

Athletic Injuries and their Treatment in Rural Illinois

Purpose

PTo determine the incidence of athletic injury in a rural Illinois community

PTo determine the method of treatment of these injuries

PTo determine if all the resources required for athletic injury prevention and treatment are available in a rural community

Purpose (cont.)

- P To determine the extent of involvement of family physicians in athletic injury prevention and treatment
- P To compare the methods of treatment in a rural community compared with national and/or state standards
- P To determine if there is a need for sports medicine in this rural community, and also to see if there is enough athletic injury to sustain a family practice doctor with sports medicine training

Hypotheses

P The level of treatment of high school athletic injuries in a rural Illinois community is less than their urban counterparts

P Family physicians in rural communities play a larger part in the treatment of athletic injury than those in urban locations

Methods

P273 local high school students completed a seven question survey inquiring about participation in competitive sports, athletic injuries, methods of treatment, follow-up treatment, and physician visits

PThree local family physicians were interviewed about their participation in the treatment of athletic injury in the high school population

Methods (cont.)

PInterviews with the I.H.S.A. office and the local school board office to determine any standards that may currently be in place

PEvaluating research papers from the National Athletic Trainers Association for recommendations on health care personnel in athletic events

Results

Participation

P71.4% of all students interviewed participated in at least one organized sport

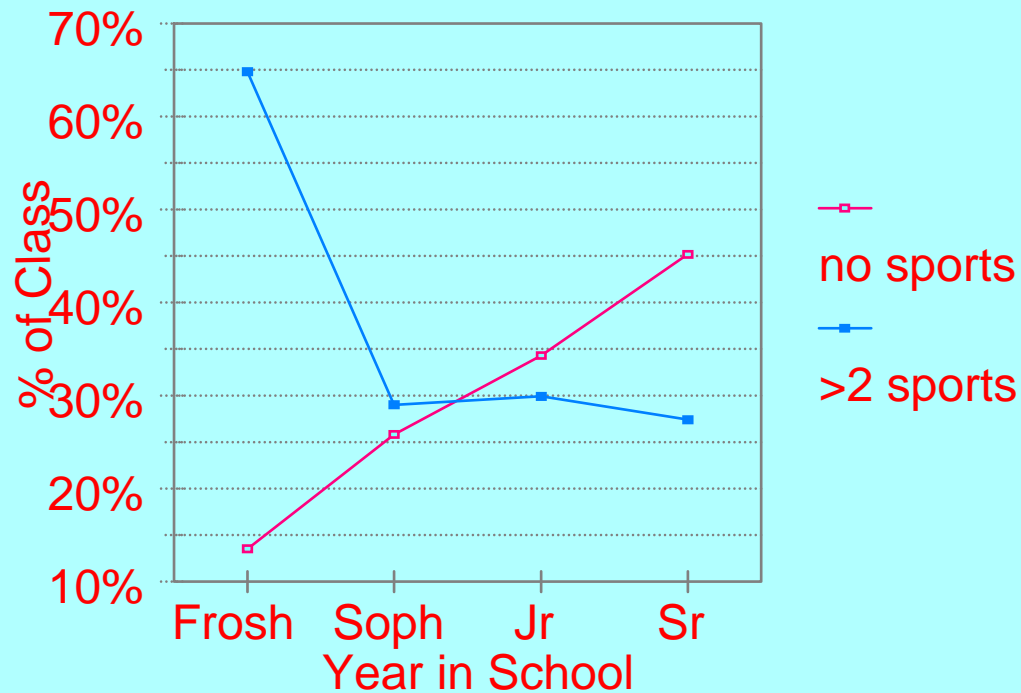
P18.3% participated in three or more organized sports

PAs the classes progress (fresh to senior), a higher percentage of students do not participate in any sports, and a smaller percentage participate in three or more sports

Results

Participation (cont.)

Athletic Participation



Results

Injuries

P49.1% of all students interviewed suffered at least one athletic injury that required treatment and/or time missed from their sport

POf only students that participated in at least one sport, 64.6% had at least one injury

PNo significant differences were noted between gender (49.3% of boys had at least one injury, 48.8% of girls)

Results

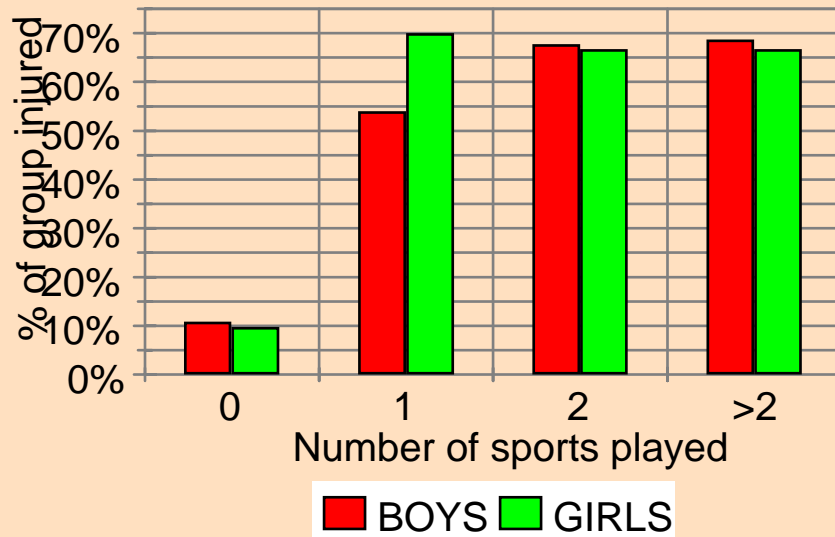
Injuries (cont.)

- < In males, as the number of sports participated in increased, the percentage of students injured increased, along with the average number of injuries
- < No significant differences were seen in the percentage of female students injured whether they played one, two, or more than two sports (70.0% vs. 67.7% vs. 68.8%)

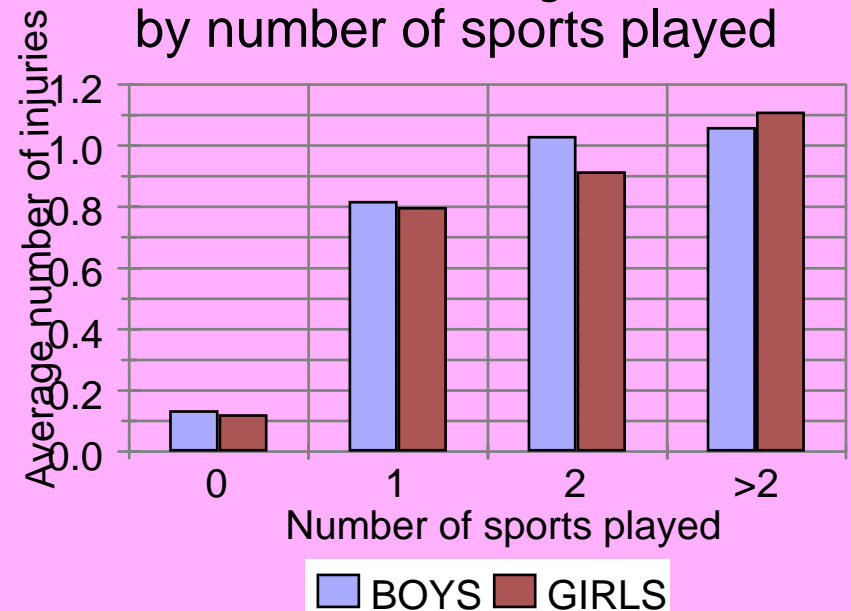
Results

Injuries (cont.)

Athletic Injuries by number of sports played



Athletic Injuries by number of sports played



Results

Area of Injury Occurrence

P Roughly one-half of both male and female injuries occurred during practices

P Males were more likely to suffer an injury during actual athletic competitions (40.7% vs. 31.6%)

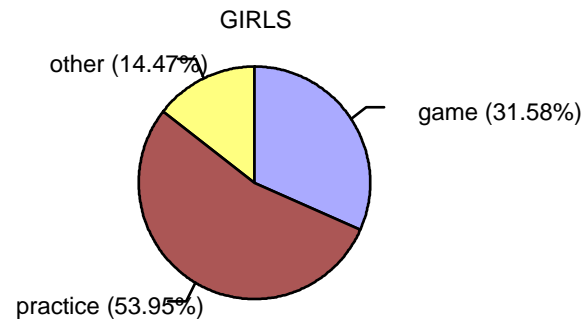
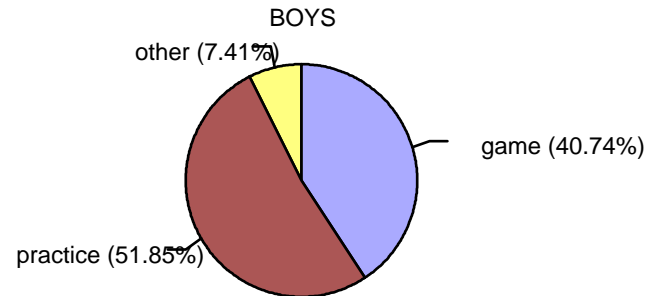
P Females were almost twice as likely to be injured during athletic training sessions as their male counterparts (14.5% vs. 7.4%)

Results

Area of Injury Occurrence

Athletic Injuries

Area of Occurrence



Results

First Treatment

P The local high school has trainers that attend several games and also spend some time at practices after school

P One-quarter of the students responded that they themselves were the first one to treat their injury

P Only 45.5% of all injuries were initially treated by someone associated with the medical field (trainer, doctor, or nurse)

Results

First Treatment (cont.)

PT Trainers appear to work with all sports, as roughly one-third of all injuries were initially treated by trainers in the one, two, and more than two sports categories (31.5% vs. 33.3% vs. 31.5%)

PT The trainers appeared to work more at the varsity-level games, as Juniors (47.6%) and Seniors (41.2%) were much more likely to receive treatment than Freshmen (13.9%) or Sophomores (20.0%)

Results

First Treatment (cont.)

Physicians were the first treaters in only 12.2% of all injuries

Nurses were the first treaters in 1.6% of all injuries

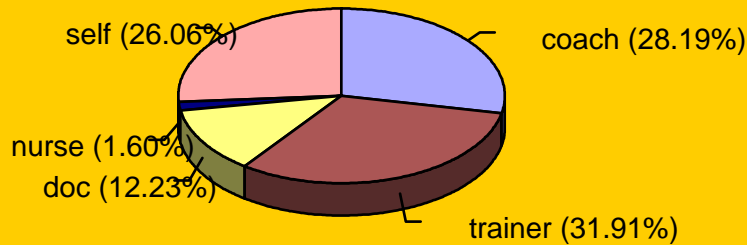
Football was the only sport with an official team doctor, but several of the local physicians' children played sports, and they served unofficially as the team physician

Results

First Treatment (cont.)

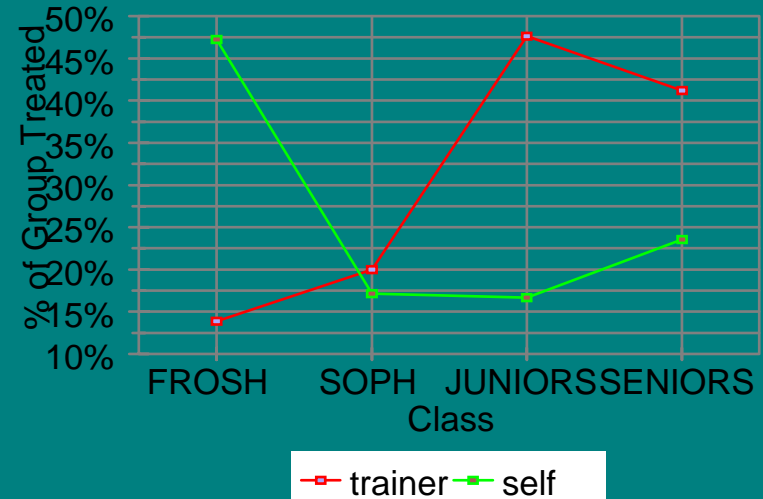
First Treatment

H.S. Totals



Athletic Injury

First Treatment by Class



Results

Follow-up Treatment

P48.7% of all injuries required follow-up treatment with a medical professional

PThe percentage requiring follow-up treatment increased with class (Frosh to Srs)

PThe highest percentage (62.5%) was actually in the students who participated in no organized sports (injuries occurred in training or P.E.)

Results

Physician Visits

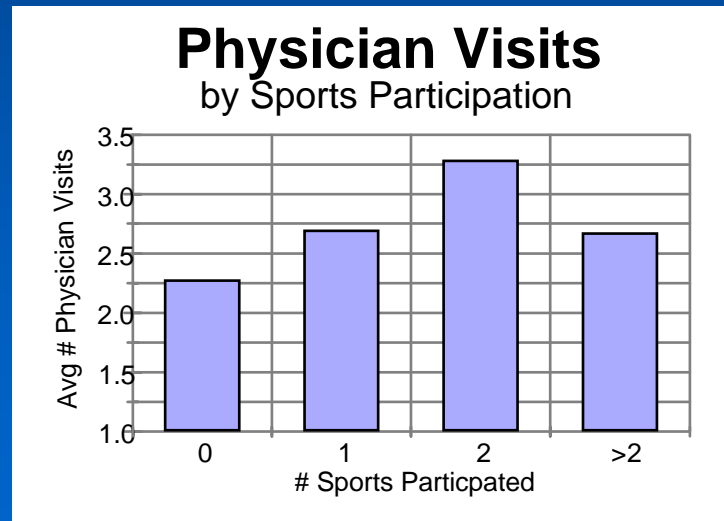
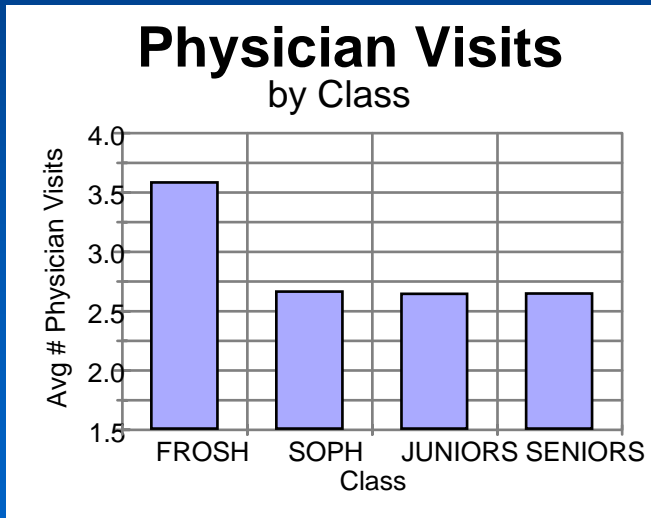
P Freshmen averaged 3.6 visits to the physician, regardless of cause, during the previous calendar year

P The three upper classes each averaged 2.7 visits

P No real differences were noted in the different sports participation groups

Results

Physician Visits (cont.)



Results

Follow-up Treatment (cont.)

P Over one-quarter (26.5%) of all injuries that occurred required follow-up treatment at a location >15 miles outside of the town

P Of only those injuries that required some sort of follow-up treatment, more than one-half (54.4%) received their care more than 15 miles outside of the town

Results

Follow-up Treatment (cont.)

P Females were more likely than males to require some sort of follow-up care (54.4% vs. 44.5%)

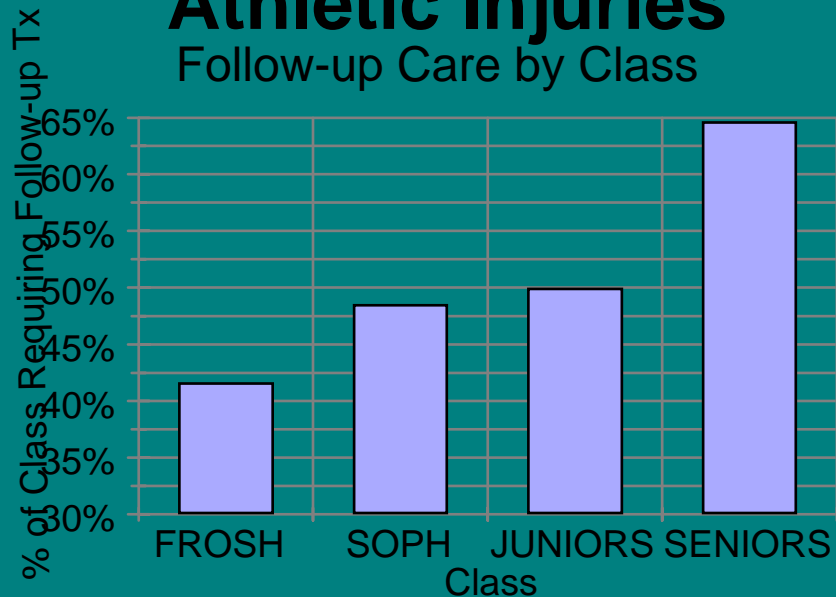
P No significant difference between males and females was seen in percentage of injuries that required follow-up treatment occurring outside of the town (28.2% vs. 24.1%)

Results

Follow-up Care (cont.)

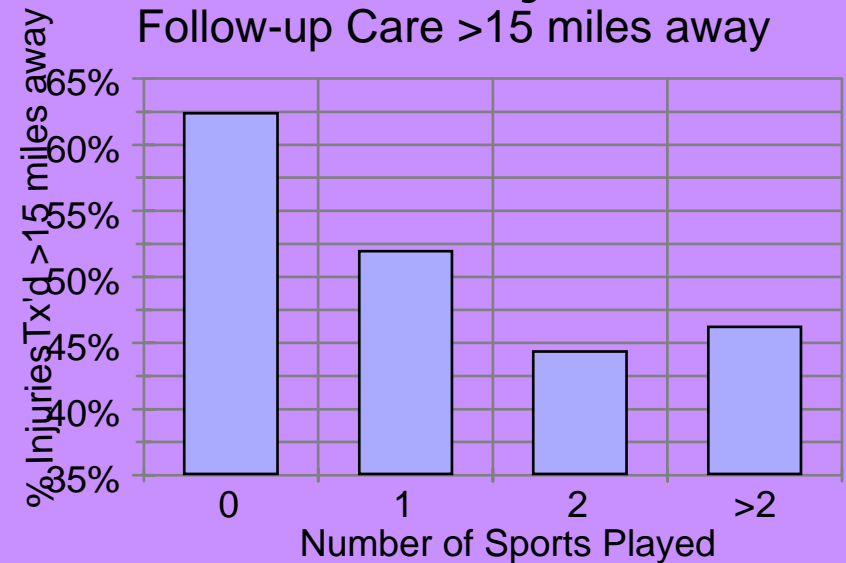
Athletic Injuries

Follow-up Care by Class



Athletic Injuries

Follow-up Care >15 miles away



Results

Guidelines

PThe I.H.S.A. reported that any guidelines regarding medical staffing of events is the sole responsibility of the local school district

PThe Monticello school district office stated that there are currently no guidelines in place for their district in regards to medical staffing of athletic events

Results

Guidelines (cont.)

P An internet search revealed that while there are many papers involving college-level medical staffing of athletic events (including a 50+ page paper by the N.A.T.S.), there are no current guidelines for the high school level

Conclusions

Athletic Injury

PBased on the amount of athletic injury noted, along with the lack of initial treatment by medical professionals, there does appear to be a need for a physician with sports medicine training in this rural town

PNot included in the study were the local junior high schools, several high schools in close proximity, nor the amount of post-high school athletic injury

Conclusions

Athletic Injury Treatment

PThe results show some level of inadequate initial treatment, as less than half of all injuries received treatment by a medical professional

PThe varsity-level events appear to receive most of the medical staffing

POnly one sport, football, had an official team physician

Conclusions

Family Physician Involvement

PNone of the three local F.P.s served as an official team physician

PEach F.P. gave a unique view on the need for a sports medicine doctor in their town – one felt there was not enough injury to warrant such a doctor, one felt there was enough injury and a sports doctor could be of great service, and the third F.P. was indifferent

Conclusions

- Based on all of these findings, there is a mixed picture as to the need for a sports medicine-trained family physician in a town of this size
- While the data seem to suggest an ample amount of musculoskeletal pathology, a few of the physicians, other health-care workers, and school administrators did not feel a need for a sports medicine doctor