

Concussion Portrayal in the Media

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Background

It is known that thorough education on the current understanding of concussion is a keystone in providing concussion care. Often, experts are faced instead with the task of re-educating patients and correcting patients' perspectives on this condition that were formed from incorrect information that was available to them through the media. Few studies examine the impact that concussion portrayal in the media has on athletes and their ability to spot concussion and identify confusion in themselves or other players. There are no studies to date examining the media's influence over how patients and the general public understand what a concussion is and how it should be treated.

Methods

Patient surveys were collected in a sports neurology clinic servicing patients with concussion and patients with general neurology conditions. All patients were initial consults with the same provider who was blinded to patient responses both before and after the surveys were completed. A 5-point likert scale was included to gain patients' concerns for sustaining a concussion based on their previous knowledge, or lack thereof.

Some patients who were seen for concussion consult were provided follow up surveys with questions regarding their change in knowledge after the appointment, to which the provider was also blinded. These results will be presented elsewhere.

Patients were also asked to provide examples of media sources that provided information about concussion that impacted their understanding and what they learned from the Internet, TV/movies, news, and newspaper/magazines. Responses were reviewed by three clinicians from different disciplines in concussion care (neurology, athletic training, occupational therapy) then compared to the listed resources, current guidelines, and most recent basic science literature, then determined in their expert opinion be:

- **Accurate (100% of comment reflects current practices)**
- **Technically accurate but non-specific (100% of comment is not incorrect)**
- **Partially Inaccurate (≥ 50% of comment is not reflective of current understanding or management)**
- **Inaccurate (100% of comment is not reflective of current practices or understanding)**

Demographics of Population

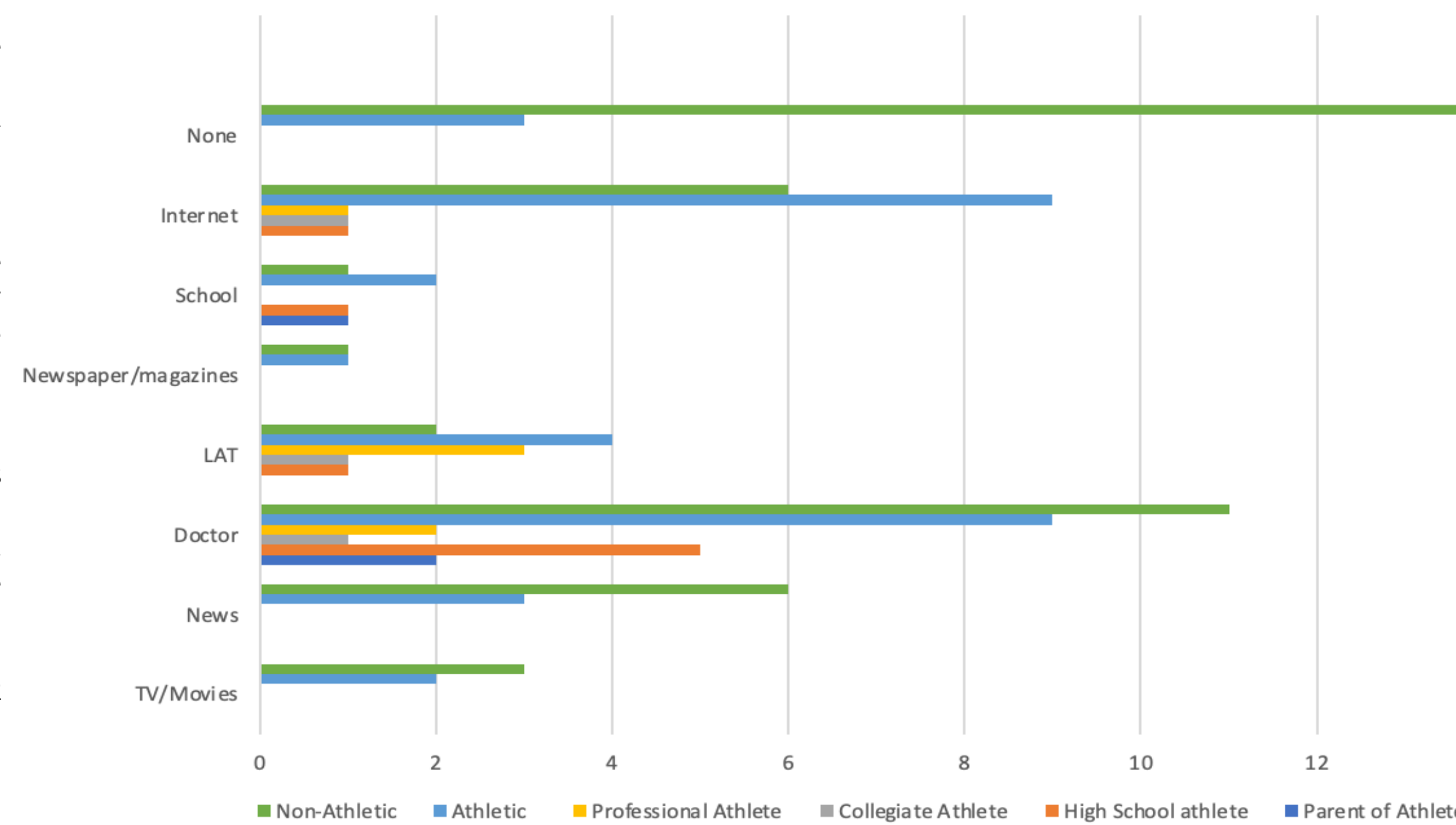
- 33/54 Patients surveyed were **female**
- 24/54 Patients identified as **Non-Athletic**
- 3/54 Patients identified as **Professional Athletes**
- 7/54 Patients identified as **Collegiate Athletes** or **High School Athletes**
- 16/54 Patients identified as **Athletic**, not part of an organizational team

References

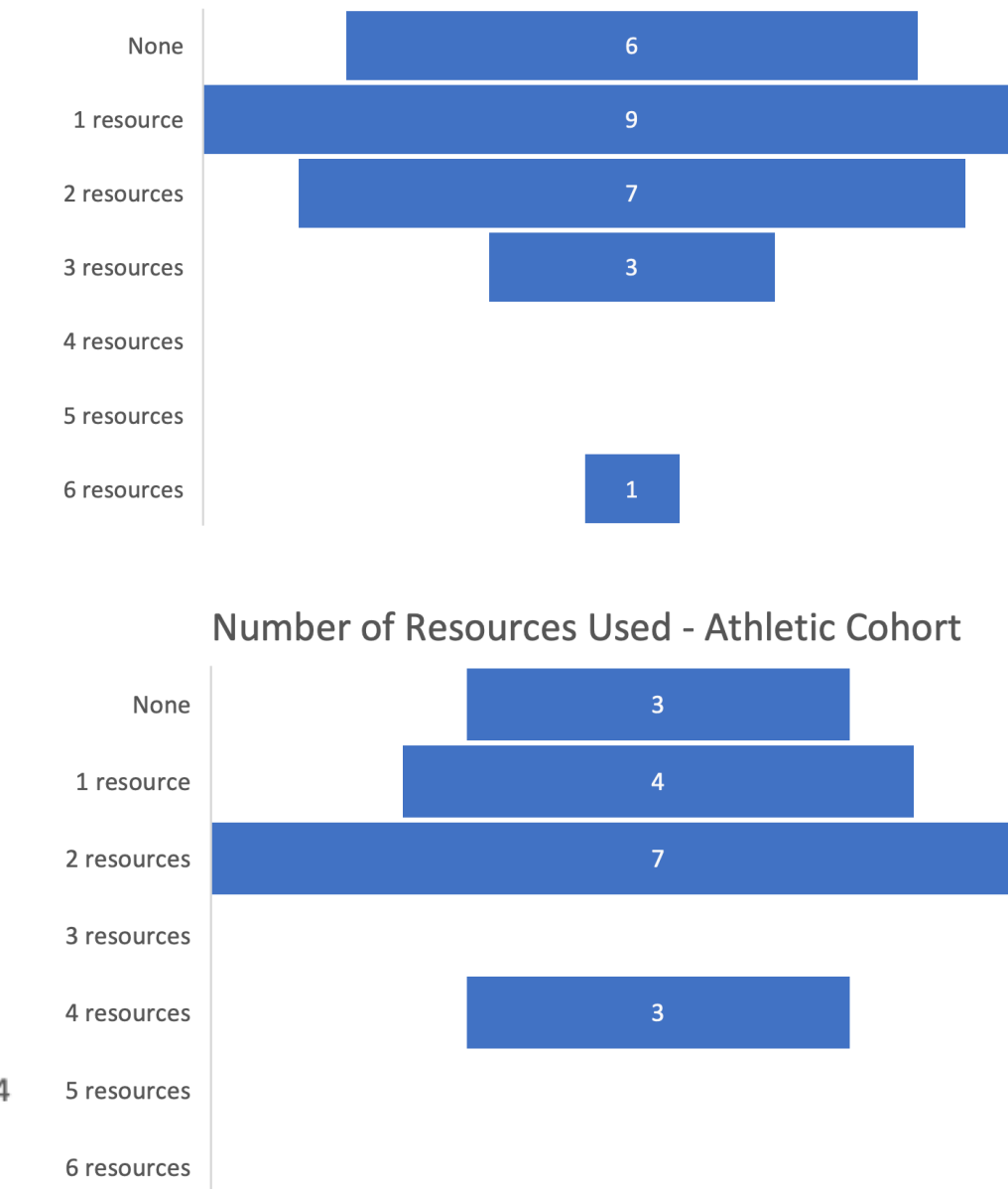


Results

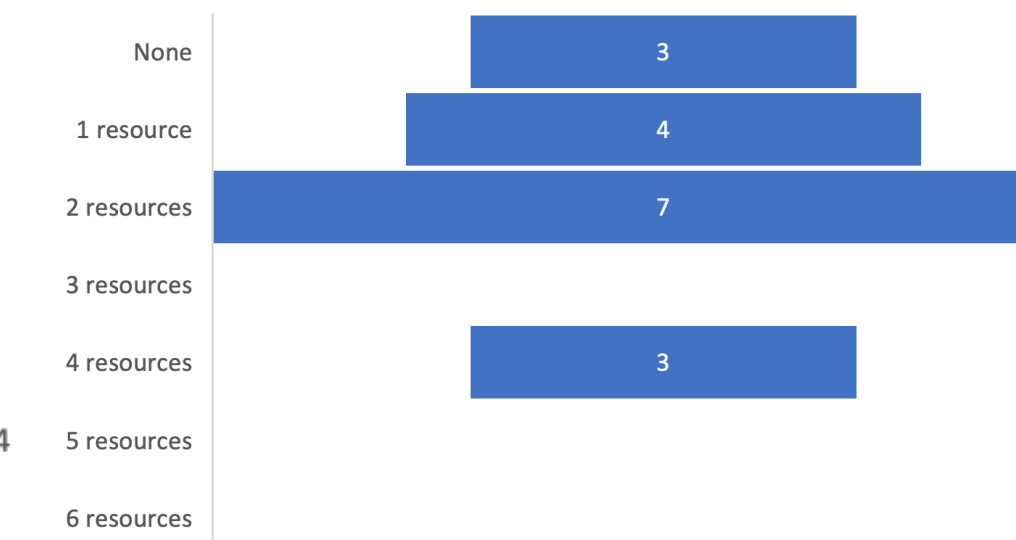
Commonly Used Resources by Athletic Cohort



Number of Resources Used - Non-Athletic Cohort



Number of Resources Used - Athletic Cohort

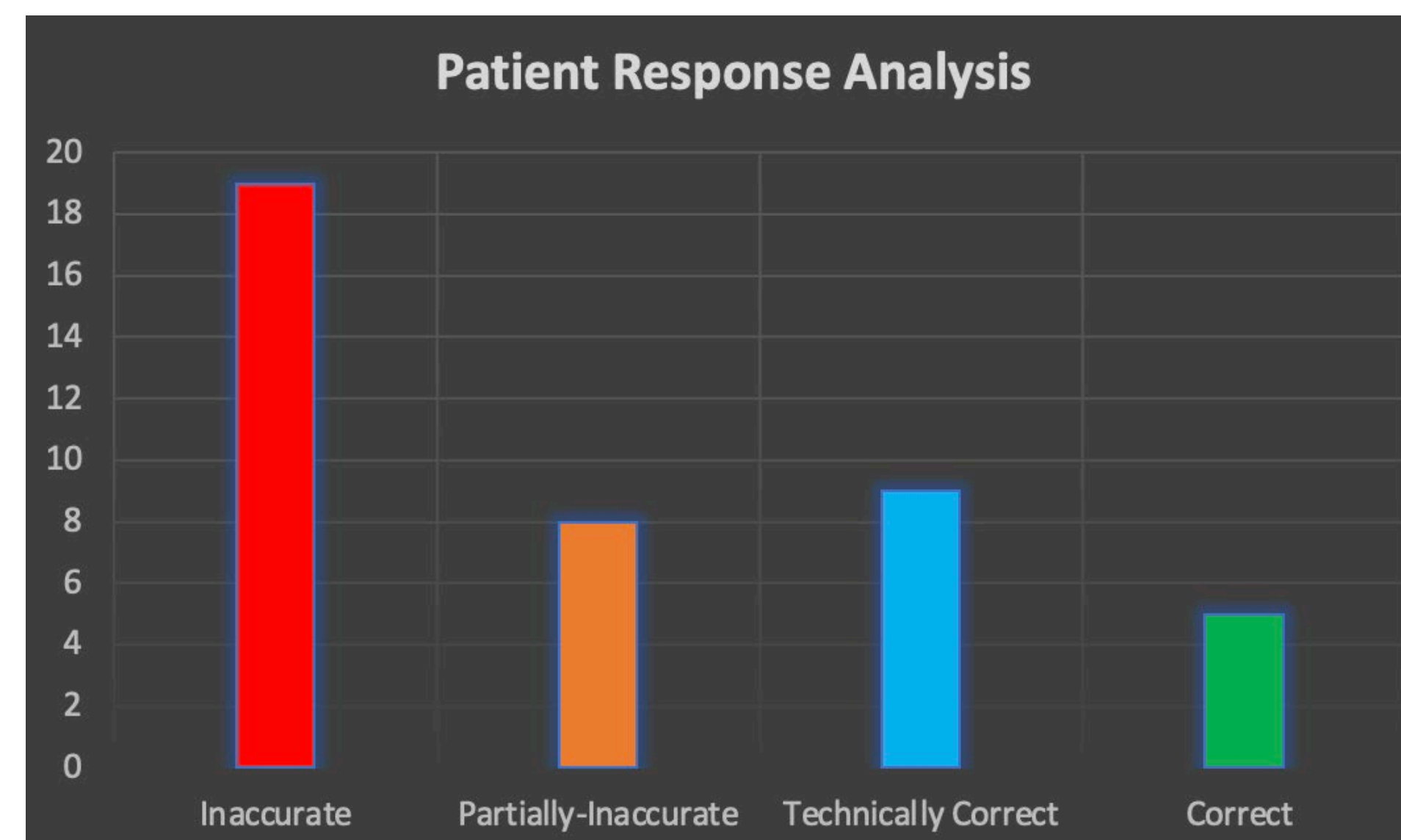


Number of Resources Used By Cohort (above)

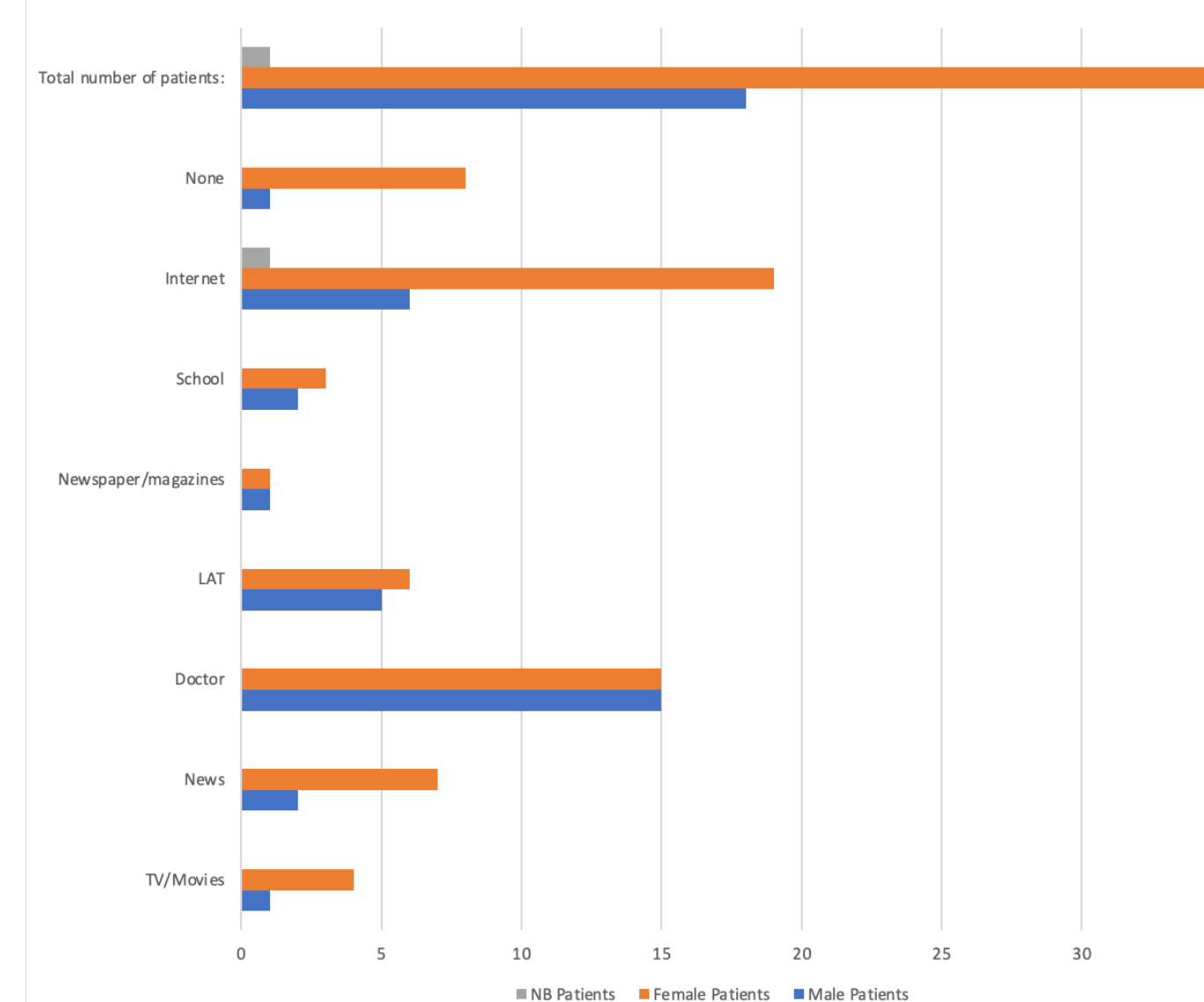
- Non-Athletic Cohort is the only group who answered positively for using 0 resources (23%)
- It is the only group to answer positively to using all 6 resources on the survey
- Combined, the majority of High School Athletes, Collegiate Athletes, and Professional Athletes use two resources for their concussion information (47%).
- The majority of responses from the Athletic cohort uses 2 resources for concussion information (41%)

Patient Responses (below)

- 41 patients wrote in comments or examples of what they remember seeing in the media about concussion
- 27/41 of responses reflect information that is partially or totally in opposition of current management guidelines or partially or totally inaccurate of current understanding of basic science of concussion
- Of the 14 responses that were totally accurate, only 5 reflected specific comments about management guidelines



Resources Used By Gender



Patient Responses

- "In Grey's Anatomy there were several concussions where they checked for bleeding and skull fractures"
- "Multiple concussions are risky, forgetfulness is common, don't wear crocs while shoveling"
- "I've read about CTE and information on concussion management when I hit my head"
- "Injury to the brain when it gets jostled around, too many is dangerous, resting eyes is key"
- "Brain injury"
- "It can cause memory loss and depression in athletes"
- "Destroys your head"
- "Have headaches"
- "Football players get concussions"
- "Relationships between concussion and CTE specifically in football"
- "Dizziness, headaches, irritability"
- "Not really other than in the context of professional sports, I experienced a handful of concussions growing up while playing football" and my father is a clinical psychologist so I am pretty well-versed in concussion knowledge"
- "A head injury, something is going on in your head"
- "They build up each one sustained effects, CTE symptoms like depression, aggression, memory loss, loss of friends, confusion"
- "I don't remember I've had this for 11 months"
- "Long term of concussions CTE/death"
- "Happens more than previously assumed"
- "Football, boxing, nothing lately, no one I know is in sports or had an accident recently"
- "Typically the side effects stand out (dizziness, nausea, memory loss/confusion) waking up the concussed person every 2 hours comes up a lot and the long term headache following it"
- "Potential increased risk of reinjury and further/more serious neurological damage caused by reinjury"
- "Brain damage, CTE, symptom free to return to play"
- "Proper treatment"
- "Concussion the movie"
- "Bad for the brain, multiple symptoms vary how bad they are"
- "That what concussions do to the brain is not fully understood or able to be seen on imaging"
- "News/sports, work at hospital, need to be checked out and monitored especially if symptoms persist"
- "Headaches, rest, avoid light, long term effects neck trauma PTSD football players have had"
- "Some people may have memory loss"
- "Vomiting and dizziness"
- "Head pain, no screens, lots of rest"
- "Take it easy no screens"
- "Back and forth if a person should sleep or not but be in a dark room"
- "Football players getting concussions, repeated concussions can affect the brain negatively"
- "A concussion is a head and brain injury that can cause damage to your brain if you don't rest it and heal before getting another concussion"
- "Concussions (specific kind) that affects many college football players in America and has been the cause of death/contributing cause for some"
- "Professional sports players and long-term effects"
- "About repetitive injury"
- "It can affect your personality with aggression it can have long term effects"
- "Symptoms can last longer than I expected"
- "Dizziness, no sleeping, headaches"
- "Concussion symptoms can last up to 2 weeks"

Discussion and Conclusions

Most information patients retain from the media about concussion is inaccurate or non-specific.

In the sample population, the Internet is the most widely used media for concussion information.

Professional athletes rely on athletic trainers for concussion information slightly more than high school athletes.

Men are more likely to seek concussion advice from a medical professional than any other source.

Athletes and athletic people seek out information from two sources in a pattern that suggests they perform their own internet research on the topic then seek education from their clinicians.

As experts in our fields, we should ensure the educational materials distributed by our clinics and online materials from our institutions are accurate and when able, take action to improve other information about concussion that is propagated by the media.