

Violence in Ottawa: Stories and Statistics from the Trauma Centre

Melissa Waggott, RN, BScN, MScN
Trauma Coordinator





What is Trauma....

A physical injury or wound caused by external force or violence







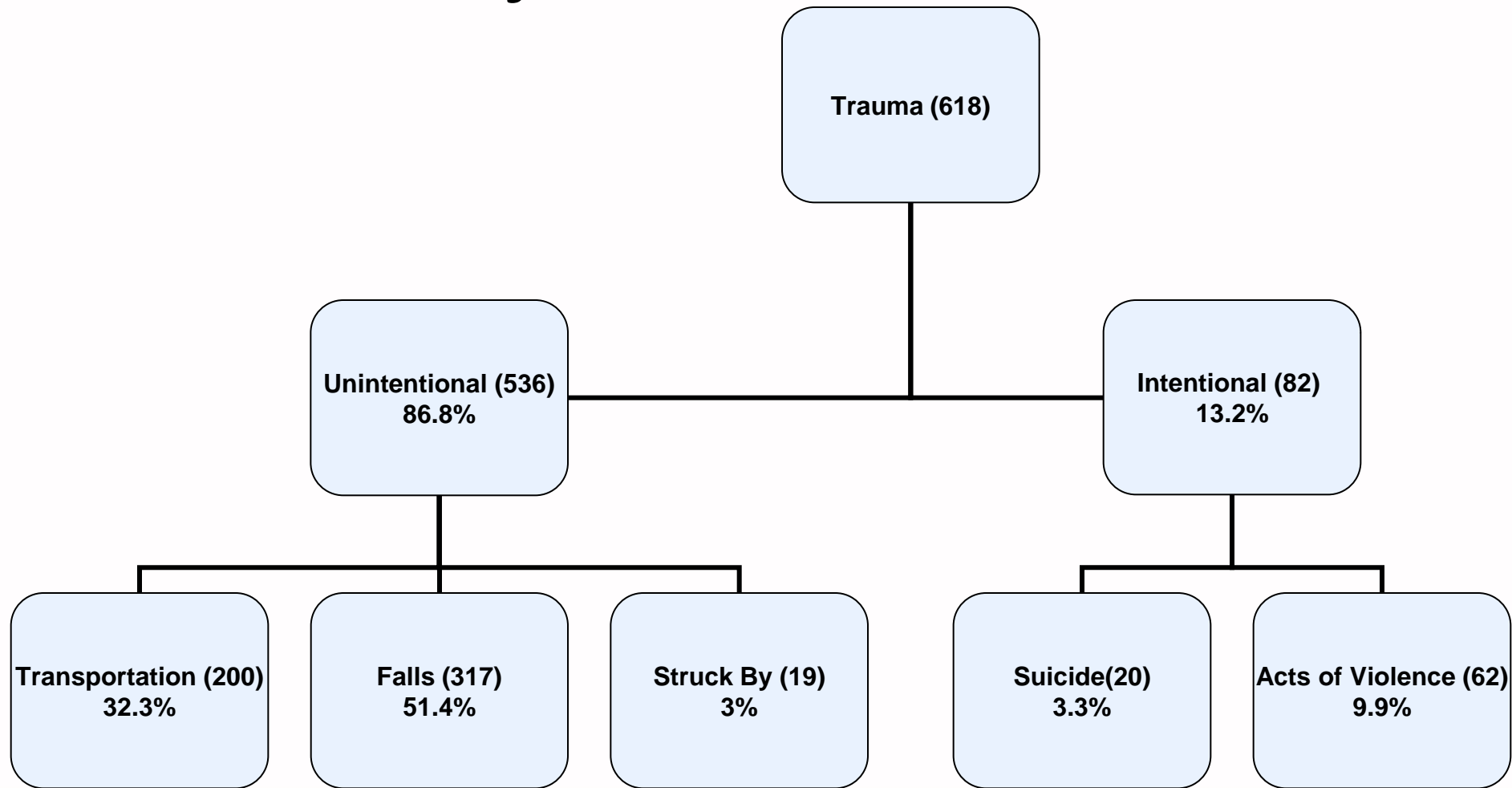
Compassionate People. World-Class Care. Des gens de compassion. Des soins de calibre mondial.

Overall Trauma Statistics

- Nationally trauma is the leading cause of death from age 1- 44
- Cost:
 - Canada: \$13 billion/year (Health Canada)
 - Ontario: \$5.7 billion/year
- 3147 Trauma Patients
- 618 Major Trauma



Major Trauma at TOH





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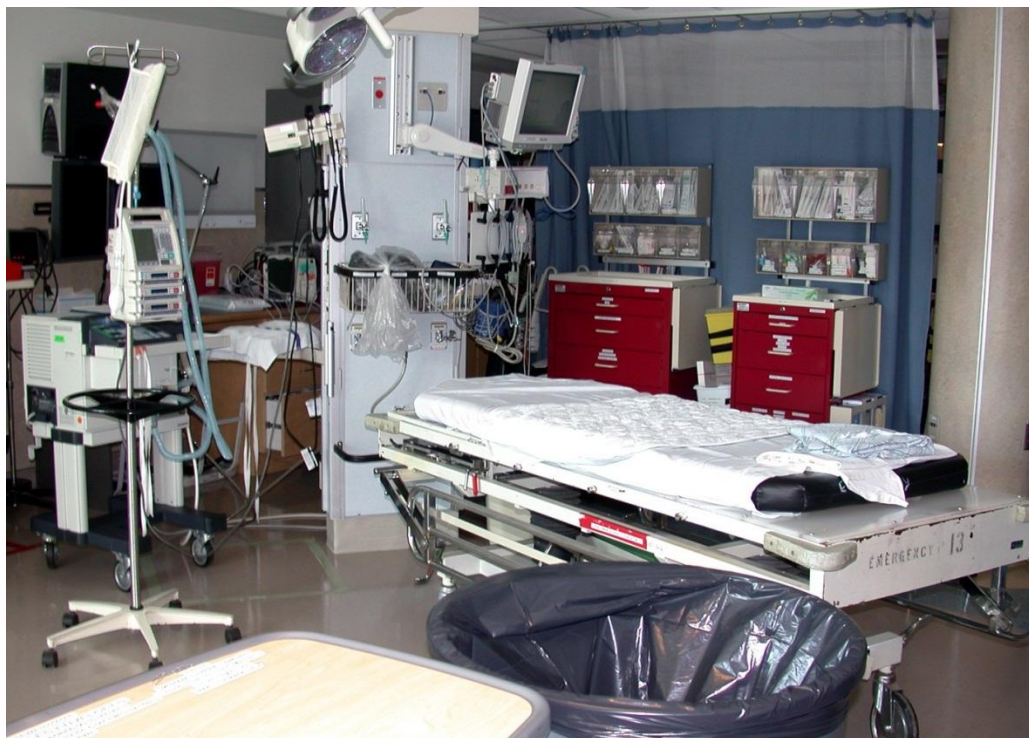
Its 2 am Saturday Morning...

The Patch phone rings ...

21 year old male multiple gun shot wounds ETA 5 min



Prior to Arrival



Trauma Team Activation Guidelines CODE 1 TRAUMA

Assess Vital Signs and Level of Consciousness

1. Respiratory distress/airway compromise, and/or intubation
2. Confirmed Systolic BP <90 at any time
3. GCS < or = 8 with mechanism attributed to trauma

Initiate Code 1 Trauma



YES?

NO?

Assess Anatomy of Injury

1. Potential for airway compromise (e.g., severe maxillofacial injury)
2. Suspected Head Injury (GCS<12) with major torso or extremity injury suspected or present or any 2 body systems significantly involved.
3. Suspected spinal cord injury
4. Transfer patients from another hospital receiving blood or IV fluids to maintain vital signs
5. Penetrating trauma to abdomen, neck, chest, flank or proximal to the elbow and knee
6. Major torso injury
7. Major orthopaedic injury
 - Multiple open fractures or
 - Amputation proximal to elbow and knee or
 - Pelvic fractures
8. Trauma with burns of > 10% or inhalation injury
9. Emergency Physician Discretion

Initiate Code 1 Trauma



YES?

NO?

Assess Co-morbid Factors

1. Pregnant trauma patient
2. Elderly trauma patient (>age 70)
3. Bariatric patient
4. Presence of intoxicants
5. Hostile environments (extremes of hot or cold)

Criteria for Code 1 Trauma applies to:

- o All Trauma <24 hrs old from scene or hospital
- o Trauma >24 hrs old with incomplete evaluation

If in doubt, initiate Code 1 Trauma



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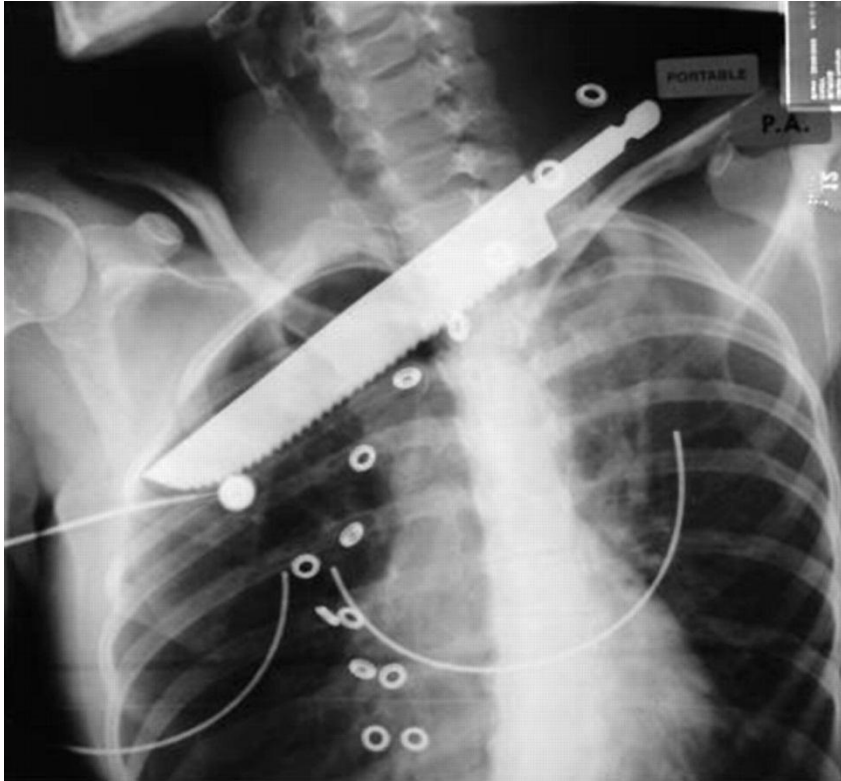
Then the Patient Arrives...



Compassionate People. World-Class Care. Des gens de compassion. Des soins de calibre mondial.



Mechanism Penetrating vs. Blunt

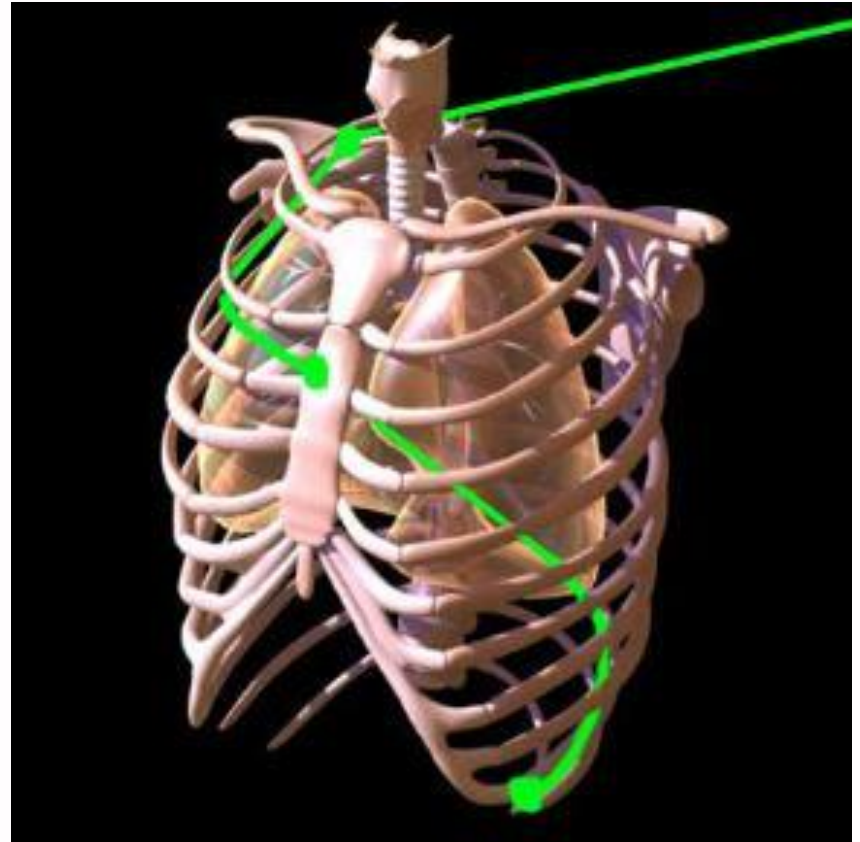
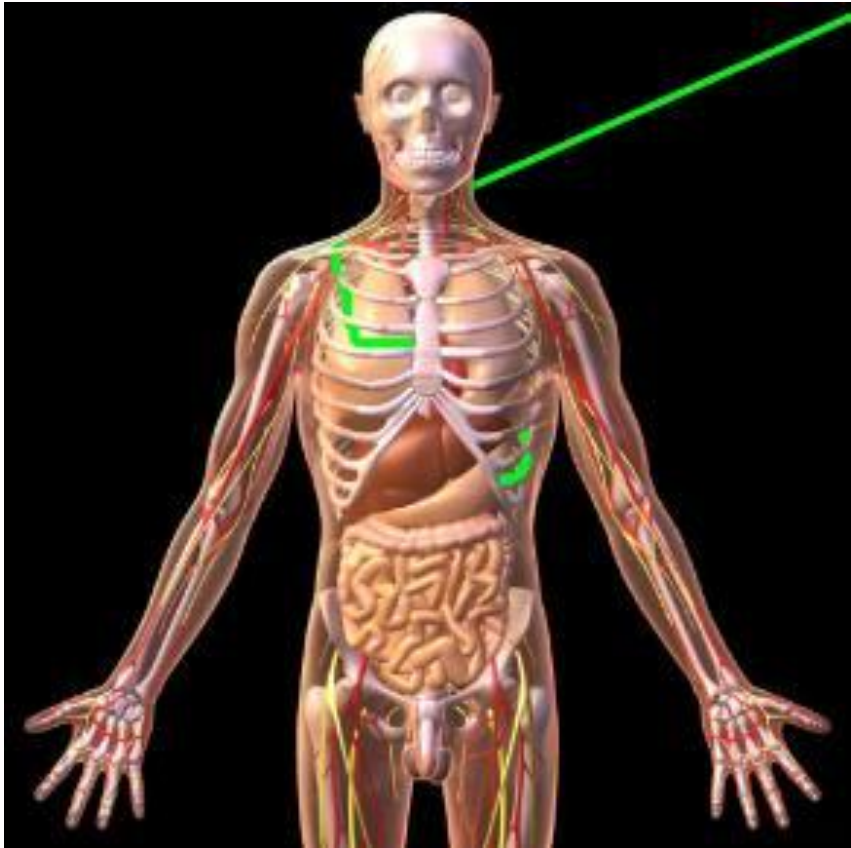


Hanvesakul R et al. Emerg Med J 2005;22:386-387



Why does Mechanism Matter

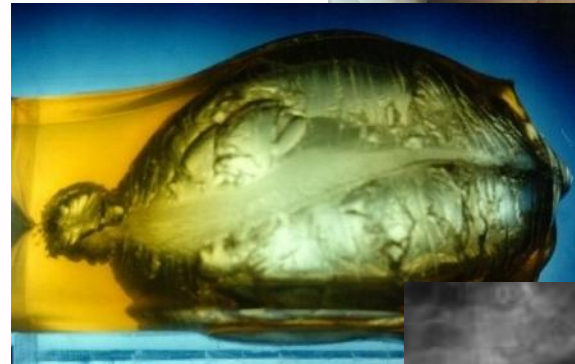
- Big Force = Big Injury
- Helps us to plan
- Sometimes injuries are not as they initially appear...





It's More than Just the Number of Holes

1. Penetration
2. The “Shock Wave”
 - *Can be 10X the diameter of the bullet*
3. Fragmentation



What Next ???

- The operating room
- No walking for at least 6 weeks
- Could develop an infection
- Could have nerve damage
- Probably will need rehabilitation



How does violent trauma in Canada compare to Ottawa?



Violent Trauma in Canada

2009-2010

- 1217 (9%) Overall Major Trauma

- Bodily Force (52%)
- Stab wounds (26%)
- Gun Shot (15%)

(Canadian Institute for Health Information, 2011)





Violent Trauma Seen at TOH

2008-2012

- 275 (10%) Overall Major Trauma
 - Bodily Force (45%)
 - Stab wounds (37.5%)
 - Gun Shot (9.5%)
 - Other (8%)



Patient Profile

Overall Trauma Population

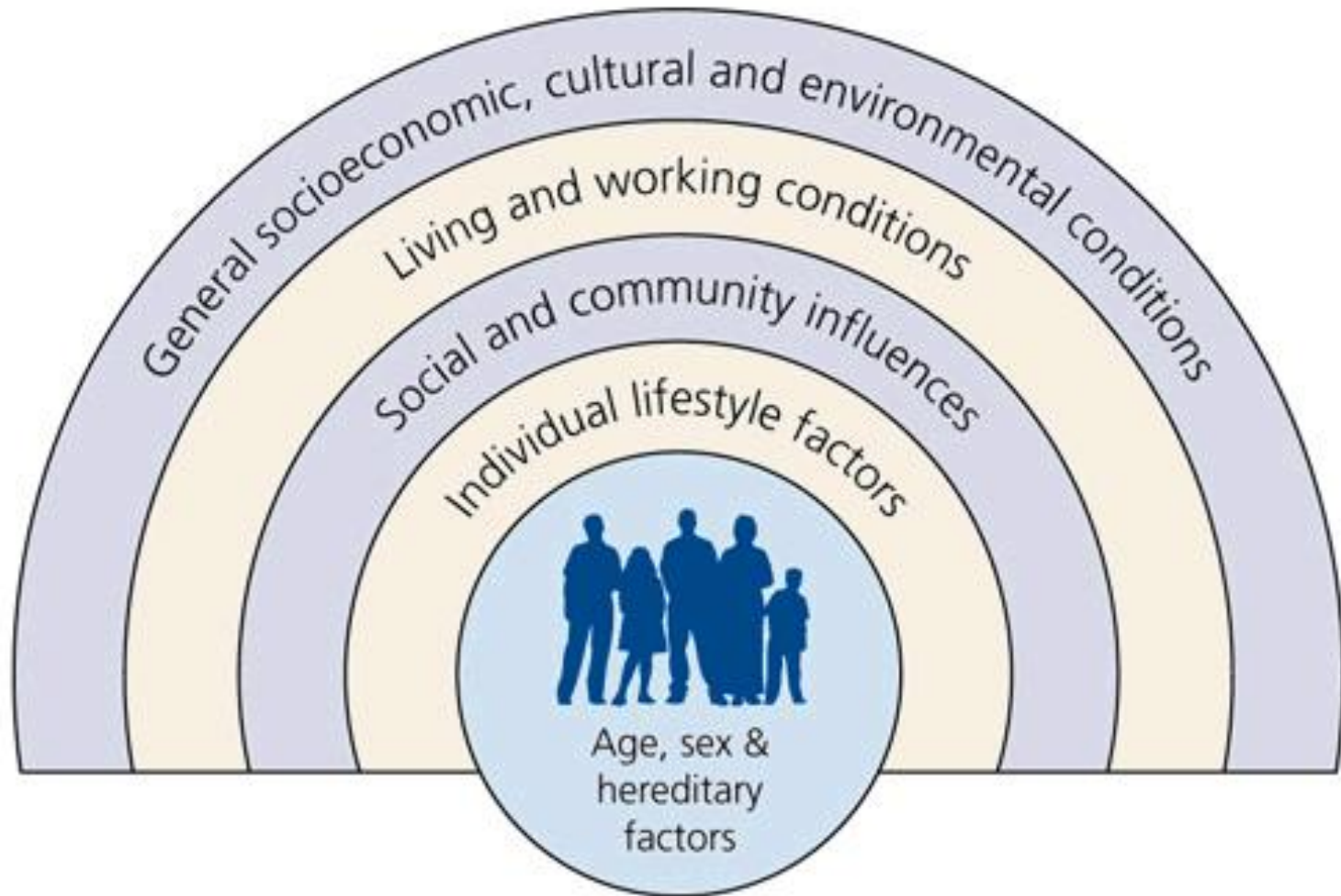
- 68% Males
- Average Age 56 years
- 15 % positive for alcohol

Victims of Violence

- 90% Male
- Average Age 33 years
- 42% positive for alcohol



What Puts Victims at Risk?



Other Risk Factors

- Drugs
- Alcohol
 - Makes typically less vulnerable populations more vulnerable
 - 42-53% of homicide victims had been drinking (Canada and US) (McClelland & Teplin, 2001)
- Mental Illness
- Involvement in Crime

Unique Challenges of Violent Trauma

- Patient Safety
- Staff Safety
- Discharge Planning
- Repeat victims
- Overlap between victim and offender
- Long term effects of experiencing violence

Future Opportunities

- Primary Prevention
 - Address individuals and social environments (Fournier-Ruggles, 2011)
- Secondary Prevention
 - “Teachable” moments in the ER (Snider & Lee, 2009)

Conclusion

- Violent Crime affects more than just the victim
- Effects of violence last long after the injuries have healed

References

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Questions

