ACS Exit Presentation

Georgia Trauma System Consultation

Friday, January 13th

The Facts

- Injury is a *major* global public health problem
  - Leading cause of death for ages 1-44 years
  - About 6 million deaths, worldwide
  - Leading cause of loss of productivity
  - Enormous economic burden
- Despite the obvious magnitude, there is little public focus
  - Stark contrast with other disease processes

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Challenges

- The general public is insensitive to and unaware of the magnitude of the problem
- Millions lack training in basic first aid
- Political authorities have been challenged with their responsibility to provide services
- Medical organizations have failed to educate the public and inform elected officials
- Resource constraints to support systems development

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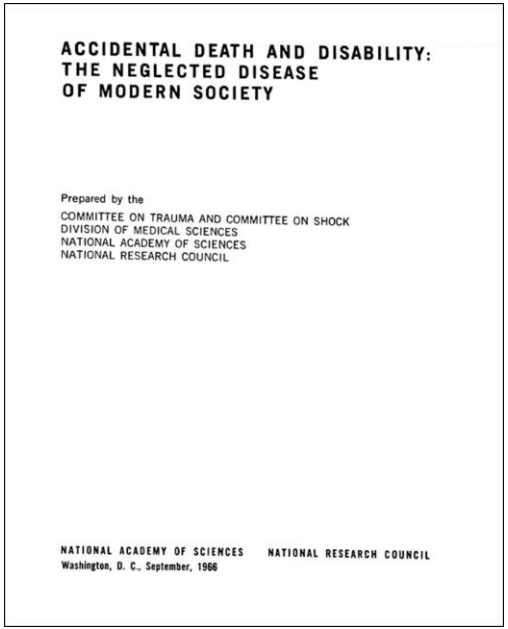
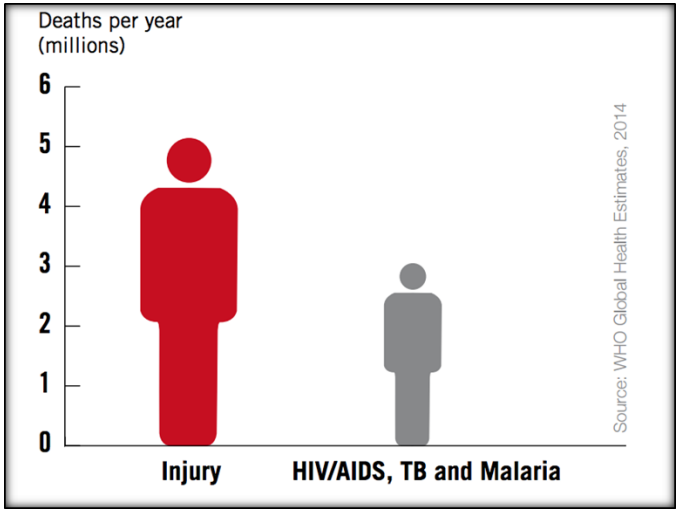
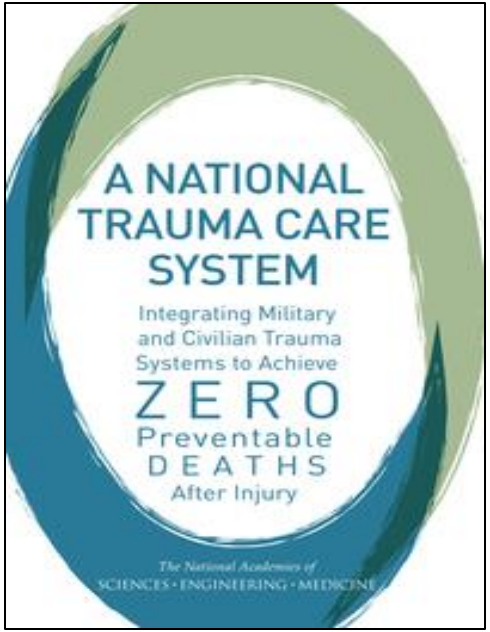




50 Years

Despite magnitude of the public health burden and numerous high-level calls for action, progress in trauma systems development slow.



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10 Leading Causes of Death, United States

2020, Both Sexes, All Races, All Ages

	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Congenital Anomalies 4,043	Unintentional Injury 1,153	Unintentional Injury 685	Unintentional Injury 881	Unintentional Injury 15,117	Unintentional Injury 31,315	Unintentional Injury 31,057	Malignant Neoplasms 34,589	Malignant Neoplasms 110,243	Heart Disease 556,665	Heart Disease 696,962
2	Short Gestation 3,141	Congenital Anomalies 382	Malignant Neoplasms 382	Suicide 581	Homicide 6,466	Suicide 5,454	Heart Disease 12,1[illegible]7	Heart Disease 34,169	Heart Disease 5[illegible]0,551	Malignant Neoplasms 440,[illegible]53	Malignant Neoplasms 602,350
3	Sids 1,389	Homicide 311	Congenital Anomalies 171	Malignant Neoplasms 410	Suicide 6,062	Homicide [illegible],125	Malignant Neoplasms 10,[illegible]30	Unintentional Injury 2[illegible],819	Covid [illegible]9 42,090	Covid [illegible]9 2[illegible],836	Covid [illegible]9 350,831
4	Unintentional Injury 1,194	Malignant Neoplasms 30[illegible]	Homicide 169	Homicide 285	Malignant Neoplasms 1,306	Heart Disease 3,984	Suicide [illegible],314	Covid 19 16,964	Unintentional Injury 2[illegible],915	Cerebrovascular 137,392	Unintentional Injury 200,955
5	Maternal pregnancy Comp. 1,116	Heart Disease 112	Heart Disease 56	Congenital Anomalies 150	Heart Disease 870	Malignant Neoplasms 3,5[illegible]3	Covid 19 6,0[illegible]9	Liver Disease 9,503	Chronic Low. Respiratory [illegible]isease 18,816	Alzheimer's Disease 132,[illegible]41	Cerebrovascular 160,264
6	Placenta Cord Membranes 700	Influenza & Pneumonia 84	Influenza & Pneumonia 55	Heart Disease 111	Covid-19 501	Covid 19 2,254	Liver Disease 4,938	Diabetes Mellitus 7,546	Diabetes Mellitus 18,002	Chronic Low. Respiratory Disease 128,712	Chronic Low. Respiratory Disease 152,657
7	Bacterial Sepsis 542	Cerebrovascular 55	Chronic Low. Respiratory Disease 54	Chronic Low. Respiratory Disease 93	Congenital Anomalies 384	Liver Disease 1,631	Homicide 4,482	Suicide 7,249	Liver Disease 16,151	Diabetes Mellitus 72,194	Alzheimer's Disease 134,242
8	Respiratory Distress 388	Perinatal Period 54	Cerebrovascular 32	Diabetes Mellitus	Diabetes Mellitus 312	Diabetes Mellitus 1,168	Diabetes Mellitus 2,904	Cerebrovascular 5,686	Cerebrovascular 14,153	Unintentional Injury 62,796	Diabetes Mellitus 102,188
9	Circulatory System Disease 386	Septicemia 43	Benign Neoplasms 28	Influenza & Pneumonia 50	Chronic Low. Respiratory Disease 220	Cerebrovascular 600	Cerebrovascular 2,008	Chronic Low. Respiratory Disease 3,538	Suicide 7,160	Nephritis 42,675	Influenza & Pneumonia 53,544
10	Neonatal Hemorrhage 317	Benign Neoplasms 35	Suicide 20	Cerebrovascular 44	Complicated Pregnancy 191	Complicated Pregnancy 594	Influenza & Pneumonia 1,148	Homicide 2,542	Influenza & Pneumonia 6,295	Influenza & Pneumonia 42,511	Nephritis 52,547

WISQARS™ Produced By: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention
Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System

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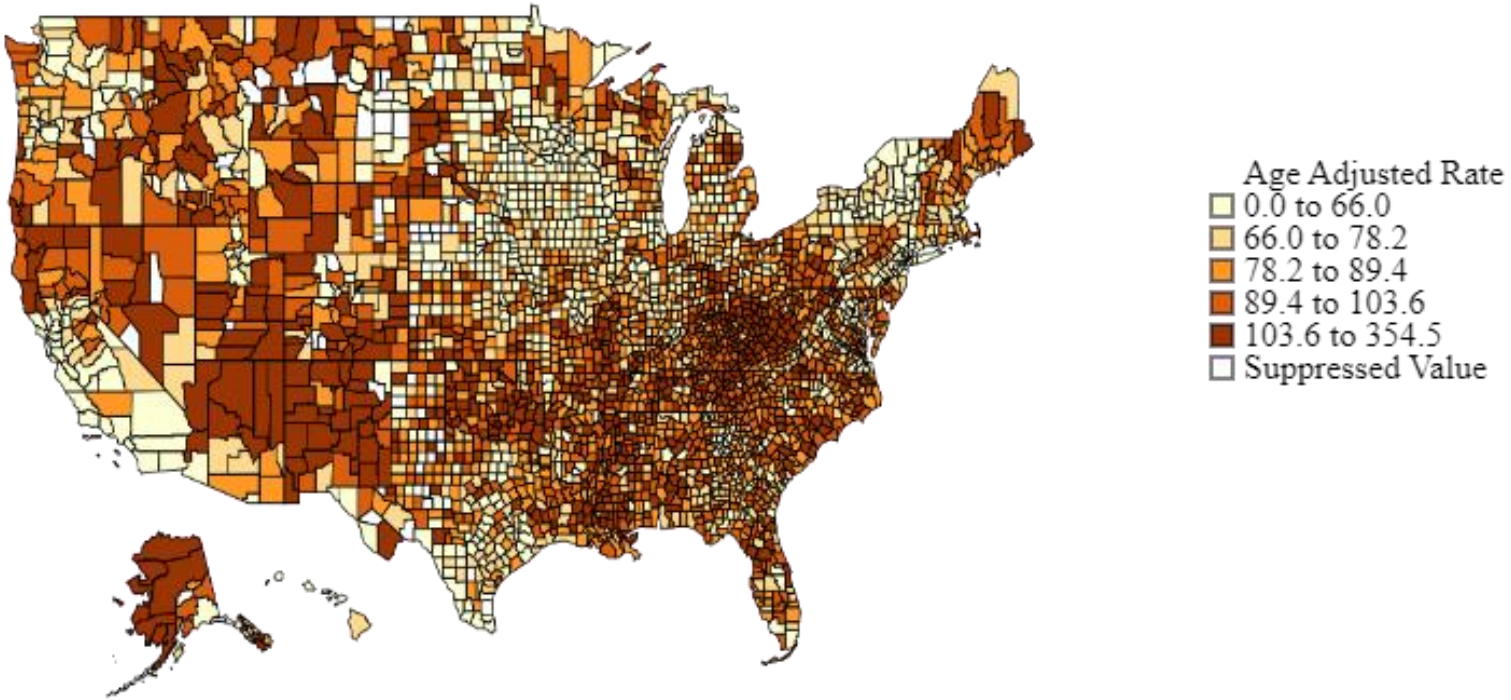
2015-2020, United States Age-Adjust Death Rates per 100,000 Population

All Injury, All Intents, All Races, All Ethnicities, Both Sexes, All Ages



NCHS Vital Statistics System for numbers of deaths. Bureau of Census for population estimates

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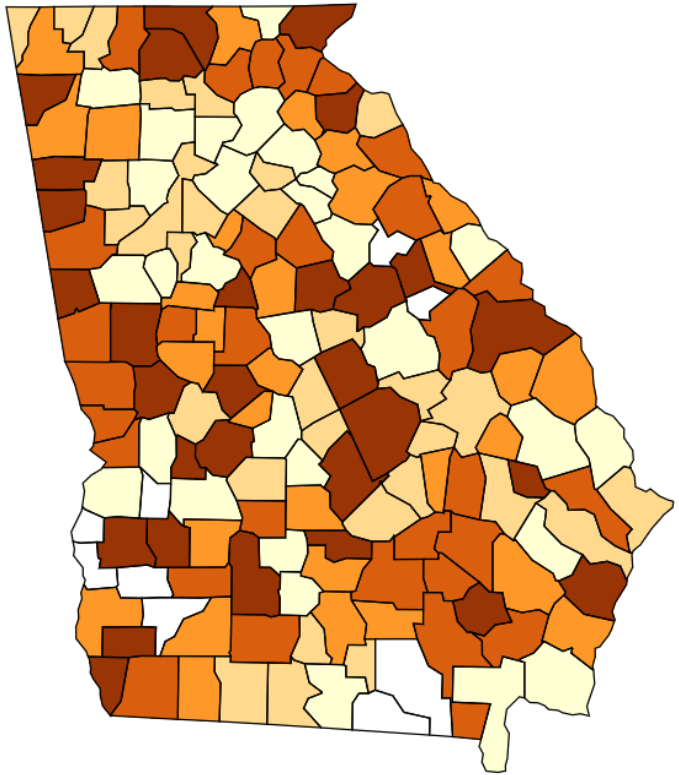
Georgia Age-Adjust Death Injury Rates per 100,000 Population 2019



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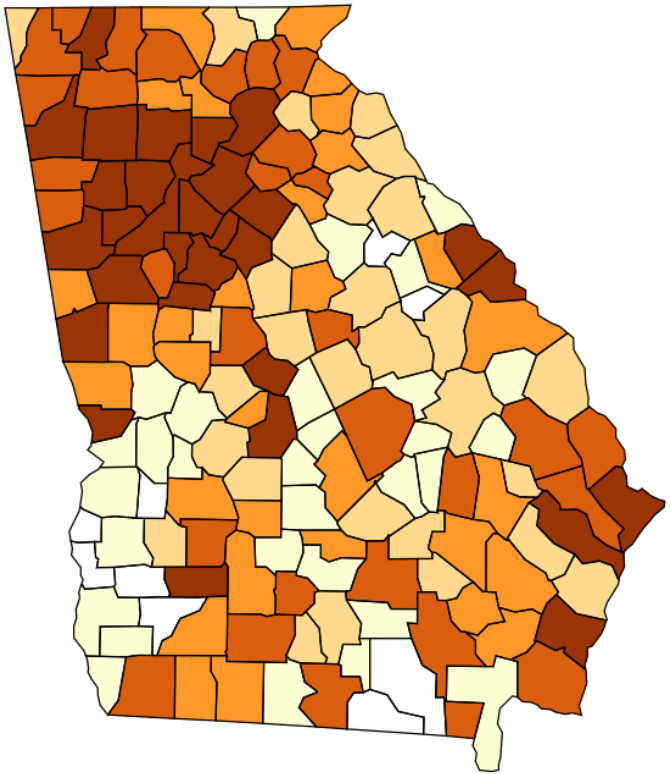
Georgia Years of Potential Life Lost Due to Injury 2019



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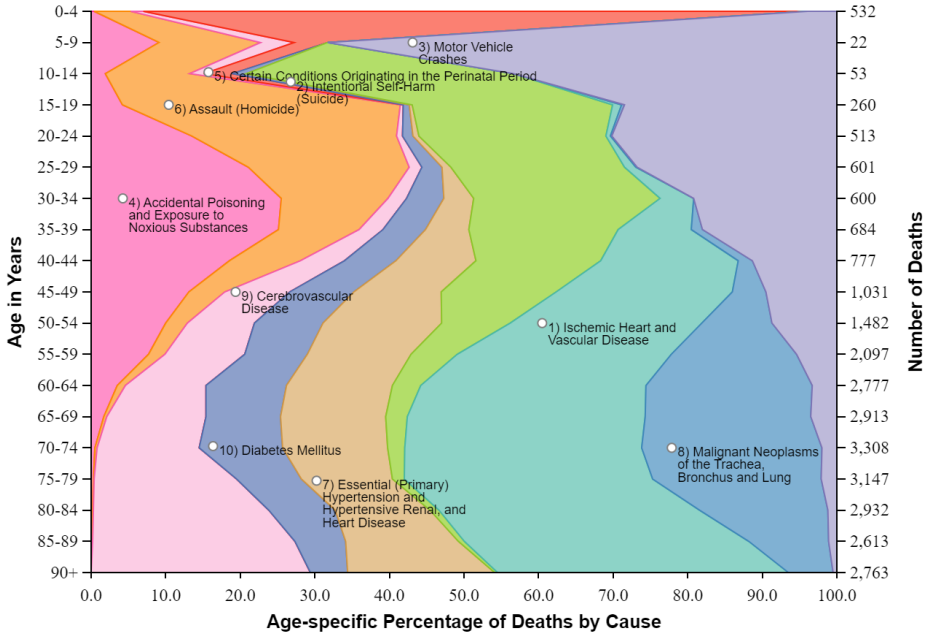
Lifespan Histomap of Mortality, Georgia, 2019

Based on the Top 10 Causes* of Years of Potential Life Lost (YPLL)



*Using Georgia Rankable Causes

Georgia Department of Public Health
Office of Health Indicators for Planning (OHIP)

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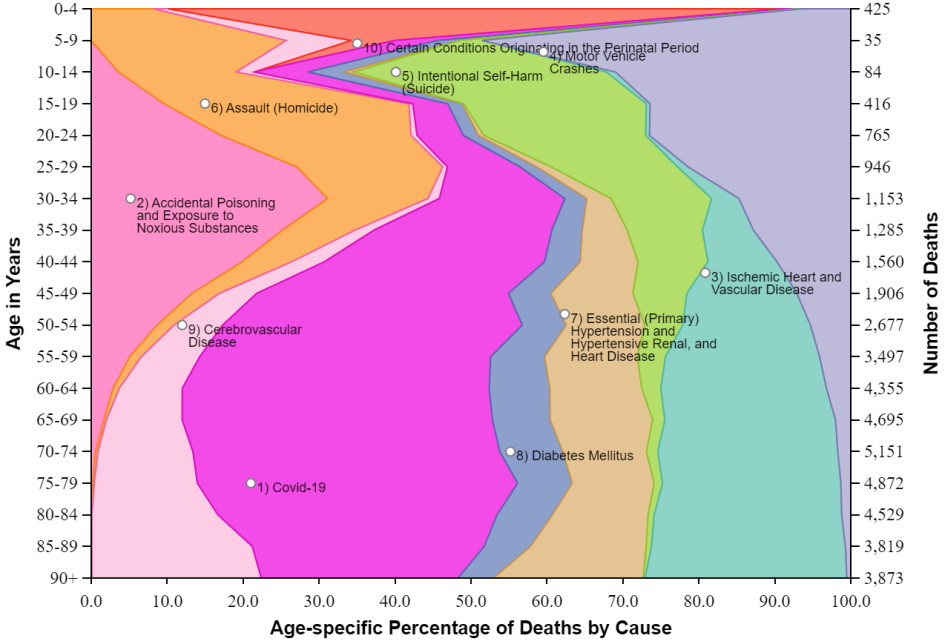
Lifespan Histomap of Mortality, Georgia, 2021

Based on the Top 10 Causes* of Years of Potential Life Lost (YPLL)



*Using Georgia Rankable Causes

Georgia Department of Public Health
Office of Health Indicators for Planning (OHIP)

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Georgia

- Population 10,711,908
- Area 59,425 sq mi
- Counties 159 (120 Rural)

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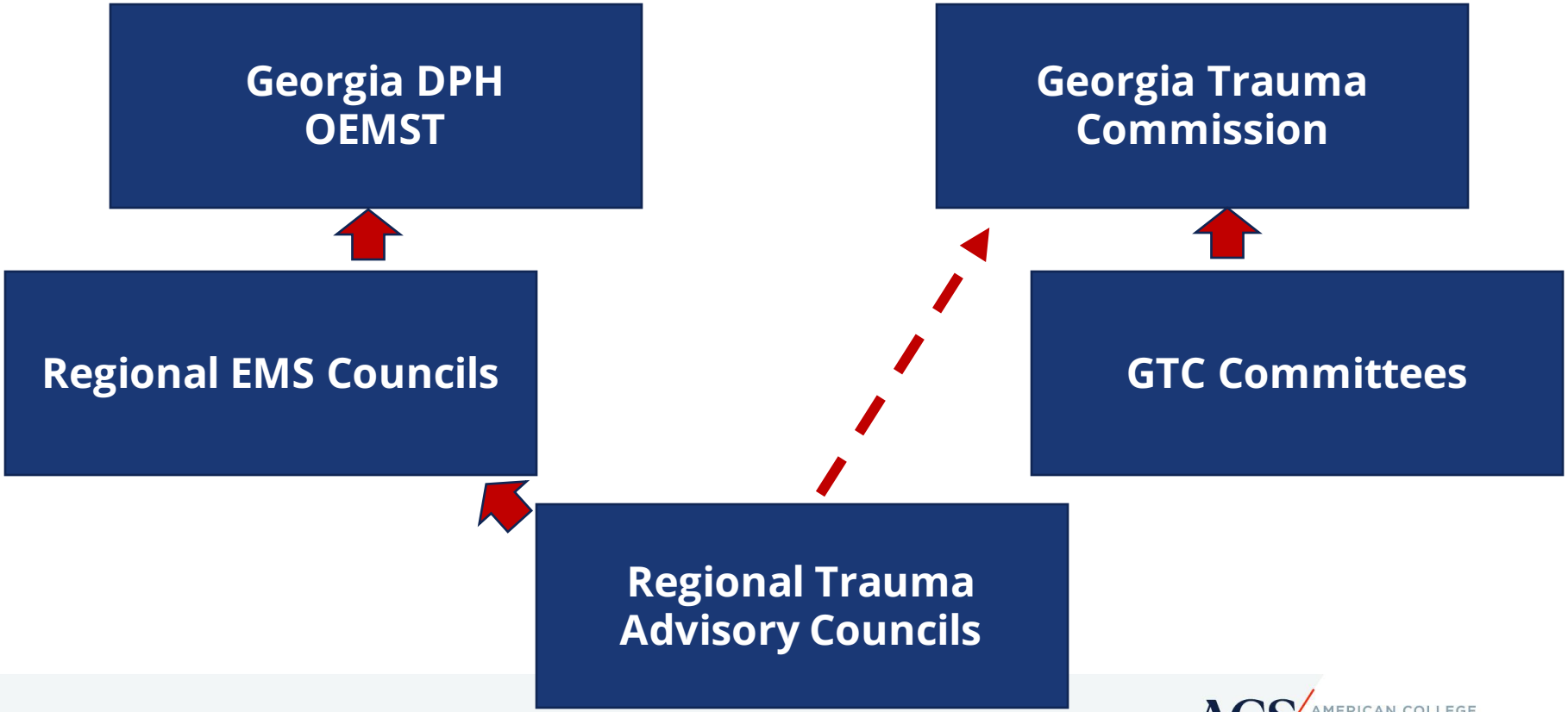
Trauma System Infrastructure



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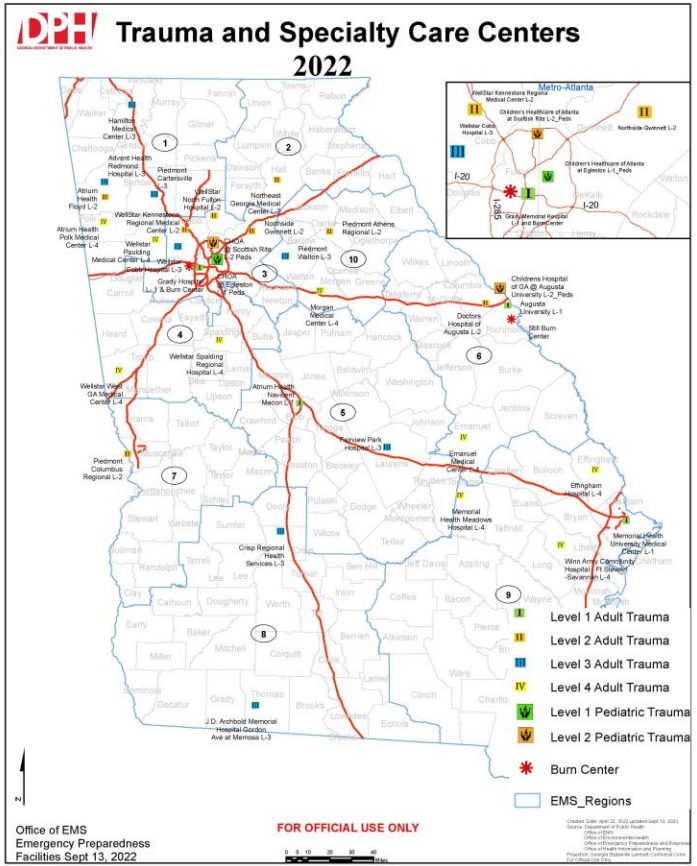
Trauma System Resources

324 Ambulance Agencies

109 First Response Agencies

7 Air Agencies



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The Model

Inclusive Trauma System

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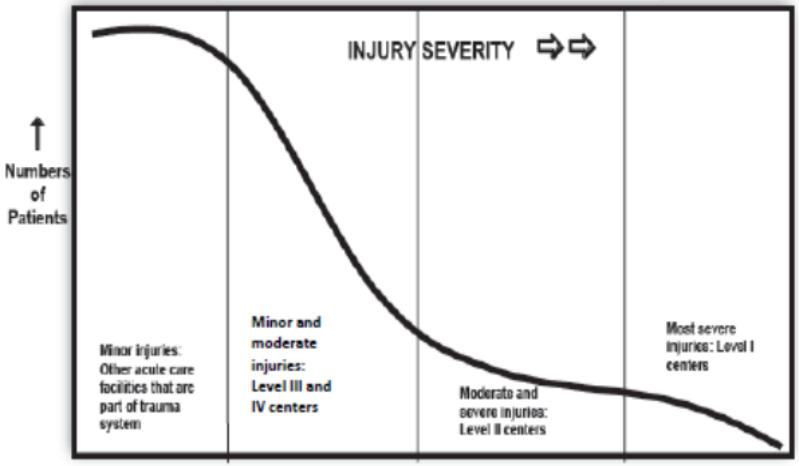
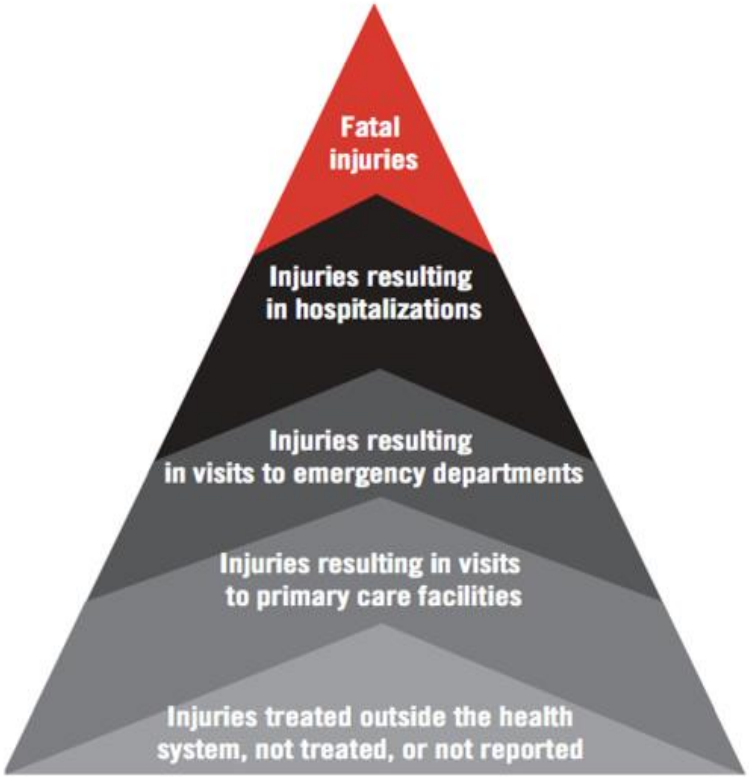
Figure 1. The Inclusive Trauma System





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The Concept of an Inclusive System

- All hospitals will see injured patients
  - Must know who to treat and who to transfer
- Hospital level should be determined by:
  - Resource availability and capability
  - System need
- Guidelines for patient destination should be uniform

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The Concept of an Inclusive System

- System oversight necessary
  - Periodic re-evaluation of need
  - Enforcement of regulations
- Robust lead agency engagement necessary
  - Difficult decisions around hospital designation
  - Difficult decisions around triage / EMS destination

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Lessons Learned

- Trauma systems are inherently political
- Trauma is not an innate priority for government or the public
- Competing priorities for resources
- Progress requires:
    - Active engagement of the public
    - Active engagement of political leaders

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Georgia Trauma System

American College of Surgeons Committee on Trauma

Trauma System Consultation

Themes

- Passionate and dedicated leaders and stakeholders.
- "Good Bones"
- Lead agency structure is not effective in meeting system needs.
- System is underfunded.
- Significant system challenges in the rural environment.
- Inadequate and inconsistent trauma triage protocols.
- Data is not leveraged to inform and improve system.

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Advantages and Assets

- Authority to designate facilities, monitor effectiveness of the trauma system, recruit new facilities, and conduct research on care.
- GA trauma system funding appropriations address funding for system development, EMS, and trauma systems.
- Active subcommittees of the Georgia Trauma Commission.
- State leadership dedicated to improving trauma care in the state.
- Successful Stop The Bleed program promulgation throughout the state.
- Passionate EMS providers.
- Majority of EMS providers in state are paid.

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Advantages and Assets

- Resources exist to facilitate system triage and patient flow with the potential to support statewide load balancing.
- Active statewide quality improvement collaborative.
- Requirements now in place that all Level I, II, and III centers receive external verification.
- Numerous rehabilitation facilities with subspecialties including pediatric, brain and spine exists.
- Georgia Trauma Commission actively engages with the legislature.
- Have completed two NBATS analyses.
- OEMST has dedicated state trauma registrar.

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Advantages and Assets

- DPH demonstrates strong resources in injury epidemiology.
- GTC has resources to assist facilities develop their trauma performance improvement plan.
- Georgia Code has specific protections for confidentiality and discoverability of peer review proceedings.
- Strong and productive relationships exist among the many entities that participate in disaster preparedness across the state.

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Challenges and Vulnerabilities

- No single lead agency and there are no rules or processes on how the two leading agencies should work together.
- No defined accountability for system oversight.
- Funding amount does not meet the projected revenue needed (~$100,000,000) to support the Georgia trauma system.
- OEMST does not receive the appropriate level of funding to fulfill oversight activity.
- No state level multidisciplinary advisory group for trauma.
- Lack of formal and comprehensive stakeholder inclusion and engagement process.

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Challenges and Vulnerabilities

- Trauma system plan is outdated and does not inform activities of the system.
- Siloed expertise and resources for injury prevention.
- EMS is not recognized as an essential service.
- Limited ability to accommodate interfacility transfers.
- Diversion inconsistently defined.
- No standardized destination protocols/guidelines.
- Designation process is not aligned with standards.
- Minimal collaboration between the GTC and rehab facilities/providers.

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Challenges and Vulnerabilities

- No uniform operational guidance for RTACs.
- Population-based needs are not routinely assessed .
- Data is not used to monitor and evaluate the system or trauma outcomes.
- Lack of inclusion of rural facilities in hospital outcome review process.
- A statewide trauma performance improvement plan is not available.
- No formalized coordination of trauma specific aspects of patient care and routing between the HCCs and the RTACs.

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Priority Recommendations

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Priority Recommendations

Statutory Authority

- Identify through legislation a single lead agency, consistent with national norms, for trauma system oversight and development. In lieu of that, develop a structured crosswalk that defines the trauma system responsibilities for the GTC and OEMST in statute.

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Priority Recommendations

Funding

- Conduct a new statewide study to determine current funding needed to sustain and advance the Georgia Trauma System and statewide EMS across the continuum of care.
- Obtain dedicated, sufficient funding for the Georgia Trauma System.
- Evaluate existing funding to identify opportunities for redistribution to develop and sustain the rural components of the system.

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Priority Recommendations

Multidisciplinary Advisory Group

- Conduct a full trauma system stakeholder analysis. Utilize this information to structure the Multidisciplinary Advisory Group to ensure there are member seats for all ten regional trauma advisory councils (RTAC) to optimize inclusive representation of the components of the trauma system including:
    - Level I-IV trauma centers, specific inclusion of rural trauma centers
    - EMS
    - Rehabilitation
    - Non-designated facilities
    - Military
    - Special populations (e.g., pediatrics, geriatrics)
    - Hospital administrators

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Priority Recommendations

Trauma System Plan

- Develop an updated state trauma system plan and revise on a regularly scheduled basis.

- *Create an inclusive trauma system. (This was also a recommendation from the 2009 Georgia State Trauma System review)*

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Priority Recommendations

Emergency Medical Services

- Declare EMS as an essential service and establish funding mechanisms for sustainability.

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Priority Recommendations

System Triage and Patient Flow

- *Develop standardized regional destination protocols including appropriate patient transport to Level IV centers. (This was also a recommendation from the 2009 Georgia State Trauma System review)*

- Develop an RMOC structure statewide for resource monitoring, patient transport, transfers and load balancing.

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Priority Recommendations

Definitive Care

- Develop performance measures to monitor designation process including:
  - Compliance with designation criteria
  - Designation application is processed by the lead agency to make the recommendation of designation within 60 days
  - Systems in place to ensure every facility completes designation review every 3 years.

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Priority Recommendations

Trauma System Registry

- Develop a collaborative stakeholder data use workgroup to define data needs required to evaluate and manage the trauma system.

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Priority Recommendations

System-Wide Performance Improvement

- *Develop, implement, and document a system-wide trauma system performance improvement plan. (This was also a recommendation from the 2009 Georgia State Trauma System review)*

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Priority Recommendations

Disaster Preparedness

- Develop, at the state level, a multi-disciplined disaster planning group that includes, but not limited to, representatives from GEMA, DHP, HCCs, RTAC leadership and other trauma experts (to include trauma leadership at RCHs), EMS stakeholders, military and others with identified expertise and resources in the management of multiple trauma events. Integrate capability of the RMOC into all regional plans.

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Priority Recommendations

Rural Focus

- Perform comprehensive resource/needs assessments including:
  - Funding for the rural trauma system emphasizing the rural aspect of EMS and trauma hospitals.
  - Rural trauma capacity needs assessment to identify gaps including EMS, trauma hospitals, and transfer capabilities.
  - Recruitment and retention primarily focusing on rural providers, nursing, and EMS.

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Priority Recommendations

Rural Focus

- Ensure involvement and participation of the rural trauma hospitals and EMS in an inclusive Georgia statewide trauma system plan.

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Priority Recommendations

Rural Focus

- Standardize trauma care in rural Georgia utilizing educational programs.

- Increase rural emergency medicine providers and resources to provide capability to manage traumatically injured patients.

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Priority Recommendations

Rural Focus

- Improve scene response times by bolstering existing mutual aid agreements and addressing staffing shortages.

- Develop a process for rescue stops and accelerated transfer in rural areas.

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Priority Recommendations

Rural Focus

- Provide education and collaboration for rural facilities to achieve proficiency regarding data entry and validity.

- Provide rural trauma program managers process improvement training along with mentorship and support from other facilities.

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Observations

- This is a process of maturation; from centers to **SYSTEM**.
- This is a consultative process.
  - The recommendations offered are based on broad general principles and experiences in other regions.
  - Solutions will be unique and specific to Georgia.
- Progress will require negotiation, commitment, and collaboration from **all** stakeholders and the lead agency.
- The solutions will be created by **YOU**.
- Do not be held back by dogma or *perceived* barriers.

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ACS TSC Review Team

Georgia

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