

# It's Not About Scoop and Run or Scoop and Play: It's About the Clock

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# Introduction

- Fundamental difference between US and EU approach to pre-hospital care:
  - Historically, the US has used the approach of bringing injured patients to physicians with little to no on scene time (location and time specific). The “Scoop and Run” approach.
  - Whereas, the EU has developed sophisticated systems that bring physicians to injured patients. The Scoop and Play” approach (?longer pre-hospital times).
- Each approach is aggressively defended by its proponents and each method has its own internal opponents.

# The Philadelphia Experience

- Population ~ 2 million
- 5 Adult Level 1 Trauma Centers; 2 Pediatric Level 1 Trauma Centers (all certified by the Pennsylvania Trauma Foundation)
- Philadelphia Fire/Rescue with both ALS and BLS service
- Average run times < 30 minutes
- No definitive trauma system exists within city (typically delivered to the closest facility but not always the case)

# Temple University Hospital

- 800 bed facility
- Dedicated Trauma/Resuscitation suite
- 24 bed dedicated Trauma SICU
  - Trauma Activations: 2008-2012 = 10406
  - Trauma Admissions: 2008-2012 = 8297
  - GSW victims: 2012 = 522 (28% of all admissions)
- Long concerned about the delay associated with the delivery of our most serious penetrating patient
- Believer in the “Scoop and Run” approach which has been adopted by the Philadelphia Police who, in greater than 50% of penetrating cases, toss the victim in the back seat of their vehicle and deliver him or her to a trauma center

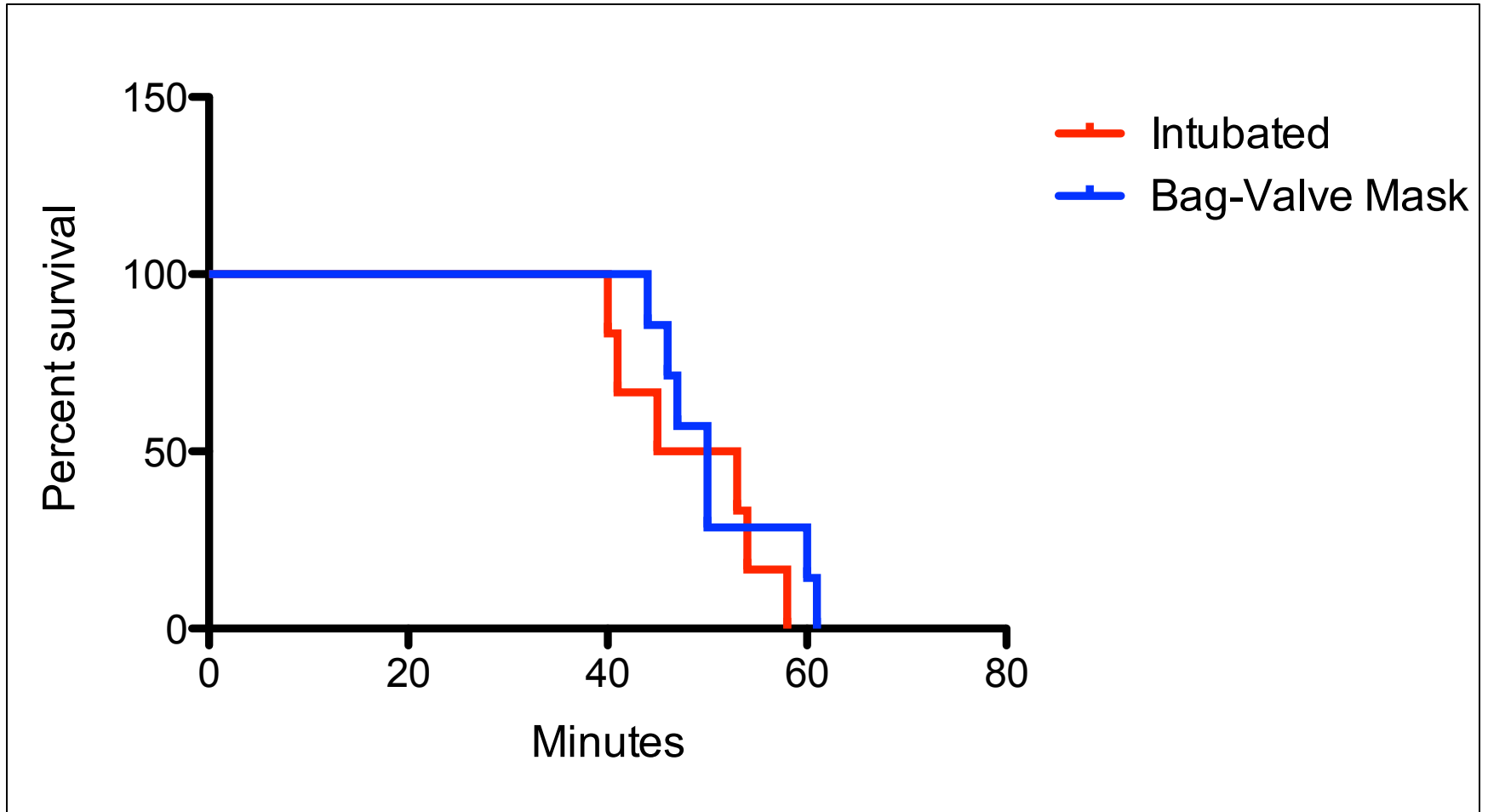
# Home Grown Clinical Papers

- Seamon MJ, et al. J of Trauma, 2007 Jul; 63(1) 113-20.
  - Showed that multiple procedures performed on penetrating trauma patients (by ALS ambulance personnel) who required EDT resulted in a 2.63 fold increase risk of death
- Seamon MJ, et al. Injury, 2013 May; 44(5) 634-8.
  - That additional procedures performed by ALS ambulance personnel did not appear to be beneficial for our penetrating trauma patients

# Basic Science Data

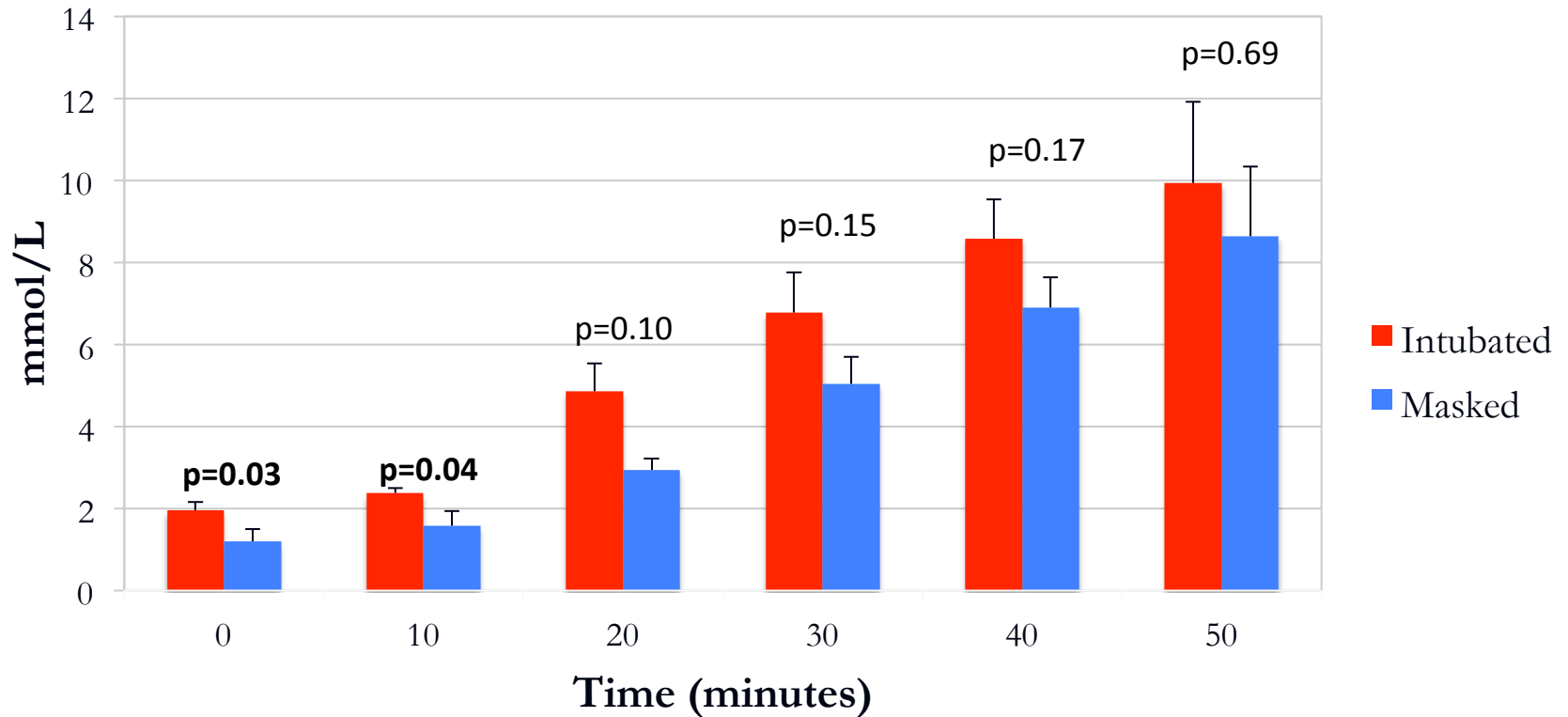
- Utilized a validated swine hemorrhagic shock model to look at the effects of pre-hospital intubation
- Initial study looked at the effects of intubation on a series of physiological markers:
  - Taghavi S, et al. J Trauma Acute Care Surg 2012. Aug; 73(2):332-7

# Survival



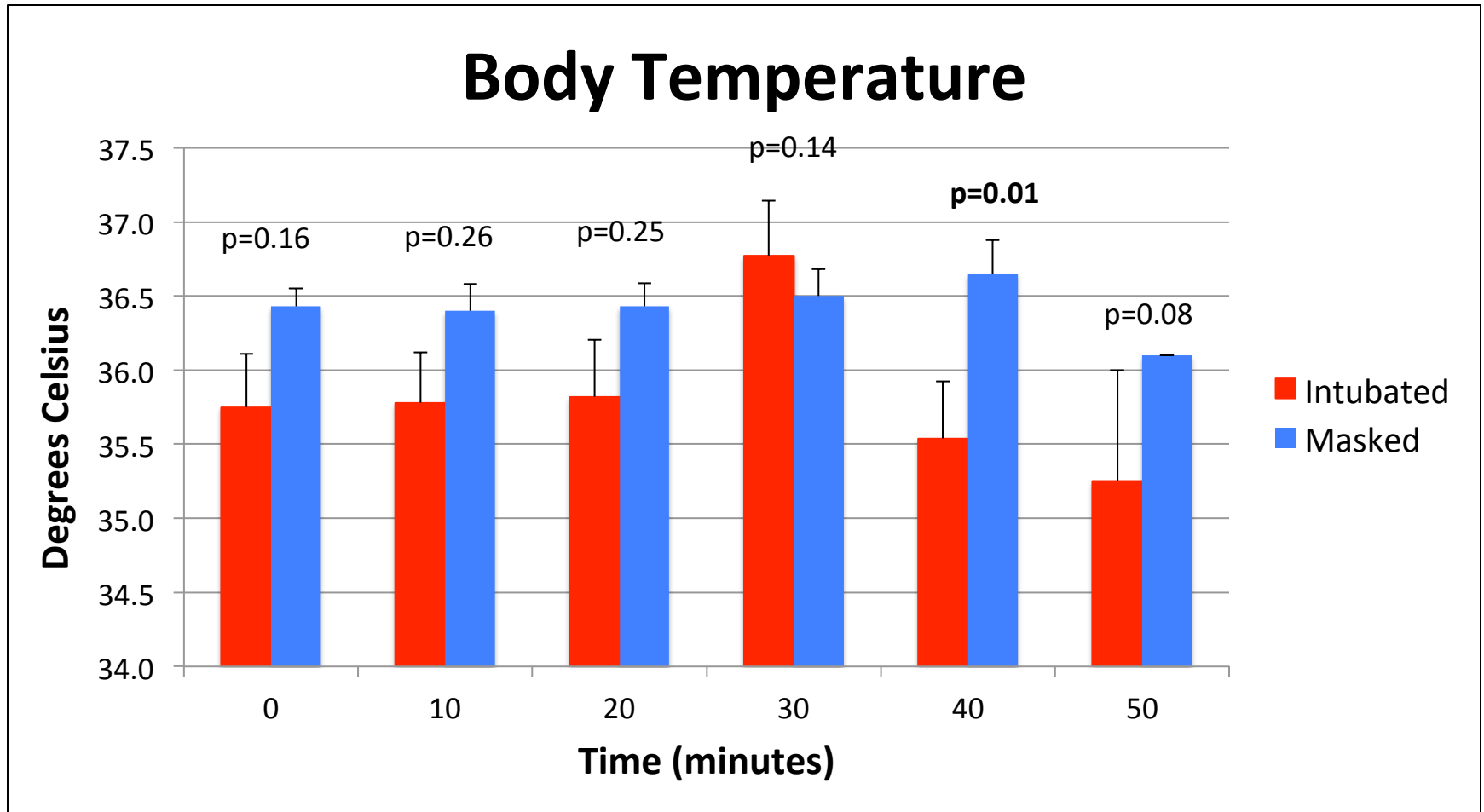
# Metabolic Data

## Lactic Acid



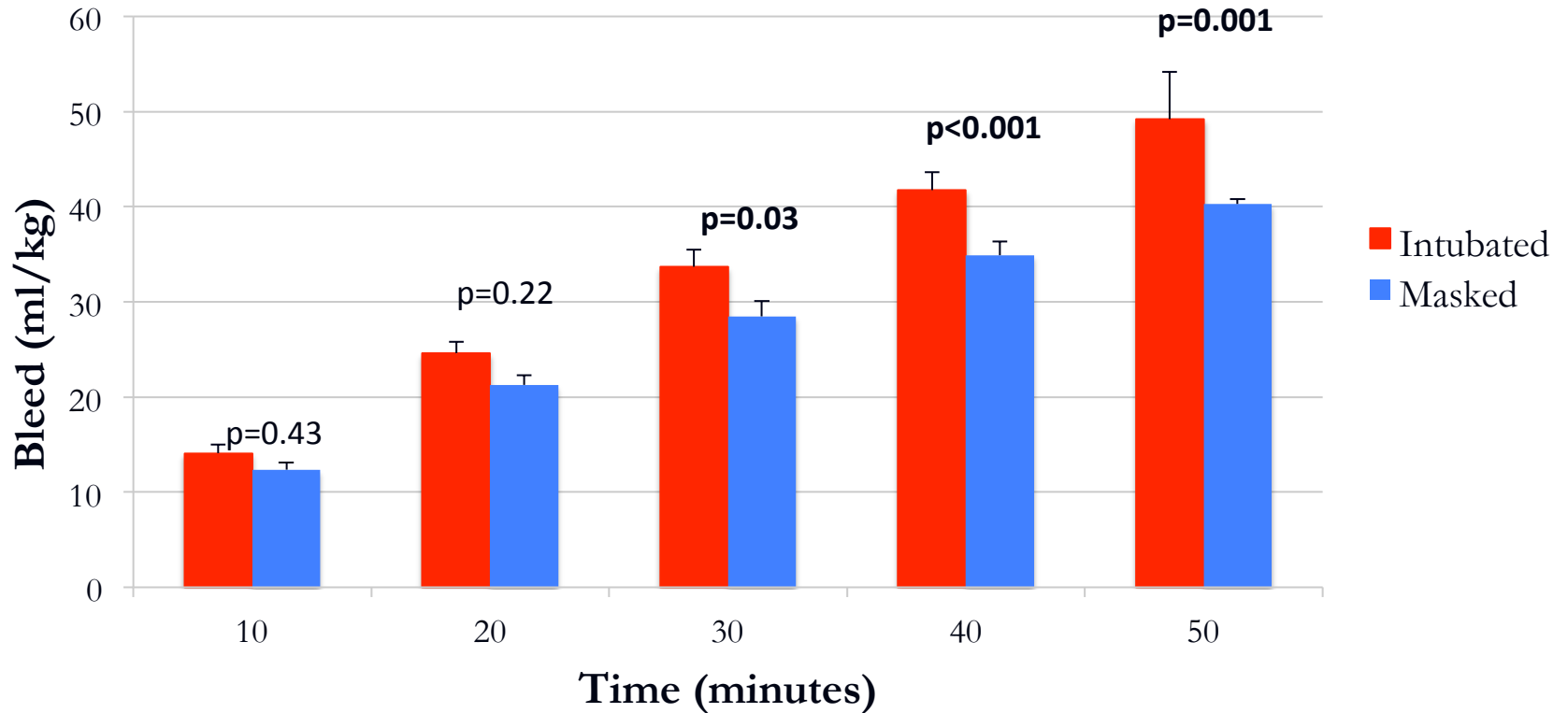


# Thermoregulation



# Bleeding Data

## Total Bleed Corrected for Weight

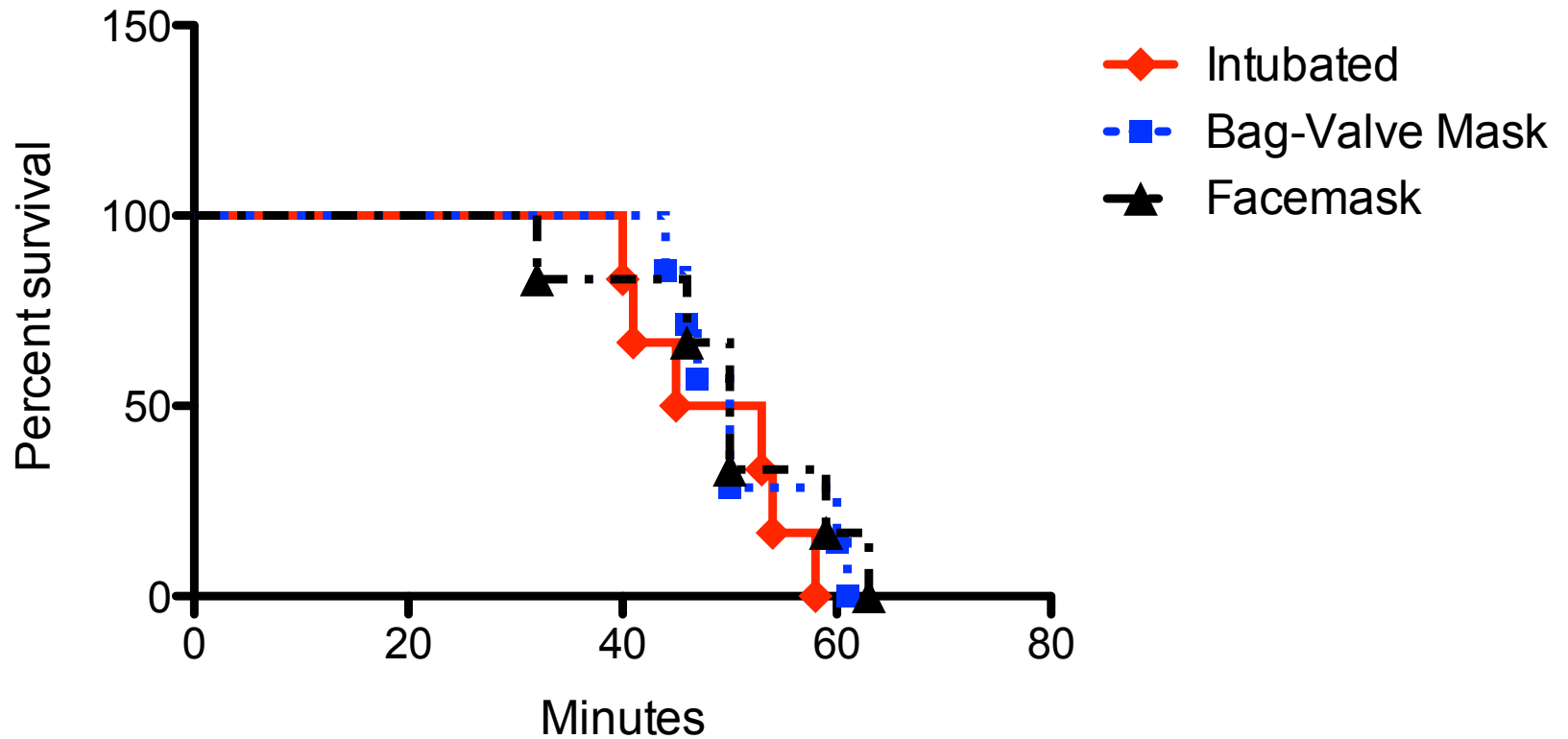


# More Basic Science Data

- Utilized same model this time using a method of hypo-ventilation and measured the same parameters:
  - Taghavi S, Rappold JF, et al. J Trauma Acute Care Surg. 2013 May; 74(5):1246-51

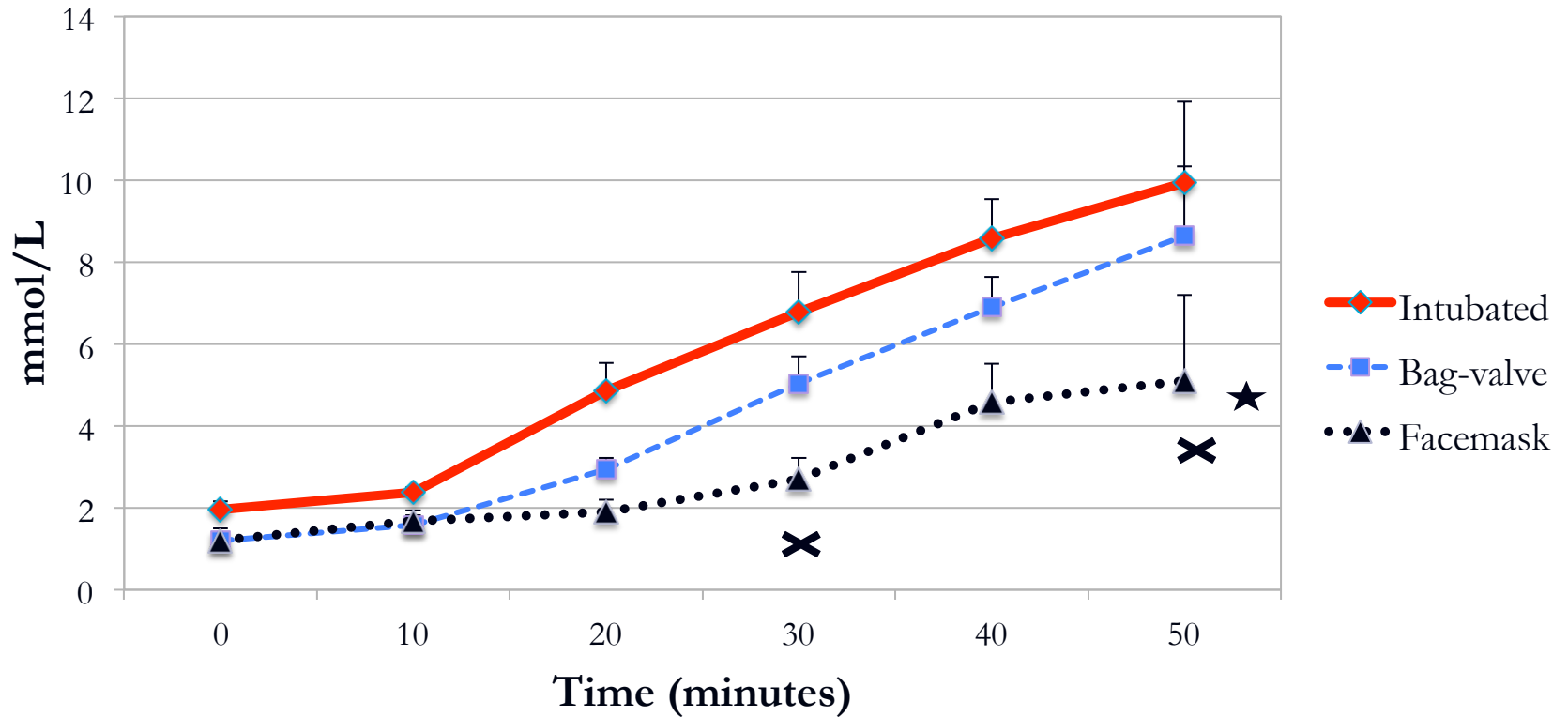
# Survival

## Comparison of Survival



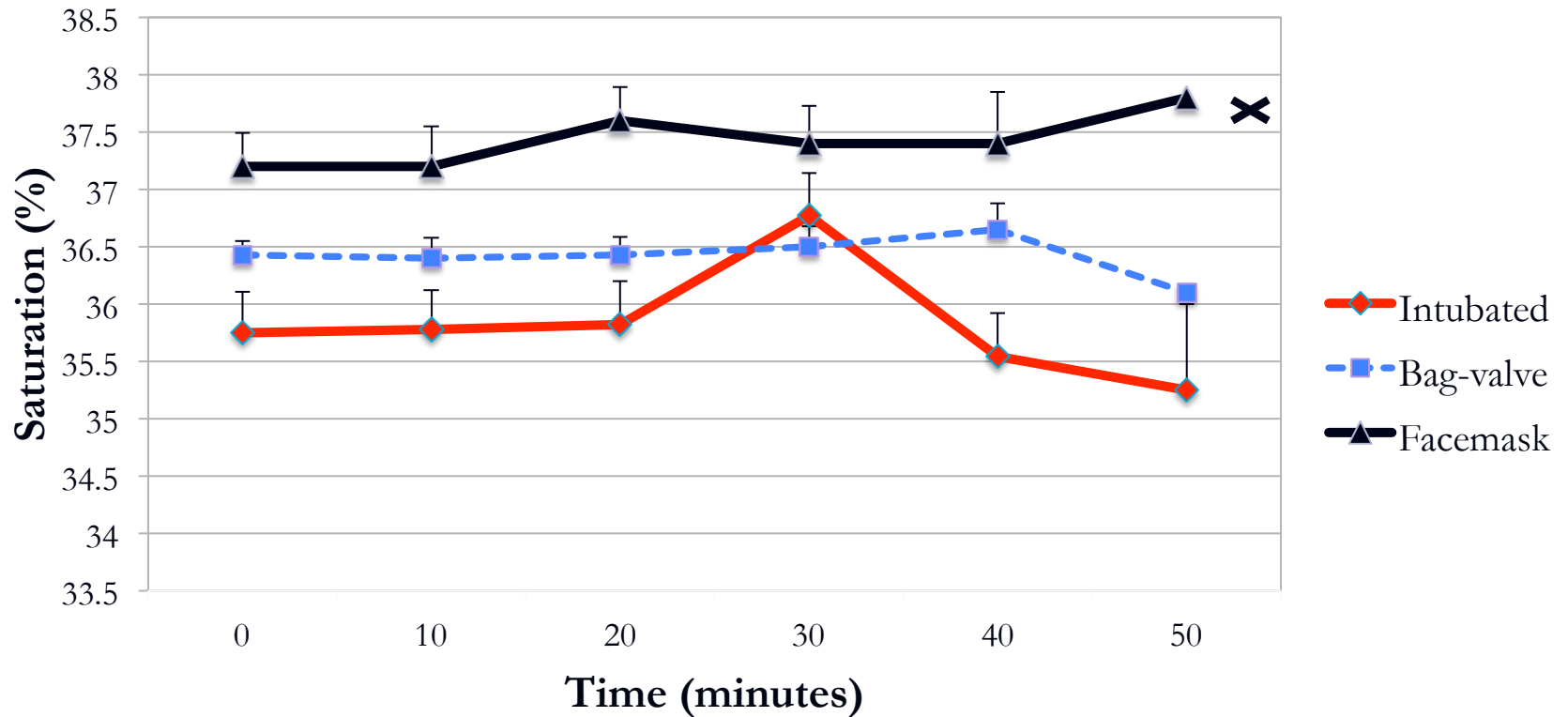
# Metabolic Data

## Lactic Acid



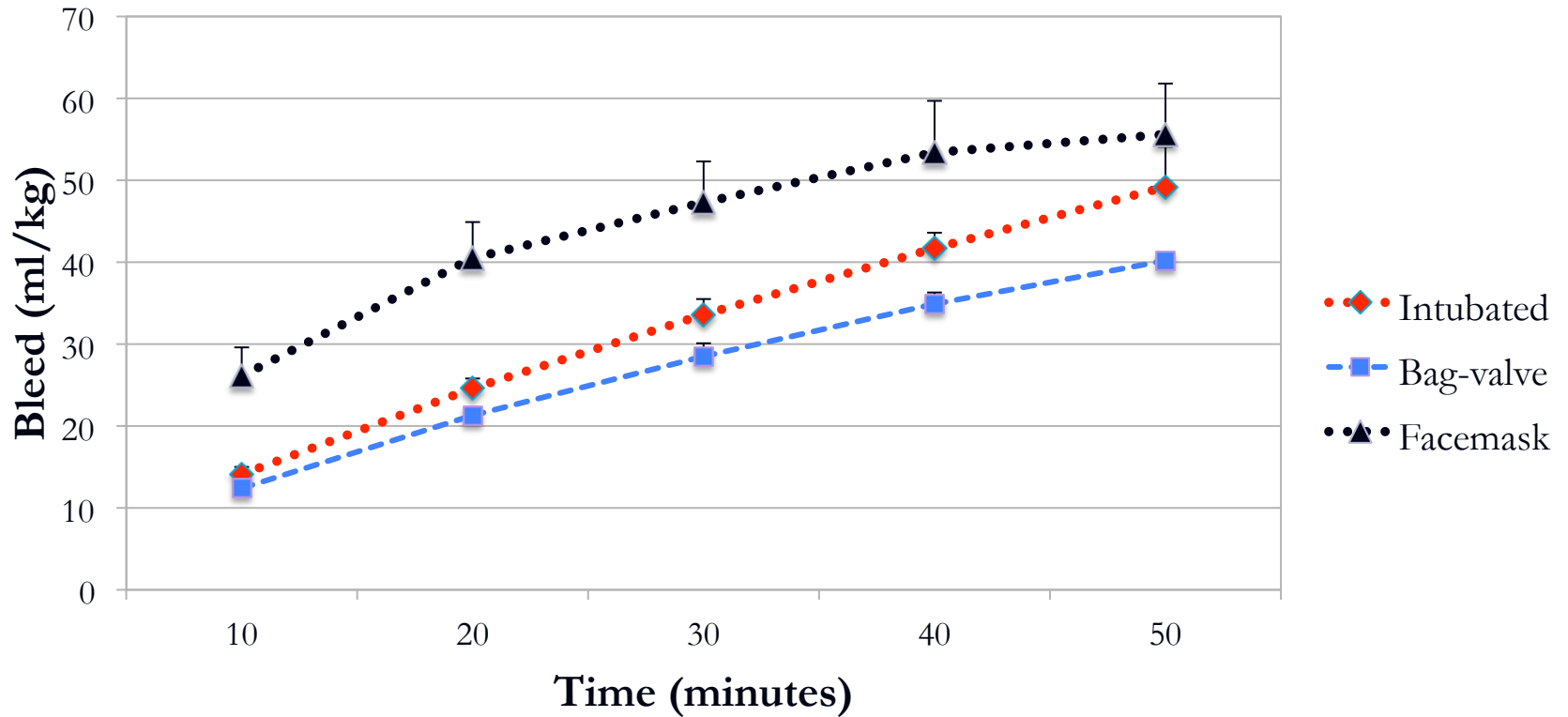
# Thermoregulation

## Body Temperature



# Bleeding Data

## Total Bleed Corrected for Weight



# Final Clinical Piece

ISS		Lived	Died	OR
<15	BLS	123	5	
	ALS	298	26	2.15
15-30	BLS	48	8	
	ALS	119	62	3.12



# Final Thoughts

- There really is no right answer to this question. For the Mayo and possibly the London HEMs system air evacuation and multiple en route procedures may in fact save lives.
- But for those in American urban environments with short transport times rapid transport to a trauma center seems to be the key to survival.