TRAUMA IN THE GERIATRIC PATIENT

STN PRE-CONFERENCE

March 2018

Sandi Garrett MSN, RN

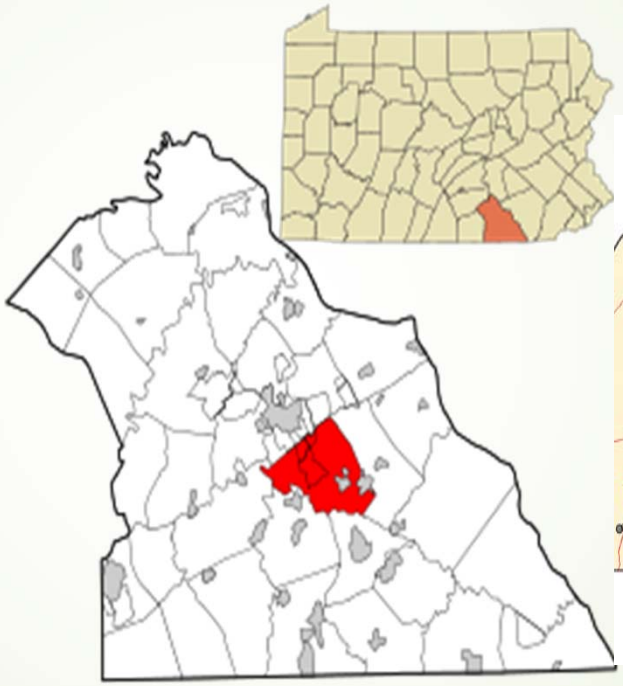
Trauma Program Manager

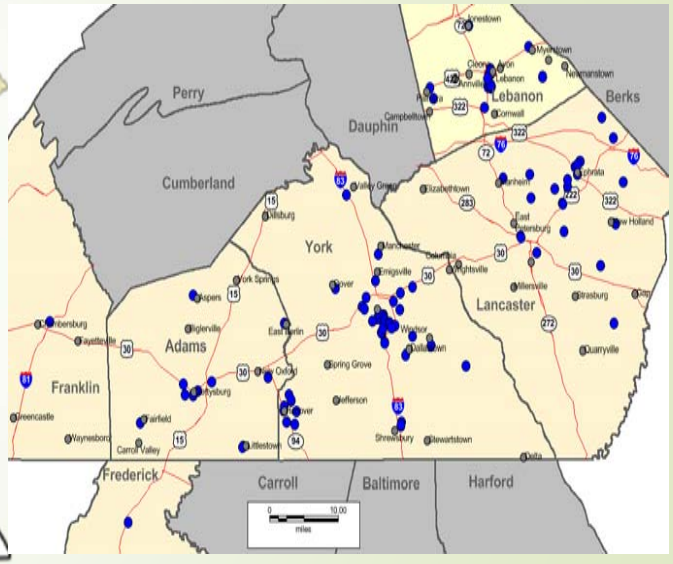
WellSpan York Hospital

WellSpan York Hospital
Level 1 Adult - State Verified

- **135 locations Physician offices** serving 1 million people in south central PA
- A multi-specialty Medical Group with **1,198 physicians** and advanced practice clinicians, and a Provider Network that includes **1,059 members**
- **6 hospitals** with a total of **1,083 staffed beds,** a regional Home Health program and a regional Behavioral Health organization
- **$2 Billion in Revenues** (2016); Aa3 Moody's and AA-Fitch bond ratings
- **15,000 employees** and 2,300 volunteers
- **$165.6 million** in community benefit

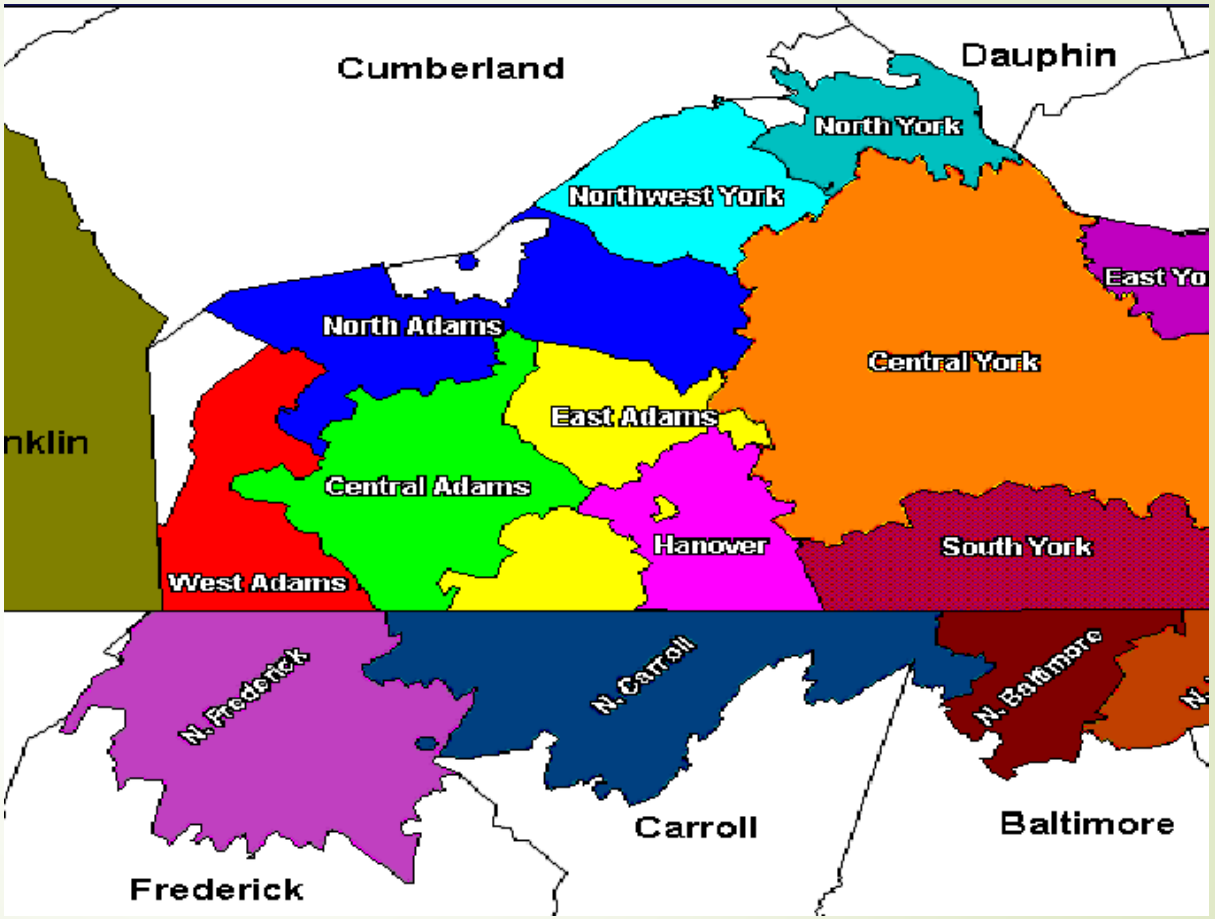
York Primary Care





Trauma Catchment Area

- WellSpan York Hospital's Level 1 Trauma Center has received a three-year accreditation from the Pennsylvania Trauma Systems Foundation, effective Oct. 1.
- The trauma center serves more than 650,000 people in York, Adams and Franklin counties. It is capable of handling any kind of trauma 24 hours a day, seven days a week.



WellSpan York Hospital

- 580 bed hospital – Regional Referral Center
- Nationally recognized teaching hospital
  - 7 residency programs
  - 5 allied health schools and other training programs
  - 5 fellowship programs
- Bariatric Center of Excellence
- Level 1 Trauma Center
- Level 3 NICU
- Advanced Disease-Specific Certification Programs
  - Stroke
  - Ventricular Assist Device
  - Chest Pain

STATISTICS > 65 year of age 2016-2017

	Number	%
FALLS	1220	75.4
Motor Vehicle	182	11.3
Motor Cycle	21	1.3
Pedestrian	26	1.6
Gunshot	2	0.1
Stabbing	5	0.3
Hot material injury/Fire	6	0.3
Bicycle	7	0.4
Struck by object/person	26	1.6
Caught btw Objects	3	0.2
Power/machine Tools	11	0.7
Fight/Abuse	4	0.2
Animal Related	14	0.9
Other and Unkns	90	5.6

	Number	%
MALE	680	42
FEMALE	938	58
DISCHARGE		
LIVE	1449	89.6
DIE	169	10.4
> 24 HOURS		67
ADMISSION TYPE		
TRANSFER IN	332	20.5
DIRECT FROM SCENE	1285	79.5
ISS		
1-15	1288	79.6
16-24	229	14.2
25-75	1	0.1
UKN	101	6.2

STATISTICS > 65 year of age 2016-2017

AGE	Number	%
65-69	257	15.9
70-74	285	17.6
75-79	251	15.5
80-84	308	19
85-89	291	18
90-94	179	11.1
95+	47	2.9

11/9/2015

Most falls by older adults are preventable

Most falls by older adults are preventable

According to the Centers for Disease Control and Prevention (CDC), falls are the leading cause of injury deaths among adults age 65 and older. One in three adults in the same age range falls each year.

In 2014, Trauma Services at WellSpan York Hospital treated 989 patients with fall as the mechanism of injury, including 605 patients 60 years of age or older.

"Older adults are the fastest growing segment of the population, and it is more important than ever to address this growing public health issue," said **Reda Willis**, advanced clinical nurse specialist. "The good news is that most falls are preventable."

Willis offered the following tips to help prevent falls. You may want to share them with your parents and/or grandparents.

Begin a regular exercise program. Exercise is one of the most important ways to lower your chances of falling. It makes you stronger and helps you feel better. Exercises that improve balance and coordination, such as Tai Chi, are the most helpful.

Have your doctor or pharmacist review all the medicines you take, even over-the-counter medicines. As you get older, the way medicines work in your body can change. Some medicines can make you sleepy, or dizzy, and can make you fall.

Have your eyes checked by an eye doctor at least once a year. You may be wearing the wrong glasses, or have a condition, such as glaucoma, or cataracts that limits your vision. Poor vision can increase your chances of falling.

11/9/2015

Most falls by older adults are preventable continued

Make your home safer by taking the following steps:

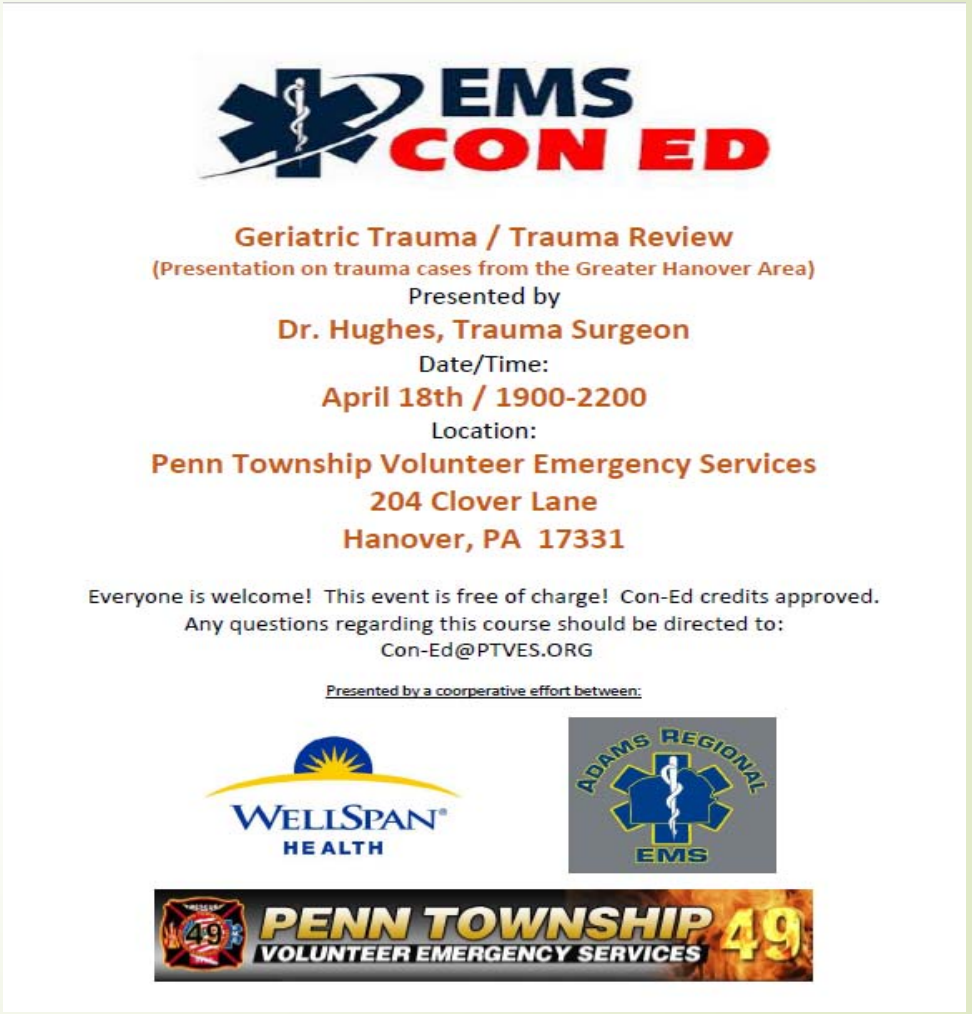
- Remove things from stairs and other places where you walk that you could trip over.
- Remove small throw rugs, or use double-sided tape to keep them from slipping.
- Keep items you frequently use in cabinets that can be reached without using a step stool or ladder.
- Have grab bars installed next to your toilet and in the tub or shower.
- Improve the lighting in your home. As you get older, you need brighter lights to see well.
- Have handrails and lights installed in all staircases.
- Wear shoes inside and outside the house. Avoid going barefoot or wearing slippers.

Community Involvement

- Participation on local, county and state committees utilizing our data to impact change, programs and grant allocation to the elderly population
- Matter of Balance – work with the Area on Aging to get access to populations that needs these programs
- Safe Driving for the Elderly - this is done in collaboration with Triple AAA, local police and the PA DOT
- Senior Fair – held yearly, home screening, PT screening, pharmacist reviews medications and risk
- Home Paramedic Program – Referrals are made, the paramedics follow the patients at home to help with needs, transportation or medical/trauma needs

EMS Outreach

- Contact the EMS regional providers
- Pull cases that their region has sent to York Hospital
- A Trauma Surgeon, the TPM and Outreach Educator prepare the presentation
- Go to the regional EMS fire house
- EMS participates in the case presentations.



Teaching Objectives

1

Discuss recent traumas sent to York's Level 1 Trauma Center from Adams County

2

Use this to highlight:

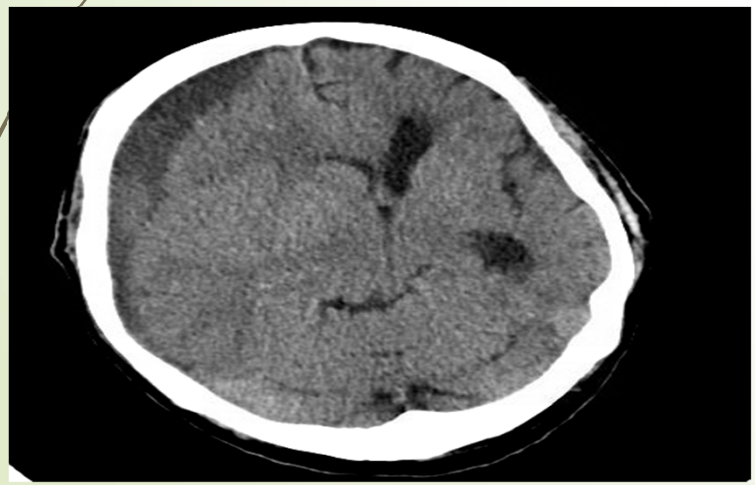
- principles of geriatric trauma management
- Pitfalls of geriatric trau*m*a patients
- Considerations in geriatric patients in general

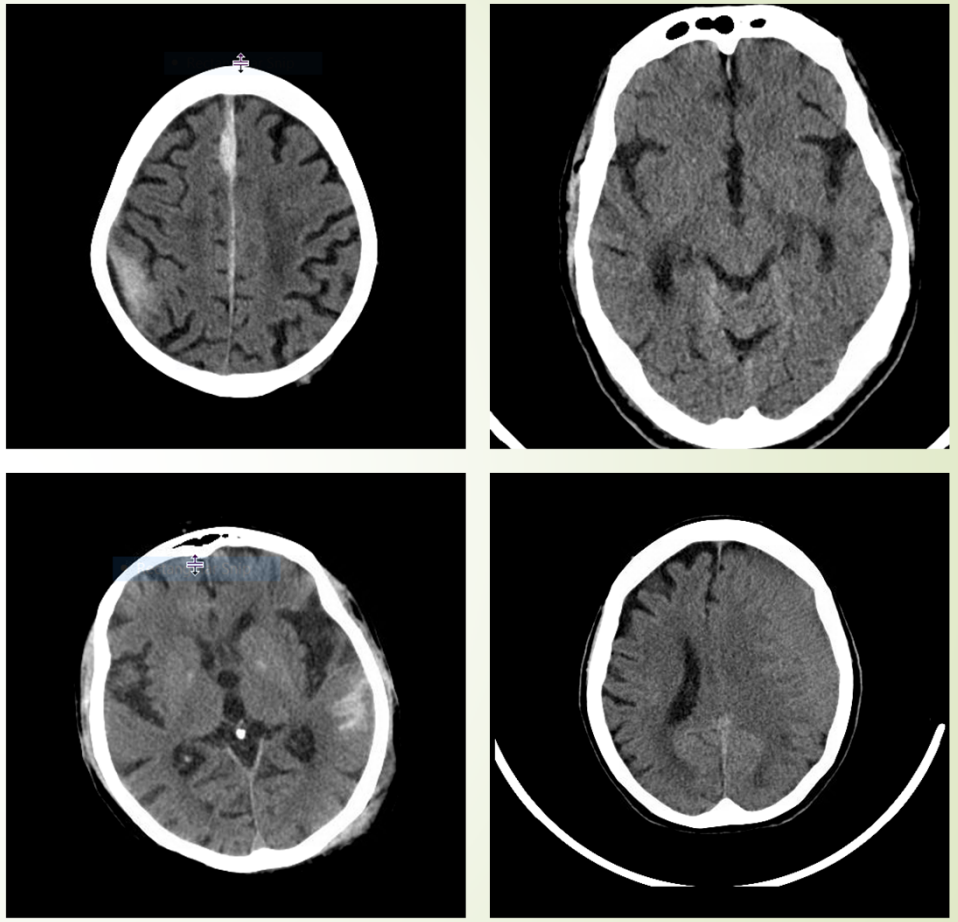
3

Provide feedback to EMS providers regarding transfers

Case Reviews and the Importance of Protocols

- Geriatric Fall from ground level (Standing)





Elderly Pitfalls

- Falls beget falls
- Diabetic disease is multifactorial and leads to trauma
- Subdural hematomas can be acute, subacute, or chronic
- Frequently reaccumulate if chronic
- Atrophy is double edge sword
- Plavix
- Timing on fracture repair
- Occult shock in elderly
- Osteoporosis and trauma
- Trauma patients get multiple evaluation by PT/OT/SLP
- Some times what is minor for a middle aged is major for an elderly.
- Loss of elasticity as we age
- Simple falls can result in complex problems
- Post operative urinary retention in elderly males

PITFALLS

- Direct from scene to York
- Hypertensive emergency verse urgency
- Chest wall protocol
- Other risks of sternal fractures
- Recognition of Complex facial injury
- Poly trauma in elderly
- Early reduction key
- Compromised blood flow with prolonged dislocation
- Check post reduction CT
- Risk of subdural in elderly increase
- Risk of epidural decreases
- Reversal protocol

PITFALLS

- Went from driving motorcycle to GCS 10
- Recognition if worsening mentation at SNF
- Must have differential diagnosis - *What causes alter mentation in trauma patient?*
- Collections of blood may expand – osmotic effect
- Polypharmacy has risk of badness
- Nicotine bad for bones – *Nicotine patch malpractice in patients with fractures*
- Futile care
- Progression of Intra-parenchymal bleeding

DEPARTMENT OF EMERGENCY MEDICINE

POLICY AND PROCEDURE YORK HOSPITAL/WellSpan

DATES: Effective: 2/24/2017
Reviewed:2/17/2017
Revised:

TITLE: ED MANAGEMENT OF ELDERLY PATIENTS WITH POTENTIAL TRAUMATIC BRAIN INJURY

This policy and procedure is intended as a guideline to assist in the delivery of patient care and management of Emergency Department and/or York Hospital WellSpan Services. It is not intended to replace professional judgement in patient care or administrative matters.

I. PURPOSE

To define the role and responsibilities of Emergency Physicians for evaluating elderly patients who present with potential traumatic brain injury.

I. PROCEDURE

1. The first point of contact for any patient in the ED, whether it be quick sort, the flow nurse, the primary nurse, or a physician, will screen for patients 60 years of age or older presenting with a traumatic mechanism or potential traumatic mechanism. An emergency physician (EM resident and/or attending physician) will be asked to evaluate the patient immediately and perform a rapid screening exam, including vital signs.
2. Should the patient meet any strict trauma bay criteria, as defined by our trauma criteria on the medical command form, they will be immediately dispositioned to the trauma bay, with the following additions to our standard criteria:
    a. Traumatic injury with multisystem complaints should be taken to the trauma bay
3. Should the patient not meet any strict trauma bay criteria, the physician will screen for anticoagulant or antiplatelet use, as well as possible traumatic brain injury or c-spine injury.
4. Any patient 60 years of age or older who is not on hospice, and who is taking anticoagulant or antiplatelet therapy (excluding isolated aspirin), and has sustained a potential traumatic brain injury or c-spine injury within the last 24 hours, will be taken for a P1 head and/or c-spine CT, and immobilized as appropriate.
5. An EM attending or resident will either accompany the patient to CT, or immediately view the images as available on PACS. Should any obvious injury be present, including c spine fracture or intracranial bleeding be present, the patient will be transported to the trauma bay immediately and trauma will be alerted, unless circumstances exist in the department that are more conducive to the patient returning to the ED upon agreement of the trauma and ED attending.
6. If no injury is present, the patient will be taken back to the department for further evaluation.

REFERENCES/RESOURCES

- Susman, Mark BS, et. al. *Traumatic Brain Injury in the Elderly: Increased Mortality and Worse Functional Outcome At Discharge Despite Lower Injury Severity*. Journal of Trauma-Injury Infection & Critical Care: August 2002 - Volume 53 - Issue 2 - pp 219-224.
- Bell, AJ, et. al. *Characteristics and outcomes of older patients presenting to the emergency department after a fall: a retrospective analysis*. *MJA* 2000; 173: 179-182.
- http://www.east.org/education/practice-management-guidelines/triage-of-the-trauma-patient
- http://www.mercy.com/Youngstown/images/2014%20PCU/Geriatric%20Trauma.pdf
- Werman, HA et. al. *Development of statewide geriatric patients trauma triage criteria*. *Prehosp Disaster Med.* 2011 Jun;26(3):170-9
- Rittenshouse, K et. al. *The ACT Alert: preliminary results of a novel protocol to assess geriatric head trauma patients on anticoagulation*. Am Surg. 2015 Apr;81(4):408-13.
- Jacobs DG. Special considerations in geriatric injury. *Curr Opin Crit Care*.2003;9:535-539.

REFERENCES/RESOURCES

- Rogers A, Rogers F, Bradburn E, Krasne M, Lee J, Wu D, Edavettal M, Horst M. Old and undertriaged: a lethal combination. *Am Surg*. June 2012;78(6):88-92.
- Chan DC, Bass RR, Cornwell EE, Mackenzie EJ. Undertriage of elderly trauma patients to state-designated trauma centers. Arch Surg. 2008;143:776-781.
- Bradburn E, Rogers FB, Krasne M, Rogers A, Horst MA, Belan MJ, Miller JA. High-risk geriatric protocol: Improving mortality in the elderly. J Trauma Acute Care Surg. August 2012;73(2):435-440.
- Sterling DA, O'Connor JA, Bonadies J. Geriatric falls: Injury severity is high and disproportionate to mechanism. *J Trauma*. 2001;50:116-119.
- Bergeron E, Clement J, Lavoie A, Ratte S, Bamvita JM, Aumont F, Clas D. A simple fall in the elderly: Not so simple. *J Trauma.* 2006;60:268-273
- Shifflette VK, Lorenzo M, Mangram AJ, Truitt MS, Amos JD, DunnEL. Should age be a factor to change from a level II to a Level I activation? *J Trauma.* July 2010;69(1):88-92.

Thank You!

- Can you name 3 fun facts about York Pennsylvania?

First Fair
First Capital of the US
First in snack manufacturing

SEPTEMBER 7-16, 2018

YORK FAIR

AMERICA'S OLDEST FAIR®

SINCE AMERICA'S FIRST FAIR® 1765

We invite you to Explore York, the Factory Tour Capital of the World