30 YEARS OF EXCELLENCE & LEADERSHIP IN TRAUMA CARE

1947  Evans-Haynes Burn Center opens as the first civilian burn center in the US
1981  First designated Level 1 Trauma Center in VA
1984  Center for Trauma and Critical Care Education (CTCCE) launched with the first university affiliated, accredited paramedic program
2005  ACS Level 1 Trauma Center verification awarded
2010  Panamerican Trauma Society (PTS) headquarters move to VCU
2011  Evans-Haynes Burn Center verification
2013  ACS Level 1 Pediatric Trauma Center verification

2014
• Evans-Haynes Burn Center re-Verification
• ACS Level 1 Trauma Center re-Verification for the 4th time
• Paramedic Training Center- CoAEMSP Re-accreditation

2015
• State redesignation as comprehensive Level I Trauma Center

2016
• ACS Level 1 Pediatric Trauma Center re-verification
• State designation of Pediatric and Burn Programs
REGIONAL PROVIDERS

Richmond City: 22%
Henrico: 17%
Chesterfield: 9%
Hanover: 5%
New Kent: 2%
Dinwiddie/Powhatan: 2%
Goochland: 1%
Colonel Hgts/Hopewell/Petersburg: 5%
Other VA counties: 31%
Out of state: 6%

VCU Medical Center trauma serves 70 Virginia counties, D.C., NC and MD
TRAUMA ADMISSIONS
Fiscal Year Trend
MECHANISMS OF INJURY*

- **MVC/MCC**: 44%
- **Fall**: 26%
- **Burns**: 11%
- **Gun Shot/Stab**: 7%
- **Bodily assault**: 4%
- **Pedestrian**: 3%
- **Accidently hit by falling/other object**: 3%
- **Bicycle**: 2%

*excluded those that represent less than 2% of total patient population (Stab/Cut/Laceration, ATV, Moped/Scooter, Explosion, Drowning, etc.*
Clinical Care-An Orchestrated Process

Multidisciplinary team
- Attending Board Certified physicians
- Nurses
- Nurse practitioners
- Case managers
- Social workers
- Pharmacists
- Dieticians
- Physical therapists
- Occupational therapists
- Speech therapists
- Psychiatrist
- Trauma registry

Comprehensive, Orchestrated, Evidence Based Collaborative Care from admission through discharge and recovery
VCU Level I Trauma Center

Clinical Programs

Performance Improvement Program

Trauma Survivors Network

Injury & Violence Prevention Programs

Center for Trauma and Critical Care Education

International Trauma Care and Systems Development

Research
Center for Trauma & Critical Care Education

- Provides more than 20 different prehospital, trauma, nursing and critical care related courses

<table>
<thead>
<tr>
<th>Year</th>
<th>Students Trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>3,414</td>
</tr>
<tr>
<td>2012</td>
<td>3,725</td>
</tr>
<tr>
<td>2013</td>
<td>4,013</td>
</tr>
<tr>
<td>2014*</td>
<td>8,752</td>
</tr>
<tr>
<td>2015</td>
<td>5,350</td>
</tr>
</tbody>
</table>

*Department of Corrections Contract

- 2015 Rural Trauma Team Development Course
  - Four courses through 2016
- US Airforce Rescue Squadron-Clinical Training
  - University of New Mexico & VCU collaboration

Student Sources:
- Community, 55%
- Hospital/SO M, 45%
Center for Trauma & Critical Care Education

- Paramedic programs now extended into Fairfax, Rockingham, Spotsylvania, Williamsburg
- Sponsored students from: Australia, South America, Univ. of New Mexico/SOM/PJ’s
- Location - Regional Sites for Paramedic Courses & sponsored CE courses
Trauma Center-Community Partnership Paradigm

Trauma centers **active leading role** in injury and violence prevention activities, inform and collaborate with their communities, and monitor the effect of prevention & intervention programs.

**Trauma Centers**

Leadership

Data registry

Expertise

• Epidemiology
• Demographics
• Public health

Windows of opportunities

**Community Leaders**

Law enforcement

Government

Research

Youth services

Local businesses

Funding agencies

*J Trauma.* 2004;56:1197–1205.
Window of opportunity - susceptible moment

When does a gang member ever let any one this close to him
Injury/Violence-Trauma Center Outreach Model

IVPP: Community 2014-16

>60 collaborative workshops

40 educational programs.
INJURY AND VIOLENCE PREVENTION/INTERVENTION PROGRAMS
Hospital - Community Based

Education & Awareness Support Programs
- AED
  Awareness, Education, Documentation
- IMPACT
  Impacting Minors Perception & Cognizant Attitudes Toward Trauma
- SOAR/TSN
- PTSD
  Screening & treatment

Prevention Programs
- GRACY
  Get Real - Alcohol Choice & Consequences of Youth
- Emerging Leaders – East End
  Youth Violence Prevention Program
- Safe Kids Virginia
- Burn Prevention

Intervention Recidivism Reduction Programs
- Hospital – Based Violence Consult
- Bridging the GAP
  Youth Violence Intervention Program
- SBIRT
- EMPOWER
  Intimate Partner Violence & Sexual assault Prevention & Advocacy Program
  Centering Pregnancy IPV Peer mentoring
Why Focus on Violence Prevention?

The firearm homicide fatality rate for Richmond youth exceeds state and national rates.¹

**Homicide Firearm Deaths & Rates 2013, 0-24 Years Old**

<table>
<thead>
<tr>
<th>Location</th>
<th>Deaths</th>
<th>Population</th>
<th>Crude Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richmond City (²)</td>
<td>14</td>
<td>70,476</td>
<td>19.86</td>
</tr>
<tr>
<td>Virginia (minus Richmond City) (²)</td>
<td>66</td>
<td>2,693,742 (³)</td>
<td>2.45</td>
</tr>
<tr>
<td>U.S. (⁴)</td>
<td>3,897</td>
<td>105,043,525</td>
<td>3.71</td>
</tr>
</tbody>
</table>

Sources:
Perspective from the VCU Trauma Center

- 4,300 trauma admissions/year
  - 10-12% - Firearms/stabbings

- Over 75% of all intentionally injured patients in the Richmond area are treated at the VCU Health System

- 95% of assault related injury visits were for youth less than 25 years.

- Five year re-injury rate for victims of intentional injury ranges from 10-50% - (VCU is 20%)
  - 20% die of subsequent violence
BRIDGING THE GAP
In-hospital intervention with community case management

Youth Violence Reduction Program for youth hospitalized with violence related injuries

Intervention program
Goal is to reduce recidivism
Channel at risk youth into programs promoting safe behaviors
Legacy Program: Bridging the Gap
In-hospital intervention with community case management

Youth ages 10-24 hospitalized with violence related injuries

Brief Violence intervention

Case management connects at-risk youth with community-based programs

Goal is to reduce recidivism

<table>
<thead>
<tr>
<th>Community Services</th>
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</thead>
<tbody>
<tr>
<td>Substance abuse</td>
</tr>
<tr>
<td>Emergency assistance</td>
</tr>
<tr>
<td>Recreational</td>
</tr>
<tr>
<td>Educational</td>
</tr>
<tr>
<td>Vocational</td>
</tr>
<tr>
<td>Mental health</td>
</tr>
<tr>
<td>Early childhood</td>
</tr>
<tr>
<td>Medical assistance</td>
</tr>
<tr>
<td>Housing</td>
</tr>
<tr>
<td>Workman’s comp</td>
</tr>
<tr>
<td>Legal</td>
</tr>
<tr>
<td>Rehab. Services</td>
</tr>
<tr>
<td>Mentoring</td>
</tr>
</tbody>
</table>
What effect does a community-based intervention have when supplemented with a hospital based brief violence intervention to reduce youth violence?

Reduction with short term risk factors
- 2.5x less likely to use alcohol
- Significant reduction in Drug use

Hospital Service utilization
- Clinic Visit: 3.5x more likely to schedule; (92%) compared to historical control (70%)
- ED visits: 2.5x more likely to have an appropriate ED visit

Community Service Utilization
- 2.5 X more likely to access community services at 6 weeks
- 3 X more likely to access community services at 6 months
- > 90% were connected to community service programs within 6 month

- **Recidivism:** < 0.5 % per year ( <5 % 2014)
Conclusion

One of the first hospital-community based violence prevention and intervention program comparing a hospital BVI alone to combination of an in-hospital BVI with community wraparound case management interventions

BVI have a unique role in youth violence prevention, especially in terms of enrollment and rapport building

BVI are not sufficient alone

Trauma centers cannot do it alone

The importance of incorporating the community into risk reduction strategies cannot be overestimated
Follow-up

2007: 1 patient enrolled
2010: 70 patient enrolled
2016: 143 patient enrolled

2014: BTG became standard of care and all participants were given the BVI + Community Case Management Services!

2015: AAST National Best Model for hospital community based youth violence prevention program
Increase in Hospital: Community Service Needs
Project Expansion

Bridging the GAP

Hospital- Violence Consultation

Admitted Patient: BVI
330 patients in the program

Follow up Visits / Case management / PTSD screening

Hospital Awareness & education
570 health care workers trained

Patient Counseling/protective orders
270 pts served

Project Empower
Intimate Partner Violence

ED - East End-Emerging Leaders

Peds ED + Boys & Girls Club
Middle school program – 22 youth served

VCUHS/Peds ED/Clinics + Community Wrap Around
High School program – 24 youths served
Emerging Leaders
High Schoolers - Ages 14-18

YOUTH VIOLENCE PREVENTION – A Hospital-Community Based Program

5 + 1 Components:
• Identification of at-risk youth
• Case Management
• Educational development
• Skill building
• Exposure to health careers
  + Internship Opportunities

VCUHS
Identification and Assessment Screening Tool

Emerging Leaders
Enrollment
VCU Health System

Curriculum
• Boys & Girls Club Programs
• JumpRope-to-Stethoscope
• VCU Police/Richmond Police
• Community Mentorship
• ART180
• Mayor’s Youth Academy

Internships at VCUHS
Partnership with Mayor’s Youth Academy

L.I.F.E. program

Emerging Leaders: East End Middle School Graduates from the Boys and Girls Club

Referrals

Referrals

Referrals
Inaugural Class of Emerging Leaders: East End Program
RVA Alternative Pathways Model

Employment
Emerging Leaders Case Manager

LIFE Case Coordinator
Post-LIFE Referral

Referrals during LIFE program for:
- Student/Family Assistance
- Behavioral Health
- Social Services

Community Programs (TBD)

VCU Health
Emerging Leaders

VCU Health
Emerging Leaders Case Manager

Mayo's Youth Academy

VCU Health
Internships

Education

Workforce Training

Mentorships

Employment

ChildSavers
VCU Leadership Role: to help align community programs to establish a coordinated system to support youth and families.
Program Sharing

Local:
• Hospital-Community wide program awareness initiative
• VCU Medical Center Grand Rounds
• Media / Newsletter / Website/Events

Regional:
• Virginia Chapter of the American College of Surgery
• Virginia State Trauma Oversight Committee
• 32nd Annual State Pediatric Primary Care Conference

National:
• American Association for the Surgery of Trauma (AAST) national Congress
• Eastern Association for the Surgery of Trauma (EAST) national Congress
• ATS : American Trauma Society

International:
• XI Colombian National Trauma Congress, at the Universidad Javeriana de Cali, Cali, Colombia, June, 2010
• Panamerican Trauma Society (PTS) annual Congress
  – Uruguay 2010 ;
  – Paraguay 2011,
  – Colombia 2012,
  – Chile 2013, Panama 2014, Bolivia 2015
• Trauma Brazilian Congress, sao paol Brazil, 2015
Outreach & IMPACT: “….& who is my neighbor”

Richmond
- Mayor Office - Mayor’s youth academy
- Office of Attorney General Liaison – Gang Violence Initiatives
- Governor’s: Trauma System Oversight & Management State - Injury & Violence Prevention Committee
- ACS – Trauma System Site Visit – Pre-Injury Task Force – State Stakeholders

Commonwealth
- National Network of Hospital based Violence Prevention Programs
- Panamerican Trauma society Injury & Violence Prevention Committee

National / Global
- VCU IVPP
- Richmond City Health District – CDC funded Juvenile justice Prevention workgroup

VCU Health
2009 Inaugural Shining Knight Gala

Recognizing the trauma system at VCU Medical Center & in Central VA

Supports Injury Prevention programs
• All currently grant funded

Supports education and outreach initiatives of the Trauma Center
• Community trauma care