



# Goggles: Where are we?

Tej M Singh, MD

Elizabeth Gardner, MD

Brij Singh

2/12/12



**USA**  
FIELD HOCKEY

# US Festival Survey 2011

- Data collected over 400 surveys:
- 320 players played both with and without goggles
- 155 goggles caused major difference negatively
- Neutral style of play affected by
- Injuries: more 132, no change 115
- 140 injuries caused by goggles during play



# National High School Federation Decision

- 4/15/11:
- Serious eye injuries only: eye ball>
- Risk minimization
- Sports Medicine Advisory Committee: looked at data for goggle states: MA, NJ, CT, RI, ME)
- Bypassed the normal 2 year lead for equipment.



# Testing of Goggles

- American Society for Testing and Materials
- ASTM F2713-09: Standard for field hockey
- Goggles “ minimize or reduce injury to the eye and adnexa due to penetration of ball or stick”
- No testing of peripheral vision



# National Operating Committee on Standards for Athletic Equipment

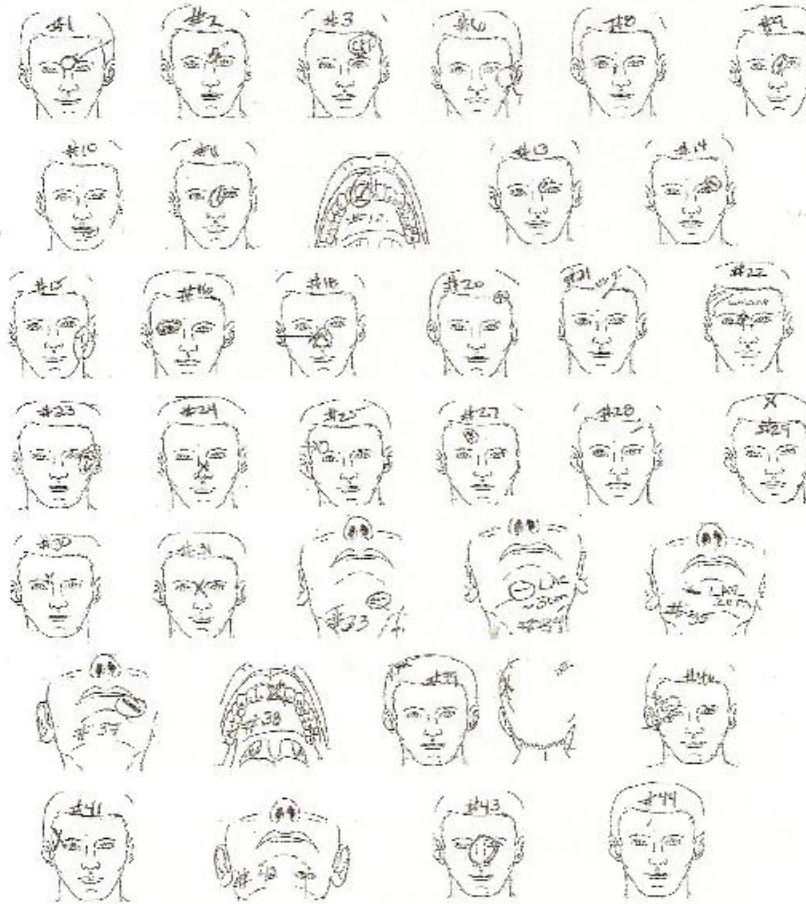
- Injury prevention research
- Focusing on head injury
- Maybe interesting to apply for a study or grant with them.



# US Festival History 2007-2011

- Karen Collins and Jen Birnstein
- Target Zone: forehead, nose, zygoma, and temple
- 35% of all injuries at Festival are in this region: About 70-80 injuries at each Festival
- **NO EYE BALL OR ADNEXA INJURIES**
- Mostly Peri-Socket

2010 Festival Injury Overview





# IRB

- Approved IRB project: Palo Alto Medical Foundation Research Institute
- Granted IRB Exempt approval 2/10/12
- Liz Gardner/Tej Singh
- Study of Goggles



# NCAA Database of Collegiate injuries

- Pattern of eye and head injuries in field hockey 2004-2009
- NCAA database, company is Datalys.
- IRB approval granted by PAMF
- Liz Gardner Dissertation



**USA**  
FIELD HOCKEY

# High School Data Collection

- 2011 High School Data
- Large group in Fairfax, VA
- Electronic database of all athletic injuries suffered by athletes
- IRB approval granted!



**USA**  
FIELD HOCKEY

# Where do we go?

- Festival with goggles in 2012 and 2013?
  - Better data comparison
- What helps: Eyeball vs. Peri-eye
  - What do goggles do and protect?
- Wait for IRB data by June 2012
- Apply for NOCSAE grant
  - Injuries with goggles
  - Peripheral vision
  - Stanford/Bellarmino College Prep project