosurgeon Liaison	26,020	6,505	54,360	6,040		**80,380**
Registry Hard/Software	7,615	1,904	26,396	2,933	9,000	**43,011**
Subtotal-Administrative	**2,431,530**	**607,883**	**3,339,644**	**371,072**	**221,522**	**5,992,696**
Clinical - Medical Staff	-	-		-		**-**
Trauma Medical Staff Compensation	-	-		-		**-**
Trauma Surgery	4,258,276	1,064,569	4,136,134	459,570	108,729	**8,503,139**
Subtotal-Clinical Med Staff	**18,003,208**	**4,500,802**	***12,836,008***	**1,426,223**	**1,198,120**	**32,037,336**
In House OR Availability	**1,744,231**	**436,058**	***2,284,553***	**253,839**	**405,646**	**4,434,430**
Education & Outreach	-	-		-		**-**
Injury Prevention	14,400	3,600	940,508	104,501	75,712	**1,030,620**
Community Outreach	795	199	262,697	29,189		**263,492**
Prof. Outreach	18,694	4,674	12,876	1,431	3,600	**35,170**
Outlying Hosp. Educ.	520	130		-		**520**
16 Hours Trauma CME	-	-		-		**-**
Trauma Med. Dir.	8,224	2,056	4,562	507		**12,786**
Trauma Prog. Mgr.	4,790	1,198	7,036	782	1,800	**13,626**
ED Trauma Liaison	5,480	1,370	5,899	655	2,200	**13,579**
Neurosurgical Liaison	3,853	963	2,445	272		**6,298**
Orthopedic Liaison	1,750	438	13,040	1,449		**14,790**
Trauma Education-Hospital Staff	-	-		-		**-**
ED	73,138	18,285	94,811	10,535	32,287	**200,236**
ICU	69,198	17,300	89,897	9,989		**159,095**
Surgery	21,676	5,419	3,275	364		**24,951**
Subtotal-Educ/Outreach	**222,518**	**55,630**	**1,437,046**	**159,672**	**115,599**	**1,775,163**
Georgia Totals	**22,401,487**	**5,600,372**	**19,897,251**	**2,210,806**	**1,940,887**	**44,239,625**

2007 Trauma Center Readiness Costs

Readiness Cost	Level I TC	GA Avg.	Level II	GA Avg.	LI/II Total
Total Medical Staff	$12,922,170	$3,230,543	$12,173,618	$1,352,624	$25,095,788
24 Hour OR Staffing	$2,530,000	$632,5000	$3,279,800	$364,422	$5,809,800
Higher Staffing Levels	$510,000	$127,500	$619,393	$68,821	$1,129,393
Transportation	$1,756,000	$439,000	$250,000	$27,778	$2,006,000
Support Services	$657,495	$164,374	$464,564	$51,618	$1,122,059
Injury Prevention	$78,500	$19,625	$1,074,770	$119,419	$1,153,270
Training	$220,000	$55,000	$488,456	$54,273	$708,456
Administration	$2,400,000	$600,000	$3,627,949	$403,105	$6,027,949
Physician Extenders	$737,000	$184,250	$121,744	$13,527	$858,744
Verification Process	$3,8000	$950	$21,250	$2,361	$25,050
Trauma Equip	$50,000	$12,500	$354,782	$39,420	$404,782
Other Costs*		Included Above	1,943,149$	$215,905	$1,943,149
Total	**$21,864,965**	**$5,466,242**	**$24,419,475**	**$2,713,275**	**$46,284,440**

Source: 2008 project conducted by Bishop+Associates for the Healthcare Georgia Foundation

2006 Trauma Center Readiness Costs

Readiness Cost	Level I TC	GA Avg.	Level II	GA Avg.	LI/II Total
Total Medical Staff	$12,017,488	$3,004,372	$10,343,929	$1,063,557	$22,361,417
24 Hour OR Staffing	$2,665,000	$666,250	$3,177,955	$338,631	$5,842,955
Higher Staffing Levels	$510,000	$127,500	$665,404	$54,983	$1,175,404
Transportation	$1,756,000	$439,000	$325,008	$43,334	$2,081,008
Support Services	$674,201	$168,550	$405,406	$33,411	$1,079,607
Injury Prevention	$77,775	$19,444	$408,021	$23,292	$485,796
Training	$218,440	$54,610	$454,195	$34,796	$672,635
Administration	$1,817,534	$454,384	$3,680,934	$330,791	$5,498,468
Physician Extenders	$733,259	$183,315	$235,160	$18,021	$968,419
Verification Process	$3,300	$825	$34,250	$1,100	$37,550
Trauma Equip	$335,000	$83,750	$517,838	$37,934	$852,838
Other Costs*		Included Above	$3,007,126	$245,395	$3,007,126
Total	**$20,807,997**	**$5,201,999**	**$23,255,227**	**$2,225,245**	**$44,063,224**

Source: 2009 project conducted by Bishop+Associates for the Georgia Trauma Care Network Commission

CY 2008 GEORGIA TRAUMA CENTER READINESS COSTS BY DESIGNATION LEVEL
Georgia Trauma Care Network Commission

January 25, 2010

To Georgia Trauma Centers,

Attached is the 2008 Readiness Cost Survey that resulted from the December Webinar and recent January Summit on readiness costs. It covers calendar year 2008. The due date is February 5, 2010.

Please immediately acknowledge that you have received this survey by replying to the email from Ann@traumacare.com.

Phase 2 of this survey – requested financial information – will be sent separately to avoid confusion.

If you have questions, please email them to Ann@traumacare.com. We will circulate answers to all trauma centers.

When completed, please email survey to Ann@traumacare.com.

Please provide the following information:

Trauma Center _____ Level _____
Name of person who completed this Survey: _____
Phone Number: _____
Email Address: _____

This survey should be reviewed by your CFO and signed to indicate his/her review:

_____CFO

LINE ITEM/ Criteria Deemed Essential For Level In ACS Gold Book	LEVEL I	II	III	IV	SURVEY INSTRUCTIONS Do Not Respond To Item If Your Trauma Center Level Is This Color As It Is Not Essential For Your Level*	AMOUNT Use Actual Costs in 2008
ADMINISTRATIVE						
Senior Administrator Support					% of time focused on trauma by main senior administrator involved in trauma X salary and benefits	
Trauma Program Manager (TPM)					Salary & benefits X % of time on trauma (if position has other duties in low volume trauma centers).	
Participation in state and regional activities (e.g., EMS Council)					Trauma Program Manager travel costs to meetings	
Trauma Center Staff Support	• If any of the following positions generate reimbursement or are supported by grants, use net hospital costs X time spent on trauma to calculate their costs. • If position employed by trauma program, or if employed by another department which focuses trauma responsibility on few staff, use salary and benefits less revenue and grant support for costs. • If employed by another department which spreads trauma responsibility among most staff, use portion of trauma patient admissions of total admissions X department salary costs.					
Outreach Coordinator			*	*	*** E.g., Level III/IV trauma centers should skip this as not required** Salary & benefits X % of time on trauma	
Case Mgmt, Discharge Planning					Salary & benefits X % of time on trauma. If support is provided by personnel from a hospital case management department, use trauma discharges/total discharges X department salary costs.	
Injury Prevention Coordinator					Salary & benefits (less grant support) X % of time on trauma.	
Research/PI Coordinator					Salary & benefits (less grant support) X % of time on trauma.	
Trauma Registrar					Salaries & benefits X % of time on trauma – Limit of 1 registrar per 500 – 1000 patients.	
Secretarial Staff					Salaries & benefits X % of time on trauma.	

Trauma Medical Director					Board-certified surgeon with specialty interest in trauma care. Administrative stipend if contracted, or if employed, salary & benefits X % of time spent on trauma center administrative functions only.	
Participation in state and regional activities (e.g., EMS Council)					Trauma Medical Director travel costs to meetings.	
ED Medical Director					Administrative stipend if contracted, or if employed, salary & benefits X % of time spent on trauma center administrative functions.	
ICU Surgical Director					Administrative stipend if contracted, or if employed, salary & benefits X % of time spent on trauma center administrative functions.	
Orthopedic Liaison					Administrative stipend if contracted, or if employed, salary & benefits X % of time spent on trauma center admin functions. Must participate actively with trauma service with documented CME and PI.	
Neurosurgeon Liaison					Administrative stipend if contracted, or if employed, salary & benefits X % of time spent on trauma center admin functions. Must participate actively with trauma service with documented CME and PI.	
Registry Hardware and Software					Costs for registry hardware, software and maintenance fees.	

CLINICAL – MEDICAL STAF	Includes the costs of maintaining trauma physician support for your trauma center other than the costs of admin functions addressed above. • If you pay specialty a stipend exclusively for trauma call, enter the full amount. • If you pay a stipend to a specialty that is for both trauma and ED call, estimate the portion attributable to trauma care. • If you employ your physicians, determine net cost (salary + benefits – pro fee reimbursement) and estimate portion attributable to trauma. • If you are supported by a faculty practice arrangement, take portion of trauma admissions to overall admissions and apply to overall hospital subsidy provided to faculty practice structures, Or Total number of physicians by specialty and apply AAMC salary database (at 50% of range) for SE region, add estimated benefits, subtract estimate salary support from pro fee reimbursement, and then apply portion of trauma admissions to overall admissions to arrive at net cost for specialty support. • Do not include amounts specifically paid to trauma physicians for care of uninsured trauma patients in the amounts for each specialty; you will be asked for a total amount of such pay at the end of this section.						
Trauma Medical Staff Compensation Do not include amounts paid for administrative duties.							
Trauma Surgery					See above.		
Orthopedics					See above.		
Neurosurgery					See above.		
Anesthesia					Estimate portion of hospital net cost for anesthesia (including CRNA's) that is attributable to trauma.		
Hand					See above.		
Microvascular					Include only if hospital pays for support and then only portion attributable to trauma.		
Cardiac					Include only if hospital pays for support and then only portion attributable to trauma.		
OB/ GYN					Include only if hospital pays for support and then only portion attributable to trauma.		
Opthalmic					Include only if hospital pays for support and then only portion attributable to trauma.		
Oral/ Maxillofacial					See above		

ENT/ Plastics					See above.	
Critical Care Medicine					See above	
Radiology					Estimate portion of hospital net cost for radiology that is attributable to trauma.	
Thoracic					Include only if hospital pays for support and then only portion attributable to trauma.	
Surgical Resident Support					This applies to surgical residency only. There are two options: Take residency costs and subtract federal funding and apply portion attributable to trauma, or take residents' hourly salary + benefits for time on trauma rotation, and subtract federal funding for this time.	
Payment for uninsured trauma patient care for all specialties					If you paid your trauma medical staff (those listed above) specifically for uninsured trauma patient care in 2008 (with hospital and/or state trauma funds), enter the total amount for all specialties on this line.	
IN HOUSE OR AVAILABILITY	Level I hospitals require in-house 24 hour availability and some Level IIs maintain this as well. • If you maintain a dedicated OR that remains open, staffed and is used exclusively for trauma, please estimate net costs (less reimbursement) below. • If you maintain 24 hour in-house OR availability but do not maintain a dedicated OR that remains open and staffed exclusively for trauma, provide your costs for an RN and OR tech for PM and night shift for 7 days a week.					
Costs Of In House OR Availability						

EDUCATION & OUTREACH	Includes costs for travel, courses, training, supplies and materials for activities specific to trauma. This does not include personnel costs, which should have been included in the Administrative Section.					
Injury prevention					Must be specific to trauma.	
Community outreach					This includes public education.	
Professional outreach					This includes offering ATLS courses and providing trauma clinical education to EMS and hospital staff in your region.	
Outlying hospital education					This addresses the unique responsibilities of Level I trauma centers in supporting outlying hospitals.	
16 hours trauma CME	Includes costs for courses and travel for up to 16 hours of trauma CMEs only for personnel below:					
Trauma Medical Director						
Trauma Program Manager					16 hours of Continuing Education	
ED Trauma Liaison						
Neurosurgical Liaison						
Orthopedic Liaison						
Education – trauma related for hospital staff	Includes cost of courses plus salary costs for educational time.					
Emergency Department						
Intensive Care unit						
Surgery						

PERFORMANCE BASED PAYMENT FOR GEORGIA'S TRAUMA CENTERS
Georgia Trauma Care Network Commission (GTCNC)
March 1, 2010

Performance based payment (PBP) is an evolving concept in health care that is gaining traction as a means of improving quality and reducing costs by financially incentivizing providers to do so. Its application in trauma care is very limited, although it has strong potential in terms of quality and costs, particularly in states that fund trauma centers.

A few states have implemented individual components of PBP for trauma centers. New Mexico, Oklahoma and Georgia have used national severity adjusted patient treatment cost norms as a basis for payment. Arkansas is implementing payment for data submission as a precursor to payment based upon clinical outcomes. In a broader context, the designation process itself provides an attractive, long term business franchise to hospitals that meet designation criteria. Another example of performance based payment is Mississippi's "pay or play" approach in which hospitals that do not serve as trauma centers help fund those that do.

Georgia is poised to take the lead nationally in trauma care PBP, due to the funding the GTCNC has secured from the state legislature and its commitment to use these funds in the most cost-effective manner possible. This document describes six PBP concepts that can be applied in Georgia, along with recommendations for implementation.

PBP concepts that can be considered in Georgia are as follows:

I. **Trauma System Participation & Reporting**
II. **Fostering Trauma Care Cost Effectiveness**
III. **Assuring Trauma Center Access**
IV. **Maintaining Georgia Trauma Center Standards**
V. **Optimizing Trauma Care Clinical Outcomes**

Each concept is described along with an outline of the following:

- Implementation Requirements
- Standards & Performance Measures
- Time Frame & Costs

This document will enable the GTCNC to select and shape the components of the PBP program it ultimately adopts. The items in *italics* are factors that the GTCNC needs to determine and can adjust periodically as the trauma system evolves.

FY 2011 GTNC TRAUMA CENTER READINESS AND PERFORMANCE BASED PAYMENT BUDGET

In FY 2011, 20% of readiness payments have been initially assigned to PBP (this proposal suggests this be raised to 30%). This document proposes the criteria for which these payments will be made in FY 2011.

Georgia Trauma Commission FY 2011
$23 Million Budget
Trauma Center Readiness and Performance Based Payments (PBP)

Trauma Center	Readiness Payments[1]	Potential PBP [2]	Total Readiness Payments
Archbold	$349,809	$87,452	$437,261
Atlanta	$349,809	$87,452	$437,261
Columbus	$349,809	$87,452	$437,261
Floyd	$349,809	$87,452	$437,261
Gwinett	$349,809	$87,452	$437,261
Hamilton	$349,809	$87,452	$437,261
North Fulton	$349,809	$87,452	$437,261
Egleston	$349,809	$87,452	$437,261
Scottish Rite	$349,809	$87,452	$437,261
Level II Totals	**$3,148,278**	**$787,070**	**$3,935,348**
Percent	57.4%	57.4%	57.4%
Grady	$583,015	$145,754	$728,768
MCCG	$583,015	$145,754	$728,768
MCG	$583,015	$145,754	$728,768
Memorial	$583,015	$145,754	$728,768
Level I Totals	**$2,332,058**	**$583,015**	**$2,915,073**
Percent	42.6%	42.6%	42.6%
Existing Trauma Center Totals	**$5,480,336**	**$1,370,084**	**$6,850,421**

New Trauma Centers	Readiness Payments[1]	PBP[2]	Total Readiness Payments
Athens Level II	$349,809	$87,452	$437,261
Walton Level III	$174,904	$43,726	$218,630
New Trauma Centers	**$524,713**	**$131,178**	**$655,891**
Existing Trauma Centers	$5,480,336	$1,370,084	$6,850,421
All Trauma Centers	**$6,005,049**	**$1,501,262**	**$7,506,312**

TOTAL OF ANNUAL PBP PAYMENT PERCENTAGES BY PBP CONCEPT

This table summarizes the suggestions for the percent of readiness payments to be tied to each PBP concept over the next five years.

PBP% of Total Trauma Center Readiness Funds

PBP Concept	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
1. Participation & Reporting	*20%*	*10%*			
2. Cost Effectiveness	*Implemented*				
3. Assuring Access		*20%*	*20%*	*20%*	*20%*
4 Trauma Center Standards	*10%*	*10%*	*10%*	*10%*	*10%*
5. Clinical Outcomes		*10%*	*20%*	*20%*	*20%*
Total	***30%***	***50%***	***50%***	***50%***	***50%***

I. TRAUMA SYSTEM PARTICIPATION & REPORTING

Description
A critical requirement for trauma system development is participation by providers. The objective of this PBP component is to reward the necessary participation of trauma centers in the following:

- Participation in Georgia trauma system development, meetings and activities.
  This includes meetings such as the readiness cost Webinar and summit, other meetings developed by the GTCNC, and regional activities related to the development of the Georgia trauma communication system.

- Provision of accurate and timely data requested by GTCNC or OEMS/T; e.g., trauma center surveys, data on use of trauma funds, etc. This includes timely responses to annual surveys conducted by the GTCNC, and information requests, and trauma center site reviews conducted by OEMS/T.

Implementation: Requires defined standards for participation with "earned point" values, and tracking system like a teacher's grading system.

Timeframe: This should be considered the first step in PBP and the timeframe for implementation is 2010 and on. New standards can be defined annually or quarterly.

Suggested Initial Standards: For FY 2011, *20%* of Trauma Center Readiness payments would be at risk due to lack of participation, defined as not present at meetings/webinars, or not completing survey/registry within time required (e.g., *50% point loss for being late*). See attached for suggested required activities and performance criteria.

Future Standards: Can be expanded to include clinical data submission to the National Trauma Data Bank to enable PBP on clinical outcomes, activities such as a statewide injury prevention initiative, etc.

Costs: GTCNC and/or OEMS/T personnel time to set standards, track each trauma center's participation in required trauma system activities (e.g., sign in sheet for meetings), and tabulate resulting payments.

Example: See attached. Due to a survey that was returned late, this Level II trauma center would receive 95% ($83,079) of its FY 2011 PBP potential payments of $87,452, or alternatively would lose 5% ($4,373).

TRAUMA SYSTEM PARTICIPATION AND REPORTING MEASUREMENT

This table provides a format for defining required trauma center activities and performance criteria, and measuring and tracking their performance in a manner that clearly and fairly determines their payment.

The required activities and performance criteria are examples drawn from FY 2010, which can be updated quarterly. The point value is the weight assigned to the activity, and points earned add up to produce an earned rate which is applied to this trauma center's full readiness allocation (it receives 95% of the 20% that was at risk).

FY 2009 Required Activities (Example) - Performance Criteria	**Point Value**	**Points Earned**	**Comments Re: Participation**
Participation In Readiness Cost Webinar *- Hospital Represented On Webinar Call*	*10*	10	Participated re: webinar call in list
Participation In Readiness Cost Summit *- Hospital Represented On Webinar Call*	*10*	10	Participated re: meeting attendance list
Complete Readiness Cost Survey By 2/5 *- Survey Returned 5 pts.; Returned by 2/8 5 pts.*	*10*	10	Survey returned by 2/8
Complete Financial Survey By 2/30 *- Survey Returned 5 pts.; Returned by 3/2 5 pts.*	*10*	5	Survey returned after 3/2; -5 points
Participation in Communication System Develop *- Develop hospital protocol for accepting transfer*	*20*	20	Developed hospital protocol for accepting transfers
Maintenance of Up-To-Date Trauma Registry *- Data submission 60 days after end of quarter*	*10*	10	Trauma registry data submitted on time
Other *- Performance Criteria*	*20*	20	Yes
Other *- Performance Criteria*	*10*	10	Yes
Total **Earned Rate**	***100***	**95** **95%**	

Once points have been tabulated, each trauma center should be given *2* weeks to provide information that supports any claim they may have to a higher level of participation.

II. FOSTERING TRAUMA CARE COST EFFECTIVENESS

Description

Cost-effectiveness in the acute care setting has been promoted with the use of an all-inclusive case rate such as the Medicare diagnostic related group (DRG) system, which means the less in costs, the more in profit. This is an alternative to paying on a fee-for-service basis in which the more in costs, the more in profit.

In trauma center funding by states, usually for uninsured trauma patient care, the initial approach was to pay based upon reported costs; those with higher costs received more in payment. This changed first in New Mexico, and then Oklahoma and Georgia, whom adopted a severity adjusted case rate methodology based upon patient injury severity scores (ISS) to distribute state trauma funds. Their motivation was this methodology's simplicity and immunity to gaming on costs.

Trauma Cost Norms Used As Basis For Fund Allocation

Trauma center patient treatment cost norms by ISS category were developed for both community and academic hospitals by the National Foundation for Trauma Care, which collected patient treatment cost data from over 100 trauma centers. The norms for each ISS category are contained in the table on the right.

Patient Treatment Cost Norms		
ISS	Community	Academic
0-8	$5,267	$6,373
9-15	$10,428	$12,618
16-24	$19,626	$23,747
>24	$33,945	$41,073

A survey of Georgia Level I and II trauma centers was conducted to determine the volume and severity of uninsured patients who met SB 60 requirements. The cost norms were multiplied times the number of patients in each ISS category and then added to produce expected patient treatment costs for each trauma center. Their proportion of total patient treatment costs for all trauma centers was then applied to the fund to determine their payment.

An Example

In the FY 2010 distribution of uninsured trauma patient care funds (see next page), Archbold Memorial Hospital has 29 ISS 0-8 self pay trauma patients. They are multiplied times the community hospital cost norm of $5,267 to arrive at $152,743. This is repeated for other ISS categories to arrive at the total cost of $706,417, which is 1.3% of the total for all trauma centers of $52.9 million. Archbold was then allocated 1.3% of uninsured trauma patient care funds. While only covering 13% of costs limits its impact, this approach also eliminates the gaming that other states that reimburse trauma centers based upon costs experience (e.g., Texas).

Injury Severity Score	Vol	X Community Cost Norm	= Total
0-8	29	$5,267	$152,743
9-15	24	$10,428	$250,272
16-24	12	$19,626	$235,512
>24	2	$33,945	$67,890
Total	**67**		**$706,417**

FY 2010 GTCNC TRAUMA CENTER UNINSURED PATIENT CARE BUDGET

In FY 2009 and 2010, trauma center payments for uninsured patient care were based upon this methodology.

FY 2010 GTCNC Uninsured Patient Care Budget

	Self Pay Trauma Patients Meeting SB 60 Requirements[1]					Cost Norm Based Allocation of Funds[2]		
Trauma Center	**ISS 0-8**	**ISS 9-15**	**ISS 16-24**	**ISS >24**	**Total**	**Total Based Upon Cost Norms**	**Allocation Based On % of Total Norm Costs**	
Archbold	29	24	12	2	67	$706,417	1.3%	$89,395
Atlanta	122	108	38	30	298	$4,274,826	8.1%	$540,964
Columbus	15	14	11	6	46	$644,553	1.2%	$81,566
Floyd	13	21	7	1	42	$458,786	0.9%	$58,058
Gwinett	38	90	28	35	191	$2,876,269	5.4%	$363,981
Hamilton	8	9	2	1	20	$209,185	0.4%	$26,472
North Fulton	27	38	17	6	88	$1,075,785	2.0%	$136,137
Egleston	9	9	3	2	23	$324,306	0.6%	$41,040
Scottish Rite	6	15	3	2	26	$314,790	0.6%	$39,836
Level II Totals	**267**	**328**	**121**	**85**	**801**	**$10,884,917**	**20.6%**	**$1,377,447**
Grady	556	551	292	233	1,632	$27,000,039	51.0%	$3,416,757
MCCG	55	68	34	15	172	$2,632,032	5.0%	$333,074
MCG	96	78	67	34	275	$4,583,543	8.7%	$580,031
Memorial	91	137	104	74	406	$7,817,699	14.8%	$989,301
Level I Totals	**798**	**834**	**497**	**356**	**2,485**	**$42,033,313**	**79.4%**	**$5,319,163**
Total LI/LII	**1,065**	**1,162**	**618**	**441**	**3,286**	**$52,918,230**	**100%**	**$ 6,696,610**

Developing Cost Norms for Georgia

A next step will be to develop trauma center cost norms that reflect the realities of Georgia. The 2010 financial survey will collect trauma center patient treatment cost data by ISS category, and will serve as a starting point for defining norms. In addition, trauma center length of stay (LOS) data, for the entire LOS as well as the ICU LOS, is also collected and can be compared to norms for Georgia and the U.S. (This can be done through the National Trauma Data Bank as well).

III. ASSURING TRAUMA CENTER ACCESS

Description
Trauma centers need to go to extraordinary lengths to maintain their availability for the treatment of the seriously injured in their region, as failure to do so means longer transport times and risks for patients. This PBP concept will reward them for minimizing:

- Time on diversion to trauma patient transports or transfers-in due to lack of readiness capacity or capabilities "essential" to designation standards (e.g., no ICU beds).

- Transfers out due to lack of readiness capacity or capabilities "essential" to designation standards (e.g., no neurosurgeon available for a Level II).

Trauma centers should not be penalized for diverting or transferring out additional patients when their resources are tied up treating multiple trauma patients. In addition, the proposed communication system should regulate the flow of trauma patients with regard to each trauma center's capacity.

Implementation: This will require the statewide implementation of the proposed communication system which will require all trauma centers to report their status in real time. It will also require defined standards for authorized closures by trauma centers due to multi-trauma incidents, as well as an allowable amount of time on diversion.

Timeframe: This should be considered for implementation in FY 2012 once the communication system is operational.

Suggested Standards: *20%* of Trauma Center Readiness pay would be at risk due to excessive time on unauthorized diversion. Suggested authorized closure standards for larger Level I & II trauma center is *2 or more trauma patients arriving within a 3 hour timeframe, and 5 or more trauma patients arriving within 24 hours*. (These can be differentiated by trauma center/level/volume, etc.) The allowable threshold for full payment would be *10% time on diversion* for each period plus time for authorized closures. For each *added 1% of diversion time, the trauma center would lose 2% of* PBP funds.

Costs: Once the communication system is operational, trauma center closure data, including cause, should be readily available. Added costs would be for GTCNC and/or OEMS/T personnel time to track and vet each trauma center's closures, and tabulate resulting payments.

Example: This Level II trauma center would receive 90% of its potential PBP payments (i.e., lose 10%) because its diversion rate was 5% over the limit of 10%. (See attached.)

ASSURING TRAUMA CENTER ACCESS MEASUREMENT

Trauma Center Closure Log

Trauma Center ___Anytown Hospital_____

Quarter ____January 2012

_31 days X 24 hours = **744** Total Hours___ _____

Date	Time Frame	Authorized Closure Explanation	AuthTime	Verified	NA Time
1/9	14:55 – 17:30	2 TP arrived at 14:20 – within 3 hours	2:35	(name)	
1/12	12:00 – 24:00	NA (No neurosurgeon available)		NA	12:00
1/13	00:00 – 12:00	NA (No neurosurgeon available)		NA	12:00
1/16	00:00 – 24:00	NA (No ICU beds)			24:00
1/17	00:00 – 12:00	NA (No ICU beds)			12:00
1/19	01:00 – 24:00	5 TP arrived at 24 hours	23:00	(name)	
1/22	00:00 – 24:00	NA (No ICU beds)			24:00
1/23	00:00 – 24:00	NA (No ICU beds)			24:00
		Totals	**25.35 Hrs**		**108:00 Hrs**
		Total Hours Less Authorized Diversion Time	**718.25 Hrs**	**% NA Time**	**15.0%**
			Allowable time on diversion		10.0%
			Excessive Time On Divert		**5.0%**

Tabulating Payment

- The 31 days in January X 24 hours = **744** hours in month
- Less **25.35** hours (authorized diversion time) = **718.25** hours
- **108:00** hours of non-authorized diversion/718.25 hours = **15.0%.**
- 15.0% - 10% (allowable time on diversion) = **5.0%** excessive time on divert (ETD)
- Potential PBP payment less **10.0%** (5.0% ETD X 2% penalty) is **90% of Potential PBP Payment**

IV. MAINTAINING GEORGIA TRAUMA CENTER STANDARDS

Description
This PBP concept will reward trauma centers for maintaining Georgia trauma center designation standards, which provide a basic foundation for their accountability. Standards will be categorized by priority as follows (see attached sample):

- Category 1 Deficiency – *Lack of major trauma call panel (Surgery, orthopedics, neurosurgery)* – 3 points
- Category 2 Deficiency – *Lack of other call panels, PI program does not meet standards, etc*. – 2 points
- Category 3 Deficiency – *Lack of injury prevention program, outreach, etc*. – 1 point.

Any points would reduce a trauma center's PBP payments.

The impact of different PBP concept on the same issue should be considered (e.g., diversion due to lack of neurosurgery coverage that is also a Category 1 standard).

Implementation: Trauma centers would be reviewed periodically by OEMS/T to determine deficiencies; an annual review of Category 1 standards and a full review every 3 years of all standards can be considered. Trauma center deficiency points would be added annually and would reduce payments based upon a formula.

Timeframe: This can be considered for implementation in FY 2011 once OEMS/T is appropriately staffed.

Suggested Standards: *20%* of Trauma Center Readiness pay would be at risk annually due to deficiencies. For each deficiency point the trauma center would lose *10% of* PBP funds.

Costs: Added costs would be for additional OEMS/T personnel time to review and report each trauma center's deficiencies and tabulate resulting payments.

Example: A trauma center with one Category 2 and one category 3 deficiencies and would receive 70% of its potential PBP payments (i.e., lose 30%) since 3 points = 30% loss.) (see attached)

Alternatives: The annual GTCNC readiness cost survey can be considered a support mechanism in that it discerns whether a trauma center is actually allocating resources to functions required by Georgia trauma center standards such as outreach, education, injury prevention, registrars, etc. Another PBP approach would be to reward them for doing so.

Another alternative to PBP funding is publically reporting trauma center criteria deficiencies as does Colorado.

SAMPLE LIST OF TRAUMA CENTER PBP STANDARDS [**E** = essential requirements] [**D** = Desired but not essential]

A. Institutional Organization ***Levels***	**I**	**II**	**III**	**IV**	**Deficiency**	**Points**
1. Trauma program	E	E	E	**E-1**		
2. Trauma service	**E-2**	**E-2**	**E-2**			
5. Trauma multidisciplinary committee	**E-2**	**E-2**	**E-2**	D		
6. Trauma coordinator/TPM	E	E	E	**E-1**		
C. Clinical capabilities						
(Specialty immediately available 24 hours a day)						
1. General surgery	**E-1**	**E-1**	**E-1**	D		
On call and promptly available 24 hours/day						
2. Hand surgery	**E-2**	**E-2**	D		*	**2**
4. Neurologic surgery	**E-1**	**E-1**	D			
6. Ophthalmic surgery	**E-2**	**E-2**	D			
8. Orthopedic surgery	**E-1**	**E-1**	**E-1**	D		
9. Plastic surgery	**E-3**	**E-3**	E	D		
D. Clinical qualifications						
1. General/trauma surgeon						
b. 16 hours CME/year	**E-3**	**E-3**	D	D		
2. Emergency medicine						
b. Trauma education: 16 hours CME/year	**E-3**	**E-3**	D			
3. Neurosurgery						
b. 16 hours CME/year	**E-3**	**E-3**	D	D		
4. Orthopedic surgery						
b. 16 hours CME/year in skeletal trauma	**E-3**	**E-3**	D	D		
E. Facilities/Resources/Capabilities						
c. Presence of surgeon at resuscitation	**E-1**	**E-1**	**E-1**	D		
F. Performance Improvement						
1. Performance improvement programs	**E-1**	**E-1**	**E-1**	**E-1**		
5. Trauma conference, multidisciplinary	E	E	E	D		
G. Continuing Education/Outreach						
3. Programs provided by hospital for						
a. Staff/community physicians (CME)	**E-3**	**E-3**	**E-3**	D		
b. Nurses	**E-3**	**E-3**	**E-3**	D		
c. Allied health personnel	**E-3**	**E-3**	**E-3**			
d. Pre-hospital personnel	**E-3**	**E-3**	**E-3**	D		
H. Prevention						
7. Collaboration with national and state programs	**E-3**	**E-3**	**D-3**		*	**1**
8. Participation in community prevention activities	**E-3**	**E-3**	**E-3**	**D-3**		

V. OPTIMIZING TRAUMA CARE CLINICAL OUTCOMES

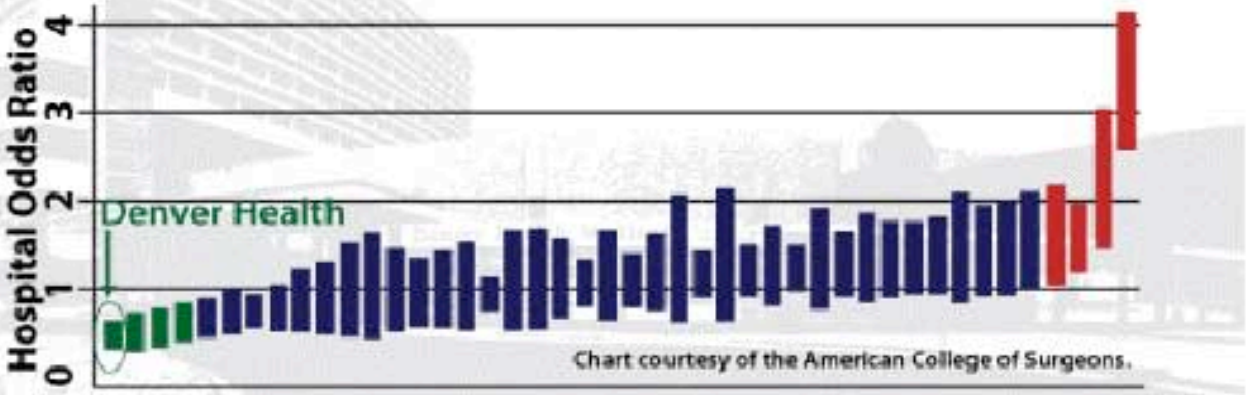
Description

Effectively rewarding quality is the "Holy Grail" of performance based payment in health care. This requires first and foremost, a mechanism for measuring quality that has been rigorously tested and enjoys broad credibility.

The American College of Surgeons (ACS) has done this with its National Surgical Quality Improvement Program (NSQIP), the first nationally validated, risk-adjusted, outcomes-based program to measure and improve the quality of surgical care by enabling valid comparison of outcomes among participant hospitals.

More recently the ACS has completed a pilot project and opened (in January 2010) its Trauma Quality Improvement Program (TQIP) to national trauma center participation. This leverages off their NSQIP experience, as well as its National Trauma Data Bank, and provides a well tested and highly credible measuring system for severity adjusted trauma care mortality rates. As an example, Denver Health, a Level I trauma center, participated in the TQIP pilot program and posted the results on the hospital's website:

Hospitals whose quality of trauma care is below average are displayed in red. Denver Health, at the other end of the scale (in green) has the best trauma outcomes in the nation's academic medical centers, as determined by the American College of Surgeons.



Georgia has the opportunity to be the first state (with Arkansas close behind) to implement TQIP statewide and tie it to its performance based payment program as a cutting edge approach to fostering high quality trauma care.

Implementation: Trauma center participation in the Trauma Quality Improvement Program requires the following:

- Level I and Level II adult trauma centers (TQIP only assesses outcomes on patients ages 16 or higher)
- Participation in the ACS National Trauma Data Bank (Georgia trauma centers already participate in the NTDB)
- Training of registrars (Georgia trauma registrars meet a high threshold of training)
- Participation by each Center's Trauma Director

This program would be implemented incrementally with the first year being used to bench-mark risk adjusted mortality and then increasing levels of payment would be tied to trauma center outcomes in following years.

Timeframe: This should be considered for initial implementation in 2011 for benchmarking purposes with no financial impact beyond costs of participation. Differences between NTDB and Georgia data definitions need to be resolved.

Suggested Standards: For 2012, *10%* of Trauma Center readiness payments would be tied to risk adjusted mortality. This should increase to *20%* in 2013. The threshold for payment would be established based upon first year benchmark results; based upon the pilot study (see attached), *1.2* observed/expected deaths should be considered to start (19 of 23 centers in pilot study met this threshold). The payment threshold can be lowered as overall performance increases, and multiple thresholds for partial payment can be considered.

Costs: Annual TQIP fee of $9000 per trauma center, plus trauma center costs of participation including new Trauma Director responsibilities (e.g., participation in annual conference), registrar training and travel and added costs for additional OEMS/T personnel time to tabulate resulting payments.

Example: A trauma center with more than a 1.2 ratio of observed/expected deaths would receive 90% of its potential PBP payments (i.e., lose 10%) in 2012.

Alternatives: Publication of results can be considered in third year (2013).

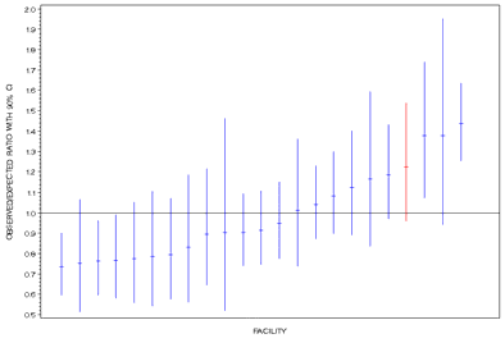
See attached information on ACS TQIP program including sample report trauma center report from pilot study.

December 9, 2008

Dear TQIP Pilot Participant:

Thank you for participating in the pilot study of the Trauma Quality Improvement Program (TQIP) of the American College of Surgeons - Committee on Trauma (COT). We have enclosed a report that presents your trauma center's risk-adjusted mortality along with the other 22 participating centers based upon data with hospital arrival year of 2007. The ratio of observed number of deaths to the expected number of deaths (O/E ratio) is used for this analysis. The expected number of deaths was derived from a statistical model that allows us to estimate the number of deaths based upon the characteristics of the patients at your institution. We report the O/E ratio along with the 90% confidence intervals (CI). A 90% CI indicates that we are 90% certain that the true O/E ratio falls within this range. The inclusion criteria, statistical methodology, a guide to the interpretation of findings, and limitations of this analysis are described in detail in the attached document.

In summary, the observed-to-expected mortality ratio of data qualifying into TQIP with admission year 2007 at your trauma center was equal to 1.0 as depicted by the red bar in the diagram. This suggests that the number of deaths at your trauma center were the same as expected from their baseline characteristics and injury severity.



Thanks again for your participation in TQIP. Please feel free to contact us with any concerns or questions.

Trauma Quality Improvement Program (TQIP), ACS Committee on Trauma

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2008 TQIP Pilot Study Benchmark Report

Trauma Quality Improvement Program (TQIP)
ACS Committee on Trauma
633 N St. Clair, Chicago, IL 60611

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Background

The American College of Surgeons – Committee on Trauma (COT) has been dedicated to improving the quality of care provided to the injured patient for over eight decades. In October 2006, the COT established a work group and charged it to "design and test a Trauma Quality Improvement Program (TQIP) that is validated, risk-adjusted and outcomes based, to measure and improve the quality of trauma care." TQIP supports the College's mission of promoting the highest standards of surgical care through the evaluation of risk-adjusted surgical outcomes in clinical practice, and is committed to improve the quality of trauma care. To accomplish this, the TQIP work group has developed a process to collect valid and reliable data, measure risk-adjusted outcomes, and provide feedback to participating trauma centers Our future plans are to identify practices in high performing centers and assist in the dissemination of the practices to elevate the quality of care at all centers.

The TQIP pilot began in June 2008. Your facility volunteered and was chosen to participate in the TQIP pilot. Registrars and data abstractors from participating centers were trained in June 2008 with follow-up training through webinars and conference calls. Data from the pilot centers were collected during the regular 2008 NTDB call for data and thus pertain to admissions between January 1 and December 31, 2007.Hence, this report is based on registry data entered prior to TQIP training or introduction of the National Trauma Data Standard (NTDS).

NTDB Confidentiality Policy

Use of NTDB data is in strict compliance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA). The NTDB does not distribute or report hospital information in any manner that allows the reporting hospital to be identified without the express written permission of the hospital. The information identifying your trauma center in this report is reported only to you.

Participating Hospitals

Institutional criteria for participation in TQIP require ACS or state Level I or II verification or designation. This pilot study includes 23 Level I or II trauma centers, which were selected based on their interest in TQIP and their commitment to NTDB. Appendix 2 shows a list of participating hospitals.

TQIP Patient Population

Selected trauma incidents submitted to NTDB were included in this report. This more focused population facilitates inter-facility comparisons. The inclusion and exclusion criteria for patients included in the TQIP analyses are described in detail in this section.

Inclusion and Exclusion Criteria

Inclusion Criteria: (must meet all of the following criteria)

- Age ≥ 16 years
- At least one valid trauma ICD-9 code in the range of 800–959.9 (excluding late effects (905-909.9), superficial injuries (910-924.9), and foreign bodies (930-930.9).
- Primary mechanism of injury classified as either blunt or penetrating:
    - Blunt is defined as an injury where the primary E-code is mapped to the following categories: fall, machinery, motor vehicle traffic, pedestrian, cyclist, and struck by or against
    - Penetrating is defined as an injury where the primary E-code is mapped to the following categories: cut/pierce and firearm
- Severely injured patients with at least one AIS ≥ 3:
    - For blunt injuries: At least one injury in any of the following AIS body regions: head, face, neck, thorax, abdomen, spine, or upper and lower extremity.
    - For penetrating injuries: At least one AIS ≥ 3 injury in any of the following AIS body regions: neck, thorax, and abdomen.
- Calculated injury severity score (ISS)* ≥ 9
- ED discharge disposition and hospital discharge disposition must be known.

Exclusion Criteria:

- GSW to the brain defined by: Any E-codes: E922.0-.9 E955.0-.4 E965.0-4, E979.4 E985.0-.4 E970 AND at least one ICD-9 code in the range: 800 - 801.99, 850-854.1
- Comorbidity: Pre-existing advanced DNR directive to withhold life sustaining interventions
- Dead on arrival

* Injury severity score (ISS) was calculated by NTDB using ICDMAP. See *Methodology* for further information.

Patient Cohorts

TQIP reports on all incidents that meet the inclusion criteria specified above and on three distinct cohorts of severely injured patients derived from this population. These three cohorts were selected to reflect the wide spectrum of trauma patients and their distinct challenges. It also provides an opportunity for centers with significant over-representation of a particular type of patient to better understand their performance relative to their peers. The cohorts are as follows:

Cohort 1- Blunt multisystem injury: Trauma type classified as blunt with injuries of AIS ≥ 3 in at least two of the following AIS body regions: head, face, neck, thorax, abdomen, spine, and upper and lower extremities.

Cohort 2 – Penetrating truncal injury: Trauma type classified as penetrating with injuries of AIS ≥ 3 in at least one of the following AIS body regions: neck, chest, or abdomen.

Cohort 3 – Blunt single system injury: Trauma type classified as blunt with injuries of AIS ≥ 3 limited to only one AIS body region with all other body regions having a maximum AIS ≤ 2.

The selection of the blunt multisystem trauma cohort allows for the assessment of many processes and outcomes related to inter-disciplinary management including critical care, neurosurgery, and orthopedic surgery. By contrast, the penetrating trauma cohort allows for evaluation of processes and outcomes related to clinical judgment, timely operative management, and general surgical technical skills. The blunt single system injuries cohort comprises the majority of cases at trauma centers and allows for evaluation of outcomes in a cohort with a relatively low risk of anticipated complications.

TQIP Primary and Secondary Outcomes

Primary Outcome: Death during hospitalization, defined by either ED discharge disposition of ‘Death’ or hospital discharge disposition of ‘Expired‘.

Secondary Outcome: The prevalence of the top ten complications as defined in the National Trauma Data Standard (NTDS). Please note that these data are not risk-adjusted. We will use information derived from the pilot study to determine how best to report risk-adjusted complication rates in the future.

Methodology

The data definitions for variables that were derived based on NTDS are described in detail below. The risk-adjustment methodology, including the significant predictors with odds ratios are presented in this section. In addition,

interpretation of the O/E ratios and W-statistic and the limitations for these analyses are described in this section.

Data Definitions

Please remember that this report is based upon data submitted to the NTDB. If you feel that there are some inconsistencies in the data please review your data quality report that is posted on the NTDB data center web site (www.ntdbdatacenter.org) or contact NTDB (tqip@facs.org) for further information.

For a detailed description of variables in NTDB and this report please see the National Trauma Data Standard data dictionary, version 1.2.2 (www.ntdsdictionary.org). In addition to the variables included in NTDS which are submitted to NTDB there were some derived variables used for consistent inter-hospital comparisons. The derived variables are described below.

Mortality

Patients that died are defined as patients with ED discharge disposition of 'Death' or hospital discharge disposition of 'Expired'.

Injury Coding: AIS and ISS

All centers submit ICD-9 injury diagnoses codes. However, not all participating centers submit AIS codes. To assure consistency in the assessment of injury severity across centers, we use a validated crosswalk (ICDMAP90, 1995 update, John Hopkins University 1997) to derive AIS codes from ICD-9 injury diagnoses codes for all centers, even if AIS codes were submitted to the NTDB. Injury severity score (ISS) is calculated based on these derived AIS scores. As a result, these AIS codes and ISS scores might differ slightly from those submitted directly by participating centers.

Mechanism of Injury

The mechanism of injury is classified according to the Center for Disease Control and Prevention (CDC) matrix of E-code groupings in Appendix 1.

- Blunt: Fall, machinery, motor vehicle traffic, pedestrian, cyclist, and struck by or against
- Penetrating: Cut/pierce and firearm

Risk-Adjustment Methodology

There are differences in baseline characteristics and injury severity of patients at each trauma center. Differences in age, injury mechanism, or severity may all affect the risk profile of patients at one center compared to another. As a result, it is not appropriate to directly compare crude mortality rates across trauma centers. To account for these differences, we used multivariate logistic regression models to estimate the expected number of deaths for each hospital

based on the following characteristics: age (classified as >65 years vs. ≤ 65 years), ISS (>24 vs. ≤ 24), GCS motor score in ED (1 vs. 2-5 vs. 6), systolic BP in ED (0 mm Hg vs. 1-90 mm Hg vs. >90 mm Hg), pulse rate (≤40 bmp vs. > 40 bmp) in ED, maximum head and abdominal AIS severity (no injury vs. 1-2 vs. 3-4 vs. 5-6), and transfer into trauma center status (yes vs. no).

The risk-adjustment mortality model is presented in Table 1. The order of entry of the patient characteristics into the model is based on the c-statistic, representing the ability of that particular parameter to discriminate between survivors and non-survivors. We also present the odds ratio of death and its 90% confidence interval for each predictor variable. An odds ratio is an estimate of the increased risk of mortality for the patient with that particular characteristic. For example, the odds ratio 11.9 for GCS motor score of one, indicates that a patient with a GCS motor score of one in ED had a 11.9 times the odds of dying compared to a similar patient with a GCS motor score greater than one.

There were a total of 15,801 incidents that met the inclusion criteria for this report. However, some incidents had missing values for GCS motor score, systolic BP and pulse rate. For example, 8.7% of these incidents were missing a GCS motor score, 3.6% were missing systolic BP, and 3.4% were missing pulse rate. As missing data are frequently not missing at random and, hence, may be associated with either a good or bad outcome, we imputed missing data. The GCS motor score, systolic BP, and pulse rate were imputed using single imputation techniques Therefore, the final model included all incidents 15,801 incidents with 1,224 deaths. The c-index for the model was 0.901. The c-index is a measure of how well the model discriminates between deaths and survivors. The c-index generally takes on a value between 0.5 and 1.0, and a c-index of 0.5 means that the model has virtually no discrimination and is no better than flipping a coin. A c-index of 1.0 represents perfect discrimination. The Hosmer and Lemeshow Goodness-of-Fit test was not statistically significant (p=0.622) indicating that the model fit the data well.

Table 1: Variables Included in the Mortality Prediction Model (all incidents)

Variable	Odds ratio (90% CI)	C-statistic
Initial GCS motor score in ED		
1	11.3 (9.6, 13.3)	0.726
2- 5	4.1 (3.5, 4.8)	0.806
6	Reference	
Initial systolic BP in ED		
0	16.3 (9.1, 29.4)	0.811
1 – 90	3.6 (3.0, 4.4)	0.827
> 90	Reference	
Injury severity score		
> 24	3.9 (3.3, 4.6)	0.857
9-24	Reference	
Age		
> 65 years	5.9 (5.1,6.9)	0.890
16-65 years	Reference	
Initial pulse rate in ED		
0 - 40 bpm	6.7 (4.0,11.2)	0.891
> 40 bpm	Reference	
Mechanism of injury		
Firearm	4.3 (3.2, 5.7)	0.895
All other mechanisms	Reference	
Head injury severity (AIS) *	1.4 (1.3,1.5)	0.899
Abdominal injury severity (AIS)*	1.3 (1.2,1.4)	0.900
Transfer status		
Transferred from an outside center	0.9 (0.8, 1.0)	0.901
Transported from the field	Reference	

*Represents the increase in odds of death for each AIS of maximum severity categorized as follows: no injury, 1-2, 3-4, 5-6.
Note: Only characteristics remaining in the stepwise model are represented in this table

The risk-adjustment model in Table 1 was used to estimate the expected numbers of deaths at each hospital for all TQIP patients, and then separately for each of the cohorts. That is, the explanatory variables included in the model were the same for each analysis but their coefficients were recalculated for each patient cohort. The head AIS predictor was omitted from the model when estimating the number of deaths for cohort 2 due to the low frequency of head injuries in this cohort

For each trauma center, the observed mortality rate was then divided by the expected mortality rate to obtain the Observed-to-Expected (O/E) mortality ratio with their 90% confidence intervals. Finally, O/E ratios were plotted on a chart in increasing order. Each trauma center's O/E ratio is highlighted in their individual report, which enables the center to assess its performance compared to their peers.

We also present the W-statistic, which estimates the excess (or fewer) deaths in your institution compared to the number expected, for every 100 patients cared for in your center. The W-statistic is defined as

$$W = \frac{\text{(observed deaths - expected deaths)}}{(n / 100)}$$

where n is the total number of patients from your facility meeting TQIP criteria.

The confidence interval for the O/E ratio was calculated using Ulm's method, which constructs the confidence intervals based on the relationship between Poisson and the Chi-squared distributions for observed events[1]. The confidence intervals for the W-statistic is based on the normal distribution[2,3]. In most cases, the interpretation of observed vs. expected number of deaths using the O/E ratio or the W-statistic yield the same information. However, as the confidence intervals are calculated based on different methodologies, it is possible that a trauma center might have fewer (or more) deaths than expected for one statistic, but not the other.

Interpretation of O/E Ratios and the W-Statistic:

- An O/E ratio with a 90% confidence interval (both lower and upper limit) less than one means we are 90% certain that your O/E ratio is less than one and indicates your trauma center has a lower than expected mortality rate.

- An O/E ratio with 90% confidence interval (both lower and upper limit) greater than one means that we are 90% certain that your O/E ratio is greater than one and indicates that your trauma center has a higher than expected mortality rate.

- An O/E ratio with a 90% confidence interval that overlaps one means that the observed mortality is the same as expected for your trauma center.

- A W -statistic with a 90% confidence interval (both lower and upper limit) greater than zero means that we are 90% certain that your W-statistic is greater than zero and indicates that your trauma center has more deaths than expected.

- A W –statistic with 90% confidence interval (both lower and upper limit) less than zero means that we are 90% certain that the W-statistic is less than zero and indicates that your trauma center has fewer deaths than expected.

- A W-statistic with a 90% CI that overlaps zero means that the observed mortality is the same as expected for your trauma center.

Limitations

The TQIP report allows centers to compare their outcomes with other hospitals in the pilot study as a measure of quality of care. However, it is possible that factors other than quality of care may influence the risk-adjusted mortality rates. The following limitations must be kept in mind when interpreting your data:

1. **Data quality:** As these data were collected prior to the development and implementation of NTDS and TQIP training of trauma registrars, it is possible that differences in data quality, such as capture of complications or coding of injury diagnosis might contribute to any observed differences in O/E mortality ratios or complication rates.

2. **Selection bias:** The current TQIP report is based upon 23 pilot centers that volunteered to participate in the pilot study. These centers were not randomly chosen; hence, do not represent a typical Level I or II trauma center.

3. **Performance over time:** A trauma center's performance may vary over time. The current report presents a single snapshot in time.

4. **Chance:** Statistical models are simply estimates. It is possible that chance alone led to the position of your center's performance relative to its peers. However, the likelihood of this occurrence by chance alone is less than 10% (based on 90% confidence intervals).

5. **In-hospital outcomes:** O/E mortality ratios are based upon in-hospital mortality. Differences in discharge disposition or access to alternate levels of care might influence in-hospital mortality rates.

Results: Inter-Facility Comparison

External benchmarking of risk adjusted mortality and the prevalence of the ten most common complications are presented in this section. Facility information for all TQIP pilot study centers with their patient characteristics is also presented.

Facility Information for Trauma Centers in TQIP

There are 23 hospitals included in the TQIP pilot study. Participation was voluntary, and based upon interest and prior participation in NTDB and the TQIP training session held in June in Chicago. Table 2 shows the facility characteristics of the 23 hospitals in the TQIP pilot study

Table 2: Facility Information for TQIP Hospitals

	Number of Hospitals
Trauma Level	
I	17
II	6
Bed size	
≤200	0
200-400	5
401-600	6
>600	12
Teaching type	
Community teaching	7
Community Non-Teaching	1
University	15
Hospital type	
For profit	1
Not-profit	22
Region	
North East	5
Midwest	5
South	7
West	6

Patient Information

There were 15,801 incidents across the 23 hospitals. The median number of incidents was 550 and ranged from 192 to 1479 across the hospitals. The patient characteristics of patients cared for in your center compared to all participating centers is shown in Table 3.

Table 3: Patient Characteristics

		All TQIP Hospitals			
	Your Hospital	**Total N (%)**	**Cohort 1 N (%)**	**Cohort 2 N (%)**	**Cohort 3 N (%)**
Total number of incidents:	**541**	**15,801**	**2,874**	**1,238**	**11,689**
Age (years)	**N (%)**	**N (%)**	**N (%)**	**N (%)**	**N (%)**
16 - 25	94 (17.4)	3,386 (21.4)	815 (28.4)	552 (44.6)	2,019 (17.3)
26- 35	61 (11.3)	2,230 (14.1)	474 (16.5)	304 (24.6)	1,452 (12.4)
36 - 45	88 (16.3)	2,189 (13.9)	462 (16.1)	213 (17.2)	1,514 (13.0)
46 – 55	70 (12.9)	2,229 (14.1)	427 (14.9)	110 (8.9)	1,692 (14.5)
55 - 65	60 (11.1)	1,620 (10.3)	299 (10.4)	38 (3.1)	1,283 (11.0)
> 65	168 (31.1)	4,147 (26.2)	397 (13.8)	21 (1.7)	3,729 (31.9)
Male	**N (%)**	**N (%)**	**N (%)**	**N (%)**	**N (%)**
Female	157 (29.0)	5,395 (34.1)	944 (32.8)	116 (9.4)	4,335 (37.1)
Male	384 (71.0)	10,402 (65.8)	1,930 (67.2)	1,122 (90.6)	7,350 (62.9)
ISS*	**N (%)**	**N (%)**	**N (%)**	**N (%)**	**N (%)**
9 – 15	130 (24.0)	7,612 (48.2)	94 (3.3)	832 (67.2)	6,686 (57.2)
16 – 24	337 (62.3)	5,728 (36.3)	951 (33.1)	244 (19.7)	4,533 (38.8)
>24	74 (13.7)	2,461 (15.6)	1,829 (63.6)	162 (13.1)	470 (4.0)
Injury type	**N (%)**	**N (%)**	**N (%)**	**N (%)**	**N (%)**
Blunt	486 (89.8)	14,563 (92.2)	2,874 (100)		11,689 (100)
Penetrating	55 (10.2)	1,238 (7.8)		1,238 (100)	

*ISS scores were derived from ICDMAP and may differ from the ISS score in your registry

Table 3 (continued): Patient Characteristics

		All TQIP Hospitals			
	Your Hospital	**Total**	**Cohort 1**	**Cohort 2**	**Cohort 3**
Mechanism	**N (%)**	**N (%)**	**N (%)**	**N (%)**	**N (%)**
MVT	171 (31.6)	6,817 (43.1)	2,138 (74.4)	0 (0.0)	4,679 (40.0)
Fall	254 (47.0)	5,499 (34.8)	430 (15.0)	0 (0.0)	5,069 (43.4)
Struck by or against	35 (6.5)	1,003 (6.4)	68 (2.4)	0 (0.0)	935 (8.0)
Firearm	14 (2.6)	665 (4.2)	0 (0.0)	665 (53.7)	0 (0.0)
Transport other	12 (2.2)	913 (5.8)	198 (6.9)	0 (0.0)	715 (6.1)
Cut/pierce	41 (7.6)	573 (3.6)	0 (0.0)	573 (46.3)	0 (0.0)
Outcome					
Crude Mortality	**% (90% CI)**	**% (90% CI)**	**% (90% CI)**	**% (90% CI)**	**% (90% CI)**
All patients	9.8 (7.8, 12.2)	7.7 (7.4, 8.1)			
Cohort 1	13.1 (7.9, 20.1)		16.4 (15.3, 17.6)		
Cohort 2	14.6 (7.4, 24.7)			12.4 (10.9, 14.1)	
Cohort 3	8.3 (6.1, 10.9)				5.1 (4.8, 5.5)
LOS (days)					
Median (IQR)	8 (4 – 15)	6 (3-10)	9 (5-18)	5 (3-10)	5 (3-9)
Mean (SD)	13.8 (18.2)	9.1 (12.2)	14.3 (16.2)	9.3 (14.4)	7.7 (10.3)
ICU LOS (days)					
Median (IQR)	2 (1-6)	3 (2-7)	5 (2-12)	3 (2-5.5)	3 (1-6)
Mean (SD)	5.7 (8.1)	6.4 (8.8)	8.8 (10.7)	5.88 (8.8)	5.3 (7.4)

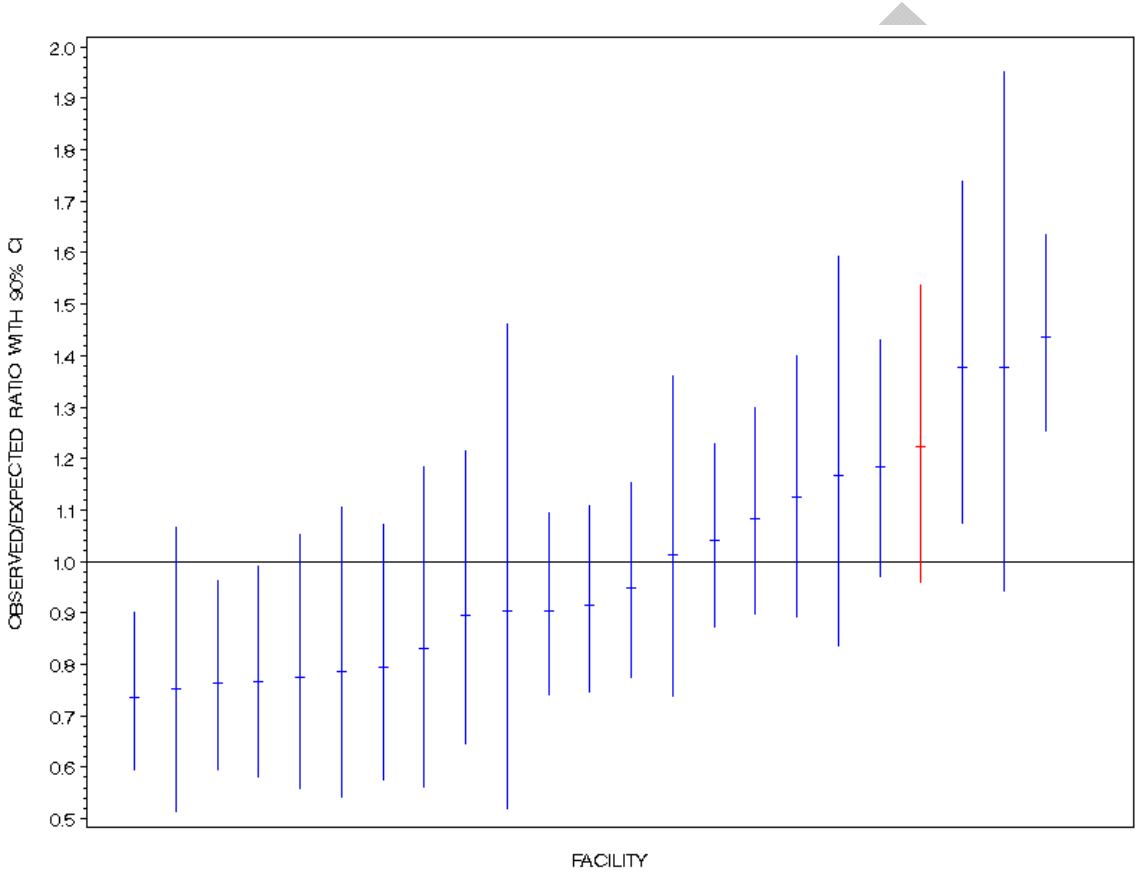
CI: Confidence interval. The Clopper-Pearson confidence interval is used.
IQR: Inter-quartile range (75th to 25th percentile)
SD: Standard deviation

Risk-Adjusted Mortality

The O/E ratio with the 90% confidence interval for the risk-adjusted mortality is shown in Figures 1 – 4 for all patients, and each of the three cohorts. The W-statistic is also presented.

All Patients:

Figure 1: Risk-Adjusted Mortality – All Patients
(Your facility is shown in red)



O/E ratio with 90% CI = 1.22 (0.96, 1.54)

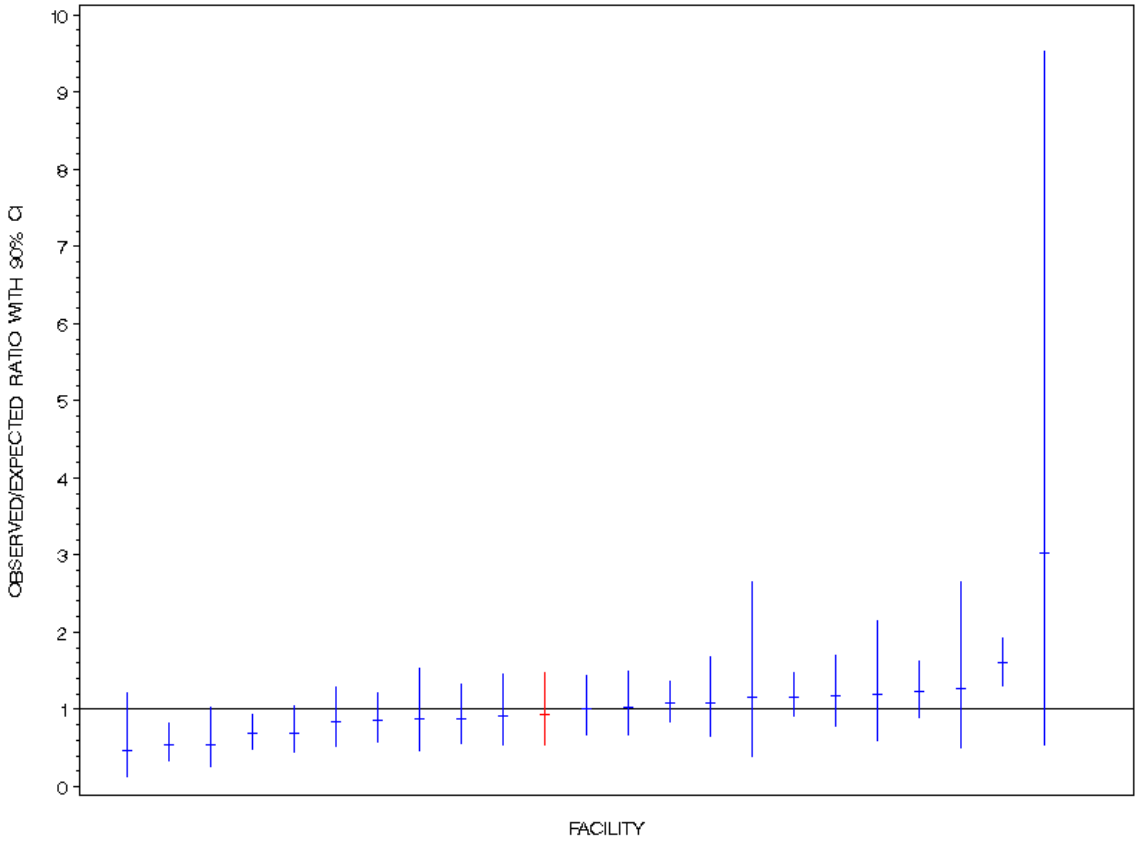
Interpretation: The number of patients that died at your trauma center was the same as expected number of deaths.

W statistic with 90% CI = 1.78 (0.21, 3.35)

Interpretation: The number of patients that died at your trauma center was the same as expected number of deaths.

Cohort 1:

Figure 2: Risk-Adjusted Mortality in Cohort 1 – Blunt Multi System Injuries
(Your facility is shown in red)



O/E ratio with 90% CI = 0.93 (0.55, 1.48)

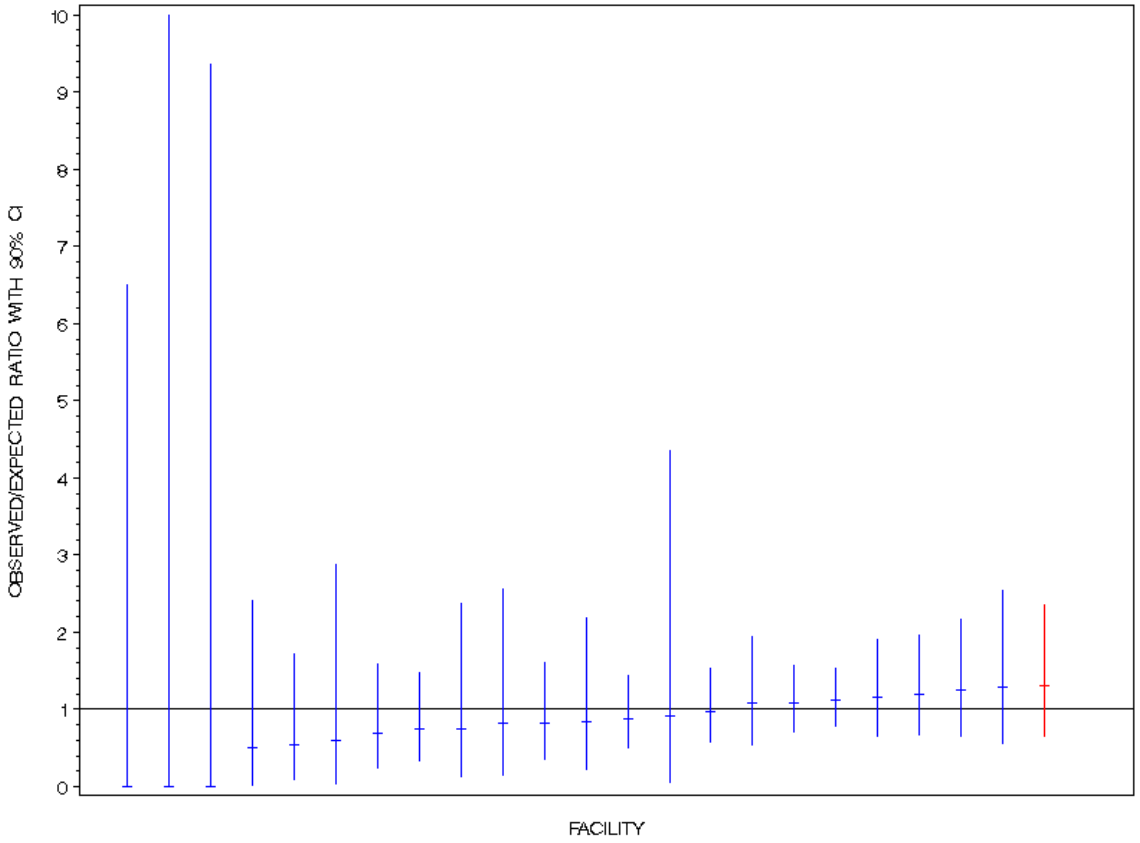
Interpretation: The number of deaths observed at your trauma center is the same as expected in this patient cohort.

W statistic with 90% CI = -0.99 (-5.81, 3.82)

Interpretation: The number of deaths observed at your trauma center is the same as expected in this patient cohort.

Cohort 2:

Figure 3: Risk-Adjusted Mortality in Cohort 2 – Penetrating Injuries
(Your facility is shown in red)



O/E ratio with 90% CI = 1.30 (0.65, 2.36)

Interpretation: The number of deaths observed at your trauma center is the same as expected in this patient cohort.

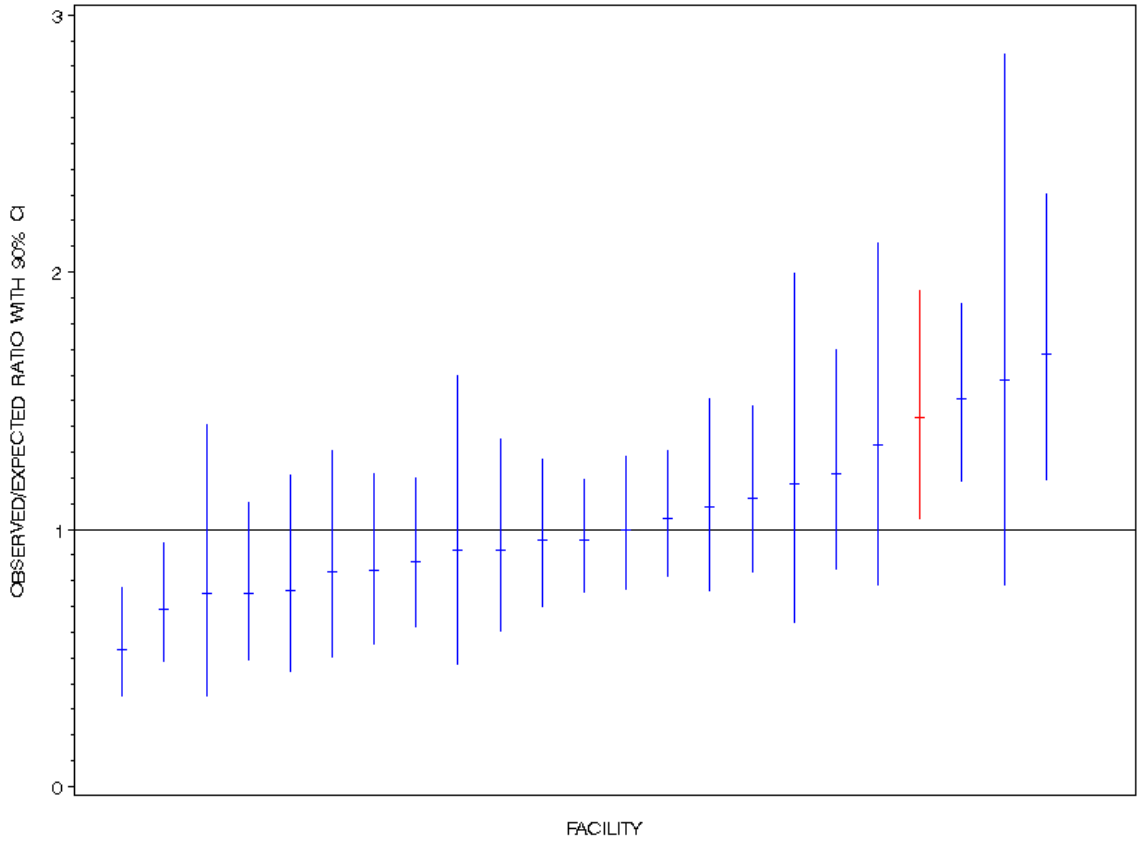
W statistic with 90% CI = 3.40 (-0.82, 7.62)

Interpretation: The number of deaths observed at your trauma center is the same as expected in this patient cohort.

Cohort 3

Figure 4: Risk-Adjusted Mortality in Cohort 3 – Blunt Single System Injuries

(Your facility is shown in red)



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O/E ratio with 90% CI = 1.43 (1.04, 1.93)

Interpretation: The number of patients with blunt single system injuries that died at your trauma center was 43% higher than the expected number of deaths in this patient cohort.

W statistic with 90% CI = 2.50 (0.84, 4.16)

Interpretation: There were 2.50 more deaths than expected per 100 patients with blunt single system injuries treated at your trauma center.

Top Ten Complications

Table 4: Prevalence of the Top Ten Complications

		All TQIP Hospitals			
	Your Hospital	**Total**	**Cohort 1**	**Cohort 2**	**Cohort 3**
	N (%)	**N (%)**	**N (%)**	**N (%)**	**N (%)**
Total number of incidents:	**541**	**15,801**	**2,874**	**1,238**	**11,689**
Blank/NR/ND	541 (100)	9,167 (54.0)	1,469 (43.0)	758 (56.1)	6,940 (56.9)
No NTDS complications	0 (0.0)	5,115 (30.1)	808 (23.6)	346 (25.6)	3,961 (32.5)
Pneumonia	0 (0.0)	614 (3.6)	281 (8.2)	44 (3.3)	289 (2.4)
DVT	0 (0.0)	249 (1.5)	111 (3.3)	16 (1.2)	122 (1.0)
ARDS	0 (0.0)	231 (1.4)	96 (2.8)	19 (1.4)	116 (1.0)
Systemic sepsis	0 (0.0)	226 (1.3)	117 (3.4)	26 (1.9)	83 (0.7)
Decubitus ulcer	0 (0.0)	219 (1.3)	88 (2.6)	5 (0.4)	126 (1.0)
Cardiac arrest	0 (0.0)	166 (1.0)	87 (2.5)	15 (1.1)	64 (0.5)
Coagulopathy	0 (0.0)	162 (1.0)	87 (2.5)	31 (2.3)	44 (0.4)
Not Applicable	0 (0.0)	148 (0.9)	40 (1.2)	29 (2.2)	79 (0.7)
Drug or alcohol withdrawal syndrome	0 (0.0)	146 (0.9)	31 (0.9)	6 (0.4)	109 (0.9)

NR=Not recorded
ND= Not Done

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References

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2. Rothman KJ. *Modern Epidemiology*. Boston: Little, Brown and Co; 1986.

3. Hollis S, Yates DW, Woodford M, Foster P. Standardized comparison of performance indicators in trauma: a new approach to case-mix variation. *J Trauma*. 1995;38:763-766.

Appendix 1: Injury Intentionality CDC Matrix

This matrix contains the ICD-9 external-cause-of-injury codes used for coding of injury mortality data and additional ICD-9-CM external-cause-of-injury codes, designated in bold, only used for coding of injury morbidity data. In addition, a list of ICD-9-CM external-cause-of-injury codes that have been added since 1994 along with their descriptors is appended to the matrix.

Mechanism/Cause	Manner/Intent				
	Unintentional	**Self-inflicted**	**Assault**	**Undetermined**	**Other**
Cut/pierce	E920.0-.9	E956	E966	E986	E974
Drowning/submersion	E830.0-.9, E832.0-.9, E910.0-.9	E954	E964	E984	
Fall	E880.0-E886.9, E888	E957.0-.9	E968.1	E987.0-.9	
Fire/burn[3]	E890.0-E899, E924.0-.9	E958.1,.2,.7	E961, E968.0,.3, **E979.3**	E988.1,.2,.7	
Fire/flame[3]	E890.0-E899	E958.1	E968.0, **E979.3**	E988.1	
Hot object/substance	E924.0-.9	E958.2,.7	E961,E968.3	E988.2,37	
Firearm[3]	E922.0-.3,.8,.9	E955.0-.4	E965.0-4, **E979.4**	E985.0-.4	E970
Machinery	E919 (.0-.9)				
Motor vehicle traffic[2,3]	E810-E819 (.0-.9)	E958.5	**E968.5**	E988.5	
Occupant	E810.-E819 (.0,.1)				
Motorcyclist	E810-E819 (.2,.3)				
Pedal cyclist	E810-E819 (.6)				
Pedestrian	E810-E819 (.7)				
Unspecified	E810-E819 (.9)				
Pedal cyclist, other	E800-E807 (.3) E820-E825 (.6), E826.1,.9 E827-E829(.1)				
Pedestrian, other	E800-E807(.2) E820-E825(.7) E826-E829(.0)				

[1]Includes legal intervention (E970-E978) and operations of war (E990-E999).
[2]Three 4th-digit codes (.4 [occupant of streetcar], .5 [rider of animal], .8 [other specified person]) are not presented separately because of small numbers. However, because they are included in the overall motor vehicle traffic category, the sum of these categories can be derived by subtraction.
[3]Codes in bold are for morbidity coding only. For details see table 2.
[4]E849 (place of occurrence) has been excluded from the matrix. For mortality coding, an *ICD-9* E849 code does not exist. For morbidity coding, an *ICD-9-CM* E849 code should never be first-listed E code and should only appear as an additional code to specify the place of occurrence of the injury incident.

Note: ICD-9 E codes for coding underlying cause of death apply to injury-related death data from 1979 through 1998. Then there is a new ICD-10 external cause of injury matrix that applies to death data from 1999 and after. This can be found on the National Center for Health Statistics website at http://www.cdc.gov/nchs/about/otheract/ice/projects.htm

Mechanism/Cause	Manner/Intent				
	Unintentional	**Self-inflicted**	**Assault**	**Undetermined**	**Other**
Transport, other	E800-E807 (.0,.1,.8,.9) E820-E825 (.0-.5,.8,.9) E826.2-.8 E827-E829 (.2-.9) E831.0-.9, E833.0-E845.9	E958.6		E988.6	
Natural/environmental	E900.00-E909, E928.0-.2	E958.3		E958.3	
Bites/stings[3]	E905.0-.6,.9 E906.0-.4,.5,.9				
Overexertion	E927				
Poisoning	E850.0-E869.9	E950.0-E952.9	E962.0-.9, **E979.6,.7**	E980.0-E982.9	E972
Struck by, against	E916-E917.9		E960.0; E968.2		E973, E975
Suffocation	E911-E913.9	E953.0-.9	E963	E983.0-.9	
Other specified and classifiable[3,4]	E846-E848, E914-E915 E918, E921.0-39, **E922.4,.5** E923.0-.9, E925.0-E926.9 **E928(.3-.5),** E929.0-.5	E9555**,.6,.7,**.9 E958.0,.4	E960.1,E965.5-.9 E967.0-.9, E968.4,.**6,.7** **E979 (.0-.2,.5,.8,.9)**	E985.5**,.6,.7** E988.0,.4	E971, E978 E990-E994, E996 E997.0-.2
Unspecified	E887. E928.9, E929.9	E958.9	E968.9	E988.9	E976, E997.9
All Injury[3]	E800-E869, E880-E929	E950-E959	E960-E969, **E979**, E999.1	E980-E989	E970-E978, E990-E999.0
Adverse effects					E870-E879 E930.0-E949.9
Medical care					E870-E879
Drugs					E930.0-E949.9
All external causes					E800-E999

[1]Includes legal intervention (E970-E978) and operations of war (E990-E999).
[2]Three 4th-digit codes (.4 [occupant of streetcar], .5 [rider of animal], .8 [other specified person]) are not presented separately because of small numbers. However, because they are included in the overall motor vehicle traffic category, the sum of these categories can be derived by subtraction.
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Note: ICD-9 E codes for coding underlying cause of death apply to injury-related death data from 1979 through 1998. Then there is a new ICD-10 external cause of injury matrix that applies to death data from 1999 and after. This can be found on the National Center for Health Statistics website at http://www.cdc.gov/nchs/about/otheract/ice/projects.htm

Appendix 2: Participating Hospitals

Cedars-Sinai Medical Center, Los Angeles, California
Christiana Care, Wilmington, Delaware
Genesys Regional Medical Center, Michigan
John Muir Medical Center, Walnut Creek, California
Massachusetts General Hospital, Boston, Massachusetts
Miami Valley Hospital, Dayton, Ohio
Lahey Clinic, Burlington, Massachusetts
Lehigh Valley Hospital, Pennsylvania
Maine Medical Center, Portland, Maine
University of Nevada, Las Vegas, Nevada
Oklahoma University Medical Center, Oklahoma City, Oklahoma
Parkland Health and Hospital System, Dallas, Texas
Regional Medical Center at Memphis, Memphis, Tennessee
Sharp Memorial Hospital, San Diego, California
St. John Medical Center, Tulsa, Oklahoma
St. Michael's Hospital, Toronto, Ontario, Canada
St. Vincent Mercy Medical Center, Toledo, Ohio
Truman Medical Center, Kansas City, Missouri
University of Michigan, Ann Arbor, Michigan
University of Virginia, Charlottesville, Virginia
University of California, San Diego Medical Center, San Diego, California
University of California, Los Angeles Medical Center, Los Angeles, California
Wake Forest University, Winston-Salem, North Carolina

ACS tqip | TRAUMA QUALITY IMPROVEMENT PROGRAM

Getting started ...

- Participate in the NTDB call for data in 2009, and on an ongoing annual basis.
- Check with your trauma registry vendor to confirm that you have fully implemented the NTDB's new data dictionary, the National Trauma Data Standard (NTDS), and that all relevant fields have been appropriately mapped.
- Submit a completed ACS TQIP Information Form.
- Execute a Hospital Participation Agreement and pay the annual fee of $9,000.
- Obtain commitment from the Trauma Medical Director or his/her designee to oversee ACS TQIP implementation and administration at the Hospital. The TMD or designee must agree to participate in semi-annual conference calls and attend an annual national TQIP meeting.
- Agree to employ a qualified, dedicated registrar/abstractor to collect and submit data to the NTDB (in most cases, this is your current registrar).
    - The registrar must successfully complete the ACS TQIP training program with a minimum score set by the COT.
    - The registrar must complete quarterly case studies and participate in quarterly conference calls.
- Provide funding (travel and accommodations) for the registrar to attend initial registrar training session and an ACS TQIP meeting once per year. Registration is included in the annual TQIP fee.
- Adhere to the NTDB data submission guidelines, defined by the National Trauma Data Standard (NTDS).
- Follow data validation procedures, including quarterly submission of registry data for data quality purposes, and agree to periodic external data validation site visits.

For more information, e-mail ACS TQIP at acstqip@facs.org or call 312-202-5536.

ACS tqip TRAUMA QUALITY IMPROVEMENT PROGRAM

Services include ...

Training

- annual, in-person training sessions for registrars
- online training available at all times
- quarterly conference calls/web conferences on topics related to data quality and reporting
- online case studies to sharpen coding skills
- Frequently Asked Questions (FAQs)

Data validation

- external data audits to ensure the quality and standardization of data abstraction
- TQIP Validator that provides automatic feedback on quarterly data quality transmissions to NTDB
- case studies to identify problem areas in coding

Clinical performance improvement

- risk-adjusted observed to expected outcomes benchmark reports, ranking your facility with other Level I and II centers
- online data analysis tool that allows the hospital to drill down into their own data and compare to other TQIP hospitals
- patient demographics report
- facility characteristics report
- sharing best practices at the TQIP annual meeting and training session

ACS tqip TRAUMA QUALITY IMPROVEMENT PROGRAM

Information for your hospital...

TQIP helps centers identify opportunities for improvement in resource utilization and rates of mortality and complications, and provides a means for high performing centers to share their best practices. We do not publicly report data.

TQIP participants will see their patient outcomes ranked with other Level I and II trauma centers in areas for potential performance improvement and cost savings, including:

- Hospital mortality rates.
- Hospital complications rates.
- Resources utilization
  - Hospital Length of Stay
  - ICU Length of Stay
  - Ventilator Days

TQIP uses your existing trauma registry infrastructure with specific enhancements to improve data quality. With this improved data quality, we can offer unique advantages with injury-specific risk adjusted benchmarking along with the identification and dissemination of best practices. Specifically, TQIP will offer the following benefits to your trauma center:

- Training that will instruct registrars/abstractors to more accurately code injuries in order to eliminate significant under-billings and help centers to realize cost savings and efficiency.
- Leverage with third-party payers and employers, arising from demonstrated commitment to performance improvement and the ability to characterize the acuity of trauma patients.
- Documented commitment to quality improvement and the potential for measurable reductions in serious complications.
- Potentially higher reimbursements in the emerging "pay for participation/pay for performance" environment.
- Competitive edge in the emerging era of "public reporting."

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17 March 2010

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RE: Contracting With Health Districts

Dear Dr. Ashley:

This letter is in response to an inquiry of the Georgia Trauma Care Network Commission ("GTCNC") on whether the GTCNC may contract with local Health Districts to implement a Regional Trauma System Plan, and for Health Districts to participate in the Georgia Trauma Communications Center operations. It is my view that the GTCNC can contract with individual Health Districts to perform these services and participate in trauma planning.[1] However, any contract for services performed by each Health District for GTCNC would require approval from the Department of Community Health ("DCH").

The statutes authorizing Health Districts is found in O.C.G.A. § 31-3-1 *et seq.* which also establishes County Boards of Health. Health Districts are established by DCH with the consent of the local County Boards of Health which make up each District. O.C.G.A. § 31-3-15.[2] The

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[1] As an independent agency, the GTCNC is authorized to enter into contracts and agreements to effectuate its statutory duties. GEORGIA CONST. Art. IX, Sec. III, Para. I; Ashe v. Clayton County Cmty. Serv. Bd., 262 Ga. App. 738 (2003) ("Any state agency expressly has the power to contract on any subject matter within its interest.").

[2] The full text of O.C.G.A. § 31-3-15 is quoted below:

> The department is authorized, with the consent of the boards of health and the county authorities of the counties involved, to establish health districts comprised of one or more counties. The county boards of health of the constituent counties shall, at the call of the commissioner, meet in joint session to approve the selection of a director appointed by the commissioner to serve such boards in common. A county board of health is authorized to appoint one of its members to represent the board at a joint meeting for this purpose. The director shall be a

District Director, who must be a licensed physician, is appointed by the Commissioner of DCH with the approval of each district's county boards of health. *Id.* The District Director also has "the same powers, duties, and responsibility as a director serving a single county board of health." *Id.* The same statute also authorizes that "county boards of health may contract with each other for the provision of multicounty services . . . and in the performance of such contracts a county board of health may utilize its employees in other counties." *Id.*

Like each County Board of Health, each Health District is authorized to "[c]ontract with [DCH] or other agencies for assistance in the performance of its functions and the exercise of its powers and for supplying services which are within its purview to perform." O.C.G.A. § 31-3-4(a)(7). In entering into contracts,

> any health district created under the authority of Code Section 31-3-15 shall be considered an agency and such agency shall have the authority to contract with any other county board of health; combination of county boards of health; any other health district; public or private hospitals; hospital authorities; medical schools; training and educational institutions; departments and agencies of the state; county or municipal governments; persons, partnerships, corporations, and associations, public or private; the United States government or the government of any other state; or any other legal entity. . . .

O.C.G.A. § 31-3-4(a)(7). Because the District Health Director has "the same powers, duties, and responsibility as a director serving a single county board of health," O.C.G.A. § 31-3-15, and part of these powers and duties is to enter into contracts, O.C.G.A. § 31-3-4(a)(7), the District Health Director would execute any contract on behalf of the Health District. *See* O.C.G.A. § 31-3-12 (empowering Directors of County Boards of Health to "perform the functions and exercise the powers set forth in this chapter").

However, in any contract where a Health District or County Board of Health contracts with another agency for the Health District to "supply[] services . . . within its purview to

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> physician who is licensed to practice medicine under Chapter 34 of Title 43 and who otherwise meets the requirements of the State Personnel Administration. The district director shall have the same powers, duties, and responsibility as a director serving a single county board of health. To further the purposes of this Code section, county boards of health may contract with each other for the provision of multicounty services and also exercise any additional powers as authorized by paragraph (7) of Code Section 31-3-4; and in the performance of such contracts a county board of health may utilize its employees in other counties.

perform,"[3] such "contracts and amendments thereto shall have first been approved by [DCH]." O.C.G.A. § 31-3-4(a)(7); *see also* O.C.G.A. § 31-3-13 ("[A] county board of health may contract for assistance in the performance of its functions and exercise of its powers, provided that such proposed contract and any amendments thereto shall have first been approved by [DCH]."). Hence, if the GTCNC entered into a contract with a Health District for the District to provide services in implementing a Regional Trauma System Plan or Trauma Communications System, such an agreement would require approval from DCH.

I hope this letter is responsive to your inquiry.

Yours very truly,

Alex F. Sponseller
Assistant Attorney General

cc: GTCNC Members

Sidney R. Barrett, Jr., Senior Assistant Attorney General

[3] County Boards of Health may "[e]xercise responsibility and authority in all matters within the county pertaining to health unless the responsibility for enforcement of such is by law that of another agency." O.C.G.A. § 31-3-4(a)(4).