

# Trauma Program

Level I Pediatric Trauma Center

2009 Report



**BUILDING COMPLETE  
HEALTH PIECE BY PIECE**





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# Trauma Program

Level I Pediatric Trauma Center



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# TRAUMA MEDICAL DIRECTOR MESSAGE



**Jonathan I. Groner, MD**  
Trauma Medical Director

**2009** was another strong year for the trauma program. There was not only an increase in clinical volume, but there was also growth in major new trauma program initiatives.

Our trauma nurse leader (TNL) program continues to grow and thrive. We currently have 16 nurses in this program. These nurses are responsible for several key components of the resuscitation of the trauma patient including: triage direction and decision making, monitoring fluid management, and ensuring completion of the primary and secondary assessment survey.

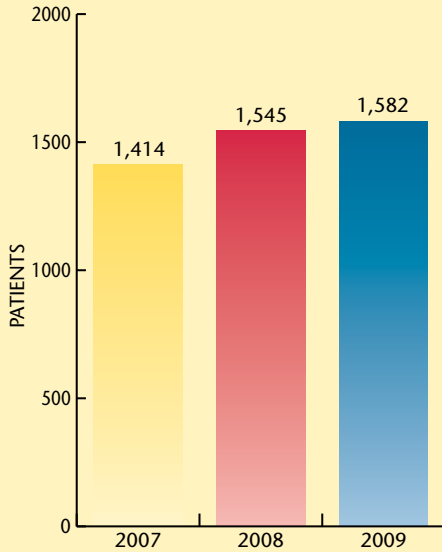
We continue to improve the performance of our trauma care providers by using simulation training and by monitoring trauma resuscitations using intranet-based audio and video capture. The trauma simulator is used as part of monthly resident orientations and trauma nursing education. Trauma room video review has become an integral part of our performance improvement process.

Finally, our trauma program continues to demonstrate a high level of multidisciplinary care that has become a standard model in pediatric trauma care. Included in this year's report you will see quotes from hospital staff on what multidisciplinary teamwork means to them at Nationwide Children's Hospital.

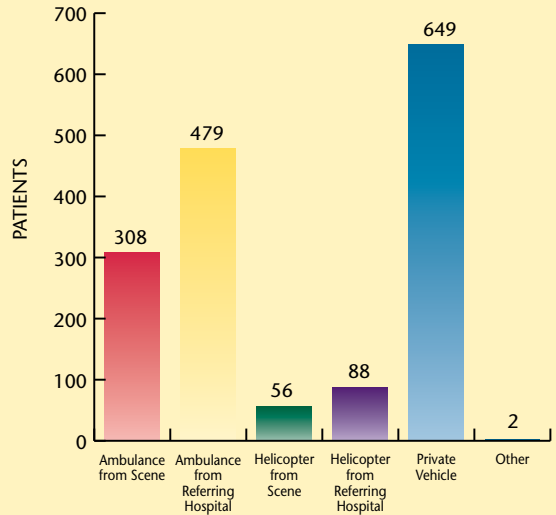


# 2009 PATIENT AND INJURY DATA

## Trauma Admissions



## Mode of Arrival



“Trauma is a multi-system disease which impacts all aspects of care. This requires the coordinated efforts of nurses, therapists, social workers, child life specialists and many different services. The other important part of trauma care is education leading to prevention. This also requires teamwork from everyone – caregivers, community educators, and lobbyists.”



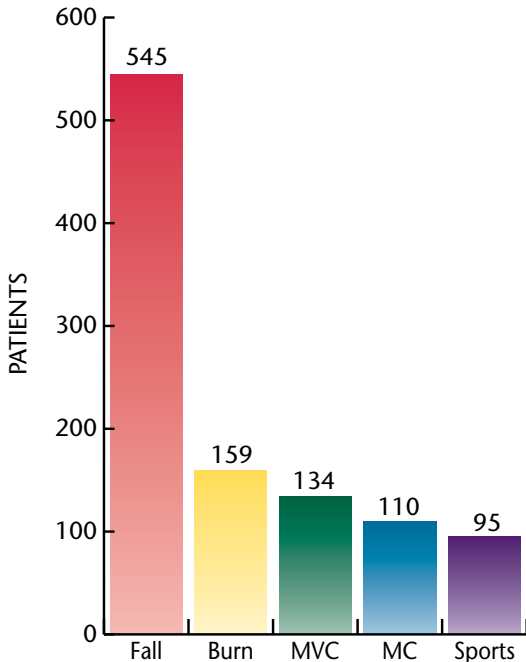
– Debbie Pratt, RN, MS, CSCC

“Our dedicated chaplains are always on hand to support both family members and staff during excruciatingly tough moments in the trauma room. Their participation in our trauma program exemplifies the great value of our teamwork approach.”

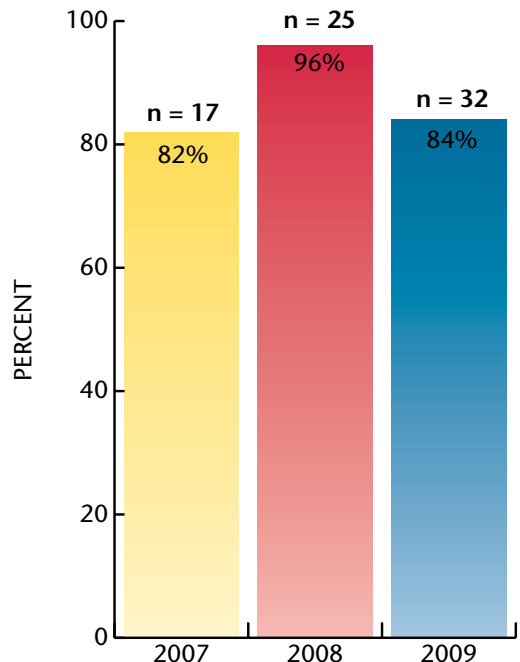
– Ben Nwomeh, MD, Surgery



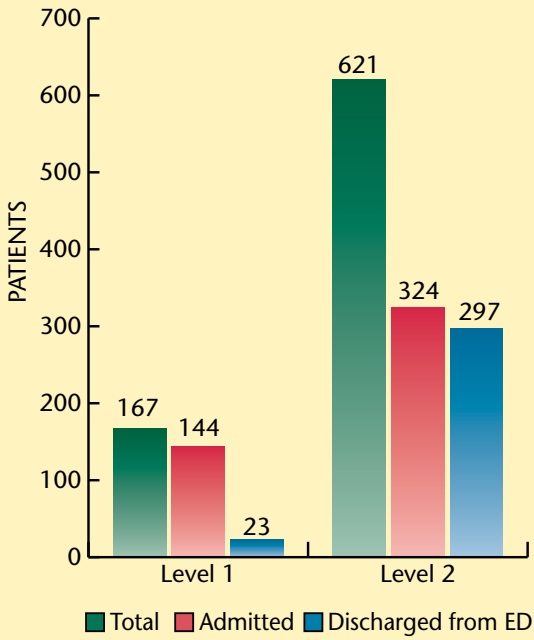
**Leading Mechanisms**



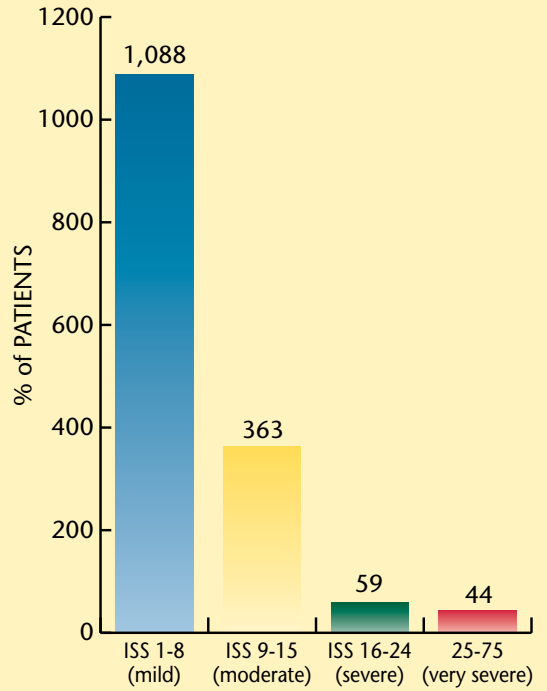
**Autopsy Rates**



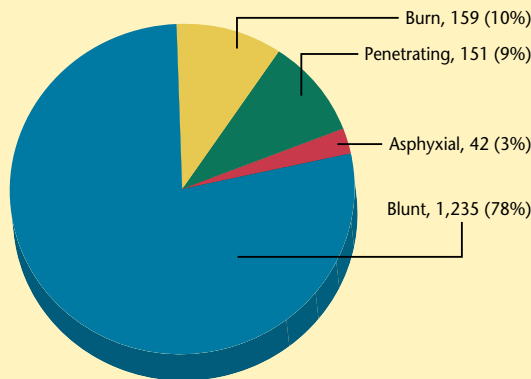
### Trauma Alert Activation



### Injury Severity Score (ISS)



### Injury Type



# PASSENGER AND BIKE SAFETY PREVENTION



Judy Hirschfeld, MSA, CPSI



Jennifer Sager, BS, CPST



Kellie O'Riordan, CPST

Passenger safety plays an important role within the Nationwide Children's Hospital Trauma Program. Research shows that prevention is effective in reducing injury. Cost benefit analysis shows the following:

- :: Every \$46 spent on a child safety seat saves \$1,900 in societal costs
- :: Every \$31 spent on a booster seat saves \$2,200 in societal costs
- :: Every \$10 spent on a bicycle helmet saves \$570 in societal costs

*(Source: Children's Safety Network Economics and Data Analysis Resource Center)*

## Car Seat Distribution

In 2009, three passenger safety specialists provided 921 conventional car seats and boosters to the following:

- :: Children who were brought to the hospital by ambulance or helicopter and needed a seat for safe transport home.
- :: Patients with existing seats that failed safety checks
- :: Patients who were involved in a motor vehicle crash and were given replacement seats.
- :: Newborns and children who were admitted or were clinic patients within Nationwide Children's Hospital network. These children were identified by NCH staff for passenger safety assessment.



“Quality is the name of the game!  
Teamwork and trauma create quality.”

– John Schultz, MD, QIS

### Car Seat Checks

Nationally, many car seats are installed incorrectly, which places children at risk for preventable injury. Nationwide Children’s Hospital provides a service to assess for proper installation. Three hundred twenty two car seats were checked for correct installation. Eight-six percent were installed incorrectly. The most common car seat misuse was not having a seat placed tight enough in the vehicle.

Children going home in special casts also benefited from the program. The specialists also assisted with positioning children into car seats for special needs.

### Bike Helmet Distribution

The city of Columbus passed an ordinance in 2009 requiring all children riding bicycles to wear helmets. The Nationwide Children’s Hospital bike program distributed 2,865 helmets throughout the year to at risk children.



## W.H.A.L.E.™

As part of a nationally recognized program W.H.A.L.E.™ (We Have a Little Emergency) stickers were distributed to hospital families and the general public. The stickers provide a method for identifying children in car seats for emergency staff when adults involved in a car crash cannot speak for the child. In 2009, 8,000 stickers were distributed.



“In Zero Hero training we talk about team member checking and Qualify, Verify and Validate. The multidisciplinary work creates a culture where everyone works together to provide the safest, high level of care to children experiencing trauma. There are many hand-offs, and ensuring the team comes together to get everyone’s participation brings together a more robust improvement system.”

– Linda Stoverock, RN, MSN, CNAA,  
CNO/SR VP Patient Care Services

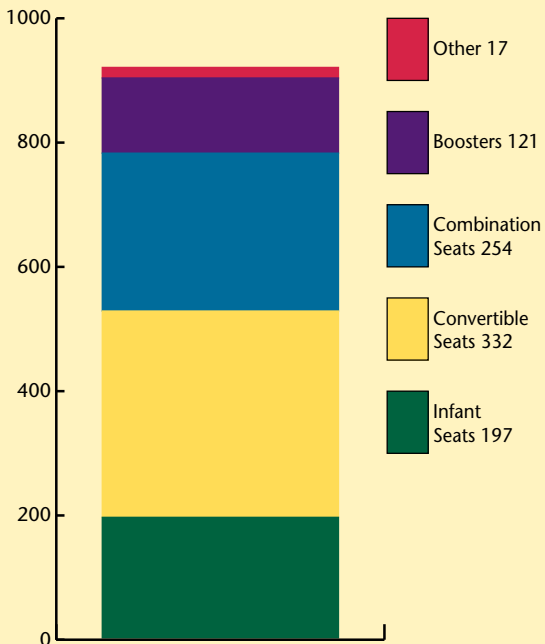


# 12,131 Passenger Safety Interventions in 2009

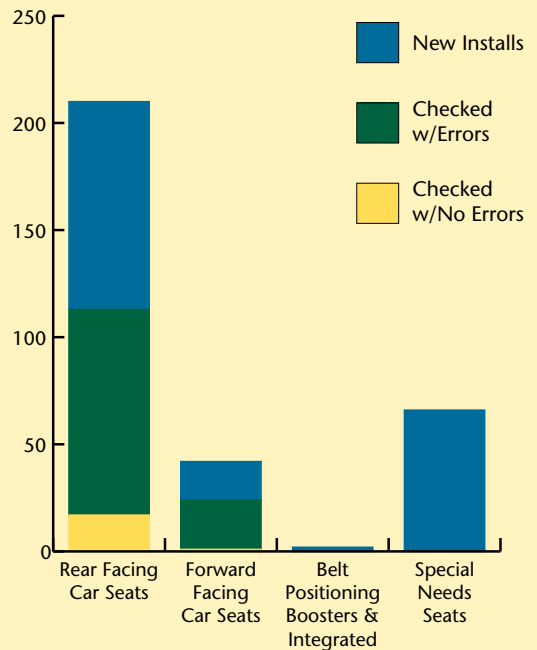
2,888 Bike Helmets Distributed

8,000 W.H.A.L.E. Sticker Sets Distributed

## 921 Car Seats Distributed



## 322 Car Seats Checked & Installed



# BURN DIRECTOR'S MESSAGE



**Renata Fabia, MD**  
Burn Medical Director

The Burn Program at Nationwide Children's Hospital continues to provide comprehensive, multidisciplinary care for thermally injured children in central Ohio. The program admitted 159 acutely burned children and adolescents which included major burn injuries of thirty, forty and eighty percent total body surface area burned. The burn center also cared for patients with major traumatic wounds, dermatological diseases, cutaneous toxic reactions including caustic ingestion and children

requiring burn reconstruction. The outpatient burn clinic treated 537 burn patients with over 1,222 visits.

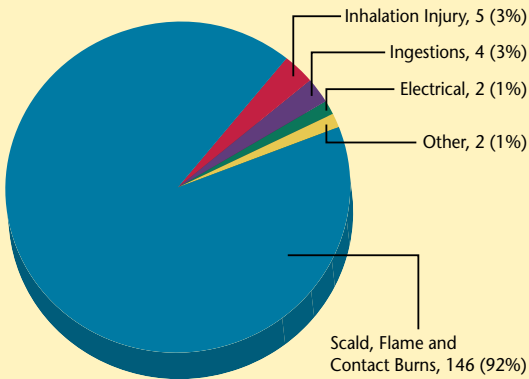
The Nationwide Children's Hospital burn program is a verified burn center accredited by the American Burn Association and the American College of Surgeons. The integrated approach to burn care includes burn surgeons, burn nurses, occupational and physical therapists, dietitians, social workers,

“Nationwide Children's Hospital demonstrates exemplary injury prevention initiatives that are both deep and broad. Trauma, emergency medicine, rehab, multiple nursing units, poison center, CRI, security, education, marketing and so many more all work as a team to keep children and families safe.”

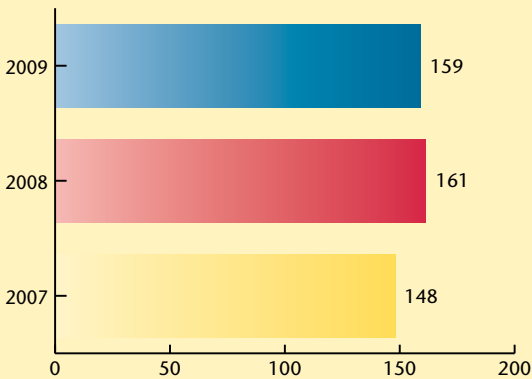


– Marcie Rehmar, Education

## Burn Type



## Burn Admissions



child life specialists, therapeutic recreational therapists, massage therapists, psychologists, social workers, pharmacists and discharge planners in the management of our patients thus providing all-inclusive burn care.

The burn program endeavors include decreasing pain for our patient population. Silver sustained-release soft silicone foam dressings were introduced and found to be flexible for physical therapy sessions and painless at removal one week after application. Patients that require daily dressing changes engage in either a virtual reality world, a computerized interactive distraction system, or a psychologist or child life specialist provides specialized distraction and comfort during the procedure. The pain service and clinical pharmacists ensure that pain medications are adequately utilized to provide maximum pain management during the healing process. All of which enhance the outcome of the patient and their family.

The burn team quests for technical advancements in the care of children with thermal injury. Various skin substitutes, numerous antimicrobial dressings and advanced techniques of wound debridement were creatively instituted. Cultured epithelial autografts obtained from individual skin biopsy cells and grown to an enlarged size provided coverage for the patients with extensive burn wounds, further acknowledging the dedication and commitment of Nationwide Children's Hospital leadership.

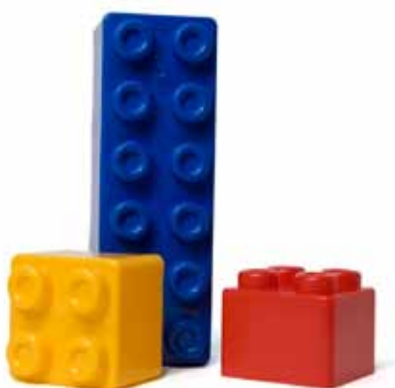
Outreach, prevention and community education continue to be an integral aspect of the burn program. Dedicated staff nurses introduce burn safety information to hundreds of elementary school students. Burn program staff provides pediatric burn management education to EMS providers throughout Columbus and the surrounding regions, promoting safety, collaboration and connection to our service area.

The burn program is extremely fortunate to have a multidisciplinary team that demonstrates dedication to pediatric burn care. It is a privilege to provide complete burn care to the children of central Ohio.



“It is refreshing to see so many people from so many specialties come together and work to improve the quality of care experience for the trauma patient. There is no doubt that excellence of care is at the heart of all of our endeavors.”

– Allan Beebe, MD, Orthopaedic Surgery



# ACKNOWLEDGEMENT

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